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**COVERING THE BOOK: BINDINGS OF THE MAMLUK
PERIOD, 1250-1516 CE**

**Thesis submitted for the degree of Ph.D by
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ABSTRACT

The study of Mamluk bindings has long stimulated the interest of scholars in the field. The bindings were recognised not only for their beauty but also for their innovative techniques of decoration. Previous studies, however, have generally focused on individual bindings or loose covers without placing them within the broader contexts of understanding the developments that took place in terms of their ornament and decoration or recognising their relationship with other media and the contemporary binding traditions of Persia or Ottoman Turkey. The purpose of this study is to trace the development of bookbinding techniques and decoration throughout the Mamluk period 650-922/1250-1516. It examines bindings that can be dateable by the colophon of the manuscripts, *waqf* inscriptions or dedications to a patron's library they contain. This study draws extensively on material in the Topkapı Palace Library and the Dar al-Kutub in Cairo, much of which has not been published before.

From this a picture emerges of a vibrant and dynamic binding tradition that drew on a variety of sources for its inspiration. The bindings of the 14th and early 15th century are decorated with geometrical patterns of measured complexity, which continue to be developed until the end of the Mamluk period and are reflected in architectural decoration and other media. In the late 15th century, changes in both ornament and technique begin to occur which are incorporated into the Mamluk binders' repertoire reflecting developments that are noted on Persian bindings of the early 15th century. These are incorporated into the

repertoire, producing bindings of outstanding workmanship and beauty. It was these designs along with pasteboard covers and gold tooling that the Italian binders of the Renaissance adopted and adapted, producing smaller and lighter books in leather bindings with gold-tooled decoration.

Chapter 1 begins with an introduction followed by Chapter 2 that considers the literature on the subject. Chapter 3 examines the origins and developments in formats and structures of the 'Islamic book' between the 9th and 13th centuries setting the scene for Chapter 4 that discusses the ornament and techniques found on bindings during the Mamluk period. Chapter 5 relates bookbinding ornament to that found in other media and charts the changes and developments that occur. Chapter 6 explores the relationship between Mamluk bindings and other contemporary binding traditions. Chapter 7 concludes by drawing together the strands of the arguments that have hopefully provided a clear picture of the important developments that took place from the 14th to the 16th centuries of an important binding tradition.

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- Fig. 6.74 Front cover of *Epistolae ad Familiares* bound for Ugelheimer in Venice, 1475 BNF Vélins 1149, 29.3 x 18.8cm.
- Fig. 6.75 Front cover of *Orationes* of Pietro Barozzi bound in Venice, dated 1488, Biblioteca Marciana, Ms.Lat.90 (3819) 25.2 x 18cm.
- Fig. 6.76 *left* Front cover of Dogeal Commission dated 1500, Biblioteca Marciana Ms.It.VII, 597 (=7820), 26 x 17.7cm. *right* Back cover of Dogeal Commission from Andrea Gritti, dated 1523, Biblioteca Marciana, Ms.Latin X, 129 (1536), 27 x 18cm.

- Fig. 6.77 Cover and doublure of *Commentarius rerum in Italia suo tempore gestarum* of Leonardo Bruni dated 1464-5, Biblioteca Marciana, Lat.X 117 (=3844), 19.7 x 11.9cm.
- Fig. 6.78 Front cover of Codex Lippomano, c.1471, 17.3 x 11.8cm.
- Fig. 6.79 *left* Pressure-moulded cover of Fra Giocondo's *Sylloge* bound in Venice dated 1520-30, Chatsworth Library, 25.1 x 15.9 cm. *right* Back cover of pressure-moulded Turcoman binding, TIEM 2301, 18.4 x 11.7cm.
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- Fig. 6.81 Front cover, Commission, 1571, Biblioteca Marciana, Ms.It.VII, 1366 (=8092), 23.4 x 15.4cm.

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All errors in this thesis are mine and mine alone.

Statement of own work

I confirm that this is all my own work.

Notes to Reader

Transliteration:

The transliteration follows the system of the *International Journal of Middle East Studies*. In keeping with the use of diacriticals found in *Muqarnas*, Anglicised names have been adopted (Ilkhanid, mamluk, amir), and diacritical marks have been added to titles and to Arabic quotations, but not to proper or geographical names.

Dates:

The dates of specific events relevant to the Islamic world and in manuscripts have been given in the Muslim and Common Eras. However, only the Common Era system of dating is used when referring to centuries or to broad spans of time eg. the 1450s.

Images:

Credits for the images have been given in the captions.

Abbreviations

The following abbreviations have been used for institutions.

BL British Library, London.

BNF Bibliothèque Nationale de France

BM British Museum, London

CBL Chester Beatty Library, Dublin.

DAK Dar al-Kutub, Cairo.

TSK Topkapı Palace Library, Istanbul.

TIEM Museum for Turkish and Islamic Arts, Istanbul.

V&A Victoria & Albert Museum, London.

Chapter 1

Introduction

Although the sources tell us of the existence of vast libraries during the 'Abbasid (132–656/750–1258) and the Fatimid caliphates (297–567/969–1171), the evidence of these has long disappeared and it is only from the Mamluk period (659–922/1260–1516) that substantial numbers of manuscripts with their original bindings are still in existence.¹ The year 659/1260 marked the beginning of the Mamluk sultanate bringing an end to the chaos and political instability that had reigned throughout following the death of Salah al-Din al-Ayyubi in 648/1250 and the sacking of Baghdad by the Mongols in 656/1258. From these beginnings, the Mamluks established themselves as the military rulers who were to control Egypt and Syria for the next 250 years. The defeat of the Mongols in 659/1260 at the battle of 'Ayn Jalut, and the re-establishment of the 'Abbasid caliphate in Cairo brought the Mamluks recognition from the rest of the Islamic world as the 'defenders of Islam'. They created a society, in which patronage flourished with the construction of religious and educational institutions and the production of the necessary furnishings, including fine manuscripts and their bindings. Thus, Cairo became the cultural, religious and intellectual centre of the Islamic world, attracting scholars and patronage and, as such, fostered a milieu in which the written word was valued and treasured.

¹ See Mackensen, 'Moslem Libraries and Sectarian Propaganda', *American Journal of Semitic Languages*, 1934–5, Vol. LI, pp.83–113; Eche, *Les Bibliothèques Arabes au Moyen Ages*, Damascus, 1967; Walker, 'Fatimid Institutions of Learning', *Journal of the American Research Centre in Egypt*, 1997, Vol.XXXIV, pp.179–200; Touati, *L'armoire à Sagesse*, Paris, 2003.

Ibn Khaldun arriving in Cairo in 785/1383 wrote:

*I beheld the metropolis of the World, orchard of the universe, hive of nations, human anthill, portal of Islam, throne of royalty, bursting with palaces and portals within, shining on the horizon with convents and schools, illuminated by the moons and stars of its learned doctors, which appeared on the bank of the Nile, river of Paradise.*²

The Mamluk period is noted for its extensive construction of religious institutions in the form of mosques, mausolea, *madrasa*, *khanqah* and *zawiyah*, institutions that were often grouped together to form a single complex which included a library.³ Mamluk sultans, amirs and the civilian élite all commissioned manuscripts for their private libraries and endowed the libraries of these religious institutions with bound manuscripts to be used for teaching and study. For example, the *waqfiyya* for the *madrasa* of Sultan Qansuh al-Ghuri (906–922/1501–1516) stipulated that 1,500 *dirhams* were to be paid monthly for a knowledgeable, trusted, honest, orderly and chaste man to be appointed as librarian for manuscripts bequeathed to the *madrasa*. He was to make a list of all the manuscripts to be presented to the *nāẓir* of the *waqf* and ensure that the library was open two days a week, on the days when the students had lectures. The books were only to be read in the library.⁴

² Quoted in Raymond, *Cairo*, trans W. Wood, Cambridge, Mass. 2000, p.145.

³ Petry, *The Civilian Elite of Cairo in the Later Middle Ages*, Princeton, 1981, pp.327–341 gives a list and description of the most important religious institutions of the period.

⁴ Al-Hamzah, *Late Mamluk Patronage: Qansuh al-Ghuri's waqfs and his foundations in Cairo*, Florida, 2009, pp.51–122.

It was within this milieu of active patronage of the book that the Mamluk bindings of this study were produced, enhancing and embellishing the manuscripts they contained.

The purpose of this study is to trace the development of bookbinding techniques and decoration throughout the Mamluk period. Manuscripts were selected that retained their original bindings – bindings that can be dated by colophon, dedicatory roundels to a known patron and *waqf* inscriptions – and examined to reach an understanding of the changes that took place. The earliest bindings in this study date from the end of the 13th century and were observed to represent a continuation from the pre-Mamluk period both in terms of structure and decorative schema. Bookbinding manuals from the 11th and 13th centuries, collections of bindings discovered in Qayrawan and Sana'a dateable to between the 9th and 13th centuries⁵ and, finally, a group of Qur'an manuscripts with their bindings from Marrakesh dated to the 13th century provide evidence to support this relationship.⁶ From these sources, it can be established that the Islamic codex underwent a number of changes in terms of its format and structure between the 9th century and the 13th century by which time the vertical format had been established and bindings were produced with the distinctive pentagonal flap associated with the Islamic book today. These bindings were

⁵ Marçais and Poinssot, *Objets kairouanais, IX^e au XIII^e siècle, Reliures, verreries, cuivres et bronzes, bijoux*, Tunis, 1948 for bindings from Qayrawan; Dreiholtz, 'Some aspects of early Islamic bookbindings from the Great Mosque of Sana'a, Yemen', in *Scribes et manuscrits du Moyen-Orient*, Paris, ed. Déroche and Richard, Paris, 1997, pp.15–34.

⁶ Ricard, 'Reliures marocaines du XIII^e siècle, Notes sur des spécimens d'époque et de tradition almohades', *Hespéris*, 17, 1933, pp.109–127 and 'Sur un Type de reliure des temps almohades', *Ars Islamica*, III, 1934, pp.23–34.

decorated with patterns of single stars and geometrical interlace based on stars, rosettes and circles, all features which are to be found on Mamluk bindings of the late 13th and 14th centuries.

By the latter part of the 15th century, changes in technique and decoration were first noted on bindings produced during the reign of Sultan Khushqadam (865–872/1461–1467). They can be linked to bindings styles produced in Iran from the early 15th century and include the introduction of the almond and cloud-collar profiles, the use of fine filigree leather on a pasteboard ground, large stamps for the central profiles and corner-pieces and the technique of pressure-moulding. The changes continued under the active patronage of Sultan Qaytbay (873–901/1468–1496) and later Sultan Qansuh al-Ghuri.

These developments in technique and design, in turn, influenced the binders of the Italian Renaissance who adopted them for the *alla islamica* bindings from where they spread throughout Europe. In recognition of their profound influence on European bookbindings, it seemed only fitting to include a short discussion on the dissemination of these techniques into the European binders' repertoire at the end of this study.

This study focuses on the collections of Mamluk manuscripts in the libraries of Istanbul, in particular the Topkapı Palace Library and the Museum of Turkish and Islamic Art, and the collections of Qur'an manuscripts in the Dar al-Kutub in Cairo. These three collections constitute a substantial corpus of dateable manuscripts with original bindings from the Mamluk period that have not been examined in any depth before and therefore remain largely unpublished. It should be noted that study was restricted to the Qur'an manuscripts at the Dar

al-Kutub because only this part of the collection had been conserved; access to the rest of the collection was not permitted. This study is therefore confined in the main to the collections mentioned above and its conclusions must be seen in the light of these limitations. The bindings in these three collections are, however, when considered together, able to provide a satisfactory picture of developments in binding techniques and decoration for the Mamluk period.

There are, of course, other substantial collections of Mamluk manuscripts that could provide additional information – such as those contained in the libraries of Al-Azhar in Cairo, Süleymaniye in Istanbul and the Asad Library in Damascus. Access to the Al-Azhar Library and the Asad Library proved impossible and Süleymaniye regulations restrict access to just two manuscripts a day, a restriction which, without a detailed catalogue, made it very difficult to ascertain which manuscripts have retained their original bindings.

The collection of Mamluk manuscripts in the Topkapı Palace collection comprises those that were taken from the Royal Library in Cairo during the Ottoman conquest of Egypt in 922/1516. The entries in the printed catalogue of manuscripts in the Arabic language, which are divided between four volumes according to the subject matter of the manuscript, do not provide much information on the bindings of the manuscripts. For example, bindings, which might belong to the Mamluk period, can sometimes be identified simply by the words ‘in the Arab style’.⁷ The catalogue does, however, provide an important

⁷ Karatay, *Topkapı Sarayı Müzesi Kütüphanesi, Arapça Yazmalar Kataloğu*, Istanbul, Vols.1–4, 1960–66.

starting-point as it usually records the names of the patron and scribe and the date of copying when these are available.

The Topkapı Palace collection spans the whole Mamluk period but, since it contains a substantial number of manuscripts and bindings that were part of the personal libraries of the Sultans Qaytbay and Qansuh al-Ghuri, it provides an especially detailed picture of the production of 'fine' bindings during the late Mamluk period. It also contains rare examples of bindings with fine filigree doublures and bindings decorated using the technique of pressure-moulding, both of which types are found in early 15th century Iran and therefore point to the transfer of technique and ornamental styles from Iran to the Mamluk realm. A further distinguishing feature of this collection is the significant number of bound manuscripts that were copied by the Mamluks or by functionaries in the service of the sultan. These manuscripts contain a dedicatory roundel to the sultan's library and colophons with the name of the scribe and, on occasion, a date.

For these reasons, they can be dated through identification of the patron and the fact that these were most likely some form of 'presentation' volume to the Royal Library. This group of manuscripts was first identified by Barbara Flemming in her article entitled 'Literary Activities in Mamluk Halls and Barracks', where she interpreted the manuscripts as special school exercises completed by young Mamluks in their barracks, particularly for the royal libraries of Qaytbay and Qansuh al-Ghuri.⁸

⁸ Flemming, 'Literary Activities in Mamluk Halls and Barracks', *Studies in Memory of Gaston Wiet*, ed. Rosen-Ayalon, Jerusalem, 1977, pp.249–60.

The library at the Museum of Turkish and Islamic Art in Istanbul contains several important Mamluk Qur'ans that were accessioned from religious institutions in Istanbul when the museum was founded in 1913. The catalogue is in the form of a hand-written notebook and, once again, does not generally provide details of a binding unless it is exceptional. The Mamluk manuscripts in the collection have for the most part retained their original bindings and can be considered contemporary with the manuscript.

In addition, some 44 Qur'an manuscripts from the collection of the Dar al-Kutub in Cairo were examined. The Dar al-Kutub collection is comprised of Qur'ans – often with the *waqf* inscription or a note indicating the provenance of the manuscript – taken at the foundation of the National Library of Egypt in 1870 from a number of important religious institutions in Cairo. Unfortunately, the collection has not yet been properly catalogued, although a hand list prepared in 1893 does exist and was of assistance. The collection is particularly important for two reasons: first, for its complete or almost complete sets of multi-part Qur'ans with their original bindings and, secondly, for its large-volume Qur'ans.⁹ Sadly, new covers have replaced the bindings of almost all the large-volume early Qur'ans with a diaper design probably made at the beginning of the 20th century. (Fig. 1.1) For example, the earliest Mamluk Qur'an in the collection dated by its *waqf* certificate of 730/1329 in the name of Sultan al-Nasir Muhammad (1st reign, 693–4/1293–4, 2nd reign 698–708/1299–1309, 3rd reign 709–741/1310–

⁹ DAK Rasid 4, 55 x 58.5cm; James, *Qur'ans of the Mamluks*, London, 1988, Cat.11; James published the illumination of 16 manuscripts from the Dar al-Kutub, Cairo; see Behrens-Abouseif, *Cairo of the Mamluks*, London, 2007, pp.173-178 for an account of this mosque.

1341) destined for his mosque in the citadel built between 718-735/1318-1335 has been rebound. (Fig. 1.2)



Fig. 1.1: New front cover of Qur'an dated 730/1329, DAK Rasid 4, 58.5 x 55cm.

Of the 44 Qur'ans that were examined only 28 retain their original bindings but of these, 18 were multi-part Qur'ans with the majority of the parts extant

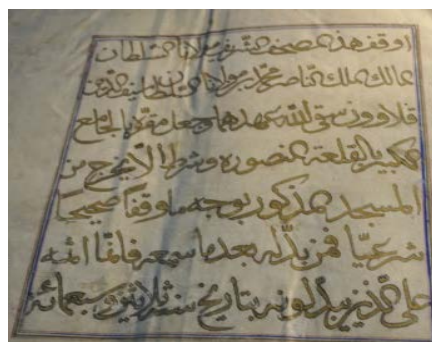


Fig. 1.2: *Waqf* in the name of Sultan al-Nasir Muhammad, DAK Rasid 4, Fol.1a.

One of the most significant later bindings in the Dar al-Kutub collection is that of a Qur'an written for Sultan Qansuh al-Ghuri in Ramadan 908/ March 1503.¹⁰ This is the only large-volume Qu'ran for Qansuh al-Ghuri which has come to light and the only example where the technique of filigree leather has been used for bindings on manuscripts copied for this sultan. The manuscript was copied by Ahmad bin Ali al-Fayyumi, who also completed a manuscript of *Arba'un Ḥadīthan* for Sultan Qaytbay on the 16th Sha'ban 900/ 11th May 1495 (TSK A.360) and who is mentioned in the colophon of a copy of the *Mukhtaṣar Sīrat al-Nabī* dated 901/1494, and now in the Topkapı Palace Library, as the teacher of the mamluk Santabay al-Sharifi from the *ṭabaqāt al-Ḥawsh* (TSK A.2796).¹¹



Fig. 1.3: Colophon and front cover of a Qur'an copied for Qansuh al-Ghuri dated 908/1503, DAK Rasid 73, 62 x 41cm.

Other collections that have been important for this study are those of the Chester Beatty Library in Dublin, the Victoria and Albert Museum and The British Library

¹⁰ DAK Rasid 73, 62 x 41cm. See fig. 4.152. The original cover has been replaced by the original filigree doublure.

¹¹ Topkapı Sarayı Library (hereafter TSK) A. 2796, 30.5 x 20.5cm; Karatay, op.cit., 1966, Vol. 3, no. 6019, (not illustrated), and TSK A. 360, 30.5 x 20.5cm; Karatay, op.cit., 1964, Vol. 2, no. 3132, see fig. 4.124; The words *ṭabaqāt al-Ḥawsh* refer to the *ṭabaqāt* or barracks to which the Mamluk belonged which in this case must refer to its position in the park near Bab al-Ḥawsh. See Ayalon, 'L'esclavage du Mamelouk', *The Mamluk Military Society*, Collected Studies, London, 1979, pp.1–66 for details of the training of the Mamluks and their barracks.

in London, the Oriental Institute in Chicago and the Staatsbibliothek in Berlin. The Chester Beatty Library has an extensive collection of Mamluk manuscripts with bindings but very few of them are dated and Van Regemorter and James have already published many.¹² In addition, the majority of bindings in the collections of the Victoria and Albert Museum and the Oriental Institute in Chicago are loose bindings without manuscripts and are therefore only dateable on a stylistic basis.¹³ Many of these bindings entered these collections from that of Dr Bernhard Moritz who was head of the Khedival Library between 1896–1911.¹⁴ Given the comparatively small percentage of original Mamluk bindings that remain in the Dar al-Kutub collection, it can be surmised that he was responsible for their replacement with new covers. It has to be remembered, however, that it was common practice at this time to replace original manuscript bindings as they were considered unimportant, hence the relatively few manuscripts in European collections with their original bindings. Thankfully, such strategies have now changed as it has been recognized that the manuscript, its structure and its binding need to be retained as a complete entity if the context in which a manuscript was produced is to be fully understood.

As previously stated, this study includes manuscripts that have retained their original bindings and structures and could be dated by colophon, *waqf* inscription or dedicatory roundels to their patron's library. A few words do,

¹² Van Regemorter, *Some Oriental Bindings in the Chester Beatty Library*, Dublin, 1961; James, *Qur'ans and Bindings from The Chester Beatty Library*, London, 1980.

¹³ Haldane, *Islamic Bookbindings: in the Victoria and Albert Museum*, London, 1983.

¹⁴ Ibid., p. 9.

however, need to be said on the problematics of such an undertaking as the dating of bindings is fraught with difficulties. In the examination of any binding the key question is how to establish the connection between the manuscript and its binding. In certain cases this is easy to determine when the binding clearly belongs to another age or tradition – as demonstrated by the example cited and illustrated above of the large- volume early Mamluk Qur'an in the Dar al-Kutub whose covers have been replaced. (Fig. 1.1)

Also, in trying to analyze structural details of bindings it is apparent that many of them have undergone extensive repair over the centuries. For example, a binding might have been repaired at some time and its original manuscript removed for re-sewing and then rebound or even had another cover added which was taken from a different manuscript. The latter procedure would necessitate a trimming of the text block to realign the quires and, as the text block in Islamic bindings is normally flush with the covers, if the manuscript is significantly smaller than its binding it is probable that it has been rebound. One such example is the large-volume binding in the Chester Beatty Library, which has traditionally been associated with the Mamluk Sultan Qaytbay and was assumed to have belonged to the Qur'an manuscript that carries his dedication.¹⁵ Arberry, who was responsible for the catalogue, measured the Qur'an manuscript as 58.8 x 40cm.¹⁶ However, since the binding measures 80 x 54.5cm it is likely that the folios were drastically trimmed before Chester Beatty purchased it. There are other factors that indicate that the folios of the Qur'an

¹⁵ CBL, loose binding, no. 79.

¹⁶ Arberry, *The Koran Illuminated*, Dublin, 1967, no.104.

manuscript do not belong to its present binding: the spine between the flap and the covers is too narrow to fit around the manuscript, suggesting that the binding and the Qur'an manuscript were bought by Chester Beatty as separate items. The Qur'an manuscript has now been placed in a modern binding.

Other signs are often helpful in determining what repairs have taken place: the appearance of unused sewing holes, additional leather in different colours on the spine, folios that are out of order; the addition of endleaves to the manuscript in modern paper, the binding of several manuscripts together, gutter repairs to the conjugate pages and repairs to the spine folds of the gatherings, as the endband¹⁷ threads often cut into the spine folds and need to be repaired on each rebinding.

The study attempted as far as possible to focus on bindings that retained their original structures but such bindings were rare. Of the 44 Qur'ans examined in depth at the Dar al-Kutub only 17 *juz'* retained their original sewing structures. For this reason, bindings that had been extensively repaired with the provision of new doublures and sewing structures were included in the study. Likewise, to facilitate an analysis of the bindings' decorative schema, loose bindings and those whose original covers had been removed and stuck to new boards have also been included where relevant.

Problems also occur in establishing the date and place of production of a binding and in identifying individual bookbinders. The dating of bookbindings depends on the presence of a colophon or dedicatory inscription within the manuscript linking it to the library of a known patron. As the covers of Islamic bindings are

¹⁷ See Appendix 1, Glossary and fig. 3.8.

attached by adhesive, and are not sewn as in the European manner, they can be removed and replaced very easily. Dating a binding by its manuscript must therefore be approached with some caution. For example, a superb filigree binding of the *Kitāb al-Furūsiyya* was published with the assumption that the completion date of the manuscript, 778/1376–7, was contemporary with the binding and as such represented an extremely early example of the use of filigree leather work on pasteboard, a technique which had only previously been found on Mamluk bindings from the middle of the 15th century.¹⁸ Further analysis revealed that the author had neglected to take into account the regnal dates of the patron to whose library this binding and manuscript were dedicated; since Sultan Abu Sa'id Qansuh ruled briefly between 904–906/1498–1500, the manuscript must have been rebound during his reign.¹⁹

Waqf inscriptions dedicating the manuscript to a certain institution can also be used to establish a date but, again, there is no certainty that the manuscript or its binding are contemporary so other dating criteria have to be used as well. For example, the second *juz'* of a thirty-volume Qur'an (DAK Rasid 70) contains a *waqf* inscription for the mosque of the Amir Qijmas al-Ishaqi, which was built between 884–887/1479–1482 in the Darb al-Ahmar district of Cairo.²⁰ Qijmas al-Ishaqi was an important amir during the reign of Qaytbay, who held the posts of Governor of Damascus and Alexandria and was appointed Amir al-Akhur,

¹⁸ TSK A. 2129, 30 x 24cm; Karatay, op.cit.,1966, Vol.3, no.7408; see fig. 4.151 for this binding.

¹⁹ Tanındı, Topkapı Sarayı Müzesi Kütüphanesi'nde Ortaçağ İslam Ciltleri,' *Topkapı Saray Museum Bulletin*, IV, İstanbul, 1990, pp.113–4 and fig. 32.

²⁰ DAK Rasid 70, 37 x 28cm; see fig.4.21 for discussion of this binding.

Master of the Stables and died in 884/1479 in Damascus where he was buried in the *madrasa* that he founded there. The *waqf* notice gives the date of the 16th Dhu'l Hijjah 885/15th February 1481, however, *Juz'* 30 contains a colophon which states that the manuscript was copied by Yahya ibn Hasan ibn Ahmad al-Qadi al-Quwumshi/Qumshi Al-Iraqi on the 1st of Rajab 757/ 30th June 1356. (Fig.1.4) The binding did not appear to have many repairs, its doublures and flap were intact and the remaining bindings of the Qur'an were all in the same style but the question remained whether the binding was contemporary with the manuscript or that the manuscript was bound on its endowment to the institution. In establishing a date for the binding, we can say that its style appears to be more in keeping with the patterns of other 14th century bindings as it has a circle with a ten-pointed star inscribed within a decagon in a pattern of geometrical interlace with very little gold tooling.²¹ We can therefore surmise that the manuscript was probably bound earlier than the date of endowment and most probably sometime soon after the date of copying.

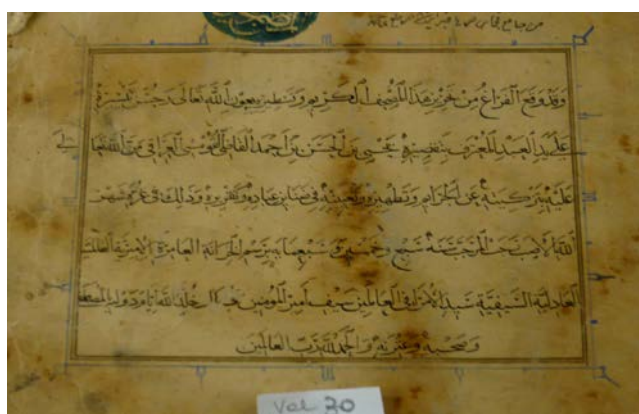


Fig. 1.4 Colophon of DAK Rasid 70 dated 1st Rajab 757/ 30th June 1356.

²¹ See fig. 4.21 for this binding.

Using stylistic criteria as a dating tool is also problematic however, because as with other media, ornament can change little within a century. For example, the strapwork decoration on a binding of a manuscript completed in Sha‘ban 815/ November 1412 (Fig. 1.5, *right*) can be compared to one produced over a hundred years earlier in Dhu‘l-Qa‘dah 697/ August, 1298 (Fig. 1.5 *left*) in terms of the technique and decorative schema of the central panel.²²



Fig. 1.5 *left* TSK A.1240/2, 27 x 18cm. *right* TSK A.2909/1, 27 x 18cm.

The same pattern of geometrical interlace is used, stemming from a twelve-pointed star based on a triangular grid pattern with the interstices of the design filled with small punches. The main difference to be noted is the use of gold paint to outline the main elements of design and segmented borders that are in keeping with developments of the late 14th and early 15th century. Thus, a record of small border tools and those used for corner pieces can be helpful in determining a broad dateable period for a binding; a select appendix of border patterns of the bindings has therefore been provided at the end of this study.

²² TSK A.1240/2, 27 x 18cm Karatay, op.cit., 1964, Vol.2, no. 3293/4; see fig. 4.38 for this binding; TSK A. 2909/1, 27 x 18cm; Karatay, op.cit. 1966, no. 5766; see fig. 4.40 for this binding.

However, the use of certain tools persisted over long periods of time, as shown in the record of tools used on the bindings of Qayrawan, two of which are found on Mamluk bindings of the 14th century.²³

The place of copying is rarely stated within a manuscript, making it difficult to reach any conclusions on regional differentiation in binding styles within the Mamluk realm. For example, the flap of a binding of a *Ṣaḥīḥ* of Bukhari copied in the Mosque of Nuri in Damascus on the 17th Jumada I 781/30th August 1379 bears a striking similarity to the decoration of the cover of another volume bound for Sultan Qaytbay on 24th Ramadan 888/26th August 1483.²⁴ For this reason it must be assumed that the *Saḥīḥ* manuscript was rebound during Sultan Qaytbay's reign by the binder of the later volume. (Fig.1.6)



Fig. 1.6: *left* Flap of TSK A.244, 21.3 x 15.3cm. *right* Front cover of TSK A.2048, 38 x 25.2cm.

²³ See fig. 3.15 and Appendix 2. nos.14 and 24.

²⁴ TSK A.244, 38 x 25.2cm; Karatay, op.cit., Vol. 2, 1964, no. 2248, see fig. 4.31; TSK A. 2048, 38 x 25.2cm, Karatay, op.cit., Vol. 3, 1966, Istanbul, no.7333, see fig. 4.31.

The binders of these Mamluk manuscripts, for the most part, remain anonymous, and it is consequently impossible to identify individuals with certain particular styles. The Chicago Catalogue of the loose bindings in the Oriental Institute in Chicago records name stamps on several bindings in its collection such as '*amal Amin*' but these manuscripts have largely been attributed to South Arabia.²⁵ None of the bindings in each of the three collections that were studied appeared to have any name stamps.

The thesis is divided into the following chapters. Following this introduction, Chapter Two is a bibliographic survey of the subject, detailing sources and material that has been published and discussing the development of approaches to the subject.

Chapter Three considers the early written sources on bookbinding techniques and decoration and the various groups of early Islamic bindings, including those from Damascus, Sana'a, Qayrawan and Marrakesh. It discusses the 'forwarding' procedures in the making of the Islamic book, examines the methods used in gathering quires, sewing stations, attaching covers and the 'finishing' or decoration of early Islamic bindings and reviews information that is found in the early bookbinding sources to trace stylistic and technical developments.²⁶

Chapter Four examines the Mamluk bindings from the 13th to the 16th centuries that were considered in this study. It begins with a consideration of the structural details that were noted among the Mamluk bindings examined and

²⁵ Bosch, Carswell and Petherbridge, *Islamic Bindings and Bookmaking*, Chicago, 1981, Cat.10, 30,31,33,36,41.

²⁶ See Appendix 2, Glossary for 'forwarding' and 'finishing'.

provides additional information on certain structural features of Mamluk bookbindings. The chapter, then, moves on to discuss the decoration of the bindings as categorized by the techniques used in their decoration: tooling and stamping, filigree and pressure moulding. The tooled bindings are further classified according to the profiles and patterns that are used on their covers. The doublures and their decoration are considered separately, according to the materials used in their manufacture and the methods used to decorate them.

Chapter Five examines parallels in the design of bindings with other media such as architectural decoration, manuscript illumination, metal work and carpets. The aim of this chapter is to examine changes within the Mamluk aesthetic and to record the transmission of ornament from or into other media.

Chapter Six discusses contemporary binding traditions of the Ilkhanid, Jalayirid, Timurid, Turcoman and Ottoman periods and their relationship with Mamluk traditions. It goes on to examine the dissemination of these techniques and designs, looking at those found on the *alla islamica* bindings produced in Italy during the Renaissance period from the middle of the 15th century.

In Chapter Seven, the conclusions of this study are presented, summarizing the developments and influences of Mamluk bookbinding during this period.

There are three appendices: a select catalogue of border patterns, a glossary of terms and a list of the accession numbers of the Mamluk bindings examined during the course of this study.

Chapter 2

Bibliographical Survey

Previous studies on the subject of Islamic bookbinding have tended, on the whole, to focus on individual fine bindings as isolated entities, removed from the context in which they had been produced, or have sought to assign geographical or regional attributions to various styles without any consideration of the relationships that might exist between them. Others have focused on loose covers, which cannot be dated and can only offer limited information if their ornament is only studied to create stylistic categories. As the study of bookbinding has developed, however, the importance of treating the binding and manuscript as one entity has been increasingly recognized. When considered together they can provide a picture of the context in which they were produced as well as information on developments in technique, in much the same way as items of clothing can only be enhanced by knowledge of the wearer and the context in which they were worn.

The Western study of Islamic bookbinding can be broadly divided into three stages of development: the first, which looked at individual bindings as objects of interest in comparison with their European counterparts, the second, which sought to assign geographical/regional attributions to various styles of bindings and the third which took note of not only the binding itself but also the bibliographical information contained therein. This last approach also examined

the relationship and influences of other binding traditions, paying attention to developments in technique and ornament.

Within Europe, the innovative styles of Islamic bindings attracted interest and comment as early as 1700. John Bagford, for example, included a description of Islamic bindings in his notes.¹

The Turks and the Persians have a peculiar manner in binding their books, and they are for the most part covered in leather of a sad red or buld (sic) colour leather, which they say is the skin of goats: others are of the opinion that it is the skin of wild asses. Their binding is very neat, and the covers stamped in the moiddle (sic) of the cover with a brass stamp cut very fine, in an oval for the most part and they have their sizes for their books as we have, as folios, quartos and octavos. 12, 24 etc. but they set not their books on shelves as we in Europe do, but are kept in apartments in their mosques and put into drawers, as most travellers in those parts relate. Their books are not bound as the Europeans', theirs are set together with a sort of paste on the back of books, and over that they cover it with a piece of linen cloth, and with the headband the book is fastened to the cover, and all their books have flaps that cover the fore edge of the book, not unlike our vellum pocket book and almanacs, but they have no clasps to them.

The bookbinder Paul Adam was the first to devote serious attention to the art of Islamic bookbinding in 1890, when he included several bindings in his history of

¹ Davenport, 'Bagford's Notes on Bookbindings', *Transactions of the Bibliographical Society*, Vol. 7, 1904, p.19; John Bagford was a British antiquarian and bookseller of the 17th century.

bookbinding and its techniques.² Adam was particularly interested in the technical details, especially the endband, a characteristic feature of Islamic bindings, which remained a puzzle for him.³ His work was the beginning of serious interest in the field and was followed by several publications that pioneered the study of the subject.⁴

The focus on individual bindings, their style and decoration, in the early parts of the 20th century, often led to generalisations and mistaken attributions. The bindings were seen as individual works of art, with little reference to their background or context. The focus of these studies on individual bindings, with or without their manuscripts, made it difficult to draw conclusions on developments of style and technique and materials in any prescribed period. Studies that have used dated bindings have been based on what can be termed individual fine or 'extra' bindings, limiting the study to a typology of ornament and attribution to broad geographical categories.⁵ This approach fails to place

² Adam, *Der Bucheinband: seine Technik und seine Geschichte*, Leipzig, 1890. In his study of the endband, Adam attributed the role of the weft of the woven band, which is attached to the top and bottom of the spine, to the sewing thread. Endbands, however, were woven on a leather band and then tied down by a thread entering the centerfolds of each quire, thus forming a warp through which the different coloured threads could be woven in the usual chevron design.

³ See Glossary for endband.

⁴ Hendley, 'Persian and Indian Bookbinding', *Journal of Indian Art*, Vol. V, July 1893, pp.51–54; Migeon, *Exposition des arts Musulmans au Pavillon de Marsan en 1903*, Paris, 1903, Pls. XCVIII–C; Sarre and Martin, *Die Ausstellung von Meisterwerken Muhammadanischer Kunst in München, 1910*, Munich, 1912; Loubier, 'Orientalische Einbandkunst', *Archiv für Buchbinderei*, Vol. X, 1910, pp.33–43; Loubier, *Der Bucheinband in alter und neuer Zeit*, Berlin, 1911; Ibscher, 'Ägyptische Abteilung Bucheinbände aus Ägypten', *Amtliche Berichte aus den Königl. Kunstsammlung*, Vol. XXXIII Nov. 1911, pp.46–51; Ibscher, 'Koptische Bucheinbände aus Ägypten', *Berliner Museen*, Vol. XLIX, 1928, pp.86–90.

⁵ See Glossary for 'extra bindings.'

the bindings within a context of development of style and technique and often ignores the contents of the manuscript.

A later publication by Sarre traced bindings from the 9th and 10th centuries in Egypt through to the 18th century in Turkey or Persia. He sought to characterize the bindings through stylistic analysis into two main divisions: Egyptian from the 9th to the 14th century and Persian–Turkish from the 16th to the 18th century.

The bindings he described were drawn from the collection in the Kaiser Friedrich Museum and a private collection in Berlin. He notes where they were acquired and dated them through comparison with the ornament of the dated Qur'an manuscripts as published by Moritz.⁶ This lavish facsimile of a limited edition of 550 copies does not, however, consider the manuscripts they may have contained, nor is any attempt made to examine technique.

Gratzl made further inroads into the problem of grouping and dating.⁷ He identified three regional groupings for what had been termed Western Islamic bindings: Egyptian–Syrian of the Mamluk period, Maghribi or North African of the 14th and 15th centuries and South Arabian of the 15th and 16th centuries. His examples were of fine bindings that could be dated by manuscript and he used their calligraphic styles to aid him in their localization. He included Persian bindings of the 16th century as a separate group. In a later article on Persian

⁶ Sarre, *Islamic Bookbinding*, trans. F. D. O'Byrne, London, 1923, pp.10–12; Moritz, *Arabic Paleography: A Collection of Arabic Texts from the First Century of the Hidjra Till the Year 1000*, Cairo, 1905.

⁷ Gratzl, *Islamische Bucheinbände des 14. bis 19. Jahrhunderts*, Leipzig, 1924.

bindings, he re-evaluated many of the attributions that had previously been published.⁸

Grohmann and Arnold made another major contribution to the subject with the publication of their work entitled *The Islamic Book*.⁹ Grohmann traced the development of the book from the 7th to the 12th century, examining the developments in early Islamic bookmaking and emphasising its debt to Coptic bindings in terms of both technique and ornament. He cites many early descriptions of bindings from contemporary historical sources and includes substantial information on leather making and its development. Arnold included a brief chapter on book craft concentrating on Persian and Turkish bindings, with sections on miniature painting, decoration, ornamentation and technique.

Sakisian made a valuable contribution to the field in a series of articles that attempted to examine the accomplishments in the field of bookbinding within a prescribed period. His articles on Ilkhanid and Turcoman binding are of particular relevance as he sought to place the bindings within an historical context, taking note of the names of patrons, scribes and bookbinders, as well as the date of the manuscript.¹⁰ He based his analyses on some bindings in the

⁸ Gratzl, 'Book Covers', in *Survey of Persian Art: A Survey of Persian Art from Prehistoric times to the Present*, eds. Pope and Ackerman, Vol. 3, Oxford, 1938–9, pp.1975–94.

⁹ Arnold and Grohmann, *The Islamic Book: A Contribution to its Art and History from the VIII-XVIII Century*, Paris, 1929.

¹⁰ Various works by Sakisian, 'La reliure persane du XIV^e au XVII^e siècle, *Actes du Congrès d'histoire de l'art*, 1921 Paris, 1921, I, 1923, pp.343-8; 'La reliure turque du XV^e au XIX^e siècle', *Revue de l'Art Ancien et Moderne*, LI, Jan-Mar 1927, pp.277–84; 'La reliure dans la Perse occidentale sous les Mongols au XIV^e et au début du XV^e siècle', *Ars Islamica*, II, 1934a, pp.180–191; 'La reliure persane au XV^e siècle sous les Timourides', *Revue de l'Art Ancien et Moderne*, LXVI, 1934b, pp.145-168 ; 'La reliure persane au XV^e siècle sous les Turcomans', *Artibus Asiae*,

Museum for Turkish and Islamic Art in Istanbul, which were published for the first time. In a communication, given in 1921 to the Society for the History of Art in Paris, he remarked that the manuscripts contained in the Waqf Museum of Istanbul (now, the Museum for Turkish and Islamic Art) allow one to distinguish between the different schools of bookbinding which were present in Persia from the 14th century in Baghdad and Tabriz under the Mongols and in Herat in the Timurid period and later at Tabriz, Shiraz and Isfahan under the Safavids.¹¹ He makes the point, very pertinently, that the styles of binding represent a continuous strand of a decorative tradition, which evolved with the transfer of artisans from one court to another. Importantly, when Sakisian wrote about these bindings he recognized the necessity of discussing the binding in tandem with the information contained in the manuscript, taking note of the scribe, date and any other important information. This marked a departure from previous approaches, which saw the binding as a single entity removed from the context in which it had been made. He was also among the first to recognize the influence of Persian and Ottoman bindings on those of Renaissance Europe, citing the bindings contained in the library of Louis XII of France (1462-1515), with the Venetian binders acting as transmitters but, unfortunately, he did not pursue this line of research.¹²

VII, 1937, pp.210–23 ; ‘Thèmes et motifs d’enluminure et de décoration armeniennes et musulmanes’, *Ars Islamica*, Vol. VI, 1939, pp.66–87.

¹¹ Sakisian, op.cit., 1921; See Tanındı , ‘Safavid Bookbinding’, in *Hunt for Paradise: Court Arts of Safavid Iran*, eds. Canby and Thompson, Milan, 2003, pp.155–85.

¹² Sakisian, op.cit., 1934a, p.80.

These studies were followed by a series of articles focusing on an understanding of bookbindings from various parts of the Islamic world. Ricard wrote on a group of bindings of the 13th century from North Africa, which could be dated by *waqf* inscriptions and colophons. This remains the only detailed and significant study of bindings from this region in this period.¹³ Ağa Oğlu wrote on Persian bindings of the 15th century; his work still remains an important source to this day as no comprehensive study of this subject has been undertaken.¹⁴ He repeated Grohmann's argument that the transfer of techniques and decoration 'from the Nile to Eastern Turkestan' formed the basis of the development of bookbinding in Persia.¹⁵ He included the titles of the manuscripts and the dates and names of the patrons and scribes when available. Thomas wrote on Spanish bookbindings from the 11th to the 15th centuries and their relationship with Islamic bindings.¹⁶ In a much later contribution Aslanapa published many Timurid and Turcoman bindings from the libraries in Istanbul for the first time, thereby providing important material for our understanding of binding during this period.¹⁷ In particular, he traced the development of binding from a chronological standpoint; his was the first study to provide a description of the decorative and technical aspects of bindings in Turcoman Iran.

¹³ Ricard, op.cit., 1933, pp.109-27; Ricard, op.cit., 1934, pp.74-79.

¹⁴ Ağa Oğlu, *Persian Bindings of the 15th Century*, Ann Arbor, 1935; Wright, *The Look of the Book*, forthcoming, 2012, provides new insights into the development of binding decoration in 15th century Shiraz.

¹⁵ Arnold and Grohmann, op.cit., p.38.

¹⁶ Thomas, *Early Spanish Bookbindings: Eleventh to Fifteenth Centuries*, Bibliographical Society, Vol. XXIII, London, 1939.

¹⁷ Aslanapa, 'The Art of Bookbinding', in *The Arts of the Book of Central Asia*, ed. Gray, London, 1979, pp.59-91.

Marçais and Poinssot made an important contribution to the study of early Islamic bindings with their publication, which discussed the bindings dateable from the 9th to the 13th centuries that were found in a pigeon house attached to the Great Mosque of Qayrawan.¹⁸ The bindings were not attached to the manuscripts for which they had been made and were in a very poor condition. However, these bindings provided valuable information on the early period in terms of designs, technique and format.¹⁹ They showed that there was a gradual change from the horizontal format to the vertical format between the 10th and 12th centuries and that by the 13th century the vertical format had become firmly established.

Petersen, following the work of Marçais and Poinssot, sought to examine the relationship between these early bindings found in Qayrawan and their Coptic counterparts.²⁰ He concludes that early Islamic bookbinding resembled Coptic bindings in all of its technical approaches, the only deviation being that the format of the Coptic codices was uniformly vertical as compared to the variety of formats found in Qayrawan.

Later studies adopted a comparative approach. Ettinghausen's article concentrated on the binding of the Morgan *Manāfi' al-Ḥayawān* and discussed

¹⁸ Marçais and Poinssot, op.cit., pp.11-12.

¹⁹ Ibid., pp.44-62; see Chapter 3 for further discussion.

²⁰ Petersen, 'Early Islamic Bookbindings and their Coptic Relations', *Ars Orientalis*, Vol. I, 1954, pp.41-64.

other bindings of the Ilkhanid period.²¹ He drew comparisons with those of the Mamluk period, stressing their superiority of technique and decoration over those of Iran and their debt to Coptic leatherwork.

Basil Gray, who drew attention to the relationship between illumination and bindings of the early Mamluk and Ilkhanid periods, subsequently reviewed this study.²² He made the point that Baghdad was an important centre of manuscript production, where the master calligrapher Yaqut al-Musta'simi resided until his death in 696–8/1296–8 and it was his school, which was to provide an important source of calligraphers and illuminators for both the Ilkhanid and Mamluk courts.²³ He rejected Ettinghausen's assertion of the superiority of the Mamluk bindings over those of the Ilkhanid period, noting that he did not cite any examples to illustrate this point.

The exhibition on the 'History of Bookbinding' held at the Baltimore Museum of Art, 1957–8 stimulated further interest in the subject: it included Coptic examples and interestingly two Fatimid bindings, the assignation of which was based on stylistic comparison with wood carving. Ettinghausen's article on the exhibition constituted a descriptive catalogue of the bindings and, although he relates the titles of the manuscripts and the name of the scribes and dates when available, there is no attempt to chart the development of binding in the Islamic

²¹ Ettinghausen, 'On the Covers of the Morgan *Manāfi*' Manuscript and other Early Persian bookbindings', in *Studies in Art and Literature for Bella da Costa Greene*, ed. Miner, Princeton, 1954, pp.459–73.

²² Gray, 'The Monumental Qur'ans of the Il-Khanid and Mamluk Ateliers of the First Quarter of the Fourteenth Century', *Rivista degli Studi Orientali*, Vol. LIX, 1985, pp.135–46.

²³ James, op.cit., 1988, Chapters 5-8 discuss the relationship between Mamluk and Ilkhanid illumination in depth.

sphere. Ettinghausen also drew our attention to the relationship of Islamic bindings to their European counterparts, which he attributes to Persian influence suggesting, perhaps, the presence of Persian bookbinders in Venice.²⁴ This exhibition brought to the attention of researchers several bindings in American collections that could provide important comparative material but had previously remained unpublished.

Gulnar Bosch's thesis on the subject of Mamluk bindings concentrated on the collection at the Oriental Institute in Chicago and produced a typology of four geographical groupings: Egyptian–Syrian, Maghribi and South Arabian, Eastern Islamic style and Persian–Turkish bindings.²⁵ This was later published as part of the catalogue for an exhibition of Islamic bindings held in the collection of the Oriental Institute, which provided a very substantial overview of the subject and to this day remains key reading material for any student wishing to embark on the study of this subject.²⁶ These bindings were mainly loose covers that had been collected by Moritz while he was head of the Khedival Library in Cairo and formed only part of the collection. The others now exist in the collections of the Islamic Museum in Berlin and the Chester Beatty Library in Dublin.

Bosch's study, and the later publication of the catalogue of the exhibition, can be considered the first comprehensive study of its kind of bindings of the Mamluk

²⁴ Ettinghausen, 'Near Eastern Bookcovers and their Influence on European Bindings: A Report on the Exhibition "History of Bookbinding at the Baltimore Museum of Art 1957-8"', *Ars Orientalis*, Vol. III, 1959, pp.113–31.

²⁵ Bosch, 'Islamic Bookbindings: Twelfth to Seventeenth Centuries', Ph.D. dissertation, University of Chicago, 1952.

²⁶ Bosch, Carswell, and Petherbridge, op.cit., 1981.

period. It made a valuable contribution to the study of Islamic bindings and provided a survey of types of bindings from the 12th to the 17th centuries, giving access to this material for the first time. In addition, Bosch drew on two particular sources for her thesis which provided a detailed insight into the craft through the translation of an 11th century treatise by al-Mu'izz ibn Badis (b. 422-501/1031-1123), *'Umdat al-kuttāb wa-'uddat dhawī al-albāb*. (The Staff of the Scribes and Implements of the Discerning)²⁷ and Ahmad ibn Muhammad al-Sufyani's *Ṣinā'at tasfīr al-kutub wa-ḥall al-dhahab*, or the 'Craft of Bookmaking and the Dissolving of Gold' completed in 1029/1619.²⁸ She later published an excerpt from the text of Ibn Badis, which specifically describes the processes involved in bookbinding and constitutes just a very limited amount of the treatise as a whole.²⁹ Both these texts were then published in translation with a vocabulary by Levey.³⁰

Bosch's study was, however, constrained by the nature of the material as the majority of those bindings that were examined were loose covers without manuscripts. This made it difficult to trace developments in technique or to establish any firm criteria for dating. Her approach was to categorise the

²⁷ Al-Mu'izz ibn Badis, *'Umdat al-kuttāb wa-'uddat dhawī al-albāb*, Ms.A.12060 of the Oriental Institute of Chicago. (Hereafter, Ibn Badis, *'Umdat al-kuttāb*).

²⁸ Ahmad ibn Muhammad al-Sufyani, *Ṣinā'at tasfīr al-kutub wa-ḥall al-dhahab*, or the 'Craft of Bookmaking and the Dissolving of Gold', edited version published by Ricard, *L'Art de la reliure et de la dorure*, Fez, 1919, 1st edn; Paris, 1925, 2nd edn, hereafter, al-Sufyani, *Ṣinā'at tasfīr*; also translated in Levey, *Mediaeval Arabic Bookmaking and its Relation to Early Chemistry and Pharmacology*, Transactions of the American Philosophical Society, New Series, Vol. 52, Part 4, 1962, pp.51–55.

²⁹ Bosch, 'The Staff of the Scribes and Implements of the Discerning', *Ars Orientalis*, Vol. IV, 1961, pp.1–13.

³⁰ Levey, op.cit., 1962.

bindings by ornamental schema and then relate these to similar published bindings in other collections, thereby establishing four localised groupings based on general dates. Her approach made it difficult to arrive at any assumptions as to the development of style and technique during this period.³¹

Bosch's concentration on loose bindings and the study of relatively few Persian–Turkish examples led her to some erroneous conclusions. She sees Egypto–Syrian influence as providing the basis for all regional styles. She says:

*The Egyptian–Syrian Bindings seem to give evidence of that region over others of the Western Islamic style and to indicate the influence of this region as a factor in developing the Eastern Islamic style. In two problems, that of the export of simple tools and that of the use of block-pressed doublures, the Egyptian–Syrian region seems to have been the centre of the book trade, but in provincial workshops there could have been imitations of both export products. The cessation of manufacture of these export products may well have occurred with the shift to the Eastern Islamic style of the Persian–Turkish regions.*³²

She accounts for what she terms as Egypto–Syrian influence on the bindings of Timurid Herat as the result of the Timurid invasions of Syria and the removal of Syrian artisans to the Timurid court. Bosch sees the shift in emphasis from West to East with the defeat of the Mamluks by the Ottoman Turks in 922/1516 and accounts for the spread of the Eastern style through the Ottoman Turks' reliance on Persian models of ornament. She also makes the point that block-pressed

³¹ Bosch, op.cit., 1952.

³² Ibid., p.170.

doublures do not seem to be used on either Persian or Ottoman bindings, an observation that has subsequently been discredited.

Weisweiler also provided a very useful survey of bindings in Dutch, German and Turkish collections in his publication *Der Islamischer Bucheinband des Mittelalters*.³³ He reproduced rubbings of the bindings, identified 106 types and noted dates, scribes, any *ex-libris* markings and *waqf* inscriptions. His survey did not, however, trace developments in technique or ornament but sought to provide a substantial corpus of type so that one is often confronted with the problem of a particular binding type found in Weisweiler, the date of whose manuscript appears incongruous with the decoration or techniques employed on the binding.

Other studies, which provide useful comparative material, relate to collections of manuscripts and bindings but are in essence descriptive with no detailed analysis. For example, Van Regemorter published a catalogue of the 'Oriental Bindings' in the Chester Beatty Library which she divided into three sections: 'Christian bindings of the Near East', 'Islamic bindings' and 'the bindings of non-Islamic Asia'. No attempt was made to examine these in any depth through a discussion of the techniques or ornament employed in their manufacture, nor indeed, were their manuscripts considered; rather they are labelled according to the general categories mentioned above, with the insertion of a date where there is one, or assigned to a century.³⁴ Duncan Haldane's study of the bindings at the

³³ Weisweiler, *Der Islamischer Bucheinband des Mittelalters nach Handschriften aus Deutschen Holländischen und Türkischen Bibliotheken*, Wiesbaden, 1962.

³⁴ Van Regemorter, *op.cit.*, 1961.

Victoria and Albert Museum is another such example: it was largely based on detached bindings and, in the light of recent work, consequently included several mistaken attributions.³⁵ David James also published a selection of manuscripts and bindings from the Chester Beatty Library that, again, provided a useful starting-point in the approach to the collection but was in essence a descriptive catalogue.³⁶

Zeren Tanındı's study of a selection of bindings in the Topkapı Palace library included 13 Mamluk examples and provided a useful starting-point in my own initial approaches to the subject. However, this study merely described the bindings, without any analysis or stylistic comparison.³⁷

Finally, we come to what constitutes the third approach in the development of the study of bookbinding: the work of Julian Raby and Zeren Tanındı, which paints a deep and enduring picture of bookbinding in the Ottoman empire of the 15th century and provides a major contribution to the history of the Islamic book.³⁸ Although not directly related to the topic in hand, their study set parameters that allowed for the emergence of a clear understanding of the historical and regional variations in style and technique of the period. Their approach differed from other studies in that it looked at a narrow period and, secondly, in that it was based mainly on bindings to which the manuscript was still attached, those which were dated or datable and could be associated with

³⁵ Haldane, op.cit., 1983.

³⁶ James, op.cit., 1980.

³⁷ Tanındı, op.cit., 1990, pp. 102–49.

³⁸ Raby and Tanındı, *Turkish Bookbindings in the 15th Century*, London, 1993.

known patrons. Raby and Tanındı note that the most important developments of the period were brought about by the arrival of craftsmen from Shiraz and Tabriz in the second half of the 15th century who introduced the technique of pressure-moulding into the Ottoman binders' repertoire. In their study, they note some connection between Ottoman and Mamluk binding, particularly in the first half of the 15th century.

Recently, three other manuscripts concerned with the technical methods of bookbinding were discovered and published by Adam Gacek; namely, the *Kitāb al-taysīr fī inā'at al-tasfīr* of Bakr al-Ishbili (d. 628/1231 or 629/1232), a bookbinder at the Almohad court. His textbook on binding was composed during the reign of the Almohad ruler, Abu Yusuf Ya'qub al-Mansur (reg. 580–94/1184–98). The work of Bakr al-Ishbili is of particular interest for the early period as he represents someone writing in the period of transition between the box-type binding and those in the vertical format with a pentagonal flap.³⁹ The other, a didactic poem, entitled *Tadbīr al-safīr fī inā'at al-tasfīr* composed by Ibn Abi Hamidah and is reproduced in its entirety in facsimile and edited by Gacek. It is thought to date to the 15th century because Ibn Abi Hamidah mentions that he came into contact with Salim al-Zawawi al-Maghribi al-Maliki, who was a *qā'ī* in Damascus at the Madrasa al-Sharabishiyya and died in 873/1468.⁴⁰ The final bookbinding source is a manual entitled *al-Mukhtara' fī funūn min al-una'*

³⁹ Gacek, 'Arabic Bookmaking and Terminology as Portrayed by Bakr al-Ishbili in his *Kitāb al-taysīr fī inā'at al-tasfīr*', *Manuscripts of the Middle East* Vol. 5, 1990–91, pp.106–13; The text is also found in Al-Ishbili, *Kitāb al-taysīr fī inā'at al-tasfīr*, ed. 'Abd Allah Kanun, *Revista del Instituto de Estudios Islamicos en Madrid*, Vols. 7–8, 1959–60, pp.1–42.

⁴⁰ Gacek, 'Ibn Abi Hamidah's Didactic Poem for Bookbinders', *Manuscripts of the Middle East*, Vol. 6, 1992, pp.41–58.

attributed to the Rasulid ruler of Yemen, al-Malik al-Muzaffar Yusuf al-Ghassani (d. 694/1294).⁴¹ These manuscripts and their description of technical approaches will be discussed and compared in greater detail in Chapter 3 of this study, with reference to the vocabulary and the technical detail they contain, noting the lacunae between them. They will be compared with the information contained within the *‘Umdat al-kuttāb wa-‘uddat dhawī al-albāb* of Mu‘izz ibn Badis and Ahmad ibn Muhammad al-Sufyani's *inā‘at tasfīr al-kutub wa- all al-dhahab*.⁴²

The publications entitled *Manuel de codicologie des manuscrits en écriture arabe* and *Scribes et manuscrits du Moyen Orient* which consist of collections of articles on the subject have also been valuable.⁴³ Likewise, the study by Szirmai on medieval bookbinding provides a comprehensive survey of the techniques employed by Eastern and European binders.⁴⁴

Prominent in the literature devoted to the *alla Islamica* bindings of the Italian Renaissance is the work of Anthony Hobson, who has been very important in

⁴¹ Gacek, 'Instructions on the Art of Bookbinding Attributed to the Rasulid Ruler of Yemen al-Malik al-Muzaffar', in *Scribes et Manuscrits du Moyen-Orient*, eds. Déroche and Richard, Paris, 1997, pp.58–63.

⁴² For the text of Mu‘izz ibn Badis, Ms. A.12060 of the Oriental Institute of Chicago was consulted. The text is translated in Levey, op. cit., 1962; only Chapter 12 considers binding methods; For the treatise of Ahmad ibn Muhammad al-Sufyani, *inā‘at tasfīr al-kutub wa- all al-dhahab*, or the 'Craft of Bookmaking and the Dissolving of Gold', the edited version published by Ricard, *L'Art de la reliure et de la dorure*, Fez, 1919, 1st edn; Paris, 1925, 2nd edn, was used in conjunction with the translations of the text in Levey, op.cit. Hereafter al-Sufyani, *inā‘at tasfīr*.

⁴³ Bibliothèque Nationale de France, *Scribes et manuscrits du Moyen Orient*, eds. Déroche and Richard, Paris, 1997; Bibliothèque Nationale de France, *Manuel de codicologie des manuscrits en écriture arabe*, Paris, 2000, later translated into English and published as Déroche and Waley, *Islamic Codicology: An Introduction to the Study of Manuscripts in Arabic Script*, London, 2006.

⁴⁴ Szirmai, *The Archaeology of Medieval Bookbinding*, Aldershot, 1999.

unravelling the various strands as he explores the bindings from the Italian perspective.⁴⁵ One chapter dealt with the Islamic sources for the humanist bindings of the Renaissance but does not include any specific Islamic examples, referring only to a few bindings contained within the catalogue of the Chicago exhibition.⁴⁶ The impressive compilation by Tammaro de Marinis of Italian decorated bookbindings of the 15th and 16th centuries covered 3,500 Italian bindings listed under the cities in which they were found is a key reference work on the subject.⁴⁷ I have attempted to relate these examples directly to developments in the Islamic world but mine are tentative steps as this is an area of research that is still in its early stages.

In more general terms, there has been much interest generated in the interactions that existed between the Islamic world and Europe. Anna Contadini's paper presented at a colloquium on 'Islam and the Italian Renaissance' in 1996 documents numerous examples of this relationship, as do other papers in the conference proceedings.⁴⁸ In 2000 Deborah Howard also examined the impact of the Islamic world on Venetian architecture,⁴⁹ followed by Rosamund Mack's study which looked at the artistic influences received from the East and, finally, the catalogue of the exhibition entitled *Venice and the*

⁴⁵ Hobson, *Humanists and Bookbinders: The Origins and Diffusion of the Humanistic Bookbinding 1459-1559*, Cambridge, 1989.

⁴⁶ Bosch, Carswell and Petherbridge, op.cit., 1981.

⁴⁷ De Marinis, *La legatura artistica in Italia nei secoli XV e XVI*, Florence, 1960.

⁴⁸ Contadini, 'Artistic Contacts: Present Scholarship and Future Tasks', in *Islam and the Italian Renaissance*, eds. Burnett and Contadini, London, 1999, pp.1-60.

⁴⁹ Howard, *Venice and the East: The Impact of the Islamic World on Venetian Architecture 1100-1500*, New Haven, 2000.

Islamic World at the Metropolitan Museum of Art in 2007 has shown the importance and impact of the arts of the Islamic world on Venice and the complex trading links and cultural exchanges that existed, of which bookbinding was only one very small part.⁵⁰

Among the Arabic sources on the history of the later Mamluk period, the work of Jamal al-Din Yusuf ibn Taghri-Birdi (813–74/1411–69) entitled *Al-nujūm al-zāhira fī mulūk mi r wa-'l-qāhira* covers the history of Egypt, with an almost daily account of the activities of the court, although it unfortunately terminates with the accession of Sultan Qaytbay.⁵¹ Ibn Taghri-Birdi was well placed to make such observations, being the son of a Mamluk amir and having studied with the famous Mamluk historian of the early period, Al-Maqrizi (d. 845/1442). An account of the reigns of Qaytbay and Al-Ghuri appears in *Badā'i' al-zuhūr fī waqā'i' al-duhūr* of Ibn Iyas (852–930/1448/9–1524) who chronicles the major events of the period and provides useful biographies of Sultans Qaytbay and Al-Ghuri.⁵² An additional valuable source for the Circassian period is that of Muhammad ibn 'Abd al-Rahman al-Sakhawi (d. 902/1497), who provides useful biographical information in his work entitled *Al-aw' al-lāmi' fī a'yān al-qarn al-*

⁵⁰ Carboni ed., *Venice and the Islamic World, 828-1797*, New Haven, 2007; Mack, *Bazaar to Piazza: Islamic Trade and Italian Art*, Berkeley, London, 2002.

⁵¹ Ibn Taghri-Birdi, *Al-nujūm al-zāhira fī mulūk mi r wa-'l-Qāhira*, ed. by William Popper, University of California Publications in Semitic Philology, Berkeley, 1961; English Translation, Popper, *History of Egypt, 1382–1469*, Berkeley, 1954–63; Popper, *Egypt and Syria under the Circassian Sultans 1382–1468 A.D.: Systematic Notes to Ibn Taghri-Birdi's Chronicles of Egypt*, University of California Publications in Semitic Philology, Vol. 15, Berkeley, 1955.

⁵² Ibn Iyas, *Bada'i' al-Zuhūr fī Waqā'i' al-Duhūr*, eds. M. Mustafa, H. Roemer, and H. Ritter, Cairo and Wiesbaden, 1960–63; French Translation by Wiet, *Histoire des Mamlouks Circassiens*, II Cairo, 1945; *Journal d'un Bourgeois du Caire*, 2 vols, Cairo, 1954, 1960.

tāsi' and is helpful in tracing the names of patrons of manuscripts and their scribes.⁵³

In considering the historical background of the period, the works by Ayalon, Petry, Northrup and Garcin have done much to contribute to our understanding of the nature of Mamluk society and its complexities.⁵⁴ Petry's studies focused on the reigns of Qaytbay and Al-Ghuri and provided detailed information on the political events of the period.⁵⁵ Har-El's work was useful in the consideration of Mamluk and Ottoman relations during the Mamluk – Ottoman (890-96/1485-1491) war as both powers competed for supremacy in the Islamic world.⁵⁶ Woods's history of the Aqqoyunlu helped to unravel the complicated network of political relationships between the Mamluks and Turcoman confederations.⁵⁷ Likewise, Alhamzah's work on the *waqfiyya* of Qansuh al-Ghawri and his foundations in Cairo gives details of the provisions that were made, information which is not easily accessible.⁵⁸

⁵³ 'Abd al-Rahman al-Sakhawi, *Al-Daw' al-lāmi' fi a'yān al-qarn al-tasī'*, ed. Husam al-Qudsi, 12 vols. Cairo, 1354/1934.

⁵⁴ Ayalon, op.cit., 1979; Ayalon, *Islam and the Abode of War: Military Slaves and Islamic Adversaries*, Aldershot, 1994; Northrup, 'The Bahri Mamluk Sultanate, 1250-1390', in *Cambridge History of Egypt, Vol.1*, ed. Petry, Cambridge, 1998, pp. 242-90; Garcin, 'The Regime of the Circassian Mamluks' in *Cambridge History of Egypt, Vol.1*, ed. Petry, Cambridge, 1998, pp.290-318.

⁵⁵ Petry, op.cit., 1981; Petry, *Twilight of Majesty: The Reigns of the Mamlouk Sultans al-Ashraf Qaytbay and Qansuh al Ghawri in Egypt*, Seattle, London, 1993; Petry, *Protectors or Praetorians?: The Last Mamluk Sultans and Egypt's Waning as a Great Power*, New York, 1994.

⁵⁶ Har-El, *Struggle for Domination in the Middle East: The Ottoman-Mamluk War, 1485-1491*, Leiden, 1995.

⁵⁷ Woods, *The Aqqoyunlu: Clan, Confederation, Empire*, Salt Lake City, 1999.

⁵⁸ Al-Hamzah, op.cit., 2009.

In approaching the discussion of the parallels between the bindings and that of other media, Behrens-Abouseif's numerous studies provided a key contribution to the understanding of architecture, metalwork and the nature of patronage of the period.⁵⁹ James Allan's articles and catalogues of important collections on the metalwork of the period provided significant insights into its relationship with binding decoration.⁶⁰ David James' study of Qur'an illumination for the Bahri Mamluk period (658–791/1260–1389) was invaluable in understanding the developments of patterns used in the illumination of Qur'ans which could be compared to those found in binding decoration of the period.⁶¹ Amy Newhall's thesis, which considered the patronage of Qaytbay with a particular focus on his architectural achievements throughout the Mamluk sultanate, provided a detailed survey of his reign and his patronage of the arts.⁶² Finally, in considering the relationship of the bindings with other traditions, Raby and Tanındı's study of Turkish bookbinding of the 15th century was particularly useful in understanding the Ottoman tradition, as very little has been published

⁵⁹ Various works by Behrens-Abouseif, *Mamluk and Post-Mamluk Metal Lamps*, Cairo, 1995; 'Sultan Ghawrī and the Arts', *Mamluk Studies Review*, Vol. VI, 2002, pp.71–94; 'Veneto-Saracenic Metalwork: a Mamluk Art', *Mamluk Studies Review*, Vol. IX/2, 2005, pp.147–52; op. cit., 2007; 'The Jalayirid Connection in Mamluk Metalware', *Muqarnas*, Vol. XXVI, 2009, pp.149–60; ed., *The Arts of the Mamluks in Egypt and Syria: Evolution and impact*, Bonn, 2012.

⁶⁰ Various works by Allan, 'Later Mamluk Metalwork – a Series of Dishes', *Oriental Art*, Vol. 15, No.1, Spring 1969, pp.38–43; 'Later Mamluk Metalwork – II, A Series of Lunch-Boxes', *Oriental Art*, No.2, Summer 1971, pp.156–64; *Islamic Metalwork: The Nuḥād Es-Said Collection*, London, 1982; 'Shāḥban, Barquq, and the Decline of the Mamluk Metalworking Industry', *Muqarnas*, Vol. II, 1984, pp.85–94; *Metalwork from the Islamic World: The Aron Collection*, London, 1986; 'Veneto-Saracenic Metalwork: The Problems of Provenance' in Grube, ed. *Venezia e l'Oriente*, Venice, 1989, pp.167–84; 'Metalwork of the Turcoman Dynasties of Eastern Anatolia and Iran', *Iran*, Vol. 29, 1991, pp.153–9; *Metalwork Treasures from the Islamic Courts*, Doha, 2002.

⁶¹ James, op.cit., 1988.

⁶² Newhall, 'The Patronage of the Mamluk Sultan Qa'itbay 872–901/1468–1496', Ph.D dissertation, Harvard University, 1987.

on this subject in any depth.⁶³ Elaine Wright also very kindly gave me access to the manuscript of her forthcoming book on book production in Iran in the 15th century, which has permitted me to use information, which I would not otherwise have known.⁶⁴

We have seen that, as the study of bookbinding has developed, the importance of treating the manuscript and binding as one entity has emerged. When considered together, the binding and the manuscript can provide a picture of the context in which they were both produced as well as details on technique and ornament. This study approaches the bindings and their manuscripts from this perspective and tries to provide a deeper and more complete understanding of book production during the Mamluk period.

⁶³ Raby and Tanındı, *op.cit.*, 1993.

⁶⁴ Wright, *op.cit.*, forthcoming, 2012.

Chapter 3

The Early Islamic Book: Structure and Decoration

The codex format, with few exceptions, was adopted by Muslims for the Qur'an from the early Islamic period.¹ It has been suggested that Ethiopians might have transmitted the codex format to Muslims because the word *muṣḥaf*, applied specifically to copies of the Qur'an, was transferred to Arabic from Ethiopic in the early days of Islam.² Tradition also relates that, during the Prophet Muhammad's lifetime, Qur'an pages were kept between wooden boards known as *lawḥāni* or *daffatāni*.³ The earliest extant fragments of Qur'an folios, written in Hijazi script on parchment and dateable to the 7th century, are in the vertical format⁴ but – there is no extant evidence of how they were covered.⁵ The origins of the Islamic codex remain poorly understood owing to the paucity of extant material from this early period and the lack of detailed research into contemporary binding traditions.

¹ Arnold and Grohmann, op.cit., 1929, p.30 note the existence in the Heidelberg papyrus collection of a papyrus roll, 183cm in length, of the mid-9th century. Rolls continued to be produced and were used for Qur'ans, see, for example, the fine Mamluk example dated to c. 803/1400 in the Bibliothèque Nationale, (arabe 6088) reproduced in Bibliothèque Nationale, *l'Art du livre Arabe*, Paris, 2002, Cat.27; see, Roberts and Skeat, *The Birth of the Codex*, London, 1983, for the account of the development of the codex.

² Pedersen, *The Arabic Book*, Princeton, 1984, p.101.

³ Ibid., p.102.

⁴ See Appendix 1, Glossary.

⁵ Early Qur'an folios in Hijazi script which date from the 7th century used the vertical format. The horizontal format was subsequently used for Qur'an codices until the 10th century, when the vertical format was used once more. See, Déroche, *The Abbasid Tradition, Qur'ans of the 8th to the 10th Centuries*, The Nasser D. Khalili Collection of Islamic Art, Vol.1, Oxford, 1992, pp. 27– 33; Hijazi is the collective term for early Arabic scripts of the 7th and 8th centuries that are distinguished by slanting strokes.

The debt owed by early Islamic book bindings to their Coptic precursors both in terms of structure and decoration has, however, been discussed in several publications.⁶ Coptic bindings from the 7th to the 11th centuries show many similarities to Islamic bindings in terms of sewing structure, method of attachment of the textblock to the boards, presence of flaps projecting from the lower board and decorative schema used for the covers.

In both Islamic and Coptic bindings a link-stitch is used for the gatherings to make up the text-block. In Coptic codices the cover extended to form a flap, either triangular or rectangular, to which wrapping bands were attached.⁷ Coptic covers were often lined with the fly-leaves of the first and last quire for the attachment of the book block to the covers, a method that was adopted by Islamic binders.⁸ Several early Coptic codices have traces of endbands at the top and bottom of the spine which are also a distinguishing feature of Islamic bindings. These will be discussed in greater detail below.⁹ In addition, papyrus pasteboards have also been recorded on Coptic bindings dated to between the 7th and the 11th centuries that can be seen as the precursors of paper pasteboards used for Islamic covers. Szirmai also noted that 40 of the 50 Coptic codices in his

⁶ Arnold and Grohmann, op.cit., 1929; Petersen, op.cit., 1954, pp.41–63; Bosch, Carswell and Petherbridge, 1981, op.cit., pp.23–4; Szirmai, op.cit., 1999, pp.32–43.

⁷ Flaps attached to the lower boards are also found in Armenian bindings but they are made only of leather and have cloth linings, without pasteboard acting as a core. The bookbinding tradition is, however, quite separate as a supported sewing structure is used in Armenian bindings unlike the unsupported one characteristic of Coptic and Islamic bindings. Armenian endbands are also worked in an entirely different way. See, Merian, 'The Structure of Armenian Bookbinding and its Relation to Near Eastern Bookmaking Traditions', Ph.D Thesis, Columbia University, 1993.

⁸ Szirmai, 1999, op.cit., pp.23–5.

⁹ Lamacraft, 'Early Bookbindings from a Coptic Monastery', *The Library*, Vol.20, 1939, pp. 219–20.

study had four sewing stations to attach the quires to one another, which is also found on the Mamluk bindings of this study.¹⁰ It should be noted, however, that Coptic codices only used the vertical format while Islamic codices alternated between the vertical and horizontal format from the 7th to the 12th centuries.¹¹

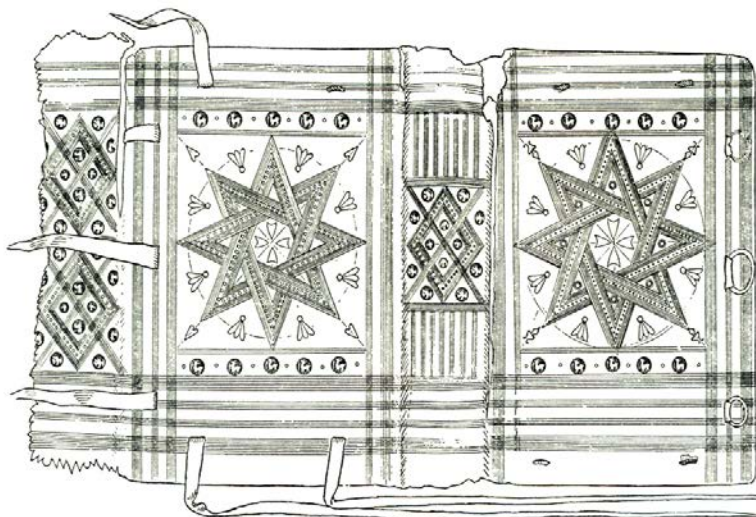


Fig. 3.1: Coptic binding with wrapping bands dateable to the 7th or 8th century, BL Or.5000. After Petersen, *op.cit.*, 1954, Fig. 30.

The earliest surviving corpus of Islamic bindings that can be dated to the 9th century are box-bindings with wooden covers covered in leather in the horizontal format from the Great Mosque of Damascus, and are thought to be of Syrian

¹⁰ Szirmai, 1999, *op.cit.*, p.32, The material comprises codices found in 1890 in Upper Egypt in the area of Sohag and Edfu and others that were discovered in 1910 in the Monastery of St Michael of the Desert near Hamuli in the Fayyum region of Egypt. Many of the bindings had been separated from their contents without any of their structures being recorded. The largest part of the material is to be found in the Pierpont Morgan Library where it was studied by Petersen whose observations formed the basis for his article, Petersen, *op.cit.*, 1954, pp.41–63; Bosch, Carswell and Petherbridge, 1981, *op.cit.*, p.46 record that all Islamic bindings have two sewing stations although this is commonly the case, four sewing stations are also used.

¹¹ The ornament of Or.5000 in the British Museum, a Coptic Psalter, tentatively dated to the 7th or 8th century, is composed of broad interlacing bands forming an eight pointed star that is cut away in the centre to form a cross shape backed by gilded vellum.

production.¹² During the 7th century the adoption of the Kufic script for Qur'anic manuscripts, of a type similar to that found on the inscription band that runs along the base of the dome of the Dome of the Rock is generally believed to have been a factor that prompted a change from the earlier vertical to horizontal format for the text and bindings in the 9th century. Between the 9th and 13th centuries further changes took place: the vertical format was once again adopted and the box-binding type was replaced by a codex with wooden covers. Later, wooden covers were replaced by those made from pasteboard and the distinctive pentagonal flap became a characteristic feature of Islamic binding, a feature which has continued in use until today.

In tracing the developments of the early Islamic codex two sources of information are of importance in understanding the changes that took place: the bindings themselves and contemporary sources. This chapter will first consider the information on structures and formats gleaned from the extant groups of Islamic bindings dateable to between the 9th and 13th centuries from Damascus, Sana'a, Qayrawan and Marrakesh before moving on to examine the contemporary written sources that describe bookbinding processes.¹³ The latter include accounts given by Mu'izz ibn Badis, a prince of the royal dynasty of the Zirides who was born in al-Mansuriyah near Qayrawan. These accounts entitled '*Umdat al-kuttāb wa-ʿuddat dhawī al-albāb*' do not provide much detail on actual binding methods being more concerned with recipes for dyeing paper and leather, the

¹² Déroche, 'Quelques reliures médiévales de provenance Damasaine', *Revue des études islamiques*, No.54, 1986, pp.85–99; These are now in the Museum of Turkish and Islamic Art in Istanbul, where they were transferred after the fire of 1893 in the Great Mosque of Damascus.

¹³ Déroche, op.cit., 1986, pp.85–99; Dreiholtz, op.cit., 1997, pp.15–34; Marçais and Poinssot, op.cit., 1948; Ricard, op.cit., 1933, pp.109–27.

preparation of inks and adhesives and tests to establish the authenticity of the ingredients.¹⁴ The treatise entitled *Kitāb al-taysīr fī šināʿat al-tasfīr* of Bakr ibn Ibrahim ibn al-Mujahid al-Lakhmi al-Ishbili is of particular importance as he distinguishes between codices bound in wooden boards and those with pasteboard covers; his work can therefore be seen as straddling the period of transition between the two types of structure.¹⁵ The instructions on bookbinding attributed to Yusuf al-Ghassani, the Rasulid ruler of the Yemen entitled *al-Mukhtaraʿ fī funūn min al-šunaʿ* will also be considered.¹⁶ The latter text is divided into two parts: the first dealing with the arts of the book and the second with martial arts. The first part draws extensively on the work of Ibn Badis, containing information on inks, dyes, adhesives, paper and methods of tanning leather. Al-Ghassani describes only a codex with pasteboard covers and a pentagonal flap as he includes a method for the preparation of pasteboard, doublures and measurements for the flap. Information from two later sources have also been included to corroborate the information on structural details from the early sources mentioned above, to show the continuity of the methods used in the preparation of the binding and to fill lacunae in the earlier texts. The text of the didactic poem on bookbinding entitled *Tadbīr al-safīr fī šināʿat al-tasfīr* by Ibn Abi Hamidah dateable to the 15th century, contains bookbinding terms which are

¹⁴ Ibn Badis, *ʿUmdat al-kuttāb*, Ms. A.12060, Chicago, Oriental Institute. The text is translated in Levey, op.cit., 1962; Only chapter twelve considers binding methods.

¹⁵ Al-Ishbili, *Kitāb al-taysīr fī šināʿat al-tasfīr*, ed. ʿAbd Allah Kanun, *Revista del Instituto de Estudios Islamicos en Madrid*, 7–8, 1959–60, pp.1–42; Summarised in Gacek, op.cit., 1990–1, pp.106–113.

¹⁶ Gacek, 'Instructions on the Art of Bookmaking Attributed to the Rasulid ruler of Yemen al-Malik al-Muzaffar' in *Scribes et Manuscrits du Moyen-Orient*, eds. Déroche and Richard, Bibliothèque Nationale de France, 1997, pp.58–63.

not found in the three sources previously mentioned.¹⁷ It is divided into ten chapters and describes the steps to be followed in binding a book as well as describing a binding with pasteboard covers and a pentagonal flap. Finally, the text of Abu'l Abbas Ahmad ibn Muhammad al-Sufyani *Ṣinā'at tasfīr al-kutub wa-ḥall al-dhahab*, written at the beginning of the 17th century, includes descriptions of adhesives, sewing structures and endbands and how to cover the boards in leather.¹⁸

The first section of the chapter dealing with bookbinding structure and format is then followed by a second section dealing with the decoration of the early groups of bindings as mentioned in the sources.

Structures and Formats

François Déroche has divided the bindings of the Islamic world into three types, all three of which share common elements: an upper or front cover, a spine that comprises the sewn part of the gathering block and a lower or back cover.¹⁹

Type One is a box binding, with a horizontal format and wooden covers, that is normally fastened by a thin leather strap which fixed to the lower board and then twisted around a peg set into the upper cover to close the binding. (Fig. 3.2)

¹⁷ Gacek, op.cit., 1992, pp.41–57.

¹⁸ Al-Sufyani, *Ṣinā'at tasfīr*, op.cit.; Translation by Levey, op. cit., 1962, pp. 51-5.

¹⁹ Déroche et al, op.cit., 2006, pp. 256–62.

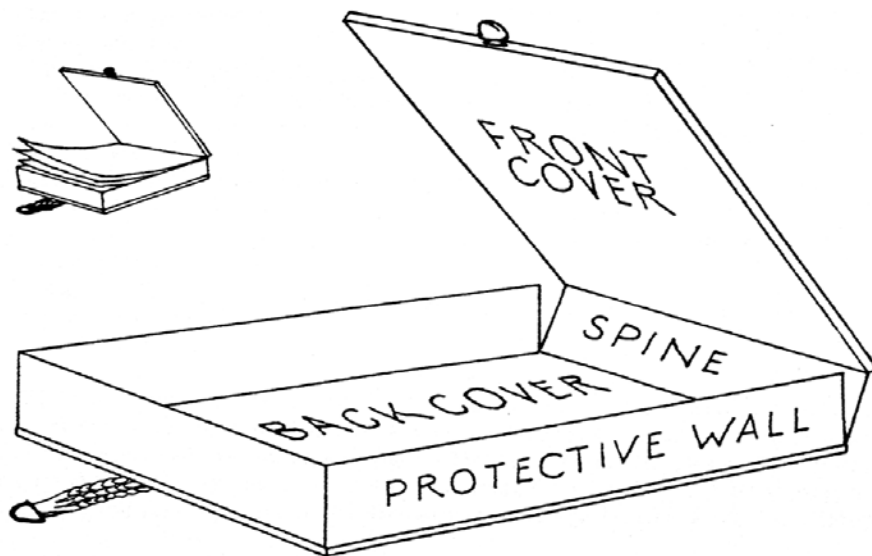


Fig. 1. Construction of an early Islamic book with wooden boards.

Fig. 3.2: Early Islamic box binding. After Dreibholtz, op.cit., 1997, Fig. 1.

Type Two is considered the archetypal Islamic binding and has two characteristic elements: the fore-edge flap and the envelope, or tongue, flap which are connected by flexible hinges extending from the fore-edge of the lower cover. The fore-edge flap lies over the textblock to protect it when the volume is closed and extends over a second hinge into the pentagonal envelope flap which extends to a point in line with the central axis of the manuscript cover. Once the quires have been sewn, the textblock is glued to the covers, making their removal and replacement very easy. (Fig. 3.3)

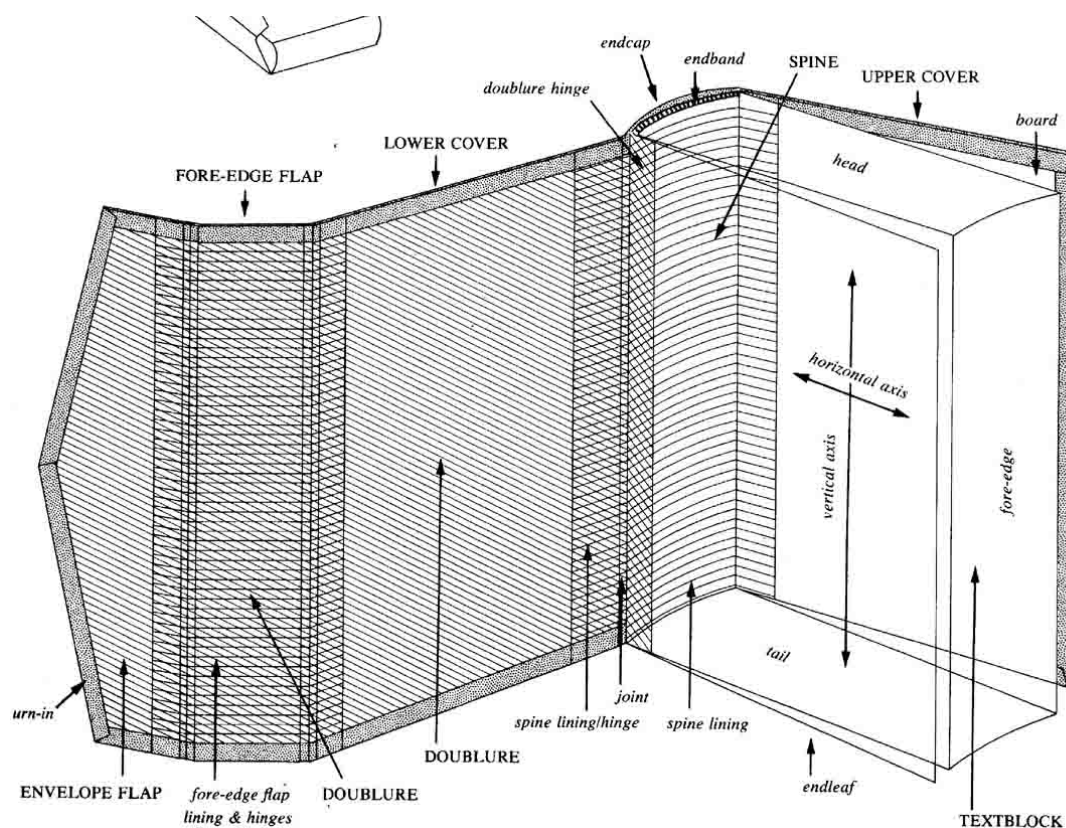


Fig. 3.3: Terminology used for the description of traditional Islamic bookbindings after Bosch, Carswell and Petherbridge, op.cit., 1981, p.38, Fig. 3.

Type Three covers all types of binding structures which are not covered under Type One and Type Two, such as 'limp bindings', i.e. those without boards, but primarily includes those bindings found on Christian Arabic manuscripts that were bound according to Byzantine techniques and, as such, only represent a fraction of Eastern bindings.²⁰

While useful for establishing general categories, this classification confuses the historical development of formats and structures with an attempt to create a typology. Type One refers to box-bindings using a horizontal format, of which there are very few examples, since they had been discarded in favour of the vertical format by the 12th century. Type Two, with its distinctive pentagonal flap

²⁰ Déroche *et al*, op.cit., 2006, p.258.

and pasteboard covers, relates to developments that took place in the 11th century and was to become the established format for Islamic binding while Type Three relates, in the main, to another bookbinding tradition in terms of structure and decoration.

The earliest extant group of Islamic bindings, as previously mentioned, were dated to the 9th century and were originally from the Great Mosque of Damascus. They were identified and published by Déroche.²¹ Six of the seven codices were box-bindings with wooden boards in the horizontal format, with sizes ranging from 6.5 x 10.1cm to 13.1 x 17.6cm.²² Their main distinguishing feature was a leather flange glued to the three edges of the lower cover, thus forming a continuous protective leather band that protected the textblock and creating a box which could be fastened. The parchment textblock was fixed to the box cover by pasting a piece of parchment which formed part of the gatherings to inner boards. As Déroche notes, the box-type bindings were most probably reserved for Qur'an manuscripts and, as such, were furnished with the box format to provide added protection. He suggests that the change from the vertical to horizontal format may have been prompted by the need to associate a certain shape with the Qur'an in order to emphasize its unique status as the word of God.²³ There is, however, no evidence to back up this assumption. Given the

²¹ Déroche, op.cit., 1986, pp.85 – 9;

²² Ibid. These bindings now in TIEM have the following accession numbers and sizes: Şe 23. 71 x 11.0 cm, Şe 1900, 13.1 x 17.6 cm, Şe 2196, 11.8 x 18.3cm, Şe 2669, 7.8 x 12.2cm, Şe 2746, 7.7x 12.1cm, Şe 2772, 6.5 x 10.1cm. Included in the group was one binding in the vertical format, Şe 2035 with wooden boards which was fastened by a peg with a strap and measured 14.7 x 10.7cm.

²³ Déroche, op.cit., 1992, p.17.

evidence from Qayrawan, the transition back to the vertical format from the 10th century on appears to have been gradual as there is no evidence of religious resistance to the change, which would have surely been the case if the horizontal format had held this significance. During the course of research, a further box-binding was found in the Staatsbibliothek in Berlin that is illustrated below.²⁴ (Fig. 3.4) The flanges on either side must have come away but it still retains a small metal peg for fastening. It has an inscription saying that it came from the Great Mosque of Damascus and the decoration of the covers is also very similar to those from Damascus published by Déroche.



Fig. 3.4: *Juz' 6* of a Qur'an, upper cover of box-binding, Staatsbibliothek Berlin, Ms.Orient. Oct 1819, 25 x 15cm. Image Staatsbibliothek Berlin.

Of interest in this group from Damascus is a single binding in the vertical format, with wooden boards and fastened with a peg and a strap, a structure which

²⁴ Staatsbibliothek Berlin, Ms.Orient Oct.1819, 25 x15cm; This carries an inscription saying that it came from the Great Mosque of Damascus and contains *Juz' 6* of the Qur'an. Unlike the examples in TIEM, this example has lost the continuous leather flange that would have been attached to the three sides.

suggests that the progression from Type One to Type Two may not have been as clear cut as the typology proposed by Déroche suggests.

The bindings discovered by Marçais and Poinssot at Qayrawan were found in a store- room in the 1940s.²⁵ The 156 bindings were dated on art historical and paleographic grounds to between the 9th and 13th centuries. They were so badly wormed and damaged that Marçais and Poinssot could only draw tentative conclusions on their structure and format and were obliged to concentrate mainly on the decorative techniques when they published their findings.

A similar cache of loose bindings was found during the restoration of the Great Mosque in Sana'a following the collapse of its western wall in 1972.²⁶ These bindings too were in a very bad state of preservation; Dreiholtz notes that no original sewing remained and that the existing sewing structures on the partially preserved textblocks were repairs, with one repair often superimposed upon another.²⁷ So far, very little has been published on the bindings from Sana'a but, since those that have been published are very similar both in structure and decoration to the early examples from Qayrawan, they have been assigned to the same period.

Of the 156 bindings and their remnants discovered at Qayrawan, 54 bindings were assigned to the 9th century, 18 to the 10th century, 54 to the 11th century and 30 to the 12th and 13th centuries. The 72 bindings dating from the 9th and 10th centuries and 45 from the 11th century were all of the format, wider than

²⁵ Marçais and Poinssot, *op.cit.*, 1948, p. 11.

²⁶ Dreiholtz, *op.cit.*, 1997, pp.15-34.

²⁷ *Ibid.*, p. 22 and Dreiholtz Communication, January, 1993.

high, known as *format à l'italienne*.²⁸ These bindings were provided with wooden boards and almost all of them had clasps consisting of looped thongs and staples. Narrow leather flaps were attached to the head, tail and fore-edges of the covers. The leather of all the remaining flanges was of a double thickness, with only three instances of leather being of a single thickness. The wooden covers had been lined with parchment sheets which were the unwritten leaves of the first quire or the last leaves of the last quire.

The 99 fragments at Sana'a were divided into covers with wooden boards and parchment textblocks and those with a paper core and paper leaves.²⁹ Of these, 51 had covers with wooden boards and 42 had pasteboard covers with only six complete covers where the front and back covers with the pentagonal flap were still connected.³⁰ All the covers – with the exception of one – were horizontal in format where the height was approximately two-thirds of the width of the book although, as Dreiholtz notes, the formats could vary slightly.³¹ Dreiholtz has shown that the bindings with a wooden core were of the box-type described by Déroche above.³² Marçais and Poinssot noted that three of the bindings at Qayrawan demonstrated that the leather for the covers was glued at right angles around the cover, thus forming a protective box, and that 125 of the examples had

²⁸ Marçais and Poinssot, op.cit., 1948, pp. 44-62; No. 1-54 were assigned to the 9th century (54), No. 55-72 to 10th century (18), No.73-117 to the 11th century in the horizontal format (45), Nos.118-126 to the 11th century in the vertical format (9) and Nos. 127-156 to the 12th-13th century, all in the vertical format (30).

²⁹ Dreiholtz, op. cit., 1997.

³⁰ Dreiholtz, op.cit., 1993.

³¹ Ibid., 1993.

³² Dreiholtz, op.cit., 1997, p.17.

been constructed in this way although the leather strips had become separated from the binding.³³ Initially, there was a debate as to whether this structure was simply a leather flange or a boxed casing for the textblock but the latter interpretation was corroborated by the discovery of the six small wooden box bindings from the Great Mosque of Damascus mentioned above.³⁴ Dreiholtz also confirmed the existence on the bindings at Sana'a of these leather 'walls' to guard the head, tail and fore-edge of the text block with the remaining side of the codex protected by the spine.³⁵ She also records the existence of interlaced leather thongs of which groups of three formed a fixture to the binding and were used for securing the fastening.³⁶ The box bindings from Qayrawan and Sana'a were closed by means of pegs inserted into the front cover. (Fig. 3.5) The metal pegs recorded by Dreiholtz were made of iron in contrast to those from Qayrawan which were made of silver and bronze.³⁷ Similar fastenings are also to be noted on Coptic bindings.³⁸ The sizes of the two reconstructed bindings published by Dreiholtz were 13.9 x 20.8cm and 14.2 x 19.8cm, which generally corresponds to the sizes of the types of binding published by Marçais and Poinssot.³⁹

³³ Marçais and Poinssot, *op.cit.*, 1948, Binding no.41, p.113, no. 54, p.125 and no. 91, p.183.

³⁴ Déroche, *op.cit.*, 1986, p. 85–99.

³⁵ Dreiholtz, *op.cit.*, 1997, p.16.

³⁶ *Ibid.*, p.17.

³⁷ *Ibid.*, p.19; Marçais and Poinssot, *op.cit.*, 1948, p.17.

³⁸ Peterson, *op.cit.*, 1954, p.60, Figs. 31 and 32.

³⁹ Dreiholtz, *op.cit.*, 1997, pp.18–23; The average size of the bindings for Qayrawan measured 11.2 x 17cm for bindings of the 9th century, 12.5 x 17.9cm for bindings of the 10th century and 10.5 x 16 cm for bindings of the 11th century in the horizontal format.

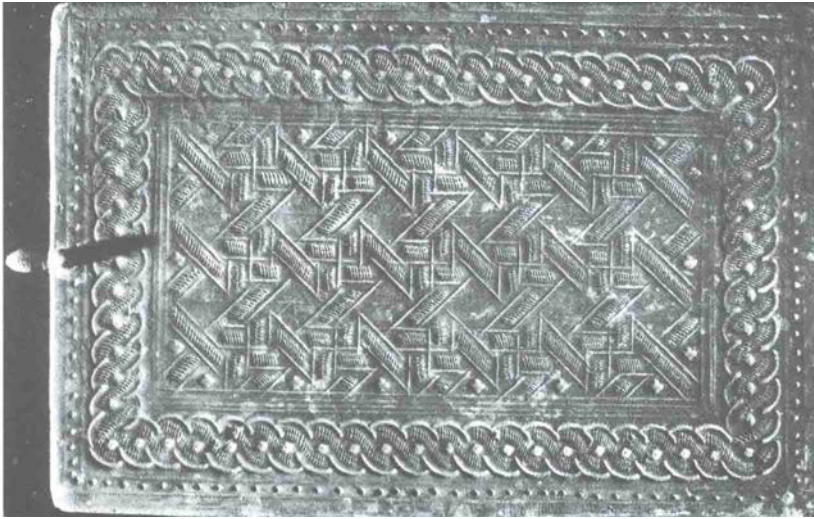


Fig. 3.5: Cover C6 Sana'a with wooden boards 13.9 x 20.8cm. After Dreiholtz, op.cit., 1997, Fig. 2.

By the 11th century a change was beginning to take place. Among the bindings from Qayrawan, 9 of the bindings from the 54 assigned to the 11th century and all those assigned to the 12th and 13th centuries, 30 in all, were higher than they were wide. The sizes for bindings dateable to between the 9th and 11th centuries ranged on average from 11.2 x 17.2cm to 16.4 x 12.4cm and those from the 12th and 13th centuries measured on average 25.1 x 18.1cm, approximately the average size of the Mamluk bindings in this study.⁴⁰

Déroche suggests that this return to the vertical format was the result of a change from the use of parchment to paper.⁴¹ The change may also have been prompted by the adoption of Eastern Kufic script, which makes its appearance in the 10th century, a script that is distinguished by the vertical orientation of its slender strokes. Pasteboards first appear to occur on the bindings from Qayrawan dated to the 10th century and become increasingly frequent until they are used almost

⁴⁰ Marcais and Poinssot, op.cit., 1948, pp.62-282.

⁴¹ Déroche, op.cit., 1992, pp.17-19.

exclusively from the 12th century. The bindings of the 13th and 14th centuries were provided with the addition of a pentagonal flap.

Among the bindings from Sana'a, Dreibholtz described four bindings with a leather button protruding from the tip of the flap and six flaps, offered evidence that such a button was once attached to them too.⁴² Three covers still bore the loop attached to the buttons. This shows another variation in binding techniques where the pentagonal flap folded over the upper cover where it was attached and not placed under it, as subsequently became customary. She suggests that this practice was discontinued when books were stacked on top of one another, as was common in Islamic practice, since stacking would have meant that the buttons and loops would have been snapped off. This very interesting observation by Dreibholtz has not been recorded elsewhere; she wonders if these bindings are evidence of a lost stage of Islamic bookmaking.

By the 13th century the use of the pentagonal flap was established, as shown by the corpus of bindings of Qur'an manuscripts discovered by Ricard in Marrakesh.⁴³ The most significant of these were from a multi-volume Qur'an, of which ten volumes remained. Several volumes contained colophons with the date 654/1256 and were copied for Abu Hafs Umar al-Murtada, the penultimate ruler of the Almohad dynasty who reigned in Marrakesh between 646–688/1248–1266.⁴⁴ Unfortunately, Ricard pays scant attention to the structural

⁴² Dreibholtz, op.cit., 1993.

⁴³ Ricard, op.cit., 1933, and 'Sur un type de reliure des temps almohades', *Ars Islamica*, III, 1934, pp.23–34; Juz' 7 of this Qur'an is in the BL Or.13192.

⁴⁴ Bosworth, *The New Islamic Dynasties*, Edinburgh, 1996, p.39.

details of the bindings, preferring to focus on decorative techniques, but he does record that each binding measured 29 x 22cm and had pasteboard covers with a pentagonal flap.⁴⁵

What can be deduced from these bindings is that the form of the Islamic book underwent several changes between the 9th and 12th centuries before establishing itself in the form that we are familiar with in the medieval period. These developments are further supported by the bookbinding sources on the subject.

From the text of Mu'izz ibn Badis's work entitled *'Umdat al- kuttāb wa-'uddat dhawī al-albāb*, it appears that the type of binding that Ibn Badis is describing is composed of wooden boards without a pentagonal flap.⁴⁶ This description supports the evidence suggested by the bindings dateable to the 9th and 10th century from Qayrawan and Sana'a. The term that Ibn Badis uses for covers is *takht* which, according to Gacek's glossary of bookbinding terms, refers to wooden boards.⁴⁷ Ibn Badis also makes reference to endpapers – the gluing of plain paper to the first and last quires and the boards – as he says that Iraqi binders do not employ this technique.⁴⁸ Endpapers were also found on some of the bindings at Qayrawan, Damascus and Sana'a, and were, undoubtedly, intended to give added strength to the attachment of the covers to the textblock if wood was being used.

⁴⁵ Ricard, op.cit.,1933.

⁴⁶ Ibn Badis, *'Umdat al-kuttāb*, Ms. A.12060, Chicago, Oriental Institute.

⁴⁷ Ibn Badis, *'Umdat al-kuttāb*, Ms. A.12060, pp. 71–2; Gacek, *The Arabic Manuscript Tradition, A Glossary of Technical Terms and Bibliography*, Brill, 2001, p.17.

⁴⁸ Ibn Badis, *'Umdat al-kuttāb*, Ms. A.12060, p.70; Levey, op.cit.,1962, p.43.

The treatise entitled *Kitāb al-taysīr fī ṣināʿat al-tasfīr* of Bakr ibn Ibrahim ibn al-Mujahid al-Lakhmi al-Ishbili covers the techniques in much greater detail than Ibn Badis and represents a period of transition between the use of wooden boards and those with a pasteboard backing.⁴⁹ He distinguishes between codices bound in wooden boards, which were made of cedar wood (*al-maṣāḥif al-mulawwaḥa*) and those made of pasteboard (*al-maṣāḥif al-sifrīyya*). He refers to the envelope flap as *udhn* or ear. He notes that the *muṣḥaf* – a term which more usually refers to the Qurʾan – is a codex consisting of parchment leaves while the *sifr* and *kitāb* have paper textblocks. He also makes reference to parchment quires, which he recommends should be sewn in twos, unlike paper quires which need to be sewn individually.

By the end of the 13th century, there is no further mention in the sources of the preparation of codices with either wooden covers or parchment. In the instructions on bookbinding entitled *al-Mukhtaraʾ fī funūn min al-ṣunaʾ* attributed to Yusuf al-Ghassani, the Rasulid ruler of the Yemen, the author describes the processes involved in making a codex in the vertical format with leather covers on a pasteboard core.⁵⁰

While documenting the changes that occur in the formats and materials that are used in the making of the Islamic book, these sources also provide us with information on the implements that were used, the materials such as the types of wood, adhesives and leather of which they were composed and, finally, the processes that were involved.

⁴⁹ Al Ishbili, *Kitāb al-taysīr fī ṣināʿat al-tasfīr*, ed. ʿAbd Allah Kanun, op.cit., 1959–60; Gacek, op.cit., 1990–1.

⁵⁰ Gacek, op.cit., 1997.

According to the bookbinding sources, there seems to have been little change in terms of the actual binding process and the types of implements used between the 11th to the 16th centuries, although there might have been some variation in the terminology that is used.

Ibn Badis gives a long list of tools, which are described in Bosch's translation.⁵¹ First, there is the *balāṭa* or slab on which the leather and boards are cut, which should be made of good-quality marble. This term is also found in Al-Ghassani.⁵² The whetstone, the *misann* or *ḥajar al-misann*, used for the sharpening of knives, is also referred to by Al-Ishbili, who advises it should be neither too soft nor too hard so that the iron of the tools neither dig into it nor are blunted by it.⁵³

Ibn Badis mentions two types of press, one with a rope twisted with new black hair that is long enough to pass over the press in which the book is placed four times.⁵⁴ (Fig. 3.6) The book is secured between two boards and the rope tied tightly with the aid of a stick. The boards of the press should be grooved so that the rope is channeled into the grooves and a sword used to trim the textblock and avoid cutting into the rope. This method is, he notes, used by the binders of Iraq, Egypt and Khurasan.⁵⁵ The other type of press is the screw-press, which is used by both Byzantines and the people of Iraq.⁵⁶ The screw-press is also mentioned by

⁵¹ Bosch, op.cit., 1952, pp.70-81.

⁵² Gacek, op.cit., 1997, p.59; Al-Ishbili refers to this as *rukhāma*, Gacek, op.cit., 1990-1, p.107.

⁵³ Gacek, op.cit., 1990-1, p.107.

⁵⁴ Levey, op.cit., 1962, p.41.

⁵⁵ Ibid.

⁵⁶ Ibid.

Al-Ishbili and Al-Ghassani who describe it as consisting of two wooden screws and two boards.⁵⁷ The screws and the boards should be made of two different types of wood. Al- Ghassani refers to the use of ebony, myrobalan and tamarind – all hard woods – for the making of the press.⁵⁸

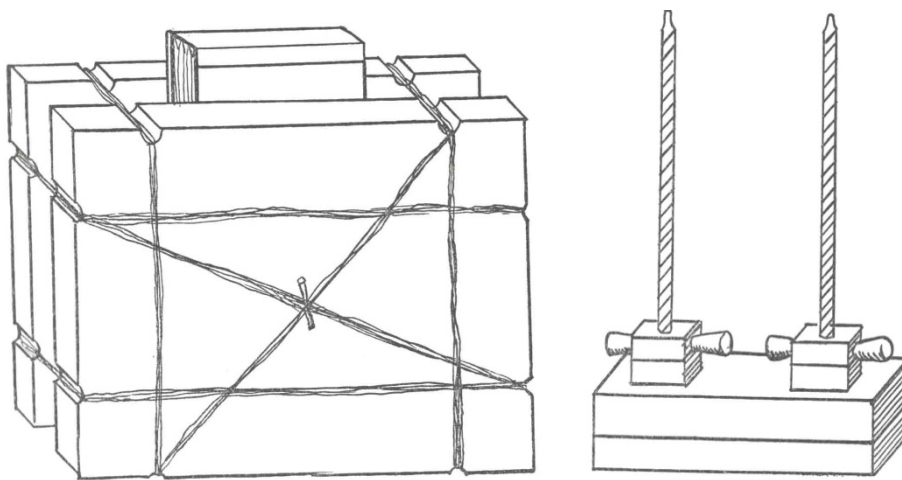


Fig. 3.6: The Screw Press as described by Ibn Badis. After Bosch, op.cit., 1961, pp.1–15, Figs 1 and 2.

Ibn Badis mentions an array of other binding tools: the awl, *al-shifā'*; the scraper, *al-shifra*; the needles, *al-ibar* (of two types: those used for gathering, *ḥazam* and those used for the endband, *al-habak*); the scissors, *al-miqāṣṣ*, the mallet, *al-kāzan*, the sword, *al-sayf* (which should be about 20 inches long); the folders, *qālab* (made of oak wood for stretching and levelling the leather) and the rulers,

⁵⁷ Gacek, op.cit., 1990–91, p.107; Gacek, op.cit., 1997, p.59.

⁵⁸ Gacek, op.cit., 1997, p.59 ; *Terminalia Chebula*, *Retzius*; *Myrobalanus Chebula*, a fruit-bearing tree which is indigenous to India and China. India ink is the product of the bark and the leaves.

al-miṣṭarāt.⁵⁹ These implements, as set out in the 11th century, continued to be used with small variations and few additions.

The problem is that the technical terms used show some variation across regions and throughout time and many of them are not to be found in standard dictionaries. For example, we find the use of *takht* to mean “a wooden board” in Ibn Badis while the term *takht al-ziyār* is used by Al-Ishbili and Ibn Abi Hamidah to refer to the wooden press which is termed the *miṣara* by Ibn Badis.⁶⁰

Likewise, Ibn Badis refers to the marble slab as *al-balāta* while Al-Ishbili uses the term *rukhāma*, Al-Ghassani uses both terms and Al-Sufyani refers to it as *lawḥ al-rukhām*.⁶¹

Before turning to the various stages of the binding processes described in the sources, mention should be made of the use of leather and types of adhesive. Ibn Badis devotes a substantial section of his text to the dying of paper and leathers in a variety of colours including blue, yellow, olive green and red. However, the dominant colour for the leather of all the bindings in this study was brown or dark brown; only three Mamluk examples, dated to the late 15th century, use red leather.⁶²

⁵⁹ Ibn Badis, *Umdat al- kuttāb*, Ms. A.12060, pp.65-68.

⁶⁰ Ibn Badis, *Umdat al- kuttāb*, Ms. A.12060, p. 66 and 77; Gacek, op.cit., 1990–91, p.107; Gacek, op.cit., 1992, p.42.

⁶¹ Ibn Badis, *Umdat al- kuttāb*, Ms. A.12060, p. 65; Gacek, op.cit., 1990–91, p.107; Gacek, op.cit., 1997, p.59; Al- Sufyani, *Ṣināʾat tasfīr al-kutub wa-ḥall al-dhahab*, ed. Ricard, op.cit., 1925, p.6.

⁶² Levey, op.cit., 1962; See the following bindings in red leather TSK.A. 2048, fig. 4.30, A. 2829, fig.4.150 and A.244, fig. 4.31.

He refers to the town of Ta'if in Yemen, which was known for the quality of its leather; leather was consequently exported from Ta'if to all parts of the Islamic world in the 10th century. Ibn Badis describes how gallnuts were used for tanning, giving careful instructions that leather should be washed after tanning so that remnants from the process did not eat into the leather.⁶³

*As to the leather, it should be unspotted, and, if it is imported, Yemenite. It is made differently from Ta'if and like the one made in this district. It is essential that it be clear and pretty of colour. It is nicely tanned so that if it is rubbed in the hand and appears soft, then it is the best. If it is not like that, then it is not good. It should be washed in a warm bath for warmth opens the pores and makes it soft. In the case of imports from Ta'if province, the water should be salty since they tan with salt water. If it is washed with warm water, its oil comes out to enhance its beauty. As for the leather which is Egyptian tanned by the method of the Yemenites using gall nuts, it is washed with sweet water because it is tanned with it. If the leather is for tooling, then it is flexible, light of weight and is less than a mann and well-tanned.*⁶⁴

Ibn Badis devotes several sections in his text to recipes for testing the authenticity of ingredients. He is concerned with improving existing tanning methods and, to this end, includes advice on the use of gall nuts. The effect of gall nuts on leather is made clear by Ibn Badis: if leather is too pliant gall nuts will harden it, if it is too hard they soften it, if too oily, they will remove the oil and if

⁶³ Levey, op.cit.,1962, p.43; Gall is a plant excretion produced in response to irritants released by the larvae of gall insects such as those of the *Cynipidae* family, the gall wasps. The spherical swellings are found in clusters in the dwarf oak. They contain the highest naturally occurring level of tannin and are used as a mordant in the preparation of ink. Pliny mentions that the green gallnuts of Aleppo were an important export.

⁶⁴ Ibid.

the leather lacks fat, they supply the fatty substance.⁶⁵ The majority of the covers of the Qayrawan and Sana'a bindings as recorded by Marcais and Poinssot and Dreiholtz, were made of goatskin.⁶⁶

The great importance of adhesives to the binder is evident from the attention given to them in all of the texts. In the main, adhesives used to secure binding structures were made from various starches, the most common of which were wheat starch, *nashā'*, and asphodel paste, *ashrās*, which are mentioned by Al-Ghassani and Ibn Badis.⁶⁷ Ibn Abi Hamidah, who includes a chapter on adhesives, records that there are three types of adhesive paste: *daqīq aṣṣār*, yellow flour, *nukhālat al-qamḥ*, wheat grains, and *aṣl al-barwāq*, the root of asphodel. All were mixed with water and boiled and, in the case of *barwāq*, the root was dried and crushed before being mixed with warm water.⁶⁸ Al-Ishbili, also mentions *daqīq al-aḥmar*, which presumably is another starch-based adhesive.⁶⁹

The Bookbinding Process

Preparation of the textblock

The first step in making a book was the preparation of the textblock which, as we have seen, could be comprised of parchment, papyrus or paper and, on occasion,

⁶⁵ Ibid.

⁶⁶ Marcais and Poinssot, op.cit.,1948, p.12 ; Dreiholtz, op.cit.,1997, see entries of individual examples.

⁶⁷ Gacek, op.cit., 1997, pp.60-1; Ibn Badis, *Umdat al-kuttāb*, p.70; Asphodel is a member of the lily family; the paste was made from the bulb.

⁶⁸ Gacek, op.cit.,1992, p.41.

⁶⁹ Gacek, op.cit.,1991, p.107.

a mixture of all three. In preparing the textblock, the sheets of paper would be folded producing bi-folios whose spine folds were then inserted into one another. Once the manuscript had been completed by the scribe, it was then ready for sewing, the first stage of the binding process.

Once the manuscript was ready, its edges were trimmed with a trimming sword and shaved. Sewing took place after ensuring the book was properly collated and all its quires marked.⁷⁰

Ibn Badis does not give a detailed description of the sewing process, only saying it can be done by a few methods: one for swiftness, where the needle only pierces the quire in two places and another where there are two or three stitches.⁷¹ He mentions that another sewing method was used by the Byzantines but he is unable to describe it. The thread, according to Ibn Badis, should be fine and well twisted. Al-Ghassani recommends a thin thread made of cotton of five to seven strands. He suggests using two sewing stations with a link stitch with the needle beginning with the last quire.⁷² Once the quires are sewn together, the spine is pounded and placed in a press. The press is placed on the knees and the spine is

⁷⁰ Various methods were used for marking the quires. These are called signatures and one must distinguish between leaf signatures, which indicate the order of leaves within a quire, and quire signatures, which denote the binding order of a series of gatherings. Déroche describes the different positions of quire signatures, noting that, by the 11th century, quires were numbered in the outer corner of the upper margin. This was the only method used from the 13th century onwards. See, Déroche and Waley, *op.cit.*, 2006, pp.90–95.

⁷¹ Levey, *op.cit.*, 1962, p.42.

⁷² Gacek, *op.cit.*, 1997, p.61.

then rounded by manipulating the fore-edge with the fingers to prevent the protrusion of the fore-edge of the text block.⁷³

Al-Sufyani describes wrapping the quires in leather similar to that used in the harem by which, I infer, he means a leather that is thin and soft, and has been pounded with a heavy iron weighing six *raṭl*.⁷⁴ As he says, without pounding the paper does not settle whatever press is used.⁷⁵ After pounding, the quires are adjusted so that they are all aligned. Lines are then drawn on the spine in the places where the book is to be sewn. Al-Sufyani only refers to two lines on the spine, which indicates that only two sewing stations are used. 'If there are many quires so that it appears thick where it is sewn, then pound it where the thread is with a mallet on a slab until the thickened thread is thinned out'.⁷⁶

There is little evidence of sewing techniques used on the bindings of Qayrawan and Sana'a since these are examples of loose covers. At Sana'a only remnants of the sewing threads and endbands were found. The bindings at Qayrawan show that the stitching began by anchoring the thread to one of the board but only half of the covers had two holes for attachment while the rest had no sewing holes, suggesting that the textblock was stuck to the boards by adhesive.⁷⁷ Dreibholtz

⁷³ Szirmai, op.cit., 1999, p.57 notes a flat spine had the tendency to distort and that rounding of the spine might have been a preventative measure.

⁷⁴ Levey, op.cit., 1962, p.51; The *raṭl* was a unit of weight which has various equivalents depending on place, period and material. For example, the *raṭl al-miṣrī* in the 11th century was equivalent to 444.9 grams for bread and meat and 964 grams for honey, sugar, cheese and metals. See 'Makayil' in *Encyclopaedia of Islam*, Volume VI, Leiden, 1991, pp.120–21.

⁷⁵ Levey, op.cit., 1962, p.51.

⁷⁶ Ibid., p.52.

⁷⁷ Marçais and Poinssot, op.cit., 1948.

records the same for the Sana'a bindings but remarks that this may not have been the original way the book was bound.⁷⁸

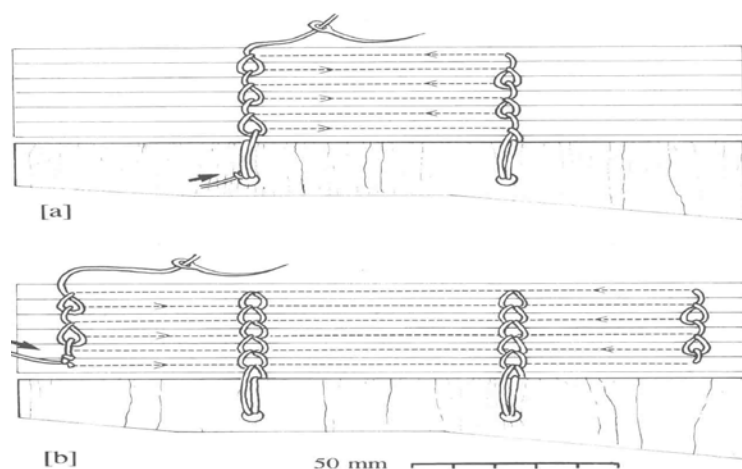


Fig. 3.7: Basic Islamic link-stitch with two and four sewing stations. After Szirmai, op.cit., 1999, Fig. 5.2.

Bosch indicates that Islamic binders used the link-stitch sewing technique, which was also used on Coptic bindings.⁷⁹ (Fig. 3.7) Grohmann also noted a sewing system on an Islamic example that was identical to that of a Coptic binding from Ushmayun.⁸⁰ As Szirmai remarks, the weakness in the construction of the spine required the use of the book cradle, which allows for an opening of no more than a hundred degrees.⁸¹

Lining of the spine

⁷⁸ Dreiholtz, op.cit., 1997, p.22.

⁷⁹ Bosch, Carswell and Petherbridge, op.cit., 1981, pp.45-8.

⁸⁰ Arnold and Grohmann, op.cit., 1929, p.57, (Inv.Ar.Pap.10130).

⁸¹ Szirmai, op.cit., 1999, p.57; David Jacobs, Communication, 2009; He notes that the standards of opening that are applied to modern western books are inappropriate for early link-stitch bindings, which relax and gape between signatures. The sturdy endband serves as a stabilizing element in the structure helping the book to open evenly as well as attaching the textblock to the cover.

Al-Ghassani notes that after the spine has been rounded, it is covered in paste, which penetrates the quires, and is pressed.⁸² It is important that the spine and the fore-edge are of the same thickness. A strip of paper the width and length of the spine is pasted onto it. Over this, another strip of paper that is wider by two fingers than the first one, is pasted over it so that the additional portion forms a hinge. A third strip of paper is, then, placed over this to form a second hinge. The folder is used at each stage to achieve a smooth finish. Two pieces of thick cloth, equivalent to the width of the spine and three fingers long, are then attached to the ends of the spine. The spine is then pasted, evenly, and a tracer is used to draw a pattern of lines, like those of a chessboard, and the book is left in the press to dry.⁸³ Ibn Abi Hamidah, a bookbinder of the of the 9th/15th century, followed the same methods but mentions the use of a file to smooth the edges of the paper after they have been trimmed, while the book was still in the press.⁸⁴

Endbands

After the spine has been lined and the edges of the textblock have been trimmed, endbands are sewn at the top and bottom of the spine. Traces of endbands were found on the bindings at Damascus, Qayrawan and Sana'a and are also found on Coptic codices.⁸⁵ The book is held in the press and a thin strip of leather is placed or glued to the end of the spine which acts as a core for the sewing,

⁸² Gacek, op.cit., 1997, p.61.

⁸³ Ibid.

⁸⁴ Gacek, op.cit., 1992, p.42.

⁸⁵ Szirmai, op.cit., 1999, p.57. Marçais and Poinssot, op.cit., 1948, note endband remnants were found on 23 of the Qayrawan covers with wooden boards. Déroche op.cit., 1995 records the remains of a green endband on one example; Dreiholtz, op.cit., 1997, p.22.

providing a stable base and preventing the primary endband threads cutting into the spine folds of the quire. The initial sewing into the centrefold of the quire with ordinary thread creates a warp and then different coloured silk threads are woven creating the weft, in a variety of patterns. Al-Ishbili mentions eight types of Byzantine endband; the term he uses is *rumi*, which has been interpreted by Gacek to refer to a Byzantine or Greek method.⁸⁶ He gives descriptions of only four of them as he says that the others are too complicated to explain and require demonstration. The first is an endband of one colour, the second has a chessboard pattern, *al-shaṭranjī* with two colours, the third is chevron-like, *al-muḍalla'* and the fourth, called *al-dālī*, is like a trellis.⁸⁷ Al-Ghassani also describes using a leather core for the sewing of the endband, this should be the width of one half of the little finger and one *shibr* long.⁸⁸ According to Ibn Abi Hamidah, the endbands are worked with two different coloured threads and two needles. The thread should be as long as the thickness of the book.⁸⁹

⁸⁶ Gacek, op.cit., 1991, p.109.

⁸⁷ Ibid., p.109.

⁸⁸ Gacek, op.cit., 1997, p.62; a *shibr* is approximately 20cm, Gacek, op.cit., 1997, p. 60.

⁸⁹ Gacek, op.cit., 1992, p.42.

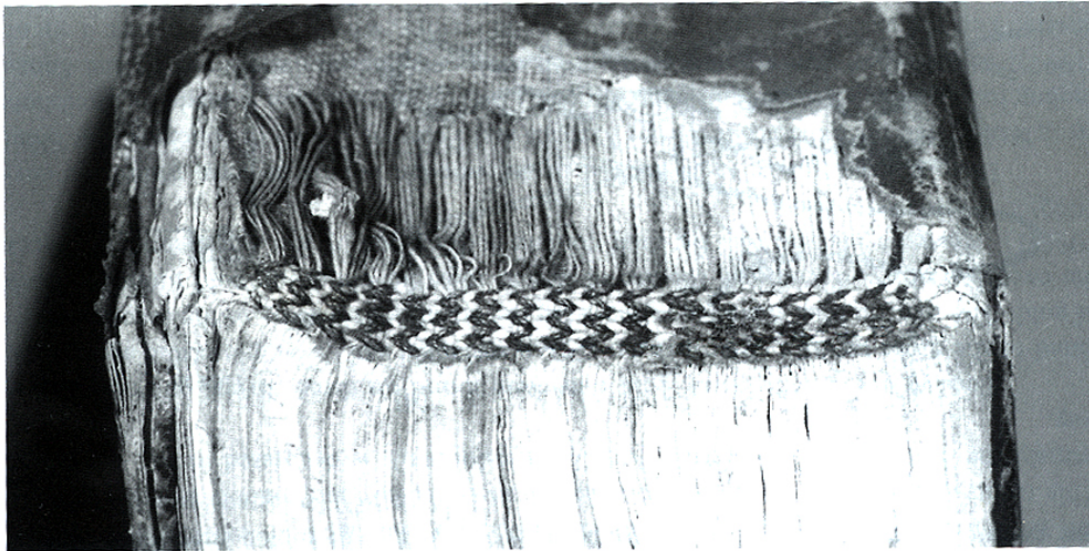


Fig. 3.8: Islamic Endband. After Szirmai, op.cit., 1999, Fig. 5.4.

Al-Sufyani gives clear instructions for the fixing of the endband:

There should be near you gum Arabic dissolved in water like thick honey. From it put some on the head of the quires on the edge under the strip on which the headband was sewn – in the manner that you put a thong on it. The strip itself is of tanned leather, which had been smeared with gum Arabic before that until dry. Start taking the leather strip from it when you need it for the headband. When that gum which you have put on the spine of the book is dry, then the leather strip is wetted with your saliva and put down on that place whereon is the gum Arabic so that the two stick together by the gluing. The needle with thread is inserted into the middle of the right quires after the end of the thread is made fast in the spine of the book in the back side from which place the head of the needle comes out. If you enter it in the middle of the quire, go ahead in the same fashion with the sewing of the quire until you finish on the last quire. Fasten the thread well on the last stitch. The sewing is then inseparable. Complete the remainder, weaving it with coloured

*silk until you complete the work of the headband from two sides. After that fix the cover boards on the book after you have smeared it with glue.*⁹⁰

Preparation of the Covers

Al-Ishbili, writing at a time of transition from bindings with wooden boards to those of pasteboard, notes that when attaching wooden boards, a piece of paper was placed between the board and the leather covering to protect the leather from the moisture in the wood and to act as a padding while the leather was being tooled.⁹¹ He stipulates that it is essential for the flap to lie on the textblock (*maqṭbūʿ alā al-sifr*) so that it would neither need a knob nor a thong to be fastened, but he also makes reference to codices with flaps which were fastened on the upper cover, perhaps a reference to the type earlier mentioned found by Dreiholtz in Sanaʿa which were fastened with a *zamm* or leather thong.⁹²

At the end of the 13th century, Al-Ghassani provides a detailed description of the preparation of the pasteboards for the cover.⁹³ A sheet of paper is pasted with *nashan*, a wheat starch paste, and another sheet is placed on top before they are smoothed and then a dry sheet of paper is placed over these two and they are smoothed with a folder. This last sheet is then removed and a further sheet is added. Between six to twelve sheets can be added, depending on the size and thickness required. In sum, three pasteboards are made, one each for the top and

⁹⁰ Levey, op.cit., 1962, p.53.

⁹¹ Gacek, op.cit., 1990-91, p.109.

⁹² See p. 52.

⁹³ Gacek, op.cit., 1997, p.62.

bottom covers and a third for the fore-edge and envelope flap.⁹⁴ A line is drawn along both sides of the pasteboards once they have dried and three drops of paste are placed along the line, one in the middle and the other two at either end. They are then placed in a press with the spine protruding before being cropped and filed. The flap is prepared in the same way, where the width of the fore-edge flap is the same as the textblock and the pentagonal flap is measured as half of the width of the pasteboard. Once ready, the boards are covered in leather and they are then ready for decoration.

A description, with much the same method, is given by Al-Sufyani, who begins his treatise with the words 'The cover board is the paper board which is covered by the leather of the book'.⁹⁵

The first step in this part of the process, according to Al-Sufyani, is the preparation of the hinges (*jināḥāni*) which are measured according to the dimensions of the book.⁹⁶ The hinges are folded over the spine of the book and over these, three papers are pasted which are then smoothed by the fingers. The book is then left in the press to dry. Al-Sufyani then removes the core from the press and measures two boards to fit it. A third board is cut that is half the size of the right cover and from what remains he makes the fore-edge flap. The right and left boards are temporarily attached to the hinges by three to five drops of paste and the book is returned to the press. He then measures the top and the bottom

⁹⁴ Ibid.

⁹⁵ Levey, op.cit., 1962, p.51.

⁹⁶ Al-Sufyani, *Ṣinā'at tasfīr* ed. Ricard, op.cit., 1925, pp.11–13.

and the fore- edge. The board is covered with leather and then temporarily pasted to the hinges and then the leather cover is decorated.⁹⁷

The Doublures

The final stage of the process was the gluing of the doublures. Marçais and Poinssot record the remains of green and pink silk on the doublures of the bindings of Qayrawan.⁹⁸ Ornamented doublures are also recorded by Grohmann on Coptic bindings dated to the 10th and 11th centuries on vellum and paper.⁹⁹ However, only Al-Ishbili and Al-Ghassani give details of the manufacture of the doublures. Al-Ishbili advises that codices with wooden boards should have strips of parchment inserted between the board and the textblock so they overlap onto the spine, no doubt to provide further reinforcement for the covers.¹⁰⁰ The strip could be glued either onto the doublure or under it. He notes also that codices with pasteboards could have their doublures made of cloth or soft leather. Al-Ghassani advises cutting the doublures to the size of the quire, taking into consideration the fore-edge and envelope flap.¹⁰¹ A sheet of white paper the size of the doublure is cut and then pasted on to it. Then another sheet of paper, which is larger by the size of a small finger, is cut and pasted so the paper and doublure are folded around the back of the first quire. This is done in order to ensure that when the quire is sewn, the endpaper and doublure are sewn with it. This method

⁹⁷ Ibid.

⁹⁸ Marçais and Poinssot, op.cit. 1948, p.142.

⁹⁹ Arnold and Grohmann, op.cit., 1929, pp.50–56.

¹⁰⁰ Gacek, op.cit., 1991, p.109.

¹⁰¹ Gacek, op.cit., 1997, pp.60–61.

seems to suggest that the doublures were sewn to the quires, which differs quite considerably from common practice whereby the doublures were pasted directly on to the covers, often overlapping onto the textblock. Interestingly, no mention is made of the use of block-printed doublures or their decoration.¹⁰²

Once this stage had been completed the covers were ready for decoration.

Techniques of Decoration: Finishing

The relationship between the decoration of Coptic and early Islamic bindings has been discussed at length in several publications.¹⁰³ As early as the 4th century, the wooden boards of Coptic codices were covered in leather which was decorated with the impressions of small tools, impressions which were then left blind or inked in or painted as an ornament.¹⁰⁴ By the 7th and 8th centuries a design format had been established for Coptic covers that is also found on Islamic bindings. The design scheme was comprised of a panel with a central design element (usually a cross) around which interlacing bands formed circles, stars and diapers. The borders of the panel were delineated by plain lines, zig-zag bands or densely interlaced knotwork. The interstices of the design were tooled with small stamps. On some of the bindings corner-pieces were used with design elements projecting into the central field or with the corners cut at right angles to the borders, and filled with blind tooled knots. This centre–corner

¹⁰² See Ch. 4 for block-printed leather doublures.

¹⁰³ Petersen, op.cit., 1954, pp.41–64; Ettinghausen, op.cit., 1959, pp.113–31.

¹⁰⁴ Petersen, op.cit., 1954, p.55; Inked ornament is found on the 6th century Psalter codex, CBL, Coptic C and on the 8th century Greek *Poll-tax book*, British Museum, Papyrus Inv.1442. The techniques of ribbon threading and sewing were discontinued with advances in tools.

piece arrangement of tooled ornament provided the basis for the decorative schema used on Islamic bindings. Other techniques were also employed such as open leatherwork on a background of gilded parchment, ribbon threading, stitching, punching along with decorated endpapers.¹⁰⁵ For example, a Coptic binding in the Pierpont Morgan library illustrates many of these techniques.¹⁰⁶ (Fig. 3.9) An applied filigree panel cut from a single piece of red-dyed sheepskin was sewn to a gilded parchment background. The border bands contain strips of white vellum laced through parallel slits (ribbon threading). Of note also in the binding illustrated below is the organization of the design: the use of interlacing ornament around the central motif of a cross and the presence of corner-pieces. The techniques of ribbon threading and cut leatherwork have not, however, been found on the extant bindings from Damascus, Qayrawan and Sana^ca.



Fig. 3.9: Front cover of a Coptic binding dateable to the 7th or 8th century, Pierpont Morgan Library, Ms. M. 569, 38.7 x 30.3cm. Image Pierpont Morgan Library.

¹⁰⁵ Decorated endpapers are recorded by Arnold and Grohmann, op.cit., 1929, pp.37–58.

¹⁰⁶ Binding of Ms. Morgan 569, *The Four Gospels*, 38.7 x 30.3 cm, dateable to the 7th or 8th century.

Comparisons can also be drawn with Byzantine and early Greek manuscripts in terms of layout and the tools that were used to make the covers.¹⁰⁷ A further binding tradition existed of which there is only very fragmentary evidence of their decoration. Le Coq, while excavating in Turfan, found two fragments of bindings tentatively dateable to the 8th or 9th centuries that are thought to be Manichaean.¹⁰⁸ Both these fragments exhibit the same techniques of tooling, cut leather and gilding which, as noted above, are also found on Coptic bindings of the same period and indicate that these book binding techniques were not confined to Coptic codices. The central field of one of the fragments was decorated with geometrical designs made up of circles and lozenges and surrounded by a band of rings made with a punch.¹⁰⁹

It is difficult to trace developments and techniques in binding decoration that occurred in the early Islamic period because of what has been termed the 'universal style' of early Islamic bindings.¹¹⁰ The bindings from Damascus, Qayrawan and Sana'a all demonstrate the use of the same techniques for decoration and organization of the ornament. The early box-bindings from Damascus employ tooled decoration set within a central panel surrounded by

¹⁰⁷ Van Regemorter, 'La Reliure des Manuscrits Grecs', *Scriptorium*, VIII, 1954, pp.3-23; 'La Reliure Byzantine', *Revue Belge d'Archéologie et de l'Histoire de l'Art*, XXXVI, 1967, pp.99-162; Dreiholtz, op.cit.,1993, also noted the use of a bird head stamp on a Qur'an cover in Sana'a which is similar to those found on Byzantine bindings.

¹⁰⁸ The fragments are now in the Völkerkundemuseum in Berlin. These have been published by A. von le Coq, *Die Buddhistische Spätantike in Mittelasien*, Vol.II, Berlin, 1923, pp.17, 40, Pl.IVc; See also Ettinghausen, op.cit.,1959, pp.113-131; Gulácsi, *Medieval Manichaean Book Art*, Leiden, 2005.

¹⁰⁹ See fig. 4.140 for example of Manichaean bookbinding.

¹¹⁰ Ettinghausen, op.cit.,1954, p.472.

tooled borders. On three examples, the central panel consists of zig-zag lines created by a series of hatchings such as those are found on the box binding from the Staatsbibliothek, Berlin which has already been illustrated.¹¹¹

One of the bindings from Damascus displays embossed decoration achieved by tooling the design on the wooden boards and overlaying it with thin cords soaked in glue that are then covered with another layer of leather.¹¹² The pattern left by the underlying cords was accentuated by running a tooled line along the profile of the design so bringing it into more defined relief. This technique was also found on nine of the 11th century bindings from Qayrawan.¹¹³ Four of the covers employed large palmettes set within a circle with pendants at either end with large leaves extending to the four corners of the central panel. (Fig. 3.10) The palmette form bears a striking resemblance to the marginal ornament found on Qur'an folios attributed to the 7th or 8th century.¹¹⁴ Marçais and Poinssot assert that this technique was invented in Qayrawan where it ceased being used in the middle of the 11th century.¹¹⁵ It is also, however, found on a Syriac cover and, although no extant examples have been found on Coptic bookbindings, the technique has been recorded on other examples of Egyptian leatherwork.¹¹⁶

¹¹¹ Déroche, op.cit., 1986, p.96, see fig. 3.4.

¹¹² Déroche, op.cit., 1986, p.92.

¹¹³ Petersen, op.cit., 1954, p.51.

¹¹⁴ Moritz, *Arabic Paleography*, Cairo, 1905, pls.15-16.

¹¹⁵ Marçais and Poinssot, op.cit., 1948, p.22, Qayrawan binding, No. 119a.

¹¹⁶ Petersen, op.cit., 1954, n. 10, p. 51, notes that this technique has not been found on extant Coptic bindings although it is found on other examples of Egyptian leatherwork. He cites as an

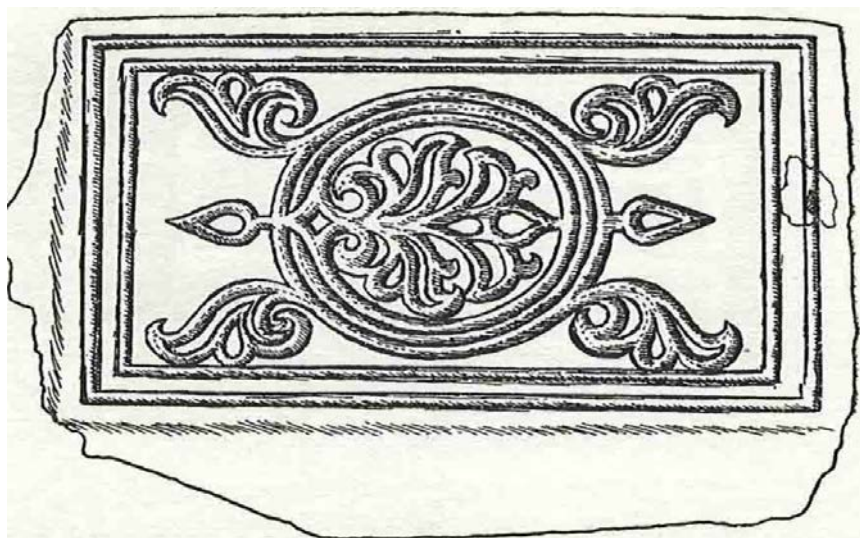


Fig. 3.10: Qayrawan Binding No.119a, dateable to the 11th century. After Petersen, op.cit., 1954, Fig. 18.

The bindings in Qayrawan used many decorative elements including cable designs arranged in interlace patterns with triangular, quadrangular, hexagonal and pentagonal patterns (Fig. 3.11). These interlacing patterns also occur on Coptic bindings of the 7th and 8th centuries as framing devices for the borders of the central panel and Petersen notes that they are almost identical to patterns found in the wall paintings of the Coptic monastery of Bawit.¹¹⁷ Similar cable designs were also found on one of the box-bindings from Damascus and on the

example a saddle in Ettinghausen's collection (now in the Walter's Art Gallery) that has clear signs of cords protruding from behind the leather. Ettinghausen, op.cit., 1954. p.119, Fig. 4, published the same example and dated it to the 7th or 8th century. The same technique was used for the covers of the Stonyhurst Gospel, which is thought to have been made in Northumbria at the time of the death of St Cuthbert in 687. Recent studies by Bloxam and Rose, Lecture, 2007, have, however, suggested that gesso was used rather than cords, although this cannot be proved; Another example is found on a Syriac manuscript dated to the 8th or 9th century, Chester Beatty, Syriac, No.2. See, Van Regemorter, 'La Reliure des manuscrits de St. Cuthbert et de St. Boniface', *Scriptorium*, Vol. III, 1949, pp. 46-7 and 'Le codex relié depuis son origine jusqu'au Haut Moyen Age', *Le Moyen Age*, Vol. 61, Brussels, 1955, pp.1-12.

¹¹⁷ Petersen, op.cit., 1954, p.47; The Coptic monastery at Bawit is situated 15 kms from Dariut and was founded between 385-390. The wall-paintings are now in the Louvre in Paris and the Coptic Museum in Cairo.

bindings from Sana'a.¹¹⁸ Dreibholtz notes the twisted rope or cable pattern was achieved by the use of three stamps: a curved one for the outline, an oval stamp for the centre and hatching to achieve a cording effect.¹¹⁹

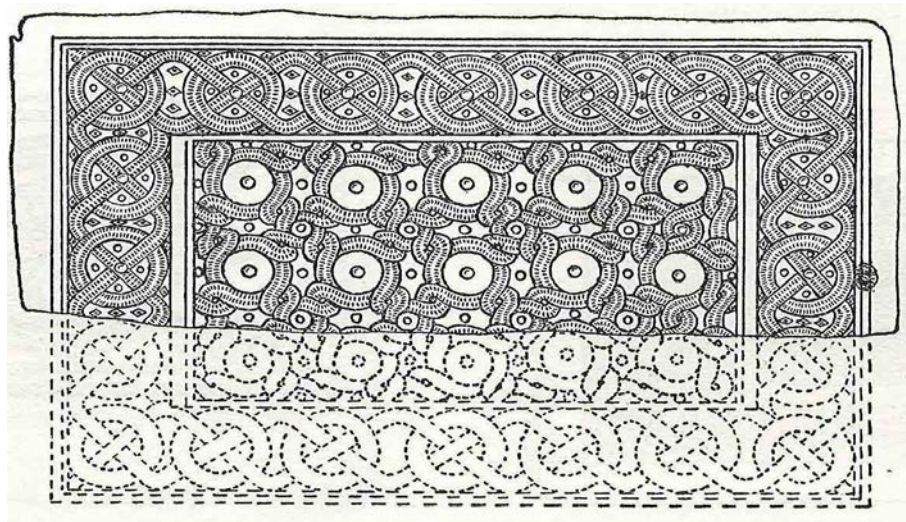


Fig. 3.11: Qayrawan binding No. 28, 19 x 27.6cm. After Petersen, op.cit., 1954, Fig. 15, p.49.

The bindings from Qayrawan and Sana'a also included eulogies tooled in the blind in Kufic script on the central panels and were dateable to the 9th century.¹²⁰ On the binding published from Sana'a, the central panel reads *al-mulk li-Llāh*.¹²¹ The outline of the letters was tooled in a single outline and then filled with perpendicular hatchings.¹²² (Fig. 3.12)

¹¹⁸ Déroche, op.cit., 1986, fig. 2, p. 97, Şe 23, 7.1 x 11cm; Dreibholtz, op.cit., 1997, fig.2, p.18.

¹¹⁹ Dreibholtz, op.cit., 1997, p.19.

¹²⁰ Petersen, op.cit., 1954, p.48 Fig.10; See fig. 3.12, this binding reads *mā shā* on the upper cover and *Allāh* on the lower.

¹²¹ Dreibholtz, op.cit., 1997, p.23 and Fig.7.

¹²² Ibid.

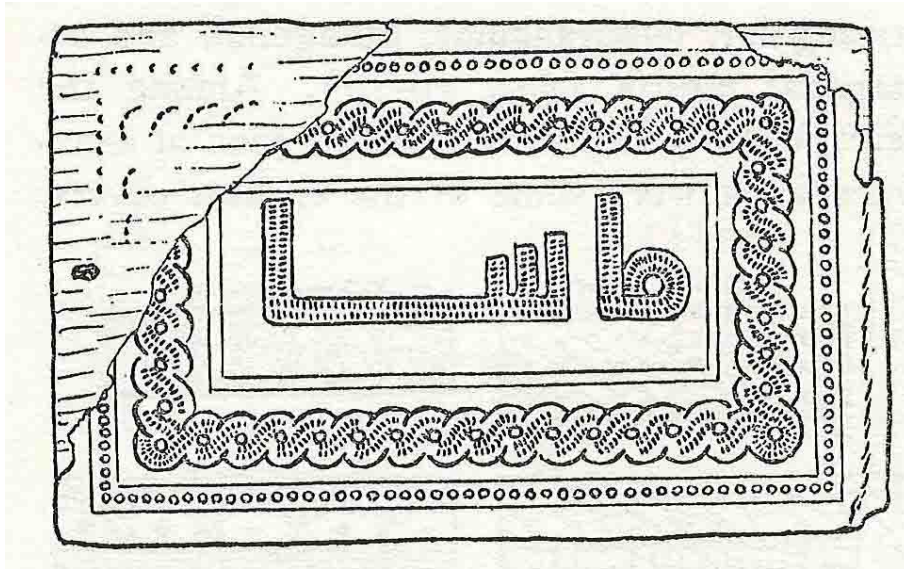


Fig. 3.12: Qayrawan binding, 1a, 8.3 x 11cm. After Petersen, op.cit., 1954, Fig. 10, p.48

In addition to tooled decoration, epigraphic stamps – usually invoking blessings of some sort – were found on bindings from Qayrawan and Sana'a dated between the 9th and 10th centuries.¹²³ A similar stamp was published by Grohmann on a binding he attributes to 10th and 11th century Egypt.¹²⁴

Bosch also records several bindings with epigraphic stamps that she assigns to South Arabia, including stamps bearing the name of the binder.¹²⁵ These bindings contain Zaidite manuscripts belonging to the 15th century and as she points out may be the continuation of a tradition established for Fatimid bookbindings when

¹²³ Dreiholtz, op.cit., 1997, p.31 gives examples of the blessings contained in these stamps. One example is similar to that found at Qayrawan although she gives the reading *thiqatī bi-llāh* ('My trust is in God') while at Qayrawan, the interpretation was *baqā bi-llāh* ('Permanence belongs to God'), Marçais and Poinssot, op.cit., 1948, Fig.58, p.335.

¹²⁴ Arnold and Grohmann, op.cit., 1929, p.49, Pl.XXIV; this reads *Allāh ḥasbī*.

¹²⁵ Bosch, Petherbridge and Carswell, op.cit., 1981, Cat.10 with '*amal Ismā'īl*', a repeat stamp used on the border, Cat.30 with '*amal al-Rabī'*' on the border, Cat.31 with '*amal Amīn*', Cat.32 with 'Alī at the centre of the panel, Cat.35 with *ḥamdan* as repeated impressions on the border, and *Allāh ḥasbī* at the centre on one stamp, and again in the corner-pieces, Cat.36 with a stamp reading *ḥamdan* on the border and '*amal Amīn*' at the centre.

Ismā'īlī missionaries fled from Egypt to South Arabia after the downfall of the Fatimid caliphate in 567/1171.¹²⁶

The 240 stamps identified on the bindings of Qayrawan were used for the borders of bindings and to fill the interstices of the design on the covers. (Fig. 3.13) They include small rosettes, almonds, hearts and diapers. Petersen notes that the stamps illustrated below in line A, a–k were used on Coptic bindings (Fig. 3.13).¹²⁷ Dreibholtz has also published a series of possible small stamps used on one of the bindings from Sana'a though, as the leather had deteriorated to a great extent, it was very difficult for her to discern their exact design. What she has represented is, however, identical to several small tools from Qayrawan.¹²⁸ (Fig. 3.14)

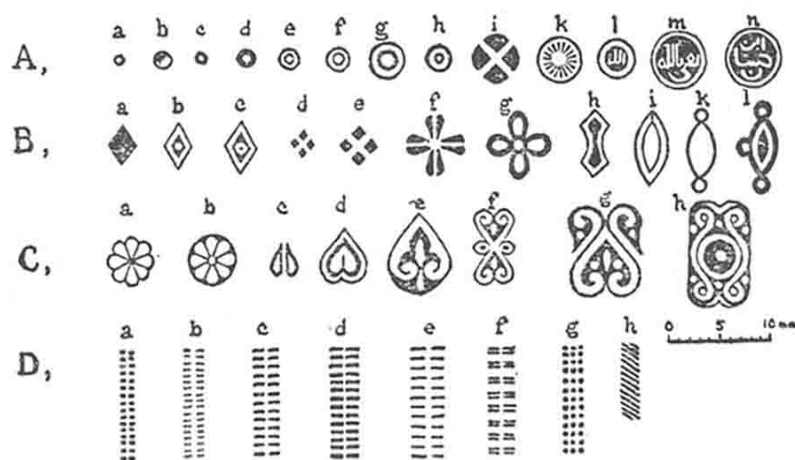


Fig. 3.13: Stamps from Qayrawan. After Petersen, *op.cit.*, 1954, Fig. 20.

¹²⁶ Bosch, *op.cit.*, 1952, pp.152–3.

¹²⁷ Petersen, *op.cit.*, 1954, p.51.

¹²⁸ Dreibholtz, *op.cit.*, 1997, Fig. 8.

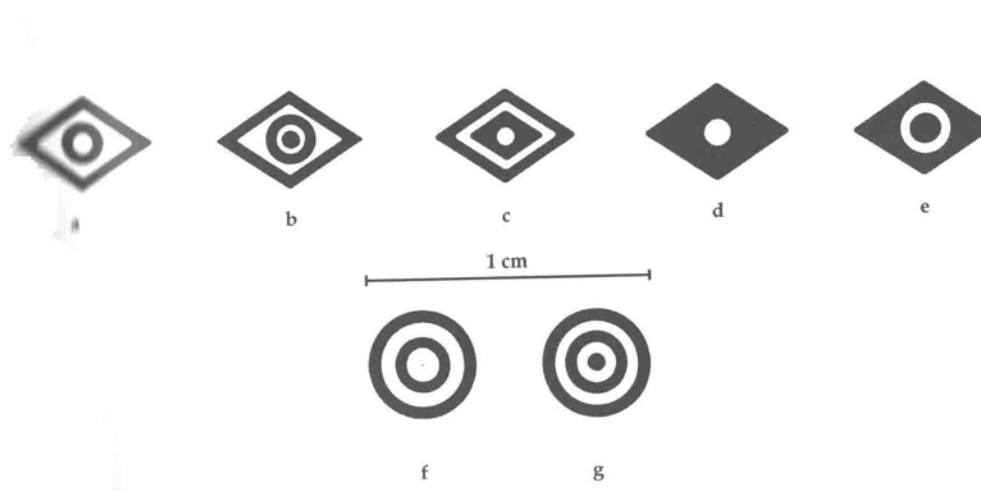


Fig. 3.14: Variations of possible stamps used for the borders. After Dreiholtz, op.cit., 1997, Fig. 8, p.25.

Two stamps illustrated below are found on bindings dated to the 13th century by Prosper Ricard in Morocco.¹²⁹ (Fig. 3.15) Stamp A also occurs on bindings from Qayrawan (see fig. 3.13, line C, g) on a binding and endpaper which Grohmann dates on paleographic grounds to the 11th or 12th century¹³⁰ and on a textile printing block dateable to the 10th century now in the Metropolitan Museum in New York.¹³¹ Its use continues into the Mamluk period as it appears on several borders in the Chicago catalogue and on bindings in this study.¹³² Stamp B also occurs on the bindings from Qayrawan (Fig. 3.13 line C, e) and on Mamluk bindings in this study; a continuation that testifies to a persistence in the use of certain tools over very long periods of time.

¹²⁹ Ricard, op.cit., 1933, p.119.

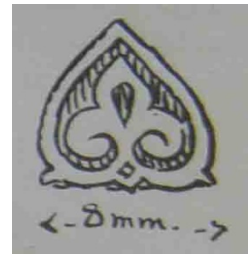
¹³⁰ Arnold and Grohmann, op.cit., 1929, pp.49–50 mention that it also occurs on a binding published by Gratzl, op.cit., 1924, Pl.XIV.

¹³¹ Metropolitan Museum, New York, Inv. 1971–87, textile printing block dated to the 10th century.

¹³² See Appendix 2. no. 14 and 24.



Stamp A



Stamp B

Fig. 3.15: Stamps used on 13th century bindings, Morocco. After Ricard, op.cit., 1933, p.119, Fig. 13.

Ettinghausen has published one binding which he tentatively dates to 11th century and assigns to Fatimid Egypt.¹³³ (Fig. 3.16) It is in the horizontal format, with an oval-shaped central medallion on a plain leather background.¹³⁴ The binding has yellow and pink dot punches at various points on the design that he regards as a forerunner of gold tooling, which will be discussed in greater detail below. The use of yellow and pink is extremely unusual and, to my knowledge, has not been recorded on any other binding. The binding also has triangular corner-pieces, which, he states, are the earliest example of their kind, although they are, however, found on Coptic bindings dateable to the 8th and 9th centuries.¹³⁵ This binding shows the use of the centre–corner-piece arrangement which is the standard layout for later Mamluk bindings.

¹³³ Ettinghausen, op.cit., 1959, p.121.

¹³⁴ Ibid., p.121 and Fig.5, No.34 in the Walters Art Gallery.

¹³⁵ See for example, Petersen, op.cit., 1954, Fig. 25, Binding of Ms. Morgan 601, *Catholic Epistles*, dateable to the 9th or 10th century.

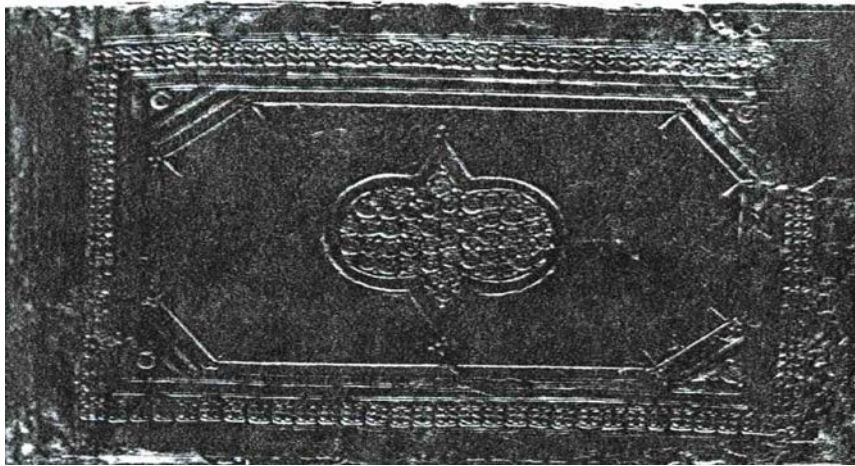


Fig. 3.16: Cover attributed to Fatimid Egypt, 11th century. After Ettinghausen, op.cit., 1959, Fig. 5, Pl.3.

The bindings from Marrakesh published by Ricard dated to the 13th century show the development of the ornament in this period and, as such represent the first appearance of the designs that occur on early Mamluk bindings.¹³⁶ (Fig. 3.17) The covers of the 30-volume Qur'an copied in the year 654/1256 by the penultimate Almohad sultan Abu Hafs Umar al-Murtada provide a dated example of an early interlace pattern based on eight-pointed stars.¹³⁷

¹³⁶ Ricard, op.cit., 1933, pp.107–27; *Juz' 7* of this Qur'an is now in the BL Or. 13126.

¹³⁷ Ibid., pp.111–12. Colophons were found on *Juz' 4* completed on 13 Rajab 654 / 27th July, 1256, *Juz' 9* which was completed after the Friday prayer in Sha'ban 654/August 1256 and one other volume (unfortunately Ricard does not give the volume number) completed after the morning prayer on the 1st Ramadan 654/22nd September 1256.



Fig. 3.17: Front cover of *Juz' 7* of a Qur'an from Marrakesh dated 654/1256, BL Or.13126. After Baker, *Qur'an Manuscripts*, London, 2007, Fig. 66.

The design, as Ricard has shown, was created on a square grid which was marked off in divisions of five squares with connecting lines drawn across the grid in order to complete the pattern.¹³⁸ The straps remain plain while the background of the design was gold tooled and made up of punches, arcs and pallets. (Fig. 3.18).

¹³⁸ Ricard, op.cit., 1933, Fig.1.

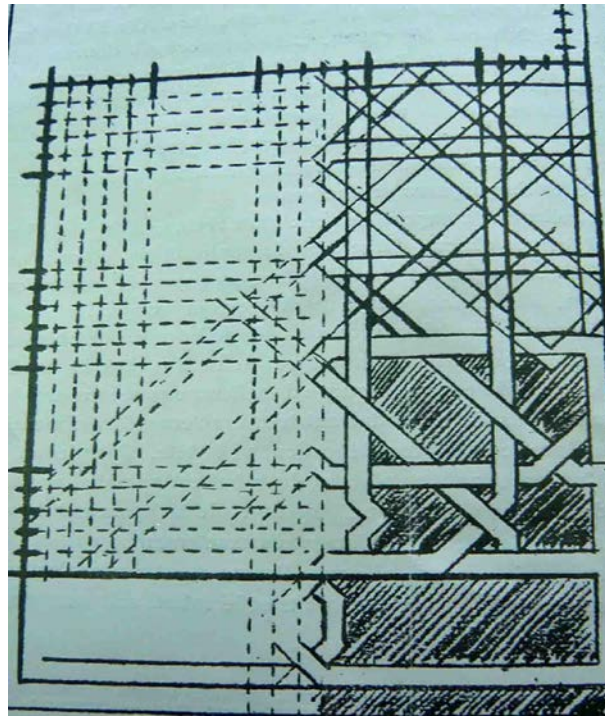


Fig. 3.18: Design for binding cover based on a square grid. After Ricard, *op.cit.*, 1933, Fig. 1.

The second group of bindings was undated and their designs were composed of single stars and rosettes, whose profiles are marked by the same broad straps on a plain background or repeat patterns of eight-pointed stars on a background of densely tooled work, a decorative pattern which was also found on the dated volumes. (Fig. 3.19) The ornament on these covers can be divided into two categories: those with an all-over tooled pattern and those with a central design element on a plain leather background, both of which constitute the design layout of the Mamluk bindings that form the basis for this study. Some of the covers had defined corner-pieces while the corners in others were marked by a single gold-tooled punch. Likewise, some of the bindings had densely tooled borders on all four sides while the tooled borders on others were reduced to two, either at the head and tail of the cover or either side of the central panel.

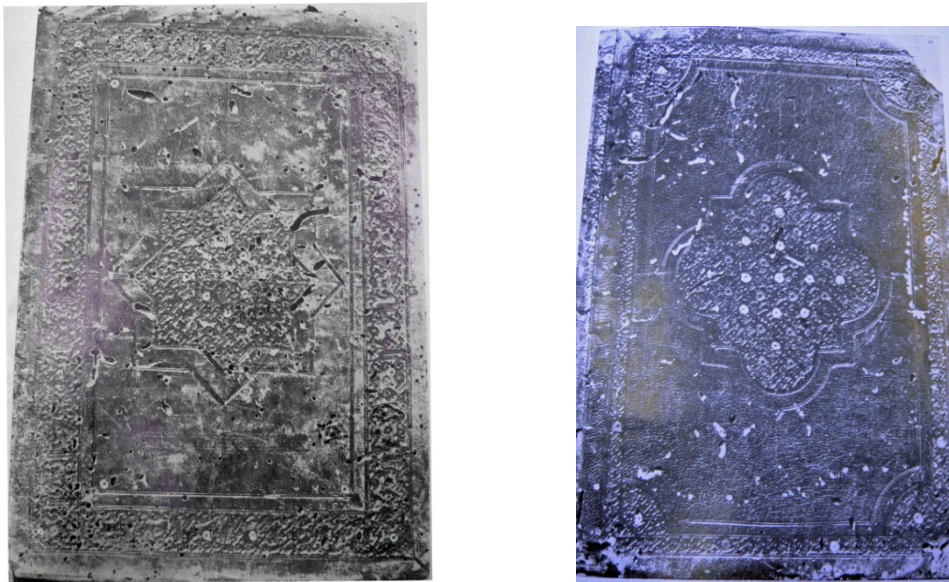


Fig. 3.19: Front covers of bindings from Marrakesh dated to the 13th century with star pattern and rosette. After Ricard, op.cit., 1933, Figs. 3 and 4.

These bindings from Marrakesh can be said to represent developments in binding decoration that had taken place by the 13th century and, as such, are the precursors of the organization and types of ornament that are found on early Mamluk bindings.

In turning to the information contained in the sources, the typical cover design, according to Al-Ishbili, should consist of interlace, *qīrs*, with either a circle or four, six, or eight-pointed medallion at the centre.¹³⁹ The outer border should consist of one or several lines and the number of frames could number from one to five which could also be filled with interlace. The compartments or *buyūt* should be filled with a variety of smaller tooled designs such as the pallet, the gouge or the dot. He recommends that the first frame should always be filled with chainwork.

¹³⁹ Gacek, op.cit., 1990-91, p.110.

The decoration of the flap should be symmetrical with that of the cover and could consist of a medallion surrounded by a *tābūt*, which refers to the frame.¹⁴⁰

Once the covers had been attached to the textblock and the leather glued on to them, they were ready for decoration. Al-Ishbili and Ibn Abi Hamidah, recommend that the book is decorated after it has been covered while Al-Sufyānī stipulates that the leather should be decorated before it is attached to the covers.¹⁴¹ Before embarking on the layout for the design, a folder (*niṣāb*) was used to work the leather to force the air out and make it smooth. Ibn Badis describes the various tools for drawing out a design: the straight-edge made of ebony or boxwood for drawing, inking and lining; two rulers, one for designing and the other for *takḥīl*, possibly meaning the heavy outlining of the design and the compass used for the drawing of the “ ‘suns’ which are the circles in pretty drawings in the middle of the book”.¹⁴² Al-Ghassani describes using a compass (*bīkāṛ*) to construct two diagonal lines from the left and right-hand corners to centre the design.¹⁴³ A circle or eight or six-pointed star for the central medallion may then be drawn. Only Al-Sufyānī, writing in the 17th century, provides a description of the processes involved in the decoration of bindings.¹⁴⁴ He says:

¹⁴⁰ The meaning of *tābūt* is box, case or chest which must, in this case, refer to the outer frame enclosing the decoration of the flap. Wehr, *A Dictionary of Modern Written Arabic*, Wiesbaden, 1971.

¹⁴¹ Gacek, op.cit., 1990-91, p.109; Gacek, op.cit., 1992, p.42; Levey, op.cit., p.55.

¹⁴² Ibn Badis, *Umdat al-kuttāb*, Ms. A.12060, p.68; Gacek, op.cit., 2001, p.123, gives the meaning of *takḥīl* as outlining. The word is derived from *kuḥl*, or antimony, used for the outlining of eyes and maybe used to describe the darkening effect that tooling has on the leather.

¹⁴³ Gacek, op.cit., 1997, p.63.

¹⁴⁴ Levey, op.cit., 1962, p.55.

*You take the pared skin and smear it with strong glue on both sides. Then you place two unpared skins on it, smeared with glue on the inner sides. Leave it until it has dried. Apply on it a sheet of paper on which is marked with ink any design which you wish to use. This is done by taking a sheet of thin paper, wetting it with your saliva, leaving it until the saliva is absorbed. Press that sketch, whatever it is you wish to draw – a design, an illustration or anything else relating to the book – with your thumb and your finger. Outline the sketch on it, remove it, and leave it until it dries. Outline it in pen and ink until the design is visible. When you have glued it on the previously mentioned leather, and it has dried, follow the sketch and the impression of the described drawing with a mubazif like that of the blood leather. To decorate make the impression on moistened leather to reproduce the design. If there are any blank spots on the work, fill them in. Try other leather also until the work pleases you.*¹⁴⁵

Once the outlines of the design had been prepared, the covers were ready for tooling. Tooling in the blind or in gold formed the basis of the bookbinder's craft. Tools for blind tooling are cut in intaglio like a die or a seal, while those used for gold tooling are cut in flat relief.¹⁴⁶ Ibn Badis, the earliest of the sources on bookbinding techniques, mentions the *lawzah* (almond-shape tool), the *ṣadr al-bāz* (breast of the falcon), the *nuqṭah* (dot), *khālīdī* (ornament), and the *mudawwara* (the encircled).¹⁴⁷ These simple tools are not described in any detail

¹⁴⁵ Levey, op.cit., 1962, p.55.

¹⁴⁶ Szirmai, op.cit., 1999, p.249, makes the point that in the early period of gilding in Europe either type of tool was employed. This may have been the case with Islamic bookbindings. Unfortunately, no examples of small Mamluk tools have come to light in collections.

¹⁴⁷ Ibn Badis, *Umdat al-Kuttāb*, pp.155–6; *lawzah* is translated in Levey, op.cit., 1962, p.48 as the gouge which refers to a curved line tool; Gacek, *The Arabic Manuscript Tradition, A Glossary of Technical Terms and Bibliography*, Leiden, 2001, p. 131, translates *khālīdī* as an oval shaped tool and *ṣadr al-bāz* as the breast of a falcon, ibid., p. 83. Bosch, 1952, p.78, n.4 refers to the entry by R.

by Ibn Badis.¹⁴⁸ Al-Ishbili mentions tools (*tawābi'* and *ḥadā'id*) and stamps (*khawātim*) for both gold and blind tooling.¹⁴⁹ These can be broadly divided into tools for geometrical and vegetal designs. The corner-piece he calls *rukn*, as does Al-Sufyani,¹⁵⁰ the fillet or line *ṭarīq*, the medallion *lawzah* and two stamps called *ʿushar*, which Gacek describes as some sort of Eurasian vine, one of which has no incised design and served for the application of gold.¹⁵¹ He names other stamps which have equally evocative names such as the *waraqqa* (vine leaf), *qamḥa* (wheat grain), *saḥaṭ* (fish scales) and *mulamlimah* (the elephant's tusk). The names of tools are also given in Al-Ghassani's treatise of the late 13th century, and have similar names.¹⁵² Al-Ghassani refers to the *lawzah* (almond), *ṣadr al-bāz* (breast of the falcon), *nuṣṭah* (the dot) and the *nuṣṭah kabīra li-buyūt al-lawzah* (the tool for decorating the interstices of the compartments of an interlace design). He also specifically mentions tools for gold tooling such as the *nuṣṭah lil-tadhhīb* (dot for gold tooling).

Ibn Hamidah, writing in the middle of the 15th century, describes tools – *marāshim* – as the pallet, (*naṣh*), the gouge (*raf*), the dot (*nuṣṭah*), the circle

Dozy, *Supplément aux Dictionnaires Arabes*, Vol. I Leiden, 1881, p.822 where *ṣadr al-bāz* is used to refer to black or Saracen wheat because the white flowers are reminiscent of the shape and colour of the breast of the falcon. Bosch makes the point that this probably refers to the heart or palmette shaped tool as wheat of the black variety has heart-like arrow shaped leaves. As this term is used by Ibn Badis and Al-Ghassani, it suggests that it was well-known to binders and may refer to the tool illustrated in Fig.3.15, Stamp B. which resembles the feather configuration of a falcon's breast.

¹⁴⁸ Levey, op.cit., 1962, p.42.

¹⁴⁹ Gacek, op.cit., 1990-1, p.109 says the range of tools given by Al-Ishbili for vegetal decoration are so numerous that it is very difficult to work out their precise meanings.

¹⁵⁰ Al-Sufyani, *Ṣinā'at tasfīr al-kutub wa-ḥall al-dhahab*, Ricard, op. cit., 1925, p.26.

¹⁵¹ Gacek, op.cit., 1990-1, p.109.

¹⁵² Gacek, op.cit., 1997, p.59.

(*sukūn*) and the stamp (*tābi'*) in the shape a fish (*ḥūt*) used for the centre-piece design, which must be a reference to the almond profile that was commonly used on Mamluk bindings by the middle of the 15th century.¹⁵³

There is still much discussion on whether hot or cold tools were used. Marçais and Poinssot were of the opinion that heated tools had been used because impressions of tools were found on the wooden boards of the early bindings of Qayrawān where the covers had been damaged.¹⁵⁴ Dreibholtz, who trained as a bookbinder, agreed with this conclusion in her examination of bindings in Sana'a as she notes that the tooling was done with a great degree of precision that could only have been achieved with the use of heated tools.¹⁵⁵ Al-Ishbili states that heated tools were used since he says tools were made from iron and needed to be cooled in fresh water after use.¹⁵⁶ Bosch et al., however, maintain that the tools were applied cold on dampened leather.¹⁵⁷ This was the method suggested by Petersen for Coptic covers.¹⁵⁸ Szirmai remarked that extant examples of tools dating from the 18th century, which are in the catalogue of bindings at the Victoria and Albert Museum, had metal shanks and no handles, making them impossible

¹⁵³ Gacek, op.cit., 1992, p.42.

¹⁵⁴ Marçais and Poinssot, op.cit., 1948, pp.340–41.

¹⁵⁵ Dreibholtz, op.cit., 1997, p.30.

¹⁵⁶ Gacek, op.cit., 1990-1, p.110.

¹⁵⁷ Bosch, Carswell and Petherbridge, op.cit., 1981, p.68.

¹⁵⁸ Petersen, op.cit., 1954, p.56; Petersen makes this assumption on the judgement of Adam and Ibscher who examined the Coptic bindings in the Berlin Museum. According to Petersen, the leather for Coptic bindings was decorated before being applied to papyrus covers as this material was too fragile to withstand the pressure of tooling and hammering.

to hold when heated.¹⁵⁹ However, Al-Ghassani, in his instructions for bookbinding, mentions that each tool or stamp has a handle, which he terms *nişāb*.¹⁶⁰ Experiments have also revealed that successful tooling can be carried out between 20°C and 80°C and that, together with the length of time that localised pressure is applied to the tool, one of the key factors for success is the type and quality of the leather.¹⁶¹ The experiment therefore seems to suggest that both methods were used by bookbinders.

Following the findings of Paul Adam and Kemal Çiğ, there has been some suggestion in the literature that tools were made of hardened camel leather and there is evidence for such tools, as those in the Victoria and Albert Museum demonstrate.¹⁶² (Fig. 3.20) The early bookbinding sources do, however, specifically refer to the use of metal tools made of both iron and steel; Al-Ghassani states that the *lawza* should be made of Indian steel or good-quality iron.¹⁶³

¹⁵⁹ Szirmai, op.cit., 1999, p.59; for leather tools see, Haldane, op.cit., 1983, Figs.21 and 22.

¹⁶⁰ Gacek, op.cit.,1997, p.60.

¹⁶¹ Szirmai, op.cit.,1999, p.61, n.11.

¹⁶² Raby and Tanındı, op.cit., 1993, p. 216 state that all the stamps for 15th century Ottoman bindings were made of hardened leather basing their work on the accounts of Adam, op.cit., 1890, p.192 and Çiğ, *Türk Kitap Kapları*, Istanbul, 1971, pp.10–13. Sakisian, op.cit.,1934b, p.148 also refers to leather stamps being used on 15th century Timurid bindings stating that these were later replaced by metal ones.

¹⁶³ Gacek, op.cit., 1997, p.60.



Fig. 3.20: Bookbinding stamp made of hardened leather, V & A inv. no.366-29-1888.

Allan and Gilmour have published two stamps made of hardened camel leather with a complex design dateable to the 19th century.¹⁶⁴ These are large with incised decoration which could be hammered on to the cover to make the required impression. They also state that panel stamps were made of brass or steel since a large number of examples in both metals are found in the collections of the Victoria and Albert Museum and the Chester Beatty Library, albeit dateable to the 19th century.¹⁶⁵ There is, however, no mention in the bookbinding sources that larger leather matrices were used before the 17th century which indicates that the use of leather was a later development. The complex patterns used in both the centre and corner-pieces seem to indicate that metal was used to provide clarity

¹⁶⁴ Allan and Gilmour, *Persian Steel, The Tanavoli Collection*, Oxford, 2000, pp.378–9 and Figs. 1.41 and 1.42.

¹⁶⁵ Haldane, *op.cit.*, 1983, fig. 2, 17. 21, 22.

of line. Unfortunately, there are no extant examples of small stamps from this period. The closest parallel, that can be found are the tools that are used to decorate bookbindings in Ethiopia today.¹⁶⁶

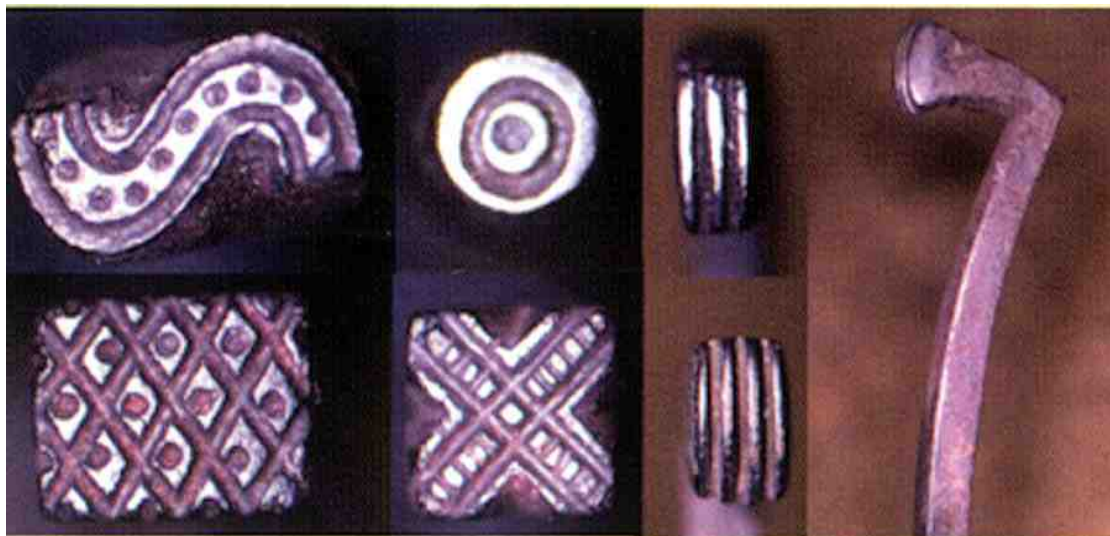


Fig. 3.21: Small Ethiopian tools used today. After Mellors and Parsons, op.cit., 2002, p.17.

The question of whether gold tooling was used, as opposed to gold in solution which was then painted onto the covers, also remains contentious. Medieval European treatises distinguish two methods for gilding with gold leaf, termed wet and dry methods. With the wet method, a medium such as glair is laid on the surface and the gold leaf is applied immediately. In the dry method, the medium – also usually glair – is allowed to dry a little and become sticky before the gold leaf

¹⁶⁶ Mellors and Parsons, *Ethiopian Bookmaking*, London, 2002, p.17. The lack of extant tools does only apply to Islamic bindings, as Dr Nikolas Sarris recently discovered a rare cache of Byzantine tools dateable to fifteenth and the beginning of the 16th century in the monastery of St Catherine in Sinai. As he says 'This extraordinary discovery owes its importance to the negligible number of pre-industrial finishing tools that survive worldwide. Old tools were considered of little value: they were often recycled and then discarded, or melted down for their metal content. Moreover, with the exception of a handful of isolated examples, finishing tools linked to specific bindings are virtually unknown. The discovery of such a substantial collection of finishing tools is truly unprecedented.' 'The Discovery of Original Bookbinding Finishing Tools at the Monastery of St. Catherine', *Sinaiticus*, Bulletin of the Foundation of St Catherine, London, New York, Geneva, November, 2008, p.12.

is applied. Adam, the first European bookbinder to examine Islamic bindings in any detail with reference to techniques that were employed, says that Persian and Turkish binders used the wet method, which was later used by binders in Italy, although he does not elaborate on how he reached this conclusion.¹⁶⁷

Tooling in gold was a very lengthy process as after the first impressions have been made they are covered in gold leaf and re-tooled. The tools for gold tooling are cut in flat relief while those for blind tooling are cut in intaglio or in three-dimensional relief. As we have seen both Al-Ishbili and Al-Ghassani make the distinction between tools used for gilding and those for blind tooling but no details are given of the processes involved.¹⁶⁸ From an examination of the covers it does, however, appear that the pattern was tooled in the blind and then painted with gold paint. It is often quite difficult to determine whether the design has been painted or tooled in gold but gold tooling has a brighter effect, lasts longer and makes a clearer impression on the leather.

Gold appears to have been used from the early period, as gold dots were found on one of the covers at Qayrawan dated to the 9th century (no. 28), but only sparingly.¹⁶⁹ Ricard specifically refers to gold tooling on the covers of the volumes of the Qur'an copied in 654/1256, the earliest extant example of this method of decoration.¹⁷⁰ (Fig. 3.17) Ibn Badis refers to the use of leaf gold but in

¹⁶⁷ Adam, 'Venezianer Einbände nach persischen Mustern', *Archiv für Buchbinderei*, XV, 1915, pp.101–10.

¹⁶⁸ Gacek, op.cit., 1990-1, p. 110; Gacek, 1997, op.cit., p.60.

¹⁶⁹ Marçais and Poinssot, op.cit.,1948, no.28.

¹⁷⁰ Ricard, op.cit., 1933, p.116.

a description of the use of gold for writing: *When you write with it what ever is desire , the excessively red beaten Ibriz gold leaf is pressed on that glue a day. It is not delayed more than that. If the gold does not stick properly with the glue, then the gold is heated on the fire and the alum shaken from it so the whiteness cannot change. When it is pressed, it is left for two days and polished with a stone.*

Both Ibn Badis and Al-Sufyani refer to fish glue (*ghirā' al-samak*), which was used for painting gold on leather while gum Arabic was used for paper.¹⁷¹ Al-Sufyani includes a special recipe for whitefish glue (*ghirā' al-ḥūt*), which was apparently very hard to obtain as opposed to the Syrian variety. He tells us that the leather should be washed if gold is to be used as washing removes the oil used by the tanners to make the leather shine. Al-Sufyani gives two recipes: one for gold in solutions of heated water and the other in fish glue, solutions which are used for painting or writing in gold on leather. 'Know that the fish glue is of two types. One is yellow tending towards red. You dissolve it with water on a mild fire. The second glue is an uncooked glue remaining as it was. It can be described as old dried soap.'¹⁷²

In the second type (the 'special' glue), the gold is beaten with the glue moistened with water with a marble stone until it becomes as a sheet of paper and then heated with water until it assumes the consistency of boiled olive oil. He suggests testing it, and if it wipes off easily, more glue needs to be added. If the leather with this gold glue is polished, the gold will not peel off, regardless of whether the

¹⁷¹ Al-Sufyani, *Ṣinā'at al-tasfīr*, ed. Ricard, op.cit., 1925, pp.20–23; Levey, op.cit., 1962, pp.54–5.

¹⁷² Levey, op.cit., 1962, p.54.

leather has been washed or not. He warns against storing the gold with glue in it for as the solution will rot and maggots will appear.¹⁷³

From the evidence in the sources and the small gold-tooled punches found on the covers, it would appear that the technique of gold tooling developed in North Africa as it decorates the bindings of the Qur'an dated 654/1256.¹⁷⁴ From there it became more widespread and developed throughout the Mamluk period. Gold tooling was restricted to small gold punches on bindings of the 13th and early 14th century and it was only during the later Mamluk period that gilded decoration becomes more common.¹⁷⁵

This chapter has traced the early development of the Islamic book between the 9th and 13th centuries. The gradual change from the use of the horizontal box binding type with wooden covers to those in the vertical format with paste board covers provided with a pentagonal flap extending from the lower cover is supported by the evidence of the early extant groups of bindings and the information in the bookbinding sources. The influence of Coptic binding traditions of the 8th and 9th centuries was established for the structures, formats and decorative schema of the early Islamic book. The binders of the early Islamic codices adopted link-stitch sewing structures and the fixing of the covers to the text block by adhesive and reverted to the vertical format which was used exclusively by Coptic binders. These bindings and techniques provided the

¹⁷³ Levey, op.cit., 1962, p.54.

¹⁷⁴ See fig.3.17 for the earliest example of gold tooling.

foundations for the production of the sumptuous and elegant bindings during the Mamluk period to which I will now turn.

Chapter 4

Mamluk Bindings

Structure and Decoration

The earliest Mamluk bindings date from the end of the 13th and the beginning of the 14th century. As we have seen in Chapter 3, by the 13th century the pentagonal flap, pasteboard covers and the vertical format had become established. This was the structure and format that was found – without exception – in all the Mamluk bindings from the 13th to the 16th centuries included in this study. This chapter will first consider certain structural details that were noted during examination of Mamluk bindings, though it should be stressed that full structural examination of bindings was often not possible and also many of the bindings examined had been extensively conserved, often with new sewing structures, the addition of new doublures and the pasting of the original cover over a new structure.¹ This chapter adds more detailed information to that of the previous chapter on structures, sewing, quires, types of leather used, endbands and the application of the block-pressed leather doublures. It will also consider the range of binding sizes as the production of large format bindings in some numbers during the Mamluk period merits some comment.

The second section of this chapter traces developments in the various decorative techniques and types of ornament that were used by Mamluk binders between

¹ For example, out of 44 examples that were examined in detail at the Dar al-Kutub, only 7 bindings were identified as retaining their original sewing structures.

the 13th and 16th centuries. Continuity is to be found in the organization of the ornament and decorative techniques used for the early bindings discussed in the last chapter and those produced during the early Mamluk period. Three of the bindings from Marrakesh represent patterns that are found on early Mamluk bindings: the use of geometrical interlace based on star patterns, single stars and the lobed rosette with a centre–corner piece arrangement, albeit in more complex and developed forms.² This is not to say that the bindings of North Africa had a direct influence on the development of Mamluk styles, they may well have, but too little is known of other binding traditions of the 12th and 13th centuries to say this with any certainty.³ From these beginnings Mamluk book binding developed creating a dynamic and vibrant tradition with the introduction of new styles of ornament and techniques.

Structures

The descriptions of the methods of preparing the pasteboard in the bookbinding manuals of Al-Ghassani and Al-Sufyani that were described in Chapter 3 seem to indicate that the pasteboard was made of single sheets of new unused paper. Several examples in the Dar al-Kutub Qur'an collection, however, showed that the pasteboard was made of discarded manuscript material and an example is illustrated below. (Fig. 4.1)

² Ricard, op.cit., 1933 ; See Fig. 3.17 and 3.19.

³ Very few bindings can be attributed to Fatimid Egypt and Ayyubid Egypt/Syria, and even then without much certainty, as many are loose bindings or there are no comparative examples. Ettinghausen, op.cit., 1959, pp.113–31, Fig. D, E and fig. 5 has published two bindings that he attributes to Egypt in the Fatimid period based on stylistic analysis; Gardiner, 'Three Early Islamic Bookbindings', *British Museum Quarterly*, 26, 1962–3, pp.28–30 attributed the binding of BL Or.9433 to the Ayyubid period on the basis of the date of the manuscript 563-4/1168–9. However, the pattern on this cover can be compared to a binding in Leiden University Library, Ms.Or.459 which is dated by manuscript to 882/1478, published by Weisweiler, op.cit., 1962, no. 33, Pl. 53 which casts into some doubt this early date.



Fig. 4.1: Pasteboards made of discarded manuscript material, DAK Rasid 61, 38 x 30cm.

The examination of another set of pasteboards of a Mamluk manuscript in the Hungarian Academy of Sciences with photographs made before the restoration of the covers has also revealed that the pasteboard was made up of small strips of new paper pasted over discarded manuscript material.⁴ It is probable that a variety of practices were common, no doubt because paper was an expensive commodity. (Fig. 4.2)

⁴ *Takhmīs al-Burda* dated 853/1449, Hungarian Academy of Sciences, arab F3, borito, 60 x 40cm.



Fig. 4.2: Front outer pasteboard cover and cover of *Takhmīs al-Burda*, Hungarian Academy of Sciences, arab F3, borito, 60 x 40cm.

Examination by microscope of the follicle patterns of the leather of several Dar al-Kutub bindings was able to confirm that tanned goatskin was used for the covers as is illustrated in Fig. 4.3 below. The skins used for the leather covers in the collection at Chicago have been also examined: goatskin has been identified as being used for the covers and sheepskin for the doublures.⁵ As sheepskin is a softer and more porous leather than goatskin it is easier to block-press.

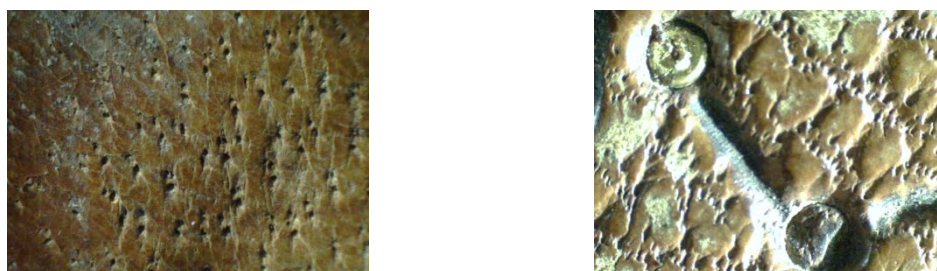


Fig. 4.3: Microscopic image of tanned goatskin covers; DAK Rasid 70, 37 x 28cm.

The bookbinding sources discussed in Chapter 3 make no mention of the manufacture or application of block-pressed leather doublures although they are commonly found on the bindings throughout the Mamluk period. The earliest

⁵ Bosch, Carswell and Petherbridge, op.cit., 1981; See individual catalogue entries.

dated example in this study is dated to 697/1298 and the latest to 916/1510.⁶ In terms of the method used for their production, the leather was probably dampened first and the mould painted with some sort of tanning stain to darken the leather pressed against it. These doublures were fixed in two ways: on some examples the leather overlapped the gutter on to the textblock, no doubt to provide extra support for the cover, while on others it was cut flush with boards. In addition, close examination of several of the doublures revealed that they were made up of small pieces of leather of various shapes and sizes that were glued to the board, before being stamped with a block. On re-examination of several of the loose covers in Chicago this technique was also apparent. This was particularly interesting as it has been generally assumed that the leather was block-printed in sheets and before being applied to the boards, while this observation suggests that the printing was applied after the small pieces of leather had first been assembled and glued to the covers.⁷

⁶ TSK A.1240/2, Karatay, *op.cit.*, 1966, no. 3293/4, see fig. 4.38 and TSK 1608, Karatay, *op.cit.*, 1966, no. 6982, see fig. 4.135 for these bindings.

⁷ Bosch, *op.cit.*, 1952, p.169 suggests Egypt and Syria were the centre for the production of block-pressed leather that may subsequently have been exported to other countries. See fig.4.172-4.185 for block-pressed doublures.



Fig. 4.4: Details of block-pressed leather doublures, DAK Rasid 99, 27 x 35cm.

Quires and Sewing

It was only possible to ascertain the types of sewing used in the bindings in this study if the covers had become loose. The conservation reports of one of the bound manuscripts in the collection at Chicago noted that the bindings of two volumes of Al-Subki's *Al-Fatāwī* completed on 19 Dhu'l-Hijjah 879/ 17 April 1475 (Volume 1) and 2 Rajab 880/1 November 1 1475 (Volume 2) had link-stitch sewing structures, which were described in Chapter 3, and had two sewing stations, although there was also evidence of rethreading with the presence of older holes.⁸ Link-stitch sewing structures were noted on seven bindings at the Dar al-Kutub: the most common arrangement was for two or four sewing stations but three, five and six sewing stations were also recorded.⁹ These examples indicate that sewing structures remained unchanged in the Mamluk

⁸ Oriental Institute, A.12056, A.12057, 26.7 x 17.4cm; Krek, *A Catalogue of Arabic Manuscripts in the Oriental Institute of Chicago*, Chicago, 1961, p.22; Bosch, Carswell and Petherbridge, op.cit., 1981, pp.139-40; See fig. 3.7 of this text for link-stitch structures.

⁹ Link-stitch structures were found on DAK Rasid 58, *Juz'* 2, Rasid 60, *Juz'* 25, Rasid 72, *Juz'* 3, Rasid, 99 *Juz'* 30, Rasid 104, *Juz'* 4, Rasid 120, *Juz'* 24 and Rasid 70, *Juz'* 17.

period. The thread used was generally S-ply of cotton or silk of medium twist; only one example of Z-ply was found in the bindings of this study from the Dar al-Kutub collection.¹⁰

Quinions, followed by quaternions, were the most common type of quire found in the manuscripts of this study, an observation that concurs with that of Déroche.¹¹ Quire signatures were noted on several manuscripts in the outer corner of the page. Déroche has noted that quire signatures between 528/1134 and 695/1295 occupied various positions in the upper margin of the page but by the 11th century quire numbers were recorded in the outer corner of the page, a position that became the norm and was used from the 13th century onwards.¹² Also, single folios could be added to the quire, for example on Rasid 120, *Juz'* 24 a folio was pasted to the last folio of the quire providing an extra page.

In Chapter 3, a description of the method used to insert endpapers into the binding was provided by Ibn Badis.¹³ The endpapers of the bindings in this study were attached in two ways: either as separate leaves glued to the board and inserted under the spine of the text block, as described by Ibn Badis, or as integral parts of the text block.

¹⁰ DAK Rasid 71, *Juz'* 1 had some evidence of resewing. Fibre can be spun in two directions: from top right to bottom left referred to as Z-spin and from top left to bottom right, referred to as S-spin; Barnes, *Indian Block-printed Textiles in Egypt: The Newberry Collection in the Ashmolean Museum in Oxford*, Vol.1, Oxford, 1997, pp. 48–51, notes that Indian cotton thread is usually Z-twist but that Egyptian cotton and flax fibres are spun in both directions. As the spin direction found in fibres appears to be something that is culturally determined, she suggested that this could mean that the spinning workshops of Egypt employed people trained in two different spinning traditions.

¹¹ Déroche, op.cit., 2005, p. 85; Déroche noted that 70% of manuscripts published between 1992 to 2001 in *Fichier des manuscrits moyen-orientaux datés*, Paris, 1992 were quinions.

¹² Déroche, op.cit., 2006, p. 91; Contadini recorded the existence of quire signatures on a *Maqamat* manuscript, BL Add.7293, dated 723/1323 in the corner of the upper margin, Communication, April, 2011.

¹³ See Ch.3, n.48.

As endbands are easily detached from the binding, very few were found on the bindings of this study. Only one original endband was found in the collection of bindings of the Dar al-Kutub and is illustrated below with its original leather core. (Fig. 4.5) Although Al-Ishbili mentions various different endband designs, all the endbands had a chevron pattern and the combination of yellow and red threads was the most common.¹⁴



Fig. 4.5: Endband and leather core of DAK Rasid 146, 36 x 24cm.

The sources discussed in Chapter 3 do not make any reference to binding sizes. For the early Islamic codex in the vertical format, 31 bindings from Qaraywan from the 12th and 13th centuries measured on average 25.1 x 18.1cm and the six examples from Marrakesh measured on average 29 x 22cm.¹⁵ In order to understand the range of binding sizes and to establish their possible relationship

¹⁴ See Ch. 3, 'Endbands'.

¹⁵ Marçais and Poinssot, *op.cit.*, 1948, nos.127-156; Ricard, *op.cit.*, 1933, pp.109-127 see Ch.3 n. 40 and n.45.

with paper sizes of the Mamluk period I decided to tabulate the measurements of the bindings in this study into bands of 10 cm ranging from to over a metre in height; a full list of the measurements can be found with the list of manuscripts examined in the appendices. Manuscripts that had been provided with new bindings were also included as their size was dictated by the size of the text-block and to exclude them would have given a very restricted view of the sizes of manuscripts and bindings especially as the majority of the large volumes have been rebound. From these measurements, it can be seen that the majority of the bindings correspond to the average size that was established for bindings of the 12th and 13th centuries from Qayrawan and Marrakesh. One important factor, however, is the number of bindings that measured from 60 centimeters to over 1 metre in height. The earliest large volume Qur'an in the Dar al-Kutub can be dated to the reign of al-Nasir Muhammad, the *waqf* inscription of which has already been illustrated.¹⁶ Sadly in common with the majority, it has been given a new cover but it can be surmised that the production of large-volume Qur'ans date from the early Mamluk period.¹⁷ The largest Qur'an in the collection of the Dar al-Kutub for the 14th century measured 105 x 75cm and was written in

¹⁶ DAK Rasid 4; See fig.1.1 of this work.

¹⁷ Large-volume Qur'ans were produced for the Ilkhanid Sultan Uljaytu of which the largest measures 71.x 49.5cm, see fig. 6.9 of this text TSK EH.245; O'Kane, 'Monumentality in Mamluk and Mongol Art and Architecture', *Art History*, Vol. 19, Number 4, December 1996, pp. 499-522 suggests that these large volumes reflect the return to the 'monumental' found in Ilkhanid and Mamluk architecture and the production of artefacts. He also makes the point that the presence of the Uljaytu Qur'an (DAK 72 see fig. 6.13) in Cairo after 726/1326 may have provided an impetus for the production of even larger volumes as a reflection of the rivalry that existed between the two powers.

Several folios of a Qur'an measuring 177 x 101cm have been attributed to Sultan Baysunghur (1397-1433/799-836), but recent studies suggest that this was made at the end of Timur's reign between 803-808 /1400-1405: see Lentz and Lowry, *Timur and the Princely Vision, Persian Art and Culture in the Fifteenth Century*, Washington D.C., 1989, Cat.6 and James, *After Timur*, London, 1992, pp.18-23.

776/1374 for Amir Sarghitmish.¹⁸ The production of large Qur'ans continued to the end of the Mamluk period; the largest volume in the collection measures 112 x 94cm and was copied for Sultan Qaytbay in 873/1469, however, the covers have been replaced.¹⁹ (Fig. 4.6)



Fig. 4.6: Folio 1a of large volume Qur'an copied for Qaytbay dated 873/1469. DAK Rasid 19, 112 x 94cm.

¹⁸ DAK Rasid 15, 105 x 75cm; James, op.cit., 1988, Cat.34; see p.132 of this work for details of his career and other Qur'ans with a *waqf* in his name.

¹⁹ DAK Rasid 19, 112 x 94cm.

A Qur'an in the John Rylands Library, Manchester retains its covers and has recently been digitized. It was described in the press as the 'Ghuri Qur'an' and as 'possibly the largest Qur'an in the world'.²⁰ It obtained its association with the Mamluk Sultan Al-Ghuri through the presence of an ownership stamp in his name.²¹ The Qur'an is not, however, dated although its illumination can be compared to that of Rasid 9 which was bequeathed by Sultan Sha'ban to his mother's *madrasa* on the 15 Sha'ban 770/25 March 1369.²² The Rylands Qur'an, while not actually the largest Qur'an in the world, must stand as a rare example of a large-volume Mamluk Qur'an that retains its original covers. The borders of the doublures are decorated using small tools that are recorded on other Mamluk bindings of the period. The production of such large and heavy volumes must have been a very specialized task, standing as testimony to the binder's art in this early Mamluk period.²³

²⁰ Daily Mail, 20th January, 2011.

²¹ John Rylands Arabic Manuscript Number 42, 86 x 54cm; Mingana, *Catalogue of the Arabic Manuscripts in the John Rylands Library*, Manchester, 1934, pp.42–3.

²² James, op.cit., 1988, Cat., 31, see fig. 5.31 for the illumination of this Qur'an

²³ Ibn Iyas, in describing the departure of the Hajj caravan in 889/1484, says that the Sultan had sent a very large Qur'an to Mecca, in fact, so large that one camel was allocated to transport it. Ibn Iyas, *Histoire des Mamloukes Circassians*, trans. Wiet, Paris, 1945, p.226.



Fig. 4.7: Front cover and doublure of Qur'an, John Rylands Library, Arabic Ms. no. 42, 86 x 54cm. Image courtesy of the John Rylands Library.

The binding sources make no reference to paper sizes except for one small comment by Ibn Badis writing in the 11th century who refers to the 'half-Manṣūrī' as a measurement.²⁴

As to the cord press, its length should be related to the section to be tied. If it is half Man ūrī size, it is proper for the operation that the press be longer than the book.

The 'half- Manṣūrī ' unit of measurement also refers to a size of paper used by the government offices in Egypt in the Mamluk period. In his study of paper sizes based on Qalqashandī's (1355-56/1418) text, Karabacek lists nine types of paper used in Egypt by government offices during the Mamluk period.²⁵ The largest was called *Baghdādī* and measured one cubit in width by one and a half cubits in length, which Karabacek estimated as being equivalent to 109.9 x 73.9cm. This

²⁴Ibn Badis, *Umdat al-kuttāb*, trans. in Levey, op.cit., p.41.

²⁵ Karabacek, *Islamic Paper*, trans. Baker, London, 2001, p.65.

size was only used in its full size for Qur'ans and chancery decrees, while the diminished *Baghdādī* was equivalent to 97.77 x 65.15cm. There were two types or Egyptian paper: the *Man ūrī*, 73.3 x 48.8cm, which was burnished, and the ordinary. Two-thirds of the full-size *Manṣūrī* measured 48.88 x 32.59cm, the half *Manṣūrī* measured 36.6 x 24.4cm and the one-third *Man ūrī* 16.29 x 24.44cm. The familiar *Man ūrī* or the quarter *Manṣūrī* measured 18.3 x 12.2 cm and ordinary paper 12.2 x 18.3cm.²⁶

Table 4.1: Binding Sizes

Measurement Bands in cm	Binding Dimensions: Height x Width in cm	Paper Full Size: Length x Width in cm	Paper Type Equivalent: Length x Width in cm
11-20 Total: 8	Largest: 18.5 x 13 Smallest: 17 x 13 Average: 17.5 x 13	35 x 26	Half <i>Man ūrī</i> : 36.6 x 24.4
21-30 Total: 69	Largest: 28 x 20 Smallest: 21.3 x 15.3 Average: 25 x 17.5	50 x 34	Two-Thirds <i>Manṣūrī</i> 32.5 x 48.8
31-40 Total: 35	Largest: 39 x 29 Smallest: 30.5 x 21 Average: 35 x 25	70 x 50	Full <i>Man ūrī</i> Length 73.329 x Width 48.886

²⁶ Qalqashandī, *Ṣubḥ al-a'shā*, Cairo, 1913–19, Vol. VI, pp.189–91; Bosch, Carswell and Petherbridge, op.cit., 1981, pp.30–31; Karabacek, op.cit., 2001, pp.54–67.

41-50 Total: 14	Largest: 46.5 x 34.5 Smallest: 43 x 32 Average: 45 x 35	90 x 70	<i>Baghdādī</i> 73.3 x 109.9
51-60 Total: 9	Largest: 58.8 x 42.5 Smallest: 50 x 38 Average: 55 x 40.25	110 x 80.5	No equivalent paper size.
61-70 Total: 2	Largest: 69 x 51 Smallest: 61 x 44 Average: 62 x 39.5 cm	130 x 95	No equivalent paper size.
71-80 Total: 3	Largest: 78 x 54 Smallest: 73 x 50 Average: 75.5 x 52	151 x 104	No equivalent paper size.
81-90 Total: 1	85 x 53	170 x 120	No equivalent paper size.
91-100 Total: 1	95 x 76	200 x 138	No equivalent paper size.
101+ Total: 4	Largest: 112 x 94 Smallest: 105 x 79 Average: 108.5 x 86.5	200 x 150	No equivalent paper size.

The majority of the bindings fell into the size bands 25 x 17.5cm (69), 35 x 25 cm (35) 45 x 35cm (14) which broadly correspond to the paper sizes that were used by the government offices and would have been readily available (see Table 4.1 above). These bindings contained a wide variety of manuscripts. All the very large volumes were Qur'ans and, at such a size, would have required special paper sizes to accommodate them and the paper would therefore most probably have had to be specially made.

The examination of the structural details of the bindings in this study shows that the practices and methods recorded in the binding manuals discussed in the last chapter remain unchanged throughout the Mamluk period. The small details that have been recorded above in relation to the affixing of the doublures and the use of manuscript waste for pasteboard along with small sheets of paper, relate to individual practices rather than to any defined change in structure. The vast array of binding sizes used during the Mamluk period does, however, represent a departure from the measurements that had been recorded for bindings of the 12th and 13th centuries in the last chapter. From the early Mamluk period large-volume Qur'ans were produced but unfortunately the majority of the large-volume covers that are extant no longer contain their manuscripts and many of the large-volume Qur'an manuscripts in Cairo have had their covers replaced.

Decoration

There are five main elements of bindings that should be considered when discussing decoration: the front and back covers, the flap, the fore-edge spine and the doublures. The front and back covers usually consist of a central field framed by borders made up of single impressions of small tools that are separated by tooled lines or fillets delineating each section. The organization of ornament of the central panel can be broadly divided into two arrangements: a central panel, surrounded by a border or multiple borders that has a central design element on a field of tooled work or a field of plain leather with the provision of separate corner-pieces filled with tooled ornament. The front and back covers usually exhibited similar designs. The spine of the book was left plain but the spine of the fore-edge flap was sometimes elaborately tooled with the title of the manuscript or patterns that were used on the covers.²⁷

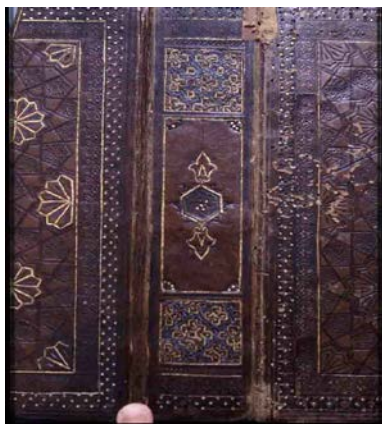


Fig. 4.8: Detail of decoration of the spine of the fore-edge flap of TSK A.285, Karatay, op.cit., 1964, no.2679, 25.4 x 17.5cm.²⁸

²⁷The spine was left undecorated, as it was the custom for books to lie flat on the shelf with spine of the fore-edge to the front.

²⁸ This binding has not been included in the discussion.

The flaps were usually decorated in a design that harmonized with that of the covers although, in some instances, it could be very different as the example below of a *juz'* from a thirty-part Qur'an demonstrates.²⁹ The central field of the cover has a design of geometrical interlace based on a ten-pointed star while the flap is decorated with arabesque ornament. (Fig. 4.9).



Fig. 4.9: Front cover and flap of binding dateable to the end of the 14th century. DAK *Juz'* 24, Rasid 120, 30 x 27cm.

On several of the thirty-part Qur'ans, two or more binding styles were often employed, probably indicating that two binders were involved in their production. Several of the *juz'* accompanying the Qur'an illustrated above, are decorated with a lobed rosette with pendants set on a plain leather field with corner-pieces extending into the central panel. (Fig. 4.10).

²⁹ DAK *Juz'* 24, Rasid 120, 30 x 27cm; see fig. 4.53 for discussion of this binding.



Fig. 4.10: Covers showing two different designs for the covers of six *juz'* of DAK Rasid 120, 30 x 27cm.

Tooling in the blind or in gold formed the basis of the bookbinders' craft.

Unfortunately, to date no detailed record has been made of the small tools used on Islamic bindings apart from those recorded by Marçais and Poinssot on the bindings at Qayrawan.³⁰ In his seminal work on Islamic bindings, Weisweiler describes a hundred tools but does not provide any illustrations so that they are consequently almost impossible to identify.³¹ An appendix of border patterns made up of single and composite tools found on the bindings in this study has been included as Appendix 2 and provides a starting-point for an understanding

³⁰ Marçais and Poinssot, op.cit., 1948, pp.322–62 and Pls.48–51; see fig. 3.13 and 3.14 for examples of tools from Qayrawan and Sana'a.

³¹ Weisweiler, op.cit., 1962, pp.33–41.

of the various patterns thus adding another tool to the armory of detail needed to date binding styles.

Several of the small tools found on early Mamluk bindings of the 13th and 14th centuries also found on the 12th and 13th century bindings of Qayrawan and Marrakesh demonstrating the continuity of a tradition. The most common tools were simple bars, arcs, punches and crosses, which were used either as single impressions or as composite elements to create a pattern in densely tooled medallions and borders. (Fig. 4.11) Small tools, however, often of quite intricate designs were also used and gradually replaced the densely tooled work commonly found on bindings of the early 14th century.



Fig. 4.11: Detail of bar and punch tooling.

During the 13th and early 14th centuries the most common examples of binding decoration comprised all-over patterns of geometrical interlace that were based on star patterns or used circle, rosette, star and geometrical rosette profiles on

plain leather backgrounds.³² The fields of these profiles were usually filled with complex geometrical ornament or tooled interlace.

By the end of the 15th century advances in technology allowed for the production of large stamps which were used for borders, corner-pieces and the central design element of the main panel. This development made it possible to apply a complete decorative unit in a single strike without resorting to the time-consuming practice of creating composite designs through tooling them by hand or the use of individual small tools to create a pattern. Small tools were, however, never completely abandoned. (Fig.4.12)

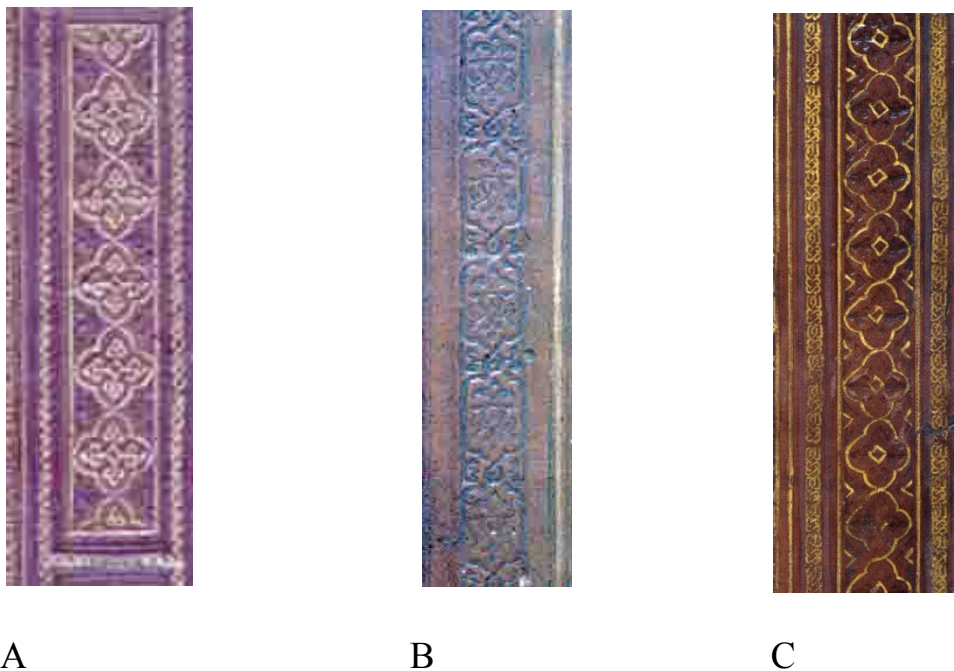


Fig. 4.12: Details of Mamluk tooled patterns of the late 15th century.

A: TSK A.649, 36.5 x 26cm, 877/1473. B: TSK 905, 30.5 x 21cm, 879/1474

C: Staatsbibliothek Berlin Ms. Or. Fol. 1624, 37 x 26.5 cm, c. 872-880/1468-76.

³² Lee, 'Islamic Star Patterns', *Muqarnas*, 1987, Vol.4, pp.182-97; the term 'geometrical rosette' is used by Lee to describe what is also termed a 'star polygon' in art historical literature.

By the second half of the 15th century, almond profiles – both plain and lobed – dominate the decoration of bindings. These profiles are usually filled with floral and arabesque ornament or with small tools providing an interlace filling.³³ At times the background is gently hatched to provide a textured background providing contrast in the colour of the leather. (Fig. 4.13) All-over patterns of geometrical interlace continue to be used but the geometry is more complex and the broadly defined tooled straps of the 14th century are replaced by tooled lines painted in gold, creating a tighter and more defined pattern.³⁴

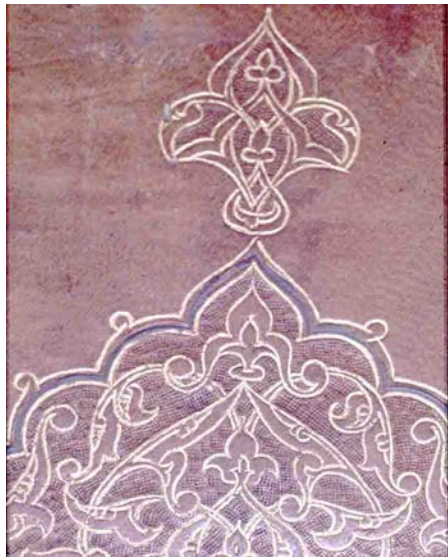


Fig. 4.13: Detail of front cover showing hatched background, TSK A.649, 36.5 x 26cm.

Along with the technique of tooling and stamping, filigree leatherwork was also used to decorate the covers and doublures. Filigree leatherwork on a textile backing was used for the outer covers of bindings from the end of the 14th century.³⁵ In the second half of the 15th century changes occurred when

³³ See fig. 4.107-4.123.

³⁴ See fig. 4.60.

³⁵ See figs. 4.143-4.146.

pasteboard replaced textiles for the backing of the filigree, thus allowing for sections of the pattern to have different colours. Filigree leatherwork is now found on the doublures as well as the covers. The technique of pressure-moulding is also to be noted in this period on several Mamluk bindings, a technique which allows the patterns of the central design element and corner-pieces to stand in relief.³⁶ The introduction of panel stamps at the end of the 15th century permitted the pattern to be stamped for one half of the central panel and then repeated for the second half often leaving a noticeable line across the middle of the panel. However, only one panel-stamped binding was found among the Mamluk bindings in this study, a detail of which is shown below.³⁷ (Fig. 4.14)



Fig. 4.14: Detail of impressed line indicating the use of the same panel stamp used twice, TSK A.2303.

On Mamluk bindings of the early period, gold punches are used sparingly to enliven the dark leather backgrounds and by the middle of the 14th century gold paint is used to outline the main elements of the design. The tooled borders could be plain or outlined in gold or blue paint. On bindings of the late 15th century, the use of gilded backgrounds is to be noted on several bindings.³⁸ (Fig.

³⁶ See Glossary, Appendix 1 for pressure-molding.

³⁷ TSK A.2303, Karatay, *op.cit.*, 1966, no.8549, 42.5 x 30cm; See fig. 4.160-1.

³⁸ See, for example, TIEM 508, fig. 4.120 and TKS A.2303, fig. 4.160.

4.15) This method of decoration was used extensively by the Turcoman binders of the late 15th century and will be discussed in Chapter 6.³⁹



Fig. 4.15: Detail of flap with gilding, TIEM 508, 50 x 38cm.

The methods and issues associated with gold tooling in early Islamic bindings were discussed in Chapter 3.⁴⁰ There has been much discussion as whether gold tooling or gold paint was used on Mamluk bindings but, as noted in Chapter 3, Al-Ishbili and Al-Ghassani specifically refer to tools for the application of gold.⁴¹ It is extremely difficult to distinguish between gold leaf and liquid gold although gold tooling does leave a slightly brighter and sharper impression on the leather.

³⁹ See fig. 6.40-1.

⁴⁰ See Ch. 3, p.87, 92.

⁴¹ Gacek, op.cit., 1990-91, p.109; Gacek, op.cit., 1997, p.60.

Microscopic examination of certain punches of the binding of a Qur'an *juz'* shows a small gold rosette which may have been gold tooled.⁴² (Fig. 4.16) The perimeter of the rosette punch may indicate scorch marks on the leather as the tool needs to be heated in order for gold tooling to take place. When binders practising today were questioned about this perimeter marking, they suggested that it could also have been caused by heavy pressure on the tool.⁴³



Fig. 4.16: Detail of gold punch from DAK Rasid 58, *Juz'* 2.

Silver was also used for the borders and outlines of profiles but, as the silver in many cases does not appear to have tarnished, it was probably an amalgam of some sort rather than pure silver. No chemical analysis of silver tooling has yet taken place.⁴⁴

Blue pigment was also often used for outlines of the stamps and, very occasionally, green or red.⁴⁵ Weisweiler recorded the early use of blue pigment on the binding of a manuscript copied in Baghdad in the Madrasa Nizamiyya

⁴² See fig. 4.70 for this binding; see fig.3.17 for earliest example of gold tooling.

⁴³ Communication with John Mumford, 20 June 2011.

⁴⁴ Déroche and Waley, op.cit., 2006, p.284 note that mercury had been detected in the gilding of a binding of a Qur'an in the Bibliothèque Nationale in Paris. (BNF arabe 5844)

⁴⁵ In the bindings of this study, green paint was noted on two bindings and red on just one.

dated 686/1287.⁴⁶ Grohmann suggested that the use of blue linen across the spine to attach the boards to the core on early bindings was to ward off the evil eye so the use of blue on the outer covers might be a continuation of this tradition.⁴⁷ There is no information on the composition of the blue paint that was used to outline elements of the tooled decoration in the sources that were considered in Chapter 3. Déroche records that the analysis of blue pigment on a binding of a Qur'an in the Bibliothèque Nationale revealed a mixture of azurite and lapis lazuli.⁴⁸ (Fig. 4.17)

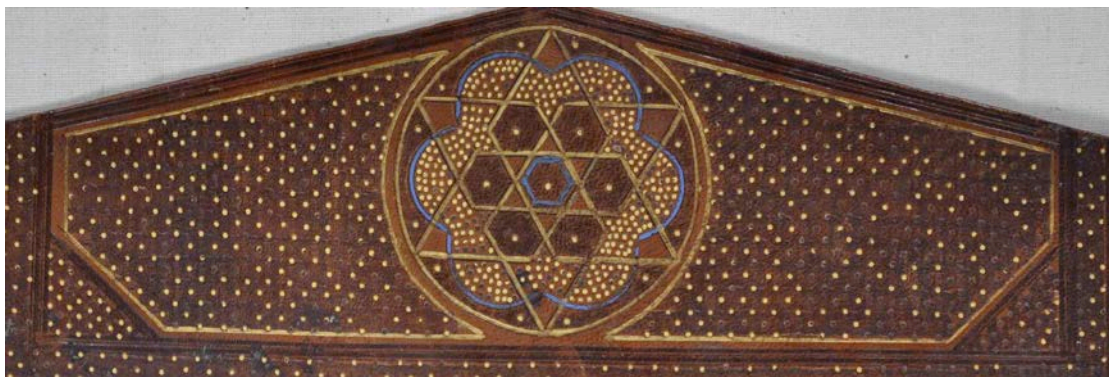


Fig. 4.17: Detail of flap with blue paint, DAK Rasid 99, 35 x 27cm.

The bindings in this study have been categorized according to the main technique that was used for decoration of the covers and flap – tooled and stamped, filigree leather and pressure-moulded bindings – as this approach facilitates the tracing of developments that took place during the Mamluk period. It has to be recognized, however, that while the division of the material according to technique is use in helping to understand changes over time it also

⁴⁶ Weisweiler, *op.cit.*, 1962, no. 331, p.171; Süleymaniye Library, Şehit Ali Paşa, 1740, 25.5 x 17.3cm.

⁴⁷ Arnold and Grohmann, *op.cit.*, 1929, p.57.

⁴⁸ Déroche and Waley, *op.cit.*, 2006, p. 284; see fig. 4.101 for DAK Rasid 99 with blue paint.

presents some problems. The technique of tooling is to be found on the majority bindings throughout the Mamluk period, whether it was restricted to the borders or the corner-pieces, or used for the whole cover. Even with the introduction of large stamps for the central design element, binders never completely abandoned the use of small unit tools for the borders. The tooled areas of the bindings using the techniques of filigree and pressure-moulding will, therefore, also form part of the discussion below where relevant.

The decoration of the doublures is considered separately: they have been categorized according to the material used and the technique of decoration. They will be discussed under the following sections: textile, block-pressed, tooled, filigree and pressure-moulded doublures.

In considering the technique of tooling, it should first be stressed that the designs for the central panel could comprise a variety of patterns and profiles and combinations thereof. It was therefore necessary to formulate a mode of categorization by which the tooled and stamped bindings could be classified. The introduction of certain profiles at certain times could then be tracked so that both the continuity and change that occurred in the ornament of bindings throughout the period could be recorded.

In approaching the formulation of such a typology, typologies previously used by Bosch and Weisweiler were first considered.⁴⁹ Bosch, in her thesis on the decoration of loose covers in the collection of the Oriental Institute of Chicago, distinguished four categories that were later revised for the published catalogue

⁴⁹ Weisweiler, *op.cit.*, 1962 ; Bosch, *op.cit.* 1952.

of the bindings.⁵⁰ For the purposes of this study, the revised schema in the catalogue is discussed whereby the bindings are divided into four categories according to the criteria listed below. In Scheme 1 a centred pattern fills the entire panel and does not repeat itself although the corner-pieces might reflect quarter portions of the central element. (Bosch, Carswell and Petherbridge, Cat.1–25.) This category includes patterns based on star patterns extending into geometrical interlace which they termed ‘strapwork’. In Scheme 2 an overall pattern with repeat tools fills the entire panel and is surrounded by single or multiple frames. (Bosch, Carswell and Petherbridge, Cat.24, 25.). In Scheme 3, a medallion or other centre-piece motif is placed at the centre of an inner panel with the field defined by one or more multiple frames. The corners of the inner panel may be decorated, as may be other areas, particularly above and below the central motif in the vertical axis. This category includes all types of central design element: stars, almonds, circles and rosettes. (Bosch, Carswell and Petherbridge, Cat: 26–68, 72–91). Finally, Scheme 4 is related to Scheme 3 but the field of the inner panel around the central motif and other decorated areas is filled with an over-all pattern (Bosch, Carswell and Petherbridge, Cat.69–71.)

This categorization of ornament of the central panels is very broad and rather unbalanced with the majority of the bindings falling in Scheme 3 since it includes all forms of profile used on a plain leather field: circles, stars, almonds and lobed rosettes, with and without pendants. This approach does not allow for tracing the introduction of certain profiles, stamps or different techniques into the

⁵⁰ Bosch, *op.cit.*, 1952 There is some discrepancy between the criteria for the categories that are first described in the contents description of her thesis, in Chapter 4 and the revised description in the catalogue that was later published. For example, see, Bosch, Carswell and Petherbridge, *op.cit.*, Cat.19, p. 85, A.12168 assigned to Category 1 in the thesis is assigned to Category 2 in the catalogue.

binders' repertoire when working with dateable bindings. For example, the bindings in Bosch's Scheme 4 includes bindings with filigree leather covers but this system of categorization only addresses the ornament and does not take into account the type of techniques used for decoration.

The typology proposed by Weisweiler for the decoration of the covers of Islamic bindings between the 9th and 16th centuries divided them into a total of 110 categories and organized the flaps separately into 41 types.⁵¹ He distinguished between those in which the decoration covers the whole of the central panel (Weisweiler Nos. 1–16) including those where geometrical interlace covers the whole panel and those that comprised what he termed as having *mittelornament* referring to the central design elements on a plain field. These were divided into a further five categories which were then sub-divided depending on the decoration of the perimeter of the design and whether pendants were attached. This classification of bindings, while showing an extremely detailed understanding of the various design elements used to decorate the covers is extremely complex and difficult to understand, a complexity compounded by the lack of illustrations for some of the types. It is pertinent to note that the catalogue that he produced contained illustrations of just 67 of the 110 types. The difficulties inherent in the use of such a typology is well-illustrated by Déroche's discussion, he chose to examine each type only according to the broad categories set out by Weisweiler, excluding those with geometrical over-all ornament as he considered Weisweiler's approach too complex.⁵²

⁵¹ Weisweiler, op.cit., 1962, pp. 41-56.

⁵² Déroche and Waley, op.cit, 2006, pp. 292–8.

After careful consideration of both these typologies of ornament, the initial distinction between bindings where all-over decoration covers the central panel and those where it is confined to a central medallion on a plain field is a useful one and provides the first parameter for categorization. The profiles, as identified by Weisweiler, also serve as useful categories but without the attention to minute details that was proposed by him.

The bindings in this study have been divided into two broad categories: covers with all-over tooling and those with a central design element on a plain leather field. The section on tooled and stamped bindings comprises bindings classified according to the patterns and profiles used for the covers in the following subdivisions: a) circles b) star patterns c) rosettes with and without pendants d) almonds, plain and lobed with and without pendants and e) cloud-collar profiles. Further sections on bindings follow that are devoted to filigree leather and pressure-moulded decoration for the covers and, finally, a separate section is included on the decoration of the doublures.

Tooled and Stamped Bindings

1. The Circle Profile

The perfect circle provided the starting-point from which many of the patterns were created.⁵³ For example, many star patterns were created through a single circle intersected by a series of secondary circles. The circle was also incorporated into the rosette profile to delineate areas of decoration and, as

⁵³ It was the circumference and radius of the circle which served as a proportioning device for the cursive scripts refined by the calligrapher Yaqut al-Mustasimi in Baghdad (d.698/1298). See Necipoğlu, *The Topkapı Scroll- Geometry and Ornament in Islamic Architecture*, Santa Monica, 1995, pp.104–5, fig.92a; see Ch. 5, p.340 for further discussion of the introduction of the cursive script.

such, it formed the basis of the designs for many early covers. This rosette profile is well - represented in the number of loose and dateable bindings with a circle profile that have been published⁵⁴ (Fig. 4.18). This first section considers bindings with a circle profile that are usually filled with small stamps or geometrical shapes. Their perimeters are usually decorated with small tools providing a sun-burst effect while knotted floating pendants were often placed above and below the roundel.

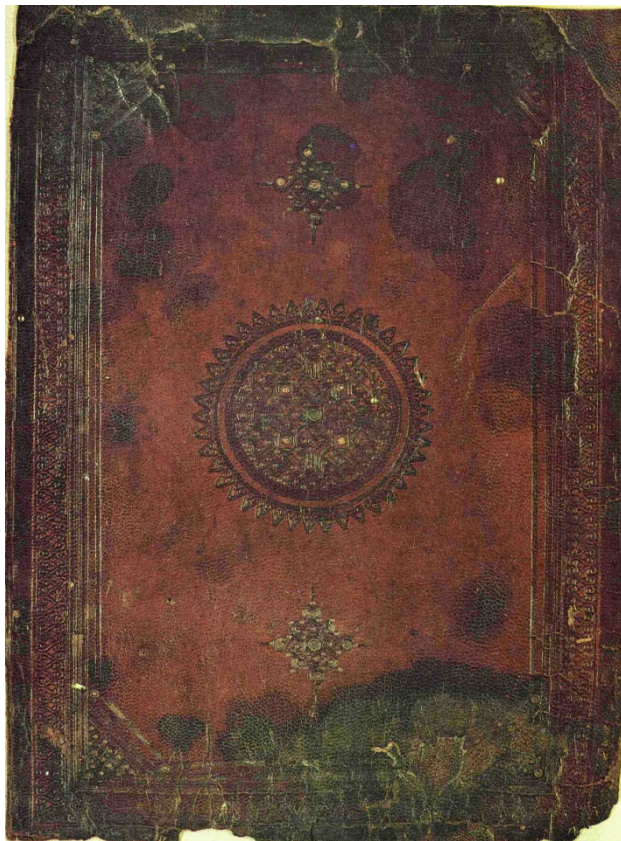


Fig. 4.18: Loose cover of a Mamluk binding, 25.7 x 18.2cm, mid-14th century. V & A 366/11-1888.

⁵⁴ See, for example, Bosch, Carswell and Petherbridge, *op.cit.*, 1981, Cat. 37, 38, 39; Haldane, *op.cit.*, 1983, Cat. 27-33.

Tanındı published a very early example of a Mamluk binding dated by manuscript to the month of Rajab 680/ October 1281 that has an eight-pointed star at the centre of a circle filled with tooled work and an internal border which incorporates the corner-pieces.⁵⁵ (Fig. 4.19). The outer border is tooled with a deeply tooled elongated angular s-shape which is also noted on later bindings of the middle of the 14th century (DAK Rasid 70 and 71).⁵⁶

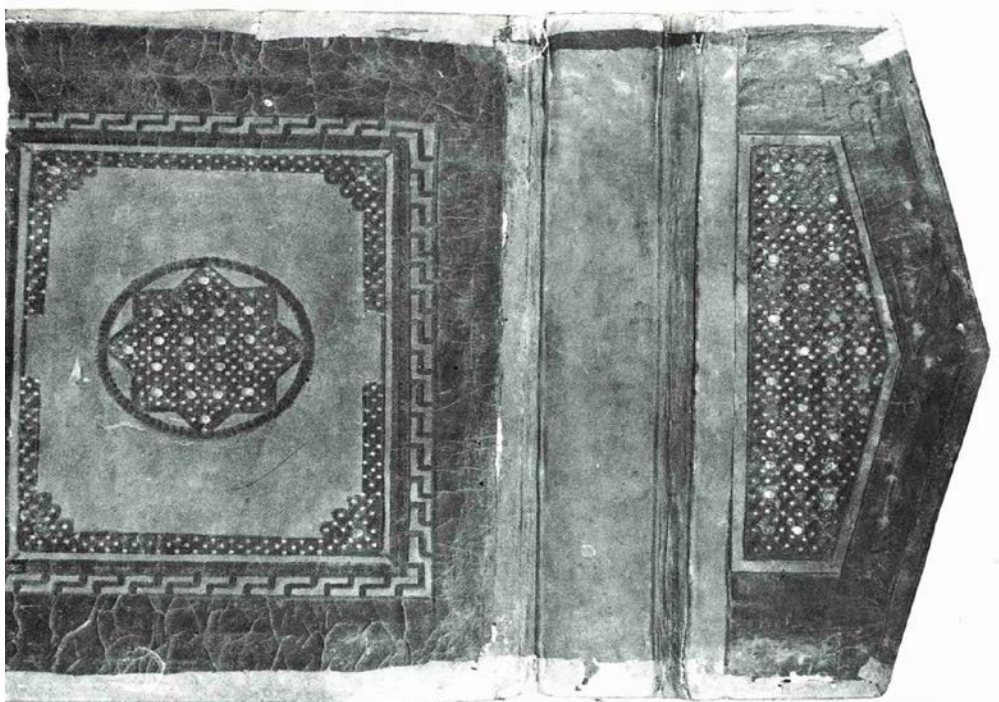


Fig. 4.19: Back cover of Mamluk binding dated 680/1281, TSK A.288, 33.5 x 25cm. After Tanındı, *op.cit.*, 1990, Pl.12

Another early example in the Bibliothèque Nationale is dated by manuscript to 717/1317 as it contains a note stating that the work had been read during 15 meetings in 716/1316 in the house near Bab Zuwayla of the author Ibn Fahd al-

⁵⁵ TSK A.288, 33.5 x 25cm; Karatay, *op.cit.*, 1964, no.2677; Tanındı *op.cit.*, 1990, p.106, Pl.12.

⁵⁶ See Appendix 2, no.2; see fig. 4.21, 4.22 for DAK Rasid 70 and 71.

Halabi who died in 725/1325 and was a chancellery employee under Sultan Baybars.⁵⁷ The cover is decorated with a circle containing a blind-tooled six-pointed star decorated with small gold punches. The border is made up of blind-tooled impressions of a single tool containing four petalled florets with scrolls.⁵⁸ (Fig. 4.20).

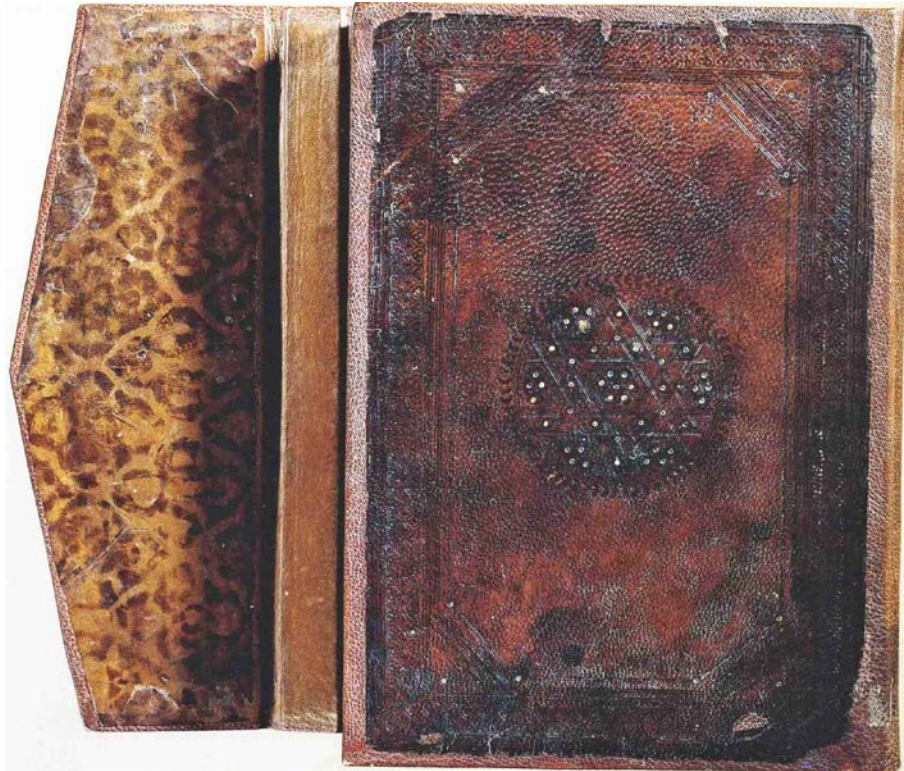


Fig. 4.20: Front cover of Mamluk binding dated 717/1317, BNF arabe 4436, 25 x 16.5cm. After BNF, op.cit., 2001, no.107.

The bindings of four thirty-part Qur'ans represent examples of what could be termed the 'ten pointed star/decagon' group and are important for a number of reasons.⁵⁹ They represent early examples of the combination of these two

⁵⁷BNF arabe 4436, 25 x 16.5cm; BNF, *L'Art du livre arabe*, 2001, p.147; No. 24 of the CBL Collection of loose bindings is almost identical to this binding.

⁵⁸ See Appendix 2, no. 3.

⁵⁹ DAK Rasid 60, *Juz' 2-29*, 27 x 38cm; Rasid 61, *Juz' 1-29*, 30 x 38cm; Rasid 70, 28 x 37cm; Rasid 71, 28 x 37cm.

geometric elements, the decagon and ten-pointed star, on bindings in Mamluk Cairo and are also found in the circle profile which decorates the bindings of the thirty-part Hamadan Qur'an of Uljaytu dated Jumada I 713/September 1313⁶⁰ and also on a Qur'an from Maragha dated 738-9/1338.⁶¹ This relationship is discussed in more detail in Chapter 6.

Two of these Qur'an manuscripts contain a *waqf* endowment for the Amir Qijmas bin Abdullah al-Ishaqi and one has a colophon stating that the manuscript was completed on 1 Rajab 757/ 30th July 1356 by Qadi Yahya bin Hasan bin Ahmed al-Quwumshi /Qumshi al-'Iraqi.⁶² (Fig. 4.21,Rasid 70) Both volumes contain very fine full-page illuminated frontispieces at the beginning of each volume in the same style. The structures of the binding of *Juz'* 17 of Rasid 70 indicate that the binding was contemporary with the manuscript. The bindings of both Qur'ans are decorated in a similar manner and must therefore have been bound at the same time by the same binder. The outer borders of Rasid 70 are decorated with three types of tooled pattern: circle/cross tool followed by a

⁶⁰ DAK Rasid 72, 56 x 41cm. See fig. 6. 13 – 6.19 of this text, where full reference for this binding will be given.

⁶¹ Boston Museum of Fine Arts 29.58. See fig. 6.20 where a full reference of this binding will be given.

⁶²DAK Rasid 70, 37 x 28cm, dated 757/1356; DAK Rasid 71, 37 x 28cm. Al-Saifi Qijmas was an amir of the Sultan Qaytbay and held the position of the Governor of Damascus until 875/1470 when he assumed the rank of Amir Akhur Kabir (Amir of the Stables). In 884/1479 he became the Amir in charge of the Mahmal, the pilgrimage caravan and later in 885/1480 reassumed the governorship of Damascus where he died and was buried in the funerary *madrassa* in his name in 893/1487. The mosque of Qijmas Al-Ishaqi was built between 884-886/1479–81 and is located in the Darb al-Ahmar district of Cairo. See Behrens-Abouseif, op.cit., 2007, pp. 286–9 for details of his mosque; see fig. 1.4 for colophon of DAK Rasid 70.

tooled angular s-shape and the innermost border with a square/cross tool.

The outer borders of Rasid 71 use two of the same tools.⁶³ (Fig. 4.22)

The centre roundels are decorated with a pattern based on a ten-pointed star over which a decagon interlaces with the straps of the stars. (Fig. 4.23) The outer tips of the star have been cut at angles by the circle. The perimeter of the circle is decorated with gold punches which are also placed at intervals in each of the arms of the star. The outer perimeter is tooled with rosettes of four lobes with flecks radiating into the central field (Fig. 4.21). The corner-pieces, which are barely visible, have the same small rosettes that are found on the perimeter of the circle. The treatment of the perimeter can be compared to the decoration of two loose bindings in the collection of the Oriental Institute of Chicago which have been attributed to South Arabia⁶⁴ (Fig. 4.24)



Fig. 4.21: Back cover and flap of *Juz' 2* of a Qur'an, 757/1356. DAK Rasid 70, 37 x 28cm.

⁶³ See Appendix 2, no. 2 and 4 for border tools of DAK Rasid 70 and 71, no. 5 for DAK Rasid 70 and no. 6 on Rasid 71, tool no. 44 was found on *Juz' 3* of Rasid 71.

⁶⁴ Bosch, Carswell and Petherbridge, op.cit., 1981, Cat. 41 is attributed to South Arabia and Cat. 42 attributed to South Arabia, Egypt/Syria. The outer perimeter decoration is also found on five examples of the CBL, Moritz collection of loose bindings, nos.29, 33, 34, 59 and 61.



Fig. 4.22: Front cover of *Juz' 2* of Qur'an, DAK Rasid 71, 37 x 28cm.



Fig. 4.23: Detail of central profile of cover of *Juz' 2* of Qur'an, DAK Rasid 70.

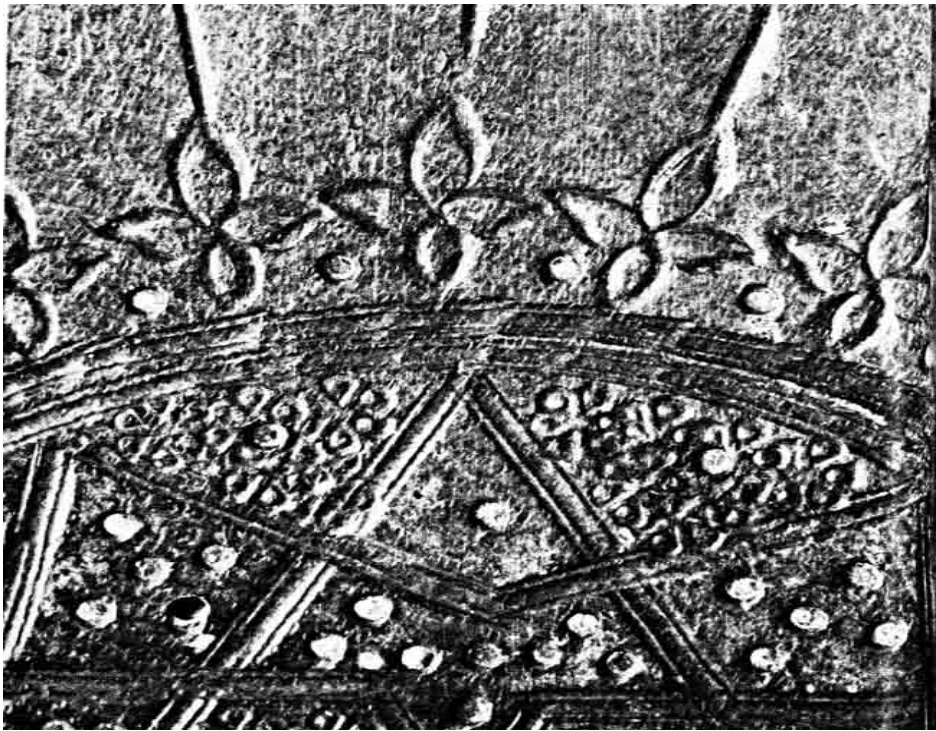


Fig. 4.24: Detail of perimeter decoration of Chicago, Oriental Institute, A.12120 attributed to South Arabia. After Bosch, Carswell and Petherbridge, *op.cit.*, 1981, Cat.42, p.146.

The flaps are decorated with a tooled roundel which circumscribes a smaller one filled with densely tooled knotwork lying on the plain leather field of the interior of the larger roundel. The remaining area of the flap is filled with tooled knotwork. This arrangement is found on a number of other bindings although some details might vary.⁶⁵ These patterns can therefore be considered representative of Mamluk bindings in the middle of the 14th century.

⁶⁵ See, for example, the binding of DAK Qawala 2, fig. 4.86; Bosch, Carswell and Petherbridge, *op.cit.*, 1981, Cat. 44 and Weisweiler, *op.cit.*, 1962, no.181, Pl. 6, dated by manuscript to Damascus 739 /1338 and Haldane, *op.cit.*, 1983, Cat.26.



Fig. 4.25: Flap of Juz' 26, Qur'an, DAK Rasid 71.

Other bindings of two thirty-part Qur'ans contain *waqf* endowments to the *madrasa* of the Amir Sarghitmish dated Jumada I 757/ 16th May 1356 (DAK Rasid 60 and 61) and use the same ten-pointed/decagon combination for the decoration of their covers.⁶⁶ Both Qur'ans are undated but DAK Rasid 60 was copied by Mubarak Shah ibn Abdullah, who James suggests, was trained in Baghdad.⁶⁷ The Qur'ans were copied in *muḥaqqaq*, a script not commonly used in

⁶⁶ DAK Rasid 60, 38 x 27cm and Rasid 61, 38 x 30cm; James, op.cit., 1988, Cat.72 (Rasid 60). Amir Sarghitmish was one of the Mamluks of al-Nasir Muhammad and in 755/1354, alongside Amir Shaykhu, he was one of the main supporters for the reinstatement of Sultan Hasan. After Shaykhu's death, he was appointed Amir Kabir under Sultan Hasan, who became resentful of his power, and he was subsequently sent to jail where he died in 759/1358; See Behrens-Abouseif, op.cit., 2007, pp.197–8 for an account of his *madrasa* where the inscription band at the entrance describes him 'the mentor of scholars, the succour of the weak and the founder of *madrasa* and mosques', see Ch.4 n.18 for details of a large volume Qur'an copied for him, see Ch.5, fig. 5.10 for comparison of this pattern with illumination.

⁶⁷ James, op.cit., 1988, pp.153–5.

Cairo in this period. James compares the style of calligraphy of DAK Rasid 60 with that of the 'Anonymous Baghdad Qur'an' copied by Ibn al-Suhrawardi (d. 720-1/1320-21), who was a distinguished calligrapher active in Baghdad, and compares the style of illumination to Qur'ans from the first half of the 14th century produced in Ilkhanid realms.⁶⁸ For this reason James attributes this Qur'an to Tabriz or Baghdad in the first quarter of the 14th century.



Fig. 4.26: Back cover of *Juz'* 25 of a Qur'an, DAK Rasid 60, 38 x 27cm.

The covers (with the exception of *Juz'* 1 and 30) of DAK Rasid 60 and 61 (Fig. 4.26, 27, 28) are decorated with a circle containing a ten-pointed star whose tips are cut by the perimeter of the inner circle with a decagon tooled over the star creating a series of polygonal cells. The cells of the arms of the star are filled with

⁶⁸Ibn al-Suhrawardi also copied parts of a large thirty-part Qur'an for the Ilkhanid Sultan Uljaytu, *Juz'* 7, TSK EH.243, 73 x 50cm, Karatay, op.cit., 1962, no.171; Tanındı, op.cit., 1990, p.128; James, op.cit., 1988, Cat.40; See fig. 6.9 for TSK EH.245 for *Juz'* 20 of the same Qur'an; James, ibid., p.154 compares the illumination of DAK Rasid 60 to a Qur'an dated 738/1338 copied in Maragha which also has the ten-pointed star/decaagon combination on its cover; see. fig. 6.20 of this text for the binding and see fig.6.7 and 6.9 for Qur'ans copied by him.

five-fold knots. These designs are also found on the previous binding discussed dated by manuscript to 756/1356 (DAK Rasid 70, Fig. 4.21). Knotted finials extend from the middle of the lower and upper borders into the central field, which are also noted on the Hamadan Qur'an of Uljaytu, and the border tools are of an s-shape.⁶⁹



Fig. 4.27: Detail of circle with ten-pointed star and decagon of DAK Rasid 60.

The corner-pieces of both bindings are cut at right angles filled with knotwork with a tooled square at the centre with a round punch in the blind. The decoration of the cover of the volumes of DAK Rasid 61 is almost identical to that of DAK Rasid 60. (Fig.4.28) The knotted finials now float on the central field above the central roundel and the border tools are different, made up of small

⁶⁹ See Appendix 2 no.7, 31; see fig. 6.17 for the Hamadan Qur'an of Uljaytu.

composite tools forming a square with a round punch which is gilded in the centre, a design which is found on several other Mamluk bindings of the period.⁷⁰



Fig 4.28: Front cover of *Juz' 1* of a Qur'an, c. 756/1356, DAK Rasid 61, 38 x 30cm.

Given the attribution by James of the manuscript of DAK Rasid 60 to Tabriz and Baghdad on the basis of the style of illumination and the use of the *muḥaqqaq* script, there are two possibilities: first that both manuscripts were copied in Baghdad or Tabriz and were bound there or secondly that they were bound in Cairo sometime around 756/1356, the date of their endowment to the *madrasa* of Sarghitimish. Little is known of the career of the calligrapher and, given that the bindings also bear a marked similarity to those which have previously been discussed, one which has a colophon dating it to 756/1356 (DAK Rasid 70), one can propose that these Qur'ans were bound in Cairo in what might be termed a 'Persian style' with the exception of *Juz' 1* and 30 of DAK Rasid 60 as all the other bindings identical with the exception of the first and last *juz'*. Both of these

⁷⁰ See Appendix 2 no. 8.

covers are decorated with a rosette profile filled with complex geometrical interlace whose compartments contain five-fold knots and five armed swastikas which can be compared to decoration on the Hamadan Qur'an of Uljaytu. This relationship is discussed in more detail in Chapter 6 where it is proposed that *Juz'* 1 and 30 represent the original bindings of the Qur'an and thereby bound in Baghdad or Tabriz while the remaining *juz'* were rebound in Cairo on their endowment to the *madrasa* of Amir Sarghitmish.⁷¹ Amir Sarghitmish, was known to be very fond of Iranians whom he 'honoured and exalted' while his institution was also dedicated to students from Iran, '*ajam*, although, as Behrens-Abouseif cautions, this is a word that might also refer to students from Anatolia.⁷²

The circle profile with geometrical ornament is also noted on the bindings of two volumes of Al-Subki's *Fatāwī* dated 19 Dhu'l Hijjah 879/ 26th April 1475 and 2 Rajab 880/ 1 November 1475.⁷³ (Fig. 4.29) The circle at the centre of the inner panel has a scalloped edge produced by impressions of a crescent shape tool. The centre is tooled with a six-armed geometrical rosette and its centre is marked by a six-pointed star divided into petal-like segments. The interstices are decorated with a small eight-petalled rosette tool at its centre with a gold dot. The area between the geometrical rosette and the periphery of the circle is filled with gold dots. The corner-pieces of the inner panel are cut at right angles to the border

⁷¹ DAK Rasid, 72, 56 x 40 cm; see fig.6.22 for further discussion of *Juz'* 1 and 30 and their relationship with Ilkhanid bindings. It has already been noted that often different binding styles are found on multi-volume Qur'ans but in this case all the *juz'* are extant and the decoration of *Juz'* 2–29 is in the same style. If two binding styles are employed they usually cover an equal number of volumes although not necessarily consecutively, see fig. 4.10 for example of DAK Rasid 120.

⁷² Behrens-Abouseif, op.cit., 2007, p.197.

⁷³ Oriental Institute, Chicago, A.12056 and A.12057, 26.7 x 17.4cm; Krek, *A Catalogue of Arabic Manuscripts in the Oriental Institute of Chicago*, Chicago, 1961, p.22; Bosch, Carswell and Petherbridge, op.cit., 1981, Cat. 40.

and are filled with the same arc stamps. The borders of Volume 1 are composed of tooled knotwork while those of Volume 2 have a stamp where small hearts form three-sepal calices to create a diamond shape, which is filled with eight-petalled rosettes.⁷⁴

This binding can be compared to the rosette-profile bindings with geometrical ornament of the late 14th century and, as such, appears rather anachronistic when compared with 'fine' bindings of the later period but there is no doubt that these patterns continued to be used for those who did not have the resources of the élite, showing the continuation of certain decorative patterns over long periods of time.



Fig. 4.29: Front cover of Vol. II of al-Subki's *Fatāwī* dated 880/1475, Moritz Collection, Chicago Oriental Institute, A12057, 26.7 x 17.4cm.

A manuscript entitled *Ghunya al-labīb fīmā yusta'malu 'ind ghaybat al-ṭabīb* ('A self-help medical text') with a dedication to the library of the Sultan Qaytbay was

⁷⁴ See Appendix 2, no.25.

completed on 24 Ramadan 888/ 26th October 1483 and was copied by Muhammad al-Hasan al-Farnawi.⁷⁵ (Fig. 4.30)



Fig. 4.30: Front cover and detail of *Ghunyat al-labīb fīmā yusta‘malu ‘ind ghaybat al-ṭabīb* dated 888/1483 with dedication to the library of Sultan Qaytbay, TSK A.2048, Vol. 3, 21.3x 15.3cm.

The binding is of cherry-red leather which is found on only three bindings in this study.⁷⁶ It has an outer border made up of the complex knot meander stamps.⁷⁷ Blue paint is used to delineate the borders of central panel and the central roundel which is filled with densely tooled gilded knotwork with a central knot in blue. There are two floating pendants of small rosettes with finials painted in gold. The corner-pieces are cut at right angles to the border with tooled

⁷⁵ TSK A.2048, 21.3 x 15.3cm; Karatay, op.cit., 1966, no.7333.

⁷⁶ The other examples are TSK A.2829, Karatay, op.cit., 1966, no. 6032, dated 889/1484, see fig. 4.150 ; TSK A.244, Karatay, op.cit., 1964, no.2248, dated 781/1379, see fig. 4.31. Red leather filigree is found on TIEM 508, see fig.4.190 and on the doublures of TSK A. 2303, fig. 4.193. Red leather is also used on Ottoman bindings with cloud-collar profiles of the 1450s and 1460s and also for doublures of bindings in the ‘Fatih’ style produced for Mehmed II. See Raby and Tanındı, op.cit., 1993, p.37 and p.49.

⁷⁷ See Appendix 2, no.26.

knotwork and their finials project into the central field. The circle on the flap of this binding can also be compared to that of a Qur'an manuscript dated by its colophon to 17 Jumada I 781/ 30th August 1379, which was copied in the Mosque of Nuri in the Qala'a of Damascus and also has a cherry leather cover with an almond profile and must be a product of the same workshop and therefore a later rebinding⁷⁸(Fig. 4.31) It has the same corner-pieces, tooled borders and uses blue paint to delineate the periphery of the circle.



Fig. 4.31: Flaps of TSK A.244, 38 x 25.2cm and TSK A.2048, 21.6 x 15.4cm.

A later manuscript with similar decoration uses the same border tools and also contains a dedication to the library of the Sultan Qaytbay. This is the fourth volume of *Qiṣa al-Anbiyā'* copied by Muhammad ibn Muhammad ibn Ali Al-Shahir bi'l Tandi (known as Tandi); its colophon states that it was completed in

⁷⁸ TSK A.244, 38.5 x 27cm, Karatay, op.cit., 1964, no.2248.

891/1486.⁷⁹ The outer borders contain a knot meander stamp found on other bindings of the period which is also used for the filling of the central circle combined with an oval stamp.⁸⁰ Two floating pendants are placed above and below the circle, made up of knotwork with a swastika motif painted in blue at the centre. Swastikas are used on bindings of this period as single motifs, a feature which was noted much earlier on Ilkhanid bindings, where they are used to fill the compartments of geometrical interlace.⁸¹ The flap repeats the central medallion. The doublures are of block-pressed leather with scrolling tendrils.

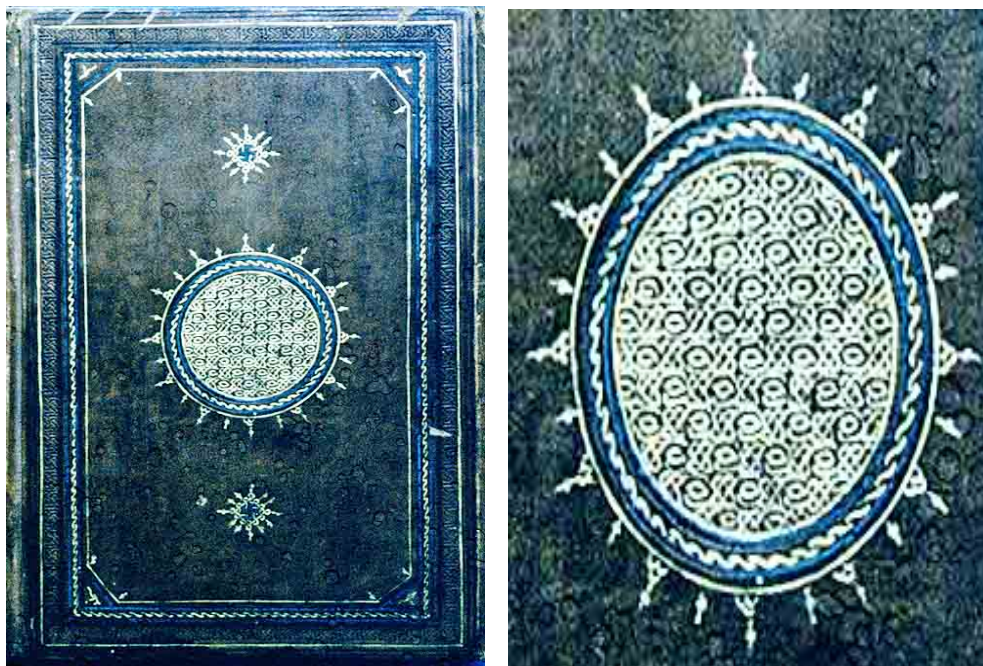


Fig. 4.32: Front cover and detail of central roundel of a copy of the *Qiṣaṣ al-Anbiyā'*, copied for the library of Qaytbay, TSK A.2863/4, 28 x 17.8cm.

⁷⁹ TSK A.2863/4, Karatay, op.cit., 1966, no. 5976, 28 x 17.8cm; there are two other volumes of the same manuscript, TSK A.2863,1/2, Karatay, op.cit., 1966, no. 5974 and 5975 with the same covers. The year of completion in the colophon is given in numerals.

⁸⁰ See Appendix 2, no. 26.

⁸¹ See fig. 6.24 for Ilkhanid examples and for Mamluk examples see TSK A.1608, Karatay, op.cit., 1966, no.6982 dated 916/1510, fig. 4.135 and TSK A.1396, Karatay, op.cit., 1966, no. 6948, see fig. 4.126.

This completes the survey of bindings with the circle profile, a decorative design that was used throughout the entire Mamluk period.

Star Patterns

Intricate star patterns in various geometrical arrangements are found on Mamluk bindings, as in other media throughout the period. As Lee points out, these patterns of geometrical interlace were derived from types of weaving, plaiting and basketwork whose origins are found in antiquity and were ubiquitous throughout the Islamic world.⁸² The borders of many of the bindings with interlace patterns reflect these beginnings.⁸³ (Fig. 4.33).



Fig. 4.33: Detail of weave patterns found on border decoration

The earliest Islamic star motifs were based on a star polygonal construction derived from a set of points distributed equally around a circle whereby the space at the centre produces two regular polygons that intersect to produce a star motif.⁸⁴ These star patterns of measured geometrical complexity were constructed with the aid of a compass and ruler.

The starting-point for each pattern is a perfect circle with points distributed equally around the circumference. When the points are joined they produce a regular convex polygon but, by joining every second or third point a star-shaped

⁸²Lee, op.cit. 1988, p.183.

⁸³ Appendix 2, no.42.

⁸⁴ Lee, op.cit., 1988, p.183.

area is produced at the centre. When the central segments are omitted a central star is created together with outer cells in the shape of kites. When all the segments are omitted the form of a regular geometrical star is created. (Fig. 4.34)

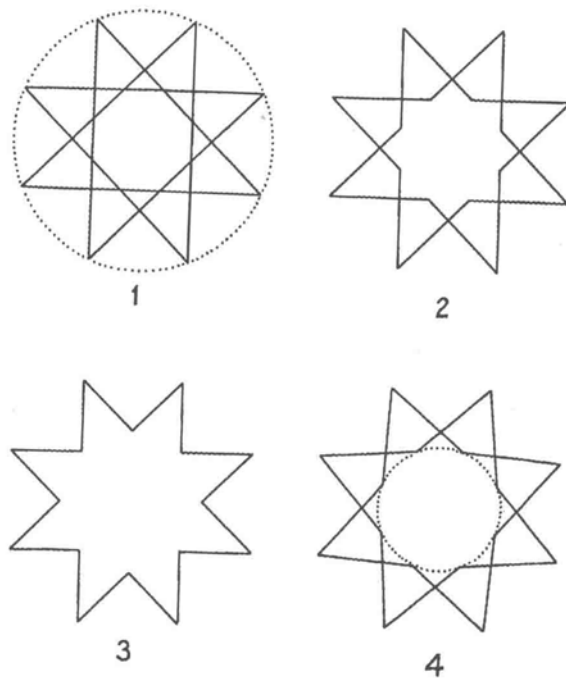


Fig. 4.34: The formation of star motifs from star polygons. After Lee, op.cit., 1988, Figs1–4.

All-over star interlace patterns

Early repeating star patterns were based on underlying grids of equilateral triangles or squares that required the ruling of parallel lines across the area for decoration. From this method, polygonal cells were created with three or more cells meeting at the nodes of the pattern. Ricard demonstrated this method of construction when analysing the bindings from Marrakesh discussed in Chapter 3.⁸⁵ By the end of the 10th century, patterns containing six and eight-pointed rectilinear stars were very common, occurring in geometrical ornament in

⁸⁵Ricard, op.cit., 1933, fig.1; see fig. 3.18.

Samarra (221/836) and in the mosque of Al-Hakim in Cairo (380/990).⁸⁶ The most common patterns found on Mamluk bindings of the 14th century were based on twelve-pointed stars on triangular or square grids.

However, not all star patterns were created using the method described above. By adding secondary circles of various sizes to intersect the original circle the inner points of the star motif could be determined and then connected with straight lines thus creating what is termed the geometrical rosette or star polygon, as it is sometimes called in the literature. As Broug notes, with this approach there are a limited number of options and most of the geometric patterns fall into three families into which four, five or six interlacing secondary circles are constructed around the primary circle.⁸⁷

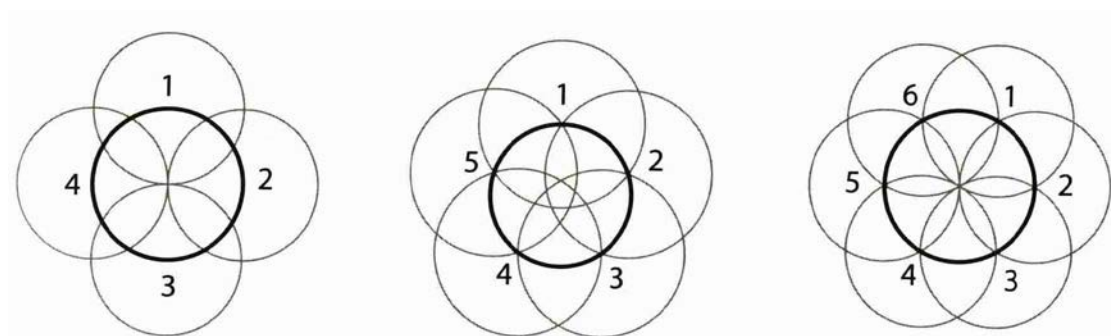


Fig. 4.35: Primary circle intersected by secondary circles forming the basis of patterns with multiples of four five and six secondary forms. After Broug, op.cit., n.d. p. 9.

When the adjacent points of the circle are joined they form regular convex polygons. In its simplest form, this comprises a six-pointed star that is surrounded by six regular hexagons. Lee notes that the earliest record of the

⁸⁶ Lee, op.cit., 1988, p.186; see, Herzfeld, *Die Ausgrabungen von Samarra I. Die Wandschmuck der Bauten von Samarra und seine Ornamentik*, Berlin, 1923, fig. 234 and Creswell, *Muslim Architecture of Egypt*, Vol.I, p.82, New York, 1978, reprint, fig. 29.

⁸⁷ Broug, *Islamic Geometric Patterns*, London, n.d. p.9.

geometrical rosette being used as a distinct motif occurs on the Arab-Ata mausoleum at Tim in Uzbekistan dated to 367/978.⁸⁸ The outer cells of the six-rayed rosette are only symmetrical when the number is six. When the number of rays is greater than six the rosette is nearly always constructed to include a two segment star as defined in the diagram below which is termed the outer star of the rosette. (Fig. 4.36)

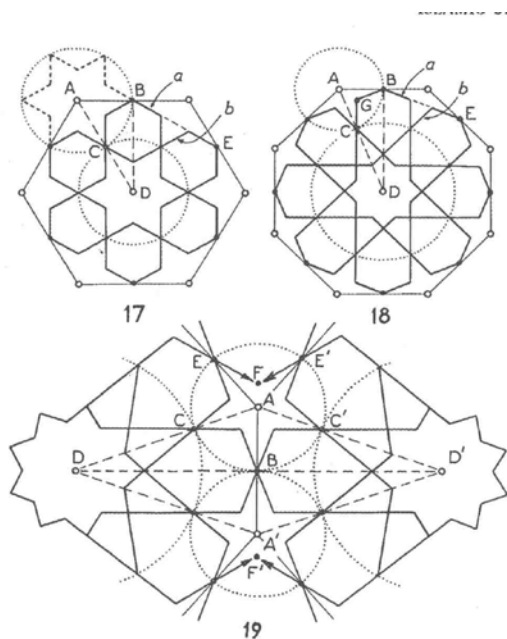


Fig. 4.36: The formal construction of a geometrical rosette. After Lee, op.cit., 1988, Figs 17–18, p.189.

The six-fold case was extended to include eight, ten and twelve-rayed rosettes. These patterns of eight and ten-rayed rosettes occur on the wooden *minbar* in the mosque of Ala al-Din in Konya (550/1155) and twelve-rayed geometrical rosettes on the *minbar* at the Mosque in Divriği (639/1241).⁸⁹ Patterns

⁸⁸ Lee, op.cit., 1988, p.188; Aslanapa, *Turkish Art and Architecture*, London, 1971, fig. 20 for the mosque of Ala al-Din and ibid., p.107, fig.13 for the *minbar* at Divriği.

⁸⁹ Lee, op.cit., 1988, p.189.

composed of geometrical rosettes with various numbers of rays appear on Mamluk bindings as single entities or as part of more complex repeat patterns.

Patterns based on twelve-pointed stars on a triangular grid were used from the early Mamluk period up to the middle of the 15th century.⁹⁰ They normally use densely tooled work for the interstices of the design, enlivened here and there with gold punches. The borders are normally made up of knotwork composed of small tools and the corner-pieces are in the form of quadrants of the central star motif.

One of the earliest Mamluk examples is found on the binding of the second volume of *Nihāyat al-Wuṣūl fī Dirāyat al-Uṣūl* which was copied by Ali ibn Yahya ibn Umar bin Habib al-Ja'fari in Damascus and is dated by colophon to the month of Dhu'l-Qa'dah in 697/ August 1298.⁹¹ (Fig.4.37)

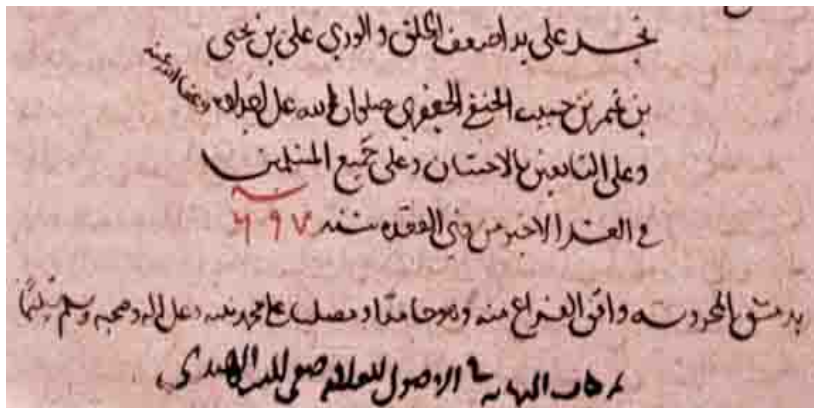


Fig. 4.37: Colophon, Fol. 379b, TSK A. 1240/2, 26 x 18cm.

⁹⁰ See TSK A.1769 dated 856/1446, see fig. 4.41 for the binding.

⁹¹ TSK A.1240/2, 26 x 18cm; Karatay, op.cit., 1966, no. 3293/4.

The binding is of dark brown leather and its border is tooled with individual knot-pattern tools.⁹² (Fig. 4.38) As this tool is not found on any of the other bindings in this study, the pattern might be an indication that the manuscript was also bound in Damascus. The design of the front cover is based on a central twelve-pointed star in an all-over interlace pattern extending to the border. The star is filled with densely tooled work in the blind, composed of hatched bars and punches. The surrounding interstices are left plain with one single stamp with a vegetal type motif at the centre. The corner-pieces repeat the densely tooled work of the centre of the star, creating a central ovoid element through the contrast of the plain and densely tooled leather. (Fig. 4.39) The doublures are of new plain leather and the flap repeats the pattern of the cover.

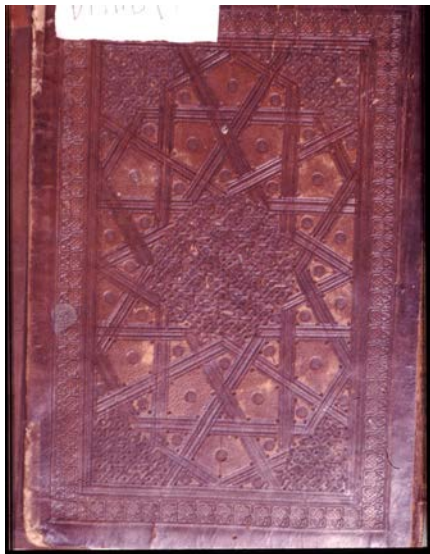


Fig. 4.38: Front cover of *Nihāyat al-Wuṣūl fī Dirāyat al-Uṣūl* dated 697/1298, TKS A.1240/2, 26 x 18cm.

⁹² See Appendix 2, no.10.

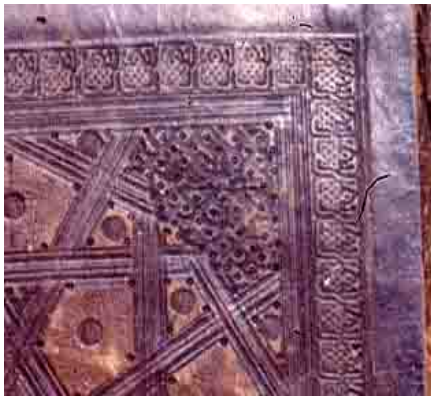


Fig. 4.39: Detail of borders, corner-piece and central star of TSK A.1240/2, 26 x 18cm.

The same star pattern is repeated on a much later binding of *Al-Muntaẓam fi badā'i' al-dunyā wa-tawārīkh al-umam* dated Sha'ban 815/November 1412 on Volume 2.⁹³ The manuscript contains an elaborate title page with a dedicatory inscription to the library of the deceased Dawun Abd al-Ahmad ibn al-Kuwayz, a member of the Banu Kuwayz, a prominent Syrian family whose members held several important military, administrative and religious posts during the Mamluk period.⁹⁴

⁹³ TSK A.2909/1, 27 x 18cm; Karatay, op.cit., 1966, no.5766/7.

⁹⁴ See Martel-Thoumian, *Les Civils et l'administration dans l'état militaire Mamluk, IX-XV siècle*, Damascus, 1992, p.82 ff. for prominent members of the Banu Kuwayz.

The binding of dark brown leather has segmented borders using a four-fold knot with small gold punches at the centre.⁹⁵ Segmented borders are noted on bindings that are dateable to the end of the 15th century and this appears as an early dated example in the Mamluk context.⁹⁶ Broad segmented tooled borders filled with tooled decoration appear on a number of volumes which are dateable to the end of the 14th century, but in this example the borders are neatly delineated and filled with defined tools. The central panel has a twelve-pointed star at its centre, which extends into an interlace pattern delineated by lines painted in gold. An underlying pattern is blind tooled creating a large rosette around the star. The complete field of the central panel is tooled with small tools of punches, bars and punches creating a hatched effect originally enlivened with gold punches. Some of the interstices of the interlace pattern have been left untooled to provide contrast. The doublures are of block-printed leather with intertwining palmettes and the flap repeats the treatment of the covers with a half-star interlace pattern extending from the tip of the flap.

⁹⁵ Appendix 2 no. 29.

⁹⁶ See fig. 4.51 for example dateable to the late 14th century and see TSK A.2129, fig. 4.151 for an example from the late 15th century. Also see fig. 6.49 for Ottoman example and fig. 6.23 for the segmented border found on DAK Rasid 60, *Juz'1* thought to have been bound in Tabriz or Baghdad; see fig. 4.26 for the other bindings of this Qur'an (DAK Rasid 60) and Appendix 2 no.7 for their border pattern.

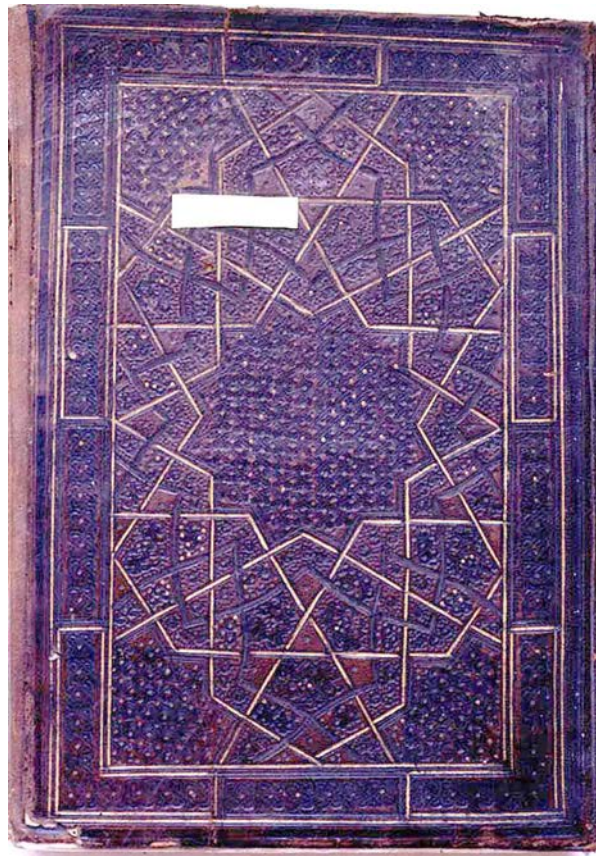


Fig. 4.40: Front cover of *Al-Muntaẓam fī badā'i' al-dunyā wa-tawārīkh al-umam* 815/1412, TSK A.2909/1, 27 x 18cm.

This arrangement of twelve-pointed stars on a triangular grid was to continue into the middle of the 15th century. The manuscript of *Ākām al-marjān fī aḥkām al-Jānn* is dated 2 Dhu'l Hijja 856/ 14th December 1452.⁹⁷ The binding of brown leather has an outer border tooled in the blind with x-shape tool.⁹⁸ (Fig. 4.41) There is another border tooled in the blind with the same stamp and formerly gold punches existed at each of the four corners and the centre of the x, some of which remain in places. The central panel contains a twelve-pointed star which extends its interlace to the border. The interstices are filled with punches, some of which would originally have been in gold. The flap echoes the design of the

⁹⁷ TSK A.1769, 27 x 18cm, Karatay, op.cit., 1966, no. 4907.

⁹⁸ See Appendix 2 no.30.

cover and the doublures are of block-printed leather in a trellis pattern which enclose a pine-cone type motif on a leafy background.⁹⁹



Fig. 4.41: Front cover of *Ākām al-marjān fī aḥkām al-Jānn* dated 856/1452, TSK A.1769, 27 x 18cm.

⁹⁹ The same pattern is found on several doublures of loose bindings in the Chicago catalogue. See, Bosch, Carswell and Petherbridge, op.cit., 1981, Cat. 8, 29, 50 and 51; see fig. 4.181 of this text for the doublure.



Fig. 4.42: Flap of TSK A.1769

Other arrangements were also found using this pattern but incorporating two twelve-pointed stars on the cover. One is a binding of a copy of *Shifā' al-Saqam* which is dated 5 Shawwal 775/19th March, 1374 and was copied in the Mosque of Nuri in the citadel of Damascus by Ahmad bin Ali bin Muhammad al-Hanafi.¹⁰⁰ (Fig. 4.43)

¹⁰⁰ The mosque of Nuri must refer to the *madrasa* of Nur al-Din in Damascus built in 562/1167.

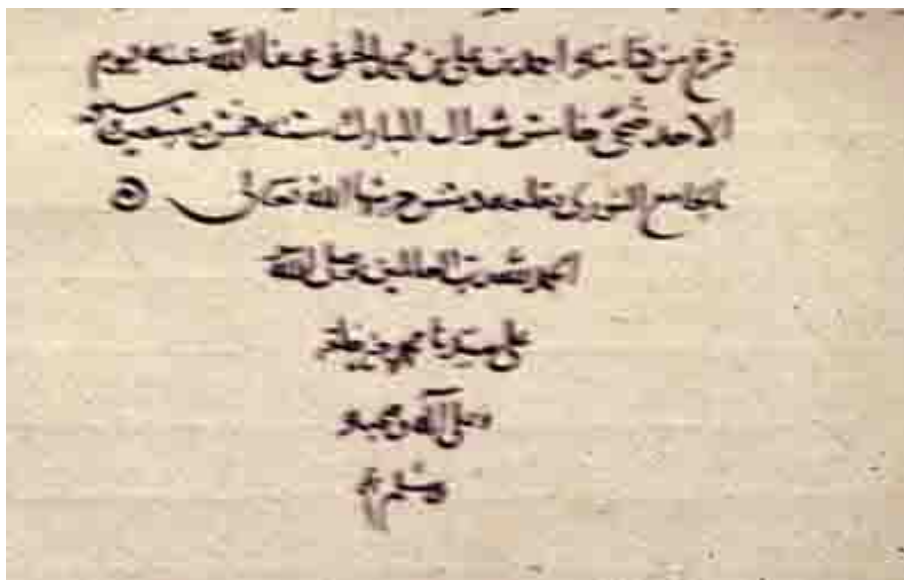


Fig. 4.43: Colophon, Fol. 164a of TSK A.324.

This cover incorporates two twelve-pointed stars on a triangular grid in a geometrical interlace.¹⁰¹ The interstices of the pattern are filled with a variety of small punches of arcs and pallets. The borders are stamped with a knot pattern made up of arcs and punches some of which are gilded.¹⁰² The flap replicates the design of the covers and it has block-pressed doublures with spiraling vines.¹⁰³

¹⁰¹ TSK A.324, 22.3 x 16 cm; Karatay, op.cit., 1964, no.2963.

¹⁰² See Appendix 2, no. 11.

¹⁰³ See fig. 4.177 for example of this pattern of doublure.



Fig. 4.44: Front cover of *Shifā' al-Saqam* dated 775/1374, TSK. A.324, 22.3 x 16cm.



Fig 4.45: Detail of central panel of cover of TSK A.324.

Patterns based on geometrical rosettes appear on bindings in the reign of Sultan Shaʿban. The binding of the second volume of the *Fatāwī* of al-Timurtashi with a title roundel to Shaʿban's library that was copied by Ibrahim bin Ahmad bin Sadiq al-Halabi has a pattern based on ten-rayed geometrical rosettes on a grid of 72 and 108 rhombs.¹⁰⁴ (Fig. 4.47)



Fig. 4.46: Fol.2a Dedication to the library of Sultan Shaʿban, TSK A.804.

The colophon states it was completed in Muharram, 775/July, 1373 by Ibrahim Ahmed bin Sadiq al-Halabi in the *majlis* of Uljay al-Yusufi, the atabak of the army. He was married to Sultan Shaʿban's mother and after her death quarreled with the amirs concerning the disposal of her property. He was accidentally drowned in the Nile in 775/1373, the same year as the date of completion of this manuscript. (Fig. 4.46) After his death, the manuscript must have become the

¹⁰⁴ TSK A.804, 31.5x21.5cm, Karatay, op.cit., 1964, no.3766; Tanındı, op.cit., 1990, p.146; see fig.5.14 and 5.15 for comparison of this pattern with those in illumination.

possession of Sultan Shaḥban, hence the title roundel to his library on folio 2a and must, therefore, have been bound for him during his reign.¹⁰⁵



Fig. 4.47: Front cover and flap of the *Fatāwī* of al-Timurtashi, TSK A.804, 31.5 x 21.5cm.

The binding is of dark brown leather and has an outer border of s-shape stamps surrounded by another border composed of individual bar tools arranged in a stepped pattern with interstitial gold punches, which is in turn surrounded by

¹⁰⁵ See Mayer, *Saracenic Heraldry*, Oxford, 1933, p.58 for details of Uljay al-Yusufi's career and Behrens-Abouseif, op.cit., 2008, p.221 for a description of his *madrasa*; see fig.4.48 for a binding with a *waqf* in his name.

another border of broad s-shape stamps.¹⁰⁶ The centre of the cover has a ten-pointed star which extends outwards creating a complex interlace pattern based on ten-rayed geometrical rosettes. The design extends right to the corners without the provision of corner-pieces. An extra border is included at the top and bottom of the panel. The interstices are filled with densely tooled hatched bars and arcs with gold punches. The flap repeats the pattern of the covers. The green textile doublures have a pattern with the inscription *al-malik al-sulṭān* and a note recording the title of the manuscript and the date 906/1501.¹⁰⁷

Two thirty-part Qur'ans, (DAK Rasid 62, DAK Rasid 64) have similar bindings.¹⁰⁸ One of the Qur'ans (DAK Rasid 62) has a *waqf* endowing it to the *madrassa* of Uljay al-Yusufi but it has had a troubled existence with later additions to the illumination while the other is undated but contains finely illuminated borders on several folios in a similar style (DAK Rasid 64). The illumination of DAK Rasid 62 is very fine and a close comparison can be made with the style of Ibrahim al-Amidi who illuminated several Qur'ans for Sultan Sha'ban.¹⁰⁹ (Fig. 4.49)

¹⁰⁶ See Appendix 2, no. 11, 17.

¹⁰⁷ See fig 4.163 for a description of this doublure.

¹⁰⁸ DAK Rasid 62, 53 x 37cm, (all *juz'* extant but *Juz'* 30 with a different binding.); see p. 154 for detail of Uljay al-Yusufi's career; DAK Rasid 64, 22 x 15cm.

¹⁰⁹ The style of illumination can be compared to the frontispiece of DAK Rasid 9 which employs the same repeat rosette pattern. James, op.cit., 1988 has identified four Qur'ans illuminated by al-Amidi, see pp.197–214 and fig.141, and Cat. 30, 31, 34, 35; See figs. 5.31 and 5.32 of this text for examples of al-Amidi's illumination



Fig. 4.48: *left* Front cover of Qur'an, Juz' 1, DAK Rasid 62, 53 x 27 cm, *right* Qur'an, Juz' 16, DAK Rasid 64, 26 x 18cm.



Fig. 4.49: Fol.2a, One-half of a double frontispiece, Juz' 20 of Qur'an with *waqf* for Uljay al-Yusufi, DAK Rasid 62.

The patterns of both these bindings are based on twelve-pointed stars extending into a repeat interlace pattern of twelve-rayed geometrical rosettes. The cover of DAK Rasid 64 includes Qur'anic verses above and below the central panel and the pattern is repeated on the flap.¹¹⁰ The broad borders of both volumes are composed of densely tooled work. These bindings represent a style which is also found on a number of loose bindings distinguished by their broad, often segmented, borders containing tooled designs painted in gold rather than decorated with the repeated impressions of small tools.¹¹¹ (Fig. 4.51) The corner-pieces of DAK Rasid 62 and DAK Rasid 64 are quite distinctive and contain an octagon tooled around a central four-pointed star. (Fig. 4.50)



Fig. 4.50: Detail of corner-piece of Qur'an, DAK Rasid 62.

¹¹⁰ The verses are from Sura XXVI of the Qur'an 192-195; See fig. 4.40 for a later example of segmented borders which are more clearly defined.

¹¹¹ This style is found on DAK Rasid, 124, 33 x 24cm and DAK Rasid 125, 38 x 27cm both undated; the same style of binding is found in Sarre, *op.cit.*, 1923, Pl.II; Oriental Institute, Chicago, A.12152, 37.1 x 26.1cm and A.12151, 37 x 26cm; Bosch, Carswell and Petherbridge, *op.cit.*, 1981, Cat.11 and 12; CBL. Collection of loose bindings, no. 68, 37 x 27cm; see fig. 4.175 for the doublures.



Fig. 4.51: *Juz' 20* of a Qur'an dateable to the end of the 14th century, DAK Rasid, 124, 33 x 24cm.

By the end of the 14th century, a change is noted in the geometry of these designs when repeat patterns of ten-pointed stars came to form the basis of the interlace pattern. Lee, writing in 1988, notes 'These decagonal patterns represent a departure from traditional methods of geometrical pattern design, although they result invariably from a logical generalization of the principles developed so far. It is not immediately obvious how to form repeating patterns with ten-pointed stars since neither of the grids considered so far is suitable.'¹¹²

The recent research by two Harvard mathematicians on the occurrence of five and ten-fold geometric patterns in the tile designs of a 15th century *madrasa* in Bukhara has, however, identified a series of underlying shapes consisting of pentagons, decagons, hexagons, rhombi and 'bowties' which created the grids

¹¹²Lee, op.cit., 1988, p.187.

that allowed craftsmen to create these complex patterns over large surfaces without gaps or disruptions in the symmetry. For many years it had been believed that there were no shapes that could only be arranged non-periodically. In their article published in the journal *Science* in 2007, Peter Lu and Paul Steinhardt argue that the introduction of these shapes, which they termed '*girih*' based on the Persian word for knot, allowed for an entirely new way of conceptualising and designing patterns.¹¹³ (Fig. 4.52)

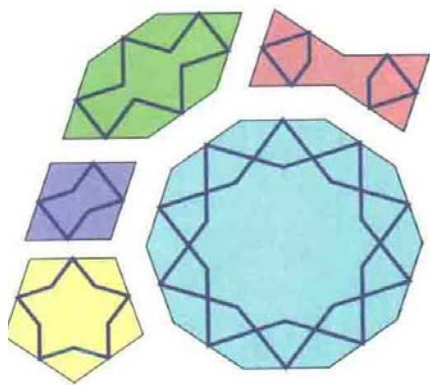


Fig. 4.52: The five *girih* shapes: hexagon (green), bowtie (pink), decagon (blue), rhombus (purple) and pentagon (yellow). After Prange, op.cit, 2009, p.27.

A series of bindings of *juz'* of a thirty-part Qur'an with a *waqf* inscription in the name of Sultan Barquq (1st r. 784–91/1382–9, 2nd r. 792–801/1390–99) marks these changes in the treatment of geometry.¹¹⁴ (Fig. 4.54)

The pattern of geometrical interlace on these bindings is derived from a ten-pointed star whose arms extend creating the *girih* shapes described above. The

¹¹³ Steinhardt and Lu, 'Decagonal and Quasi-Crystalline Tilings in Medieval Islamic Architecture', *Science*, 23 February 2007, Vol.315, pp.1106–10 and Prange, 'The Tiles of Infinity', *Saudi Aramco World*, September/October, 2009, Vol.6, No.5, pp.24–31. Many shapes can be used to form non-periodic and periodic tilings but for many years it was believed that no shapes existed which could only be arranged non-periodically. Penrose in 1974 was the first to identify two shapes which could be exclusively arranged non-periodically: the 'kite' and the 'dart'. See also Ch. 5, pp.329–338 for further discussion of this geometry.

¹¹⁴ DAK Rasid, 120, 36.5 x 26.5cm.

*giri*h elements are clearly distinguished through the use of dark and light leather.¹¹⁵

The flap is decorated with elaborate arabesque ornament, the earliest example of arabesque ornament used on bindings in this study. The elegant spiralling arabesques stem from a lobed central cartouche which is centred with a three-petalled calyx. The pattern is outlined in gold paint and is distinguished by lying on a background darkened through the stippling of the leather. (Fig. 4.54) The doublures are of block-printed leather of two types: one with a vegetal design and the other incorporating large quatrelobe split palmettes in a repeat pattern.¹¹⁶ The border tools are commonly used on other Mamluk bindings, comprising an x shape with gold punches and another based on hatched arcs combined to create an ovoid pattern.¹¹⁷

A binding of the 26th *juz'* of a Qur'an in the Bibliothèque Nationale which has a *waqf* inscription for Sultan Barquq for his *khanqah* has an identical design for the cover and flap and uses the same tools for the borders although it is very slightly larger in size.¹¹⁸ (Fig. 4.55)

¹¹⁵ In order to create the darker leather, it was probably tooled while damp and, as the binder embossed the areas with a decorative tool, the leather darkened. With this type of decorative leather-work, flat metal tools are used to compress certain areas to give the impression that the leather is recessed. Communication with John Mumford, bookbinder, January, 2012.

¹¹⁶ See fig. 4.185 for discussion of these doublures; see fig. 4.113 for bindings with the quatrelobe split palmette motif.

¹¹⁷ See Appendix 2, nos. 12, 13 and 20.

¹¹⁸ BNF arabe. 5846, 37.4 x 26.2 cm; BNF, op.cit., 2001, Fig.103, also published in Déroche, *Du Maghreb à l'insulinde*, Paris, 1985, no. 348; There are two other *juz'* of this Qur'an in the BNF; see fig. 4.145 for *Juz'* 21 of this Qur'an, BNF arabe, 5845 and fig. 4.96 for *Juz'* 26, BNF arabe 5844.



Fig. 4.53: Front cover of *Juz' 24*, Qur'an with *waqf* for Sultan Barquq, DAK Rasid 120, 30 x 27cm.

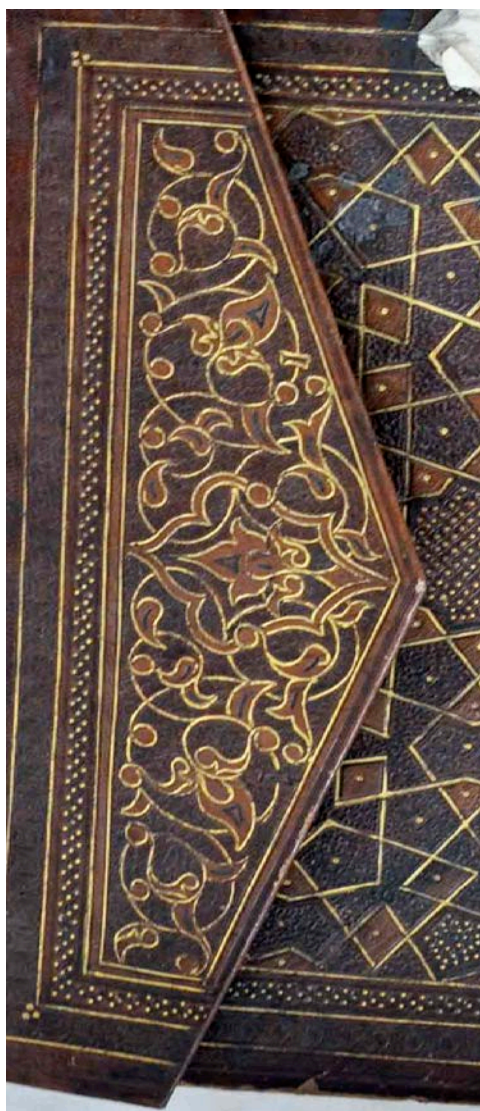


Fig. 4.54: Flap of *Juz' 24*, Qur'an with *waqf* for Sultan Barquq, DAK Rasid 120, 30 x 27cm.



Fig. 4.55: *left* Front cover of *Shāhnāma*, CBL. Ms. Per.110, 37.5 x 30cm *right* Qur'an *Juz'* 27, BNF arabe. 5846, 37.4 x 26.2cm.

A further binding with a very similar pattern is found in the Chester Beatty Library which contains an undated manuscript of the *Shāhnāma*. It must be a Mamluk cover that has been reused as the small border tools are the same as the Mamluk binding described above.¹¹⁹ (Fig.4.55 left.) This binding presents another example of the problems associated with the attribution and dating of bindings.

A later binding of the sixth *juz'* of a thirty-part Qur'an has a *waqf* inscription and the date 823/1421 in numerals on *Juz'* 26 but unfortunately other details have been erased.¹²⁰

¹¹⁹ CBL Per.110, 37.5 x 30 cm; Arberry, *A Catalogue of the Persian Manuscripts and Miniatures*, Dublin, 1959, pp.23–4 notes the manuscript consists of disconnected portions of the text.

¹²⁰ DAK Rasid 102, 34 x 26cm.

The design is based on a ten-pointed star repeat pattern. The binding has three outer borders: the first of individual stamps based on a square with arms protruding from each of the corners and a gold punch at the centre of each square, surrounded by another border with a simple x stamp and, finally, the outer border of the central panel is surrounded by s-shape stamps.¹²¹ (Fig.4.58) The interstices are densely tooled with punches arcs and bars. The flap has an eight-pointed star which extends, forming an eight-rayed geometrical rosette. The use of punch gilt decoration on the flap is used extensively on a series of Qur'ans associated with Sultan Barsbay.¹²² (Fig.4.56) Similar decoration can also be found on a loose flap in the Moritz collection in Chicago.¹²³



Fig. 4.56: Front cover of *Juz' 6* of Qur'an with *waqf* dated 823/1421, DAK Rasid 102, 34 x 26cm.

¹²¹ Appendix 2, no. 30, 33, 35.

¹²² See fig. 4.102.

¹²³ Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.53.



Fig. 4.57: Detail of *flap*, *Juz' 6*, DAK Rasid 102.



Fig. 4.58: Detail of tooled borders of DAK Rasid 102.

By the late 15th century this style of geometrical ornament has developed with the appearance of repeat patterns based on ten-rayed geometrical rosettes. This pattern is found on a single remaining *juz'* of a Qur'an with a *waqf* inscription for Sultan Qaytbay.¹²⁴ The outer borders are segmented and filled with knot-work painted over with gold tear-drops, a design that is commonly found on other

¹²⁴ DAK Rasid 88, 52 x 38 cm.

bindings of the period.¹²⁵ The geometrical rosettes employ ten-petalled flowers for their centres and the connecting rhombs and 'bow ties' are filled with small punches contrasting with others which are left plain or with an arrangement of five punches.



Fig. 4.59: Front cover of *Juz' 18* of a Qur'an for Sultan Qaytbay, DAK Rasid 88, 52 x 38cm.

¹²⁵ See fig. 4.130 for a binding of this type.



Fig. 4.60: Detail of the cover of DAK Rasid 88.

The pattern employed on the covers of this binding is so close to a loose binding in the Dar al-Kutub (without an accession number) that it deserves some mention. The outer border is segmented into cartouches with a calligraphic inscription with a verse from the Qur'an that reads *allāhu lā ilāha illā huwa al-ḥayy al-qayyūm la ta'khudhuhu sinatun wa-lā nawm* (Qur'an 2:255). The outer borders and those of the inner panel are tooled with a meander knot pattern which is commonly found on other bindings of the late 15th century.¹²⁶ A similar binding is also to be found in Chicago exhibition catalogue.¹²⁷ This binding is representative of the long development of ten-fold patterns in binding decoration in Egypt. The binding must have required enormous skill to design as each element would have had to have been tooled and then carefully gilded by hand. It is interesting to note that certain elements have been outlined with

¹²⁶ See Appendix 2, no. 27, 47.

¹²⁷ Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.19.

grayish paint, perhaps to serve as a guide in the decoration of the pattern.

The binding has a tooled doublure of a large lobed almond filled with arabesques. This will be considered in the section on doublures.¹²⁸



Fig. 4.61: Loose binding, DAK, 73 x 51cm.



Fig. 4.62: Detail of loose binding dateable to the late 15th century. DAK, no accession number at present.

¹²⁸ See fig. 4.188-89.

Apart from star patterns, other all-over decorative patterns were found on a few other covers. A volume of a collection of *tafsīr*¹²⁹ copied by Abu Bakr bin Muhammad bin Ahmed bin al-Hasan al-Suyuti on the 12 Rajab 824/12th July 1421 has a pattern composed on a grid of squares with a single octagon in each compartment.¹³⁰ The centre of each octagon has a small rosette and gold punches are used to decorate the borders of each of the unit squares in a similar manner to that found on. The borders are made up of s-shape stamps with small punches. No other examples have been found of this type of design.



Fig: 4.63: Front cover of a collection of *tafsīr*, TSK A107, 18 x 13.5 cm

Star patterns on a plain leather ground

Star patterns are also found on bindings as single elements on a plain leather background. There are numerous examples of these in the collections of loose

¹²⁹ *Tafsīr* literature comprises commentaries on the Qur'an.

¹³⁰ TSK A.107, Karatay, op.cit., 1962, no.2154, 18 x 13.5cm.

bindings.¹³¹ Single stars on a plain leather background were also used for decorating covers and sometimes incorporating geometrical rosettes. *Juz'* 9 of a thirty-part Qur'an contains a *waqf* endowment in the name of Al-Saifi Qanibay al-Jarkasi with the date of the 14 Sha'ban 857/19th August 1453.¹³² The outer border contains a heart-shaped tool with a floral motif.¹³³ The cover is decorated with a central eight-pointed star which extends into an eight-rayed geometrical rosette which is enclosed within a further eight-pointed star. The interstices of each of the outer arms of the star are filled with gold punches and the points of the star are tipped with small gold punches arranged in groups of three, with small flecks extending into the central field. The other has two pendants terminating in tooled knotwork.



Fig. 4.64: Front cover and detail of *Juz'* 6 of Qur'an with *waqf* dated 857/1453, DAK Rasid 101, 28 x 19cm.

¹³¹ See Haldane, op.cit., 1983, Pl. 6–8 for examples of bindings with single star patterns.

¹³² DAK Rasid 101, 28 x 19cm; Qanibay al-Jarkasi was appointed Dawadar in 853/1449 but was imprisoned by Sultan Inal on his accession to the throne. He was released by Khushqadam and died in Damietta 866/1462. See Mayer, op.cit., 1933, pp.176-77 for details of his career.

¹³³ See Appendix, 2, no.38.

The geometrical rosette also occurs as a single motif on a plain leather ground. A series of bindings of a thirty-part Qur'an contain *waqf* inscriptions on *Juz'* 9 and 28 endowing them to the *madrasa* of Khwand Baraka in the Khatt al-Tabannah district of Cairo dated 15 Sha'ban 770/ 24th March 1369. (Fig. 4.65)

The bindings of *Juz'* 20, 21, 23, 24 and 28 have ten-rayed geometrical rosettes on their covers while others are decorated with an eight-lobed rosette profile with arrow corner-pieces which will be discussed in the next section.¹³⁴ The centre of the design is marked with a ten-pointed star with knot work at its centre. The outer borders are decorated with a tool that has been previously described and has also been used on bindings from Marrakesh.¹³⁵ The flap has a circle with an eight-pointed star at its centre. The doublures of some of the *juz'* are of block-printed leather in two types of trellis designs, while others use green textured cloth.¹³⁶

¹³⁴ See fig. 4.72.

¹³⁵ DAK Rasid 80, 24 x16cm.

¹³⁶ See fig. 4.180, 4.182 for the block-pressed doublures. The volumes also contain textile doublures see fig. 4.170.



Fig. 4.65: Front cover and flap of *Juz'* 23 of a Qur'an dated 770/1368, DAK Rasid 80, 17 x 25cm.

The use of the single geometrical rosette for the decoration of covers does not appear to have been very common as only two other examples were noted: one in the collections of loose bindings at the Chester Beatty Library and the other at Oriental Institute at Chicago.¹³⁷ (Fig. 4.66) The cover, in this case, contains an eight-rayed geometrical rosette surrounded by an octagon with large arrow-like corner-pieces projecting into the central field which are found on the lobed rosette bindings of these volumes.¹³⁸ The border tools are the same so this should be dated to the same period.

¹³⁷ CBL. Loose binding, no.17, 25 x16cm; Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.60.

¹³⁸ See fig. 4.72.



Fig. 4.66: Loose binding with eight-rayed geometrical rosette, CBL loose binding, no.17, 25 x 16cm.

These star patterns of geometrical interlace were adopted by Mamluk binders from patterns that had long been established in the Islamic world and used in a variety of media. Mamluk bindings of the early 14th century with all-over patterns of geometrical interlace are decorated with broad thick straps and the interstices of the design are filled with a variety of simple tools such as arcs and pallets. By the end of the 14th century these broad straps began to be replaced by thinner lines and more complex patterns appear, as noted on the binding for Sultan Sha'ban dated 775 /1373, although the simpler patterns also continue to be used. Bindings produced in the second half of the 14th century have designs based on ten-fold repeat patterns which relied on different types of grids incorporating *girih* shapes, which will be discussed in more detail in Chapter 5. By the late 15th century these patterns become infinitely more complex. As noted on the bindings produced during the reign of Qaytbay, they were distinguished by their refined lightly tooled gold-painted lines. The next section

will consider bindings with the rosette profiles which also incorporate geometrical designs for their interior patterns – the other most common mode of decoration for Mamluk bindings of the 14th century and the first half of the 15th century.

Rosette Profiles

The rosette profile is commonly found on Mamluk bindings from the early 14th century. Bindings with rosette profiles can be broadly divided into two groups: those where the cover is filled with all-over tooling with the outline of the rosette and corner-pieces in reserve and those where the tooled rosette and corner-pieces decorate the cover on a plain leather background. In the second group, the rosette profile appears on extant bindings from the middle of the 14th century, when geometrical arrangements and tooled interlace for the filling of the rosettes are painted in gold. These are usually provided with pendants terminating in finials composed of knotwork or a fleur-de-lis motif. The corner-pieces of these bindings are usually marked by overlapping segments of quadrants of a circle or with corners, cut at right angles to the central panel and filled with knotwork.¹³⁹

All-Over Tooled Covers

Bindings with an all-over tooled background with the rosette profile in reserve are relatively rare; only one example was found during the course of this study. This binding of a large format Qur'an in dark brown leather has a large central ten-lobed rosette measuring 13.7 x 12.5cm set in the centre of a densely tooled field of hatched arcs and bars that creates a textured effect.¹⁴⁰ The Qur'an was copied by Ahmad ibn Ibrahim ibn Muhammad al-Shafi'i al-Qarashi al-Katib al-Dimashqi in Shawwal 742/March 1341. The rosette and corner-pieces are marked with broad fillets outlining the profile. Large arrow-like corner-pieces

¹³⁹ See figs. 6.25 and 6.54 for further discussion of corner-pieces with overlapping segments found on Ottoman Ilkhanid and Jalayirid bindings.

¹⁴⁰ TSK M5, 47 x 38cm, Karatay, op.cit., 1962, no. 138; James, op.cit., 1988, Cat. 21, pp.143–6; Tanındı, op.cit., 1990, p.143.

project into the central field from the borders, which are filled with dense tooling. Similar corner-pieces are found on a number of later examples and are discussed below. (See Fig. 4.67-8) The flap, with half a rosette, repeats the design scheme of the central panel. The doublures are decorated with tooled geometrical interlace based on ten-pointed stars while the doublure of the spine of the fore-edge flap is decorated with tooled eight-pointed stars. James, in his study of Mamluk illumination of the 14th century, discussed this Qur'an, pointing out that the style is not found on any other Qur'an of the period in Egypt. For that reason he suggested that it was most probably copied and illuminated in Damascus where it was probably also bound.¹⁴¹

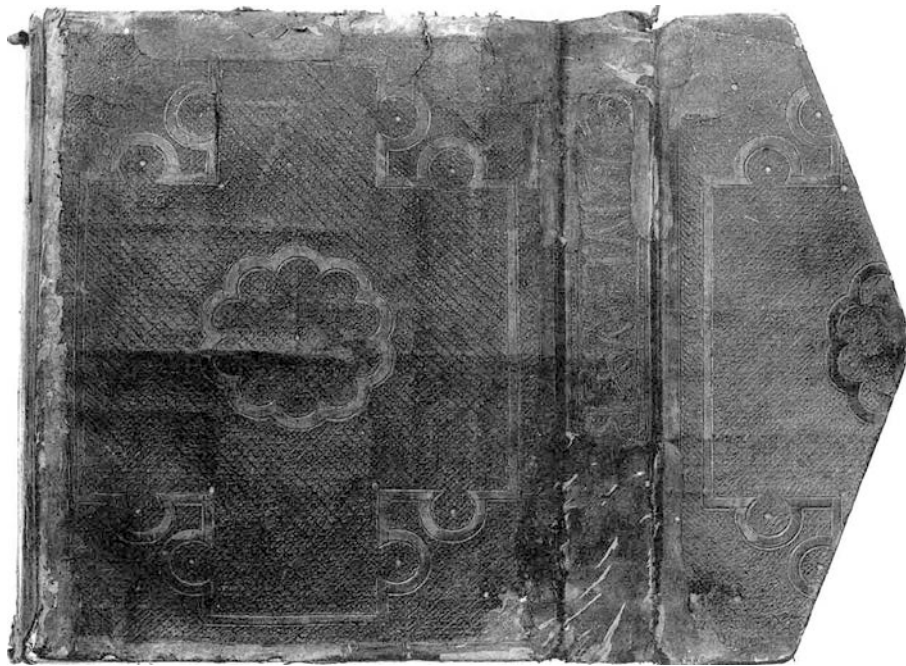


Fig. 4.67: Back cover and flap of Qur'an dated 742/1341, TSK M5, 47 x 38cm
After Tanındı, op.cit., 1990, p.143.

¹⁴¹ James, op.cit., 1988, pp.144–5.

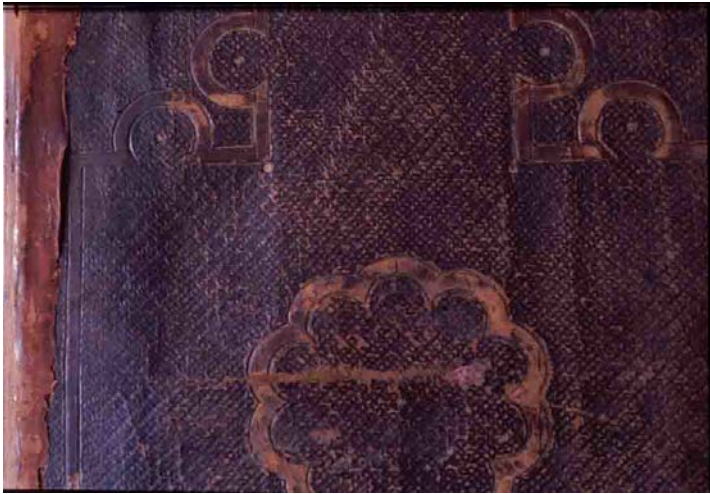


Fig. 4.68: Detail of the cover of Qur'an dated 742/1341, TSK M5, 47 x 38cm.

Before turning to bindings with rosette profiles on a plain field, some mention should be made of another less common design with rosette patterns on a densely tooled field. Two early examples of the latter bindings have been published by Weisweiler whose covers are decorated with overlapping segments of a rosette which are marked by broad borders in reserve forming a pattern of arcs and circles on a densely tooled background.¹⁴² (Fig. 4.69) One example was copied in Damascus and is dated 715/1314 while another was copied in Kerak and is dated to 719/1319. This arrangement is not found on Mamluk bindings that have been attributed to Cairo, as will be discussed later in Chapter 5.¹⁴³

¹⁴²Weisweiler, op.cit., 1962, no.34, Pl.18, Staatsbibliothek Berlin Ms. Or.Quart 2008, 26.5 x 18cm dated to 715/1314 and No.319, p.168, Pl.20, Süleymaniye Library, Şehid Ali 378, 25.3 x 18 cm dated 719/1319.

¹⁴³ See fig. 5.32 for further discussion of the ornament.



Fig. 4.69: Front cover of Staatsbibliothek Berlin Ms.Or.Quart 2008, 26.5 x 18 cm dated to 715/1314. After Weisweiler, *op.cit.*, 1962, Pl.18

Rosettes on plain leather field

The earliest example in this study of an early Mamluk examples of the rosette profile on a plain leather field is a binding of a copy of *Muntahā al-Madārik* copied by Hasan bin Ahmed al-Fata al-Tabrizi in Cairo in the new mosque on the Nile.¹⁴⁴ This must refer to the first mosque built by Al-Nasir Muhammad (1st r.693–4/December 1293–December 1294, 2nd r.698–708/January 1299–April 1309, 3rd r. 709–41/Feb.1310–June 1341) after his return to power for the third time and was completed in 712/1312. The colophon on f.214b states that the manuscript was completed in Ramadan 731/ June 1331 and the binding appears to be contemporary with the manuscript. The binding is badly wormed, with extensive repairs to the flap and new paper doublures. The central panel

¹⁴⁴ TSK A.1499, Karatay, *op.cit.*, 1969, no. 8504, 28.4 x 20cm; a photograph could not be included as the image was too dark: see also Behrens-Abouseif, *op.cit.*, 2007, p.171 for a description of the mosque.

contains an eight-lobed rosette filled with hatched arc and bar tools on a plain leather field. Small gold dots are placed between each of the lobes and the corner-pieces, cut at right angles to the central panel, are filled with a small knots created from small hook-shaped tools with gold punches.

This style is also found on a thirty-part Qur'an in the Dar al-Kutub, Cairo with no date of copying carries a *waqf* inscription in the name of Sultan Hasan (1st r.748–752/1347–1351, 2nd r.755–762/ 1354–1361) and has the same arrangement of a central rosette on a plain field.¹⁴⁵ (Fig. 4.70) A further note states that the Qur'an was accessioned into the Dar al-Kutub from the Sultan Hasan mosque which was built between 756–762/1356–1361.¹⁴⁶ Many of the volumes retain their original doublures of pink silk and each volume has a finely illuminated opening page.¹⁴⁷(Fig. 4.71)



Fig. 4.70: Back cover and flap of *Juz' 1* of a Qur'an endowed to the mosque of Sultan Hasan, DAK Rasid 58, 57 x 41cm.

¹⁴⁵ DAK Rasid 58, 57 x 41cm.

¹⁴⁶ See Behrens-Abouseif, op.cit., 2007, pp. 201–14 for a description of the *madrasa* and Friday mosque of Sultan Hasan.

¹⁴⁷ See fig. 5.14 for the illumination and fig.4.16 for gold tooled punch of this binding.



Fig. 4.71: Flap and pink silk doublure of *Juz' 1* of a Qur'an endowed to the mosque of Sultan Hasan, DAK Rasid 58.

A broad tooled band frames the central panel and the corner-pieces form part of this outer border. The frame and the corners are filled with dense tooling composed of hatched arcs and bars. The central panel has an eight-lobed rosette with small projections between each of the lobes. The points of these projections are marked by clusters of three gold annular dots with a single radiating fleck. The inner field of the rosette is composed of the same densely tooled work as the outer border. It also has the same arrow-like corner-pieces extending into the central field from the border that was noted on a Qur'an probably copied and illuminated in Damascus dated Shawwal 742/ March 1341 with all-over tooling of the central field.¹⁴⁸ (Fig. 4.67) These arrow-like corner pieces are found on several bindings with similar patterns and were also noted in the previous section on a loose binding with a single geometrical rosette.¹⁴⁹ Similar corner-pieces are found on a binding published by Weisweiler where a central roundel contains a strapwork pattern based on a square/star that is dated 739/1339 and

¹⁴⁸ TSK M5, 47 x 38cm; see also Ch.5 pp.399-403 for discussion of these projecting corner-pieces and their relationship with metalwork fittings for doors during the late 14th century.

¹⁴⁹ See fig. 4.67.

tentatively assigned to Cairo.¹⁵⁰ They are also found decorating the cover of *Juz'* 9 of a Qur'an endowed to the *madrasa* of Khwand Baraka with a *waqf* inscription dated 770/1368.¹⁵¹ (Fig. 4.72)

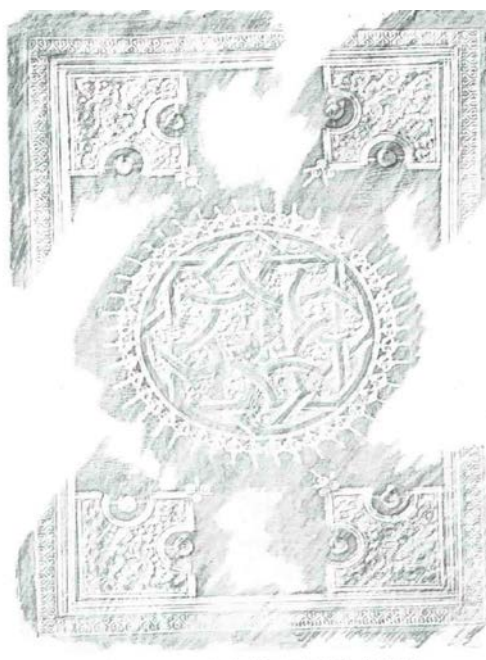


Fig. 4.72: *left* Front cover of *Juz'* 9 of a Qur'an dated 770/1368, DAK, Rasid 80, 17 x 25cm. *right* Front cover of binding dated 739/1339, Köprülü Library, Istanbul, 407-410, 26.5 x 17.7 cm. After Weisweiler, op.cit., 1962, Pl.34

The Chicago exhibition catalogue of bindings also contains two examples of covers with similar arrow-like corner-pieces.¹⁵² Bosch attributes both of these to the Maghrib in the 15th century on a stylistic basis.¹⁵³ (Fig.4.73) She argues that Maghribi covers have broad strapwork bands, lack inner frames to delineate the

¹⁵⁰ Köprülü Library, Istanbul, 407-410, 26.5 x 17.7cm; Weisweiler, op.cit., 1962, no.269, p.154, Pl.34.

¹⁵¹ DAK Rasid 80, 17 x 25cm; see 4.65, for the other binding style of this Qur'an.

¹⁵² Oriental Institute, Chicago, A.12171, 56 x 39.8cm and A.12118, 26.7 x 18.8cm; Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.57 and 58.

¹⁵³ Bosch, op.cit., 1952, p.149.

borders and use twisted cord motifs for the filling of the profiles. She does not, however, provide any comparable Maghribi examples to support her argument and, given the existence of Mamluk covers in the exactly the same style that are dateable to the 14th century, her attribution cannot be substantiated. The number of extant Mamluk examples indicate that this style formed part of the repertoire of Mamluk binders as their designs are identical to the one described above; and probably those assigned by Bosch to the Maghrib are actually Mamluk. Large arrow-like corner-pieces are, however, found on later Maghribi bindings of the late 15th century although the central profile is very different, indicating that the design was used in the Maghrib long after it had ceased to be found in Mamluk Cairo.¹⁵⁴

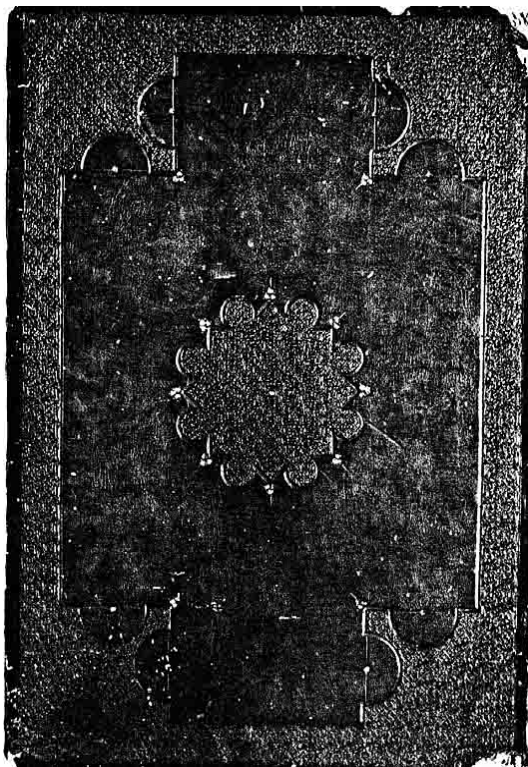


Fig. 4.73: Front cover loose binding with arrow-like corner-pieces Oriental Institute, Chicago A12171, 56 x 39.8 cm. After Bosch, Carswell and Petherbridge, *op.cit.*, 1981, Cat.57, p.171

¹⁵⁴ See fig. 6.2 for late 15th century Maghribi binding.

The style persisted in Cairo until the first quarter of the 15th century, as an example of this rosette profile is found on the cover of a second volume of the *Ṣaḥīḥ* of Bukhari which contains a dedicatory roundel to library of Sultan Barsbay (r.825–41/1422–38) stating that it was copied by Abu Bakr ibn Muhammad bin Muhammad al-Sufi though there is no date of completion.¹⁵⁵ (Fig.4.74) The central panel contains an eight-lobed rosette filled with densely tooled work of small tools on a plain leather field with small gold punches at each node of the lobes. The central panel has an outer blind-tooled border with a stamp consisting of cordiform scrolls which surround three small petalled calices followed by fillets delineating the central panel.¹⁵⁶ This tool has already been discussed as it appears in those recorded by Marçais and Poinssot on the bindings of Qayrawan.¹⁵⁷ The corner-pieces with their projecting finals into the central field may be seen as a more elegant development of the arrow-like type which have just been described and similar examples are found on a Qur'an dated by a *waqf* inscription to 747/1349.¹⁵⁸ Weisweiler has published what appears to be an almost identical example (though the border tools are different) assigned to Damascus and dated 742/1342 while Haldane has also published four loose bindings with a very similar organization of ornament which he has attributed to North Africa/Egypt in the 15th century.¹⁵⁹

¹⁵⁵ TSK R.211, 25.5 x 17 cm; Karatay, 1964, op.cit., no.2253.

¹⁵⁶ See Appendix 2, no.3.

¹⁵⁷ See fig. 3.15.

¹⁵⁸ See fig. 4.86 for similar corner-pieces; see also Ch.5 pp.399-403 for comparison with metalwork designs for doors.

¹⁵⁹ Istanbul, Feyzullah, 283, 25.4 x 16.4cm; Weisweiler, op.cit., 1962, p.133, no.194, Pl.49; Haldane, op.cit., 1983, Cat.55, 56, 57, 58.



Fig. 4.74: Front cover and detail of corner-piece of *Sahih* of Bukhari with a dedication to the library of Sultan Barsbay, TSK R. 211, 25.5 x 17cm.

The simple lobed rosette profile was developed to include star patterns and geometrical rosettes for the interior decoration. This is noted on a series of *juz'* which carry a short undated *waqf* inscription in the name of Sultan Hasan (1st r.748-52/1347-51, 2nd r.755-62/1354-61) and were accessioned from his mosque.¹⁶⁰ In this case the rosette is based on a twelve-pointed star that extends into a twelve-rayed geometrical rosette with overlapping segments whose arms extend creating the outer profile of the rosette.¹⁶¹ (Fig. 4.75) The compartments are filled with interstitial gold punches providing a sun-burst effect. (Fig. 4.76) The corner-pieces are created using overlapping segments of a quarter-circle with finials projecting into the central field with small radiating flecks.¹⁶² The

¹⁶⁰ DAK Rasid 59, 46.5 x 36cm.

¹⁶¹ See, fig. 5.17-5.19 for comparison of this geometrical pattern with illumination and fig. 5.23 for comparison with door decoration.

¹⁶² See fig. 4.93 for earliest example of corner-pieces with overlapping segments in this study.

outer border contains a segmented square tool with a gold annular punch at the centre that is commonly found on other bindings of the period and the doublures are of block- pressed leather of various patterns.¹⁶³ (Fig. 4.78) The flap reflects the design of the cover. (Fig. 4.77)

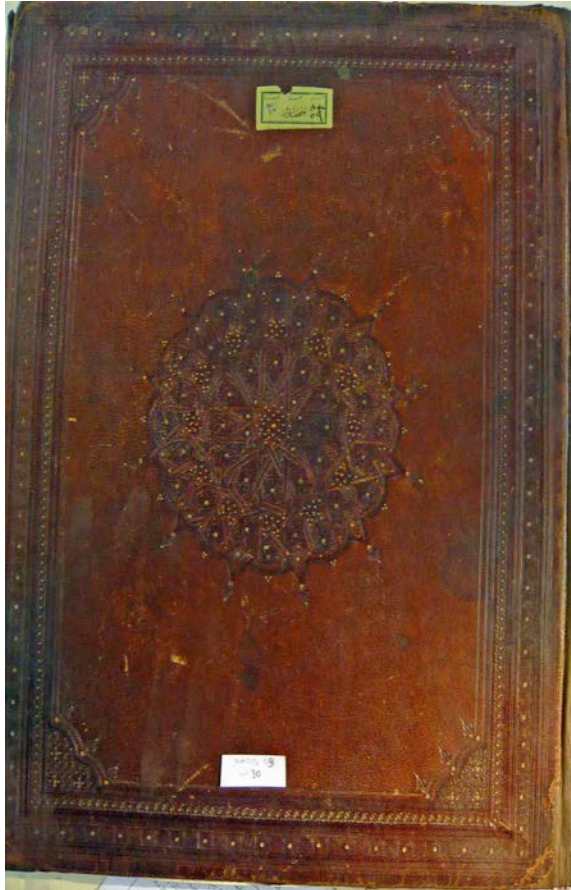


Fig. 4.75: Front cover of *Juz' 30* of a Qur'an for Sultan Hasan, DAK Rasid 59, 46.5 x 36cm.

¹⁶³ See Appendix 2, no.9.; see fig. 4.174, 4.179.



Fig. 4.76: Detail of central rosette of *Juz'* 30 of Qur'an with *waqf* for Sultan Hasan, DAK Rasid 59.



Fig. 4.77: Detail of flap, *Juz'* 30 of Qur'an with *waqf* for Sultan Hasan, DAK Rasid 59.



Fig. 4.78: Detail of the border tools of *Juz' 30* of Qur'an with *waqf* for Sultan Hasan, DAK Rasid 59.

Similar patterns are found on bindings that are dateable to the reign of Barquq.

(Fig. 4.80) A series of *juz'* of a Qur'an with a *waqf* inscription for Sultan Barquq for his funerary complex completed in 786-8/1384-6 also has a similar arrangement for the central rosette of the covers.¹⁶⁴ (Fig. 4.79)



Fig. 4.79: Fol.1, *Juz' 30* of Qur'an with *waqf* inscription for Sultan Barquq, DAK Rasid 76.

The twelve-lobed rosette contains a ten-pointed star within a circle profile whose arms interweave with a decagon. (Fig. 4.81) The combination of a

¹⁶⁴ DAK Rasid 76, 24 x 33cm; see Behrens-Abouseif, op.cit., 2007, pp. 225-9 for his funerary *madrassa*.

decagon with a ten-pointed star has already been noted on several bindings belonging to four thirty-part Qur'ans and also occurs on the cover of the Hamadan Qur'an of Uljaytu.¹⁶⁵ The compartments are tooled with arcs and punches. The outer border contains a twisted knot tool which is also found on several other bindings.¹⁶⁶ (Fig. 4.83) The flap has a six-rayed geometrical rosette surrounded by a six-lobed rosette. The flap is decorated with an elegant rosette and the tools of its are different from those on the cover consisting of a segmented square and the doublures are of block-printed leather with the quatre lobe split palmette pattern.¹⁶⁷ (Fig. 4.82)



Fig. 4.80: Front cover of *Juz' 30* of Qur'an with *waqf* for Barquq, DAK Rasid 76, 33 x 24cm.

¹⁶⁵ See DAK Rasid 60, fig. 4.26, DAK Rasid 61, fig. 4.28, DAK Rasid 70, fig.4.21, Rasid 71, fig. 4.22. See fig. 6.13 for DAK Rasid 72, Qur'an for Uljaytu.

¹⁶⁶ See Appendix 2, no.16.

¹⁶⁷ See Appendix 2, no. 8; see fig. 4.185 for the doublures; see Ch.4 n.243 for origins of this motif and fig. 4.113 for its occurrence on bindings.



Fig. 4.81: Detail of rosette of cover of *Juz' 30* of Qur'an with *waqf* for Barquq, DAK Rasid 76.



Fig. 4.82: Detail of flap of *Juz' 30* of Qur'an with *waqf* for Barquq, DAK Rasid 76.



Fig. 4.83: Detail of border tool of the cover and corner-pieces of *Juz'* 30 of Qur'an with *waqf* for Barquq, DAK Rasid 76.

The corner-pieces are made up of overlapping segments of a circle, a design that occurs on a number of bindings of the late 14th century.¹⁶⁸ (Fig. 4.83).

Pendants are added to the lobed rosette profile in a style that dominated binding design from the middle of the 14th century. Rosettes can be divided into two groups according to the ornament used to decorate the interiors of the central rosette: interlace patterns composed of small tools are used along with geometrical ornament usually, painted in gold.

A Mamluk example published by Tanındı dated by manuscript to Rajab 739/ January 1339 has two small projections from the top and bottom of the rosette that appear to be a rather crude attempt at the provision of pendants.¹⁶⁹ (Fig. 4.84) The binding is decorated with an eight-lobed rosette which is filled with tooling and has corner-pieces cut at right angles to the central panel. The flap of

¹⁶⁸ See for example, fig. 4.75 and for the earliest example in this study see fig. 4.93.

¹⁶⁹ TSK A.347/3.26 x17.5cm; Karatay, op.cit., 1964, no.2605; Tanındı, op.cit., 1990, p.111, Pl.25.

this binding can be compared to that of a Qur'an cover which is illustrated below. (See, for example, Fig. 4.87) This flap is covered with dense tooling except for a roundel in reserve set at the centre is commonly found on bindings of the late 14th century usually with the rosette pendant profile on the front and back covers.

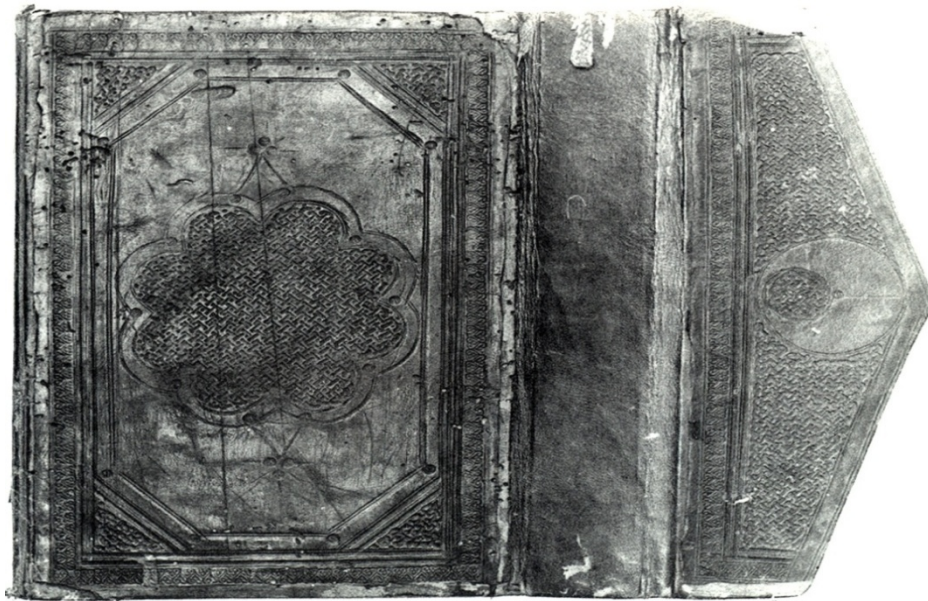


Fig. 4.84: Back cover and flap of binding dated 739/1339, TSK 347 32.6 x 17.5cm, after Tanındı, op.cit., 1990, Pl.25.

One early example of the rosette type with pendants is the binding of a Qur'an in 30 parts which has been heavily restored with new sewing, endpapers and doublures of marbled paper.¹⁷⁰ The manuscript contains a *waqf* inscription for Amir Arghun al-Kamili and is dated Safar, 747/ June 1346.¹⁷¹ (Fig. 4.85)

The outer borders are of densely tooled work made up of a series of small tools, as is the centre of the rosette. A broad s-tool is used to frame the border of the

¹⁷⁰ DAK Qawala 2, 36 x 24.5cm.

¹⁷¹ Arghun al-Kamili was appointed Governor of Aleppo (750–52/1349–51) for the first time and again from 752/1352 and later Governor of Damascus 752/1351. He was arrested in Cairo and later imprisoned in Alexandria in 756/1355 and finally exiled to Jerusalem where he died on the 28 Shawwal 758/14 October 1357; see Mayer, op.cit., 1933, pp.74–5.

central panel, a usage observed on other bindings.¹⁷² The corner-pieces are cut at right angles and have elegant projections into the central field with finials made up of small tools. The eight-lobed central rosette has small projections from each of the nodes which form triangular extensions that are repeated in the corner-pieces. The flap is also densely tooled and has inscribed circles with gold punches which must have also been used on the front covers but have since worn off. (Fig. 4.87) The organization of the ornament of the flap can be compared to the previous example.

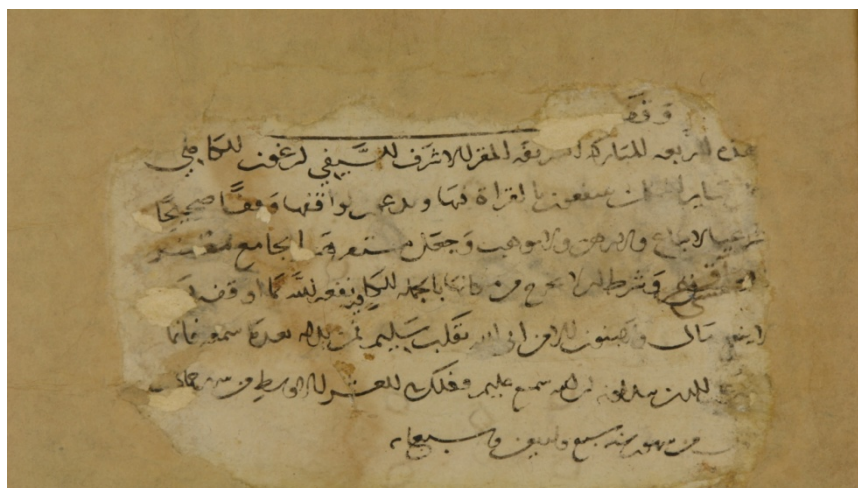


Fig. 4.85: Fol.1a of *Juz' 2* with *waqf* inscription for Al-Saifi Arghun al-Kamili. DAK Qawala 2.

¹⁷² See Appendix 2, no.17.



Fig. 4.86: Back cover and flap of *Juz' 1* of Qur'an dated 747/1346, DAK Qawala 2, 36.0 x 24.5cm.



Fig. 4.87: Detail of flap of *Juz'* 1 of Qur'an dated 747/1346, DAK Qawala 2, 36.0 x 24.5cm.

The cover of the fourteenth *Juz'* of a Qur'an dated by a *waqf* inscription for Sultan Barquq has a lobed rosette profile with a densely tooled knotwork centre with pendants terminating in leafy extensions.¹⁷³ (Fig. 4.88) The outer borders are decorated in the blind with an s-shape tool.¹⁷⁴ The flap is intact and has a lobed rosette which is filled with same s-shape tools of the border. (Fig. 4.89) These are arranged in a braided interlace pattern with a rather malformed four-pointed

¹⁷³ TIEM 546, 27.5 x 19cm; the binding of TIEM 542, 27.5 x 19cm is almost identical and contains a *waqf* for Sultan Barquq and presumably must be the work of the same binder; see fig.4.184 for the block-printed leather doublures.

¹⁷⁴ See Appendix 2, no. 28.

star at the centre with four squares arranged around it; the main elements of the design have been painted in gold.

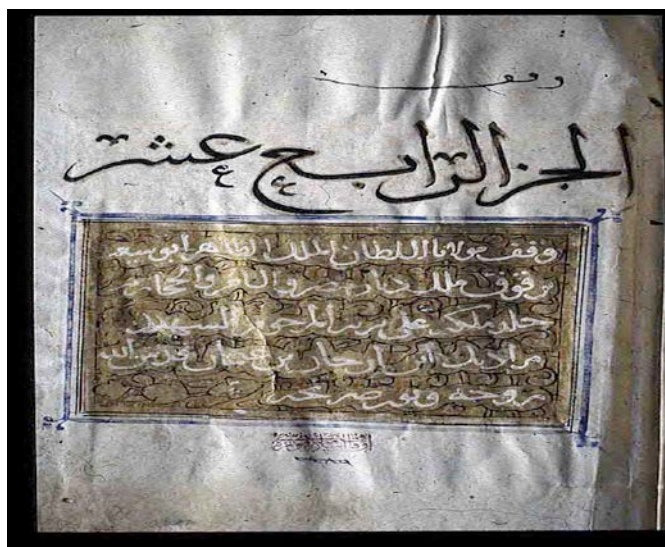


Fig. 4.88: TIEM 546, Fol.1a, *waqf* inscription of *Juz'* 14 of a Qur'an for Sultan Barquq.



Fig. 4.89: Front cover and detail of flap of *Juz'* 14 of a Qur'an for Sultan Barquq, TIEM 546, 27.5 x 19cm.

Another example of the rosette type is the binding of a copy of the *Ma'rifat al-Sunan wa al-Āthār* whose manuscript is dated 788/1386.¹⁷⁵ (Fig. 4.90) The binding of brown leather has an outer border tooled in the blind with a large s-shaped stamp producing a cable pattern with small gold punches.¹⁷⁶ The central panel, outlined by plain tooled lines, contains a rosette with pendants. Each of the lobes of the rosette are outlined in gold and filled with gold punches. This method of decoration with repeated small gold punches filling appears on several bindings with a *waqf* for Sultan Barsbay so it may be a rebinding of that period.¹⁷⁷ Small finials project into the central field from nodal knots which form part of the borders of the lobes of the rosette. The central roundel is filled with densely tooled hatched bars and arcs with a central square in which there is a green dot. The original gold dots at the centre have largely disappeared. The corner-pieces, whose interstices are enlivened with gold dots, are composed of overlapping quadrants of a circle and have small finials projecting into the central field. The flap repeats the borders and corner-pieces of the central panel. A rosette is placed at the centre of the flap with each of the lobes filled with gold punches. The doublures of bright yellow paper are a recent addition.

¹⁷⁵ TSK A.271/1, Karatay, op.cit., 1964, no.2638, 26.5 x 18 cm.

¹⁷⁶ See Appendix 2, no.19, 23.

¹⁷⁷ See fig. 4.102 for DAK Rasid 107 and Rasid 108.



Fig. 4.90: Detail of flap and front cover of binding dated by manuscript to 778/1386, TSK A.271/1, 26.5 x 18cm.

A copy of *Mukhtaṣar al-Nabī* has an illuminated page with a dedication to the library of the Mamluk Sultan Jaqmaq (842–57/ 1438–53) and was copied by Ayas al-Mahmudi al-Maliki al-Zahiri Mushir al-Awwal but, since the manuscript gives no date of copying, the regnal dates of Sultan Jaqmaq provide a *terminus ante quem* for the cover.¹⁷⁸ The binding of dark brown leather has an outer border composed of s-shaped tools in gold, followed by a blind-tooled border of knot tools.¹⁷⁹ (Fig. 4.91) The central panel has a large central rosette with a serrated edge different from the usual lobed profile, which contains three successive roundels, each painted in gold. A plain circle is followed by one made

¹⁷⁸ TSK A.1582, Karatay, op.cit., 1966, no. 6035, 32 x 21cm; The position of *mushīr* refers to the scribe's position as counselor to the sultan who acted as his mouthpiece during audiences. See Stowasser, 'Manners and Customs at the Mamluk Court', *Muqarnas*, Vol. 2, 1984, p.16.

¹⁷⁹ See Appendix 2, no. 11 and 28.

up of s-shaped tools and the central roundel is filled with densely tooled knot work in gold. The pendants incorporate a circle and arrow motif. Two other bindings replicate this design; one is dated by manuscript to 856/1452 while the other is undated.¹⁸⁰

The flap of this binding is very interesting as it is decorated with a large lobed hasp filled with scrolling arabesques and leaves. The earliest occurrence of arabesque decoration is found on a binding with a *waqf* for Sultan Barquq and it appears later on a binding for Sultan Barsbay dated to the 17 Safar 831/6 December 1427 which bear some similarity with bindings made for the Ottoman Sultan Murad II.¹⁸¹

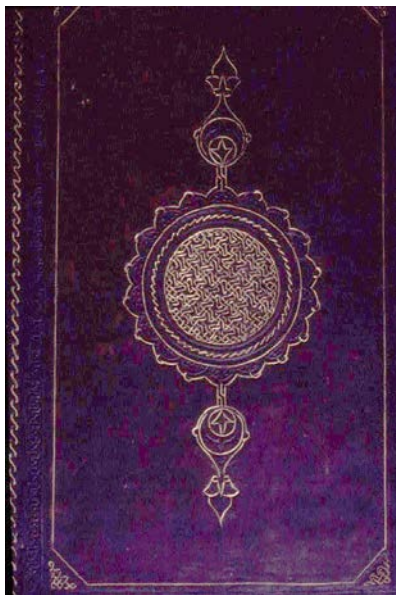


Fig. 4.91: Front cover and flap of *Mukhtaṣar al-Nabī* copied for Sultan Jaqmaq, TSK A.1582, 32 x 21cm.

¹⁸⁰ Staatsbibliothek, Berlin, Ms.Landberg 140, 26.8 x 18.2cm; Weisweiler, op.cit., 1962, No.1 Pl.45, and TSK A.3047, Karatay, op.cit., 1966, no. 5769, 25.8 x 18cm, not illustrated in this text.

¹⁸¹ Arabesque decoration appears on the flap of DAK Rasid 120 which has a *waqf* for Barquq, see fig. 4.54. It later decorates the cover a binding with a *waqf* for Sultan Barsbay, see fig. 5.44 whose doublures in a trellis pattern can be directly compared to an Ottoman binding; see fig. 6.49 for the cover of an Ottoman binding with a similar hasp flap (not illustrated) to that found on TSK A. 1582, fig. 4.91.

Other rosette bindings use geometrical arrangements for the interiors of the profiles. One of the earliest examples of this type in this study is found on a Qur'an copied by the famous calligrapher Mubarak Shah al-Suyufi in Cairo in Ramadan 744/January 1344 whose illumination has been discussed by James.¹⁸² (Fig. 4.92) James suggests that he may have been born in Damascus and trained in Baghdad.¹⁸³ The Qur'an is written in *rayḥan*, a script that was not favoured by Mamluk calligraphers, and includes styles of illumination that can be compared to Ilkhanid Qur'ans.¹⁸⁴



Fig. 4.92: Fol. 246b of Qur'an written by Mubarak Shah al-Suyufi in 745/1344, TSK Y.2468.

¹⁸² TSK Y.2468, 37 x 24.6cm; Karatay, op.cit., 1962, no.144; James, op.cit., 1988, Cat.67; James gives another accession number of TSK Y.365 to that found in the Karatay catalogue.

¹⁸³ Ibid. pp.150–52; he also copied another Qur'an in Cairo in 744?-/1343–4? (James' question marks), ibid., Cat.68 in the Salar Jung Museum Hyderabad, no.182. Conflicting biographical information does not allow for a clear construction of his career. See, Huart, *Les Calligraphes et les miniaturistes de l'orient musulman*, Paris, 1908, p.92. He died in 735/1344–5, the year he completed this Qur'an in Cairo.

¹⁸⁴ Ibid.

The binding of dark brown leather has an outer border of broad s-shape tools followed by a simple x-tool border in the blind with small gold punches.¹⁸⁵ (Fig. 4.93) The central panel has a twelve-lobed rosette with two pendants terminating in fleur-de-lis finials. The centre of the rosette is circumscribed by an inner ring of s-shaped stamps. The design is centred by an eight-petalled flower that serves as the basis for the creation of an eight-armed geometrical rosette whose arms extend to create two overlapping squares. An octagon is tooled around the rosette intertwining with the corners of the square. The arms of the geometrical rosette are filled with punches in the blind creating a two-tonal effect as the plain tan leather of the central flower contrasts with the darker tooled leather. The outlines of the design are painted in gold for the front cover while the back cover has the same tooled profiles but remains plain. The flap has the same borders and corner-pieces as the cover and is decorated with circle which has a six-rayed geometrical rosette. The doublures are of block printed leather in a vegetal pattern.¹⁸⁶

This binding represents the earliest example in this study and other published examples of the use of geometrical designs for decoration of the interior of the rosette and of over-lapping segments for the corner-pieces.¹⁸⁷

¹⁸⁵ See Appendix 2. No. 12 and 17.

¹⁸⁶ See fig. 4.174 for an example of this type of doublure.

¹⁸⁷ See fig. 4.94, 4.95 for later examples of geometrical designs for the interior of the lobed rosette profile. See fig. 4.75, 4.83 and 4.99 for later examples of overlapping corner-pieces; see fig. 5.72 for the use of the geometrical rosette in illumination; see also fig. 6.54 and 6.55 for comparison between Ottoman, Persian and Mamluk examples.

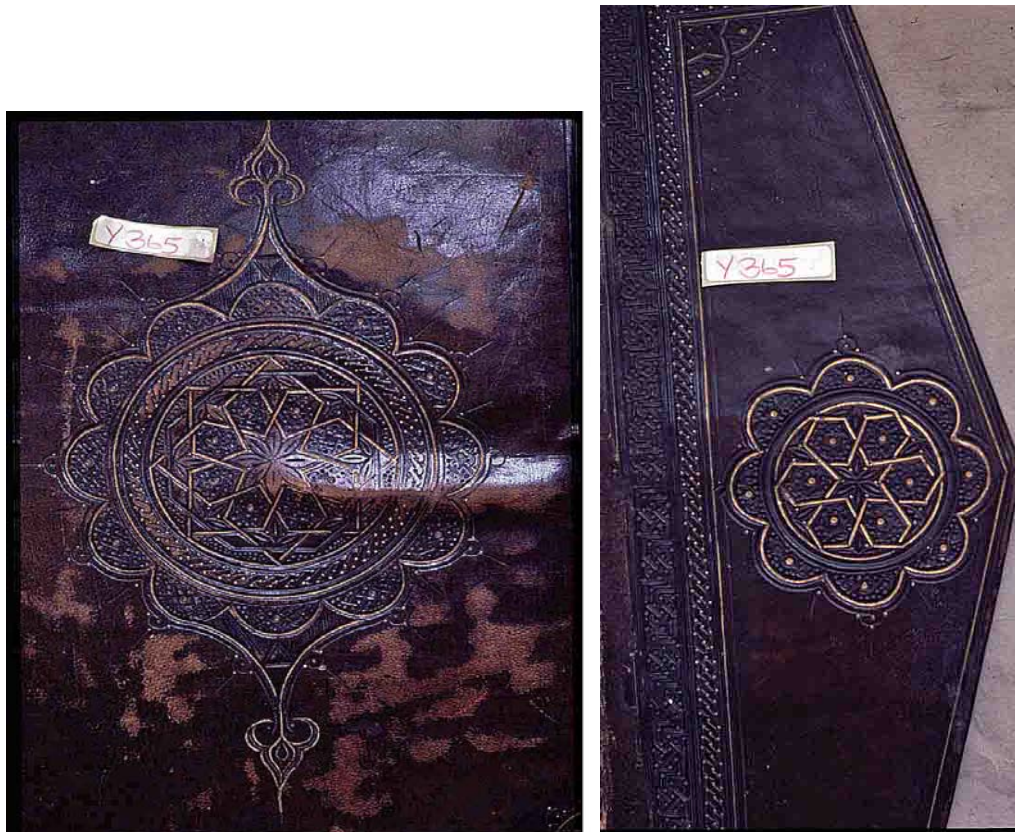


Fig. 4.93: Front cover and detail of flap of Qur'an copied by Mubarak Shah al-Suyufi in 744/1345, TSK Y.2468, 37 x 24.6cm.

A later example of the rosette profile with geometrical ornament is found on the covers of a Qur'an of 30- volumes which are scattered in various collections.¹⁸⁸

The British Library manuscript contains a *waqf* notice for endowment to the library attached to Aytмыш al-Bajasi's mosque in Bab al-Wazir, Cairo, a mosque that was founded in 785/1383.¹⁸⁹ Aytмыш al-Bajasi rose to the rank of 'amir of a

¹⁸⁸ There are other volumes scattered in collections throughout the world which have the same binding; *Juz'* 28, CBL, Ms.1495, and *Juz'* 22, Ms.1478; Arberry, op.cit.,1967, no. 90 and 128, pp. 28, 34; James, op.cit., 1980, Cat.105; *Juz'* 25,BL, Or.9671; Baker, op.cit., 2007, p.102; Fragment, Victoria and Albert Museum, 910–1982; Haldane, op.cit., 1983, Cat.13; *Juz'* 9, Library of Congress, Washington, S.1986.28; unknown as no text extant, Freer Gallery, Washington,45.15; Ettinghausen, op.cit.,1954, p.469, Fig. 356; Atil, *Art of the Arab World*, Smithsonian Institution, Washington,1975, no.40; *Juz'* 2, Walters Art Gallery, W.561, Ettinghausen, op.cit.,1959, p.123; The Metropolitan Museum of Art, op.cit., 2007, Cat.124.

¹⁸⁹ Baker, op.cit., 2007, p.42; In several publications the *waqf* endowment is mistakenly described as being for the library of a *madrasa* built by Aytмыш al-Bajasi near Bab al-Wazir, one of the gates of the city of Tripoli in Lebanon, see, for example, Atil, op.cit., 1975, p.94; James, op.cit., 1980, Cat.105.

thousand' but, having led a rebellion against Sultan Barquq in 800/1397–8 and was imprisoned in Damascus and executed on the 14 Sha'ban 802/10 April

¹⁹⁰1400.¹⁹¹

The binding is of tan leather with multiple plain line borders followed by a frame with a running pattern of small palmette scrolls. (Fig. 4.94) This is followed by three plain lines which frame the central panel with three small gold dots at each of the corners. A further band follows made up of a running pattern of x-shape stamps with gold interstitial gold dots.¹⁹² The central element of the design is composed of a large lobed rosette with pendants. The lobes, with a single gold dot at the centre, are filled with densely tooled punches and are defined by a single line at each of the loops. Small gold dots are placed within each of the spandrels with small finials projecting into the central field. The centre of the pattern of the rosette is marked by an eight-pointed star with a tooled four-petalled flower at its centre. The arms of the star extend to the perimeter of the central roundel and the resulting pentagons are filled with tooled knotwork with a large central dot. An octagon is tooled around the star pattern creating an eight-rayed geometrical rosette and the design is contained within an eight-pointed star created with two overlapping squares.

Pendants extend on the vertical axis from the lobes of the rosettes and enclose a small triangle containing gold dots. These extend into a floral shape followed by trefoils with a finial. The corner-pieces are quadrants filled with x-stamps in the

¹⁹⁰ See fig.5.25 for comparison with the roundels and pendants that decorate the façade of the funerary complex of Sunqur al-Sa'di.

¹⁹¹ Mayer, *op.cit.*, 1933, p.91.

¹⁹² See Appendix 2, no.11, 20.

blind decorated with gold dots. The outline of the quadrant is painted in gold and is followed by a lobed outline with gold dots placed at the centre of each lobe. A small finial projects into the central field with gold dots. The flap repeats the outer borders of the central panel and the field is blind tooled in a pattern made up of stepped bar tools with gold dots at regular intervals.¹⁹³ This treatment of the flap can be compared to the tools of the border of a filigree leather binding also dateable to the reign of Barquq.¹⁹⁴ The central roundel has a gold geometrical rosette with each of its interstices filled with hatched tooling and gold dots.

The design of this cover can be directly compared to the Qur'an of Mubarak Shah al-Suyufi as the same geometrical elements are used, albeit in a slightly different way.¹⁹⁵

¹⁹³ See Appendix 2, 11.

¹⁹⁴ See fig. 4.144.

¹⁹⁵ See fig. 4.93.



Fig. 4.94: Back cover CBL 1495, *Juz' 28* of a Qur'an for Aytmish al-Bajasi, 37 x 26cm.

The covers of *Juz' 15* of a Qur'an in the Dar al-Kutub (DAK Rasid 74) have the same geometrical arrangement as the covers of the Qur'an for Aytmish al Bajasi.¹⁹⁶ The volume contains a *waqf* in the name of Sultan Barquq but is undated. In this case, however, the corner-pieces of overlapping quadrants are in the same style as the Mubarak Shah al-Suyufi Qur'an and are similar to those found on several contemporary covers which have been discussed earlier.¹⁹⁷ (Fig. 4.95) The cover is decorated with a twelve-lobed rosette with small pendants and it has an eight-pointed star at its centre which extend to form an

¹⁹⁶ DAK Rasid 74, 28 x 20cm; See fig.5.25 for comparison with the roundels and pendants that decorate the façade of the funerary complex of Sunqur al-Sa'di.

¹⁹⁷ See fig. 4.93, 4.83, 4.75.

eight-rayed geometrical rosette contained within an octagon. The corner-pieces are composed of overlapping segments, a design which has been noted on a number of bindings.¹⁹⁸



Fig. 4.95: Front cover and detail of central rosette of *Juz'* 15 of a Qur'an with a *waqf* for the Sultan Barquq, DAK Rasid 74, 28 x 20cm.

A thirty-volume Qur'an which employs two styles of binding decoration on its series of covers, one of which has already been discussed in the section concerned with geometrical interlace, has the same corner-pieces which are found on the *Juz'* of Aytмыш al-Bajasi. It carries a note that these volumes were taken from the mosque of Barquq.¹⁹⁹ (Fig. 4.96) The binding has an outer border

¹⁹⁸ See fig. 4.83, 4.90 and 4.93.

¹⁹⁹ *Juz'* 22 of Qur'an, DAK Rasid 120. For the other bindings of the series of DAK Rasid 120, see fig. 4.10, and for *Juz'* 28 see 4.53 and 4.54. See fig. 4.94 for the corner-pieces of the Aytмыш al-Bajasi Qur'an, CBL 1495.

of small palmette meander stamps followed by another border of x-tools.²⁰⁰ The rosette contains a six-pointed star which has a six-rayed geometrical rosette at its centre. Three bindings of Qur'an *juz'* in the Bibliothèque Nationale replicate the design of this binding, use the same border tools and also contain a *waqf* inscription in the name of the Sultan Barquq to his *khanqah*.²⁰¹



Fig. 4.96: *left* Front cover of *Juz' 22* of Qur'an with a *waqf* for Sultan Barquq, DAK, Rasid120, 30 x 27cm. *right* Front cover of *Juz' 27* of Qur'an with a *waqf* for Sultan Barquq, of BNF. Arabe 5844, 37.4 x 26cm, after BNF, op.cit, 1987, p.44.

Another thirty-part Qur'an whose covers also have two different binding styles with geometrical arrangements can be assigned to the same period. It contains an inscription in the name of Sultan Barquq dated to the 10 Dhu'l-Hijjah

²⁰⁰ See Appendix 2, no.12, 20.

²⁰¹ BNF, arabe 5844, 37.4 x 26cm; BNF, op.cit., 1987, p.44.

789/22nd December 1387, stating that it was copied in his *madrassa* by Ahmad al-Isfahani.²⁰² (Fig. 4.97)



Fig. 4.97 : Colophon, Fol.17b, *Juz' 3* of a Qur'an copied in 789/1389 by Ahmad al-Isfahani, DAK Rasid 123, 42 x32cm.

The covers of *Juz' 3* are decorated with a central rosette with geometrical ornament based around a six-pointed star that extends into a six-rayed geometrical rosette whose arms extend further to create a complex pattern of geometrical interlace. (Fig. 4.98) The outer borders are composed of broad hatched s-shape stamps which have been painted in gold and silver paint.²⁰³ The inner borders are made up of a complex knot and a thin s-tool.²⁰⁴ The corner-

²⁰² DAK Rasid 123, *Juz' 3*, 43 x 32cm; see also fig. 4.168 for the textiles doublures of this binding.

²⁰³ Appendix 2, no. 21, 22.

²⁰⁴ See Appendix 2, no. 16, 22, 34.

pieces resemble the arrow-type which has been noted previously.²⁰⁵ The flap has a rosette with finials and parts of the design are contrasted where they have been densely tooled to create a darker leather. An identical cover is found among the loose covers of the Chester Beatty Moritz collection.²⁰⁶



Fig. 4.98: Back cover, of *Juz' 3* of a Qur'an copied in 789/1387. DAK Rasid 123, 43 x 32cm.

The covers of *Juz' 28* of the same Qur'an are decorated with a single sixteen-lobed rosette, also filled geometrical interlace based around a six-pointed star. The corner-pieces are composed of the overlapping segment type already noted

²⁰⁵ See fig. 4.72

²⁰⁶ CBL Moritz Collection, No.37, 41.8 x 29.4cm; See Bosch, Carswell, Petherbridge, 1981, op.cit., Cat. 62.

on several bindings.²⁰⁷ The tools used for the outer borders are the same as those used on the other extant volumes with the difference that the broad s-shape stamps are painted in gold and black. The flap is decorated with a nine-lobed rosette with a pendant. The centre of the rosette of the flap contains six-pointed star decorated with gold punches.



Fig. 4.99 : Back cover of *Juz' 28* of a Qur'an with dedication to Sultan Barquq, DAK Rasid 123, 42.5 x 31cm.

Of note on this binding is the use of five-fold knots for the intertices of the design, accompanied by small sun-burst stamps which replace the usual arc, punch and knot tools.²⁰⁸

²⁰⁷ See fig. 4.93 for the earliest example in this study and for later examples, see fig. 4.75 and 4.80.

²⁰⁸ These small sun-burst tools are found later, see fig. 4.134 for TSK A.3032 and TSK A.2798.



Fig. 4.100 : Detail of the central roundel of *Juz'* 28, DAK Rasid 123.

The style of these rosette bindings may be compared to two *juz'* of a Qur'an (DAK, Rasid 60, *Juz'* 1 and 30) which are discussed in Chapter 6.²⁰⁹

The rosette profile continued to appear on bindings in the 15th century and is found on a series of Qur'an *juz'* which contain *waqf* inscriptions for Sultan Barsbay.²¹⁰

A thirty-volume Qur'an with all volumes extant and identical bindings contains a *waqf* inscription for the Sultan Barsbay and is dated 831/1427.²¹¹ The covers of *Juz'* 3, for example, are decorated with a large twelve-lobed rosette with small

²⁰⁹ See fig. 6.22, *Juz'* 1 of DAK Rasid 60 for comparison with the decoration of the cover of this Qur'an.

²¹⁰ The same *waqf* inscription in the same hand is found on DAK Rasid 99, 107 and 108, see figs. 4.101 and 4.102.

²¹¹ DAK Rasid 99, 35 x 27cm.

knotted finials. The centre of the rosette profile has six-armed geometrical rosettes with a six-pointed star tooled between the arms. The flap is tooled with a variation of the geometry of the cover as the six-rayed geometrical rosette is encapsulated within a six-lobed rosette and the arms of a six-pointed star extend between the lobes of the rosette. The outline of the rosette is painted in blue providing a vivid contrast with the gold tooled punches which decorate the inner field. The outer border pattern of the central panel is composed of a complex knot stamp which has not been noted on any of the previous examples.²¹² The tool of the inner border of x-shape stamps can, however, be compared to those found on other bindings of the 15th century.²¹³ The doublures of block printed leather are of an unusual floral pattern.²¹⁴

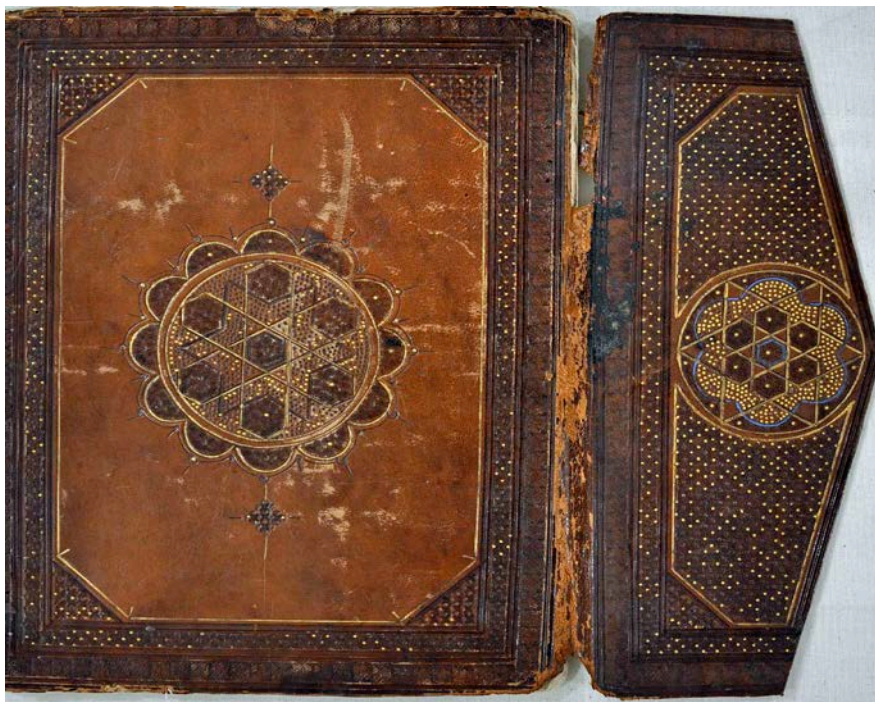


Fig 4.101: Back cover of *Juz' 3* of a Qur'an with a *waqf* for the Sultan Barsbay dated 831/1427, DAK Rasid 99, 35 x 27cm.

²¹² Appendix 2, no. 36.

²¹³ Appendix 2, no. 33.

²¹⁴ See fig. 4.179 for the doublures.

The bindings of two thirty-part Qur'ans also with a *waqf* for the Sultan Barsbay dated 1422/826 and the other dated 1424/828 have almost identical bindings.

²¹⁵ The Qur'an Rasid 107 does, however, have other bindings in a slightly different style but the binding of *Juz'* 24 can be directly compared to those of Rasid 108. The geometrical arrangement of the centre of the rosette is very unusual and is based on a series of polygons radiating from a centre creating a series of polygonal cells. The flap repeats the half rosette on its cover. (Fig. 4.103) The binding of Rasid 108 is provided with very finely tooled doublures for the cover and the flap.²¹⁶ (Fig. 4.102)



Fig. 4.102: *left* Front cover of *Juz'* 24 of a Qur'an with *waqf* for Sultan Barsbay dated 828/1424, DAK Rasid 107, 32 x 22cm. *right* *Juz'* 28 of a Qur'an for Sultan Barsbay dated 826/1422, DAK Rasid 108, 32 x 21cm.

²¹⁵ DAK Rasid 107, 32 x 22cm *waqf* dated 828/1424; DAK Rasid 108, 32 x 21cm, *waqf*, dated 826/1422.

²¹⁶ See fig 5.34 for comparison with this style found in metalwork and on later bindings illustrated in fig. 4.104.

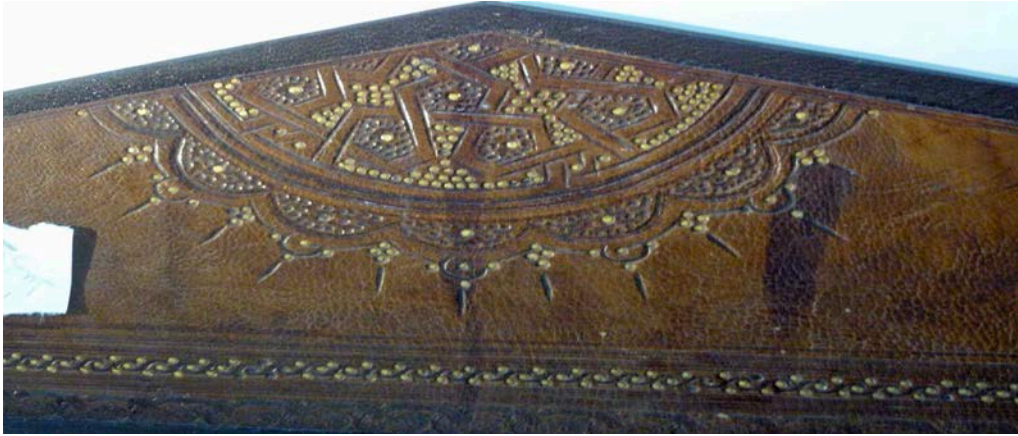


Fig. 4.103: Detail of flap of *Juz' 28*, DAK Rasid 108.



Fig. 4.104: Doublure of front cover and flap of DAK Rasid108.

Two bindings that have been published in the Chicago catalogue have similar decorative arrangements as the doublures of the Barsbay Qur'an. These were previously attributed to South Arabia but without justification and should certainly be seen as part of the Mamluk repertoire.²¹⁷ (Fig. 4.105) This pattern of overlapping segments does, however, occur on South Arabian bindings, and will

²¹⁷ Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.47 and 48.

be discussed in Chapter 6.²¹⁸ In Weisweiler's catalogue there are, however, two dated examples, one of which he attributes to Damascus 865/1461-2 and the other to 882/1478 which are very similar to the pattern of overlapping segments described above and show the continuation of these styles into the late 15th century.²¹⁹



Fig. 4.105: *left* CBL Moritz Collection, 25.3 x 17.4cm, after Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.47, p.152. *right* Berlin Staatsbibliothek, Wetzstein, II, 1708, 18.9 x 13.2cm, after Weisweiler, op.cit., 1962, Pl. 52

A final example of a rosette binding shows the continuation of this profile into the late 15th century.²²⁰ The manuscript was copied in 879/1475 in Cairo by Ali ibn Dawud al-Jawhari al-Hanafi, a jeweller known to have copied several

²¹⁸ See fig. 6. 4.

²¹⁹ Berlin Staatsbibliothek, Wetzstein II, 1708, 18.9 x 13.2cm and Leiden, Or.459, 26.6 x 17.7cm, Weisweiler, op.cit., 1962, no.164 and 459, Pl.52 and 53.

²²⁰ BNF, Arabe 1604, 26 x 18 cm, BNF France, op.cit., 2001, p.146.

manuscripts.²²¹ (Fig. 4.106) The covers are decorated with a large twelve-lobed rosette with finials and overlapping quadrants for the corner-pieces which all conform with the arrangement of ornament for this profile from the middle of the 14th century. However, the decoration of the central medallion of the rosette has a large lotus tooled at its centre, outlined in gold, reflecting the changes in ornament that had taken place in the late 15th century when floral ornament is used to decorate bookbindings.

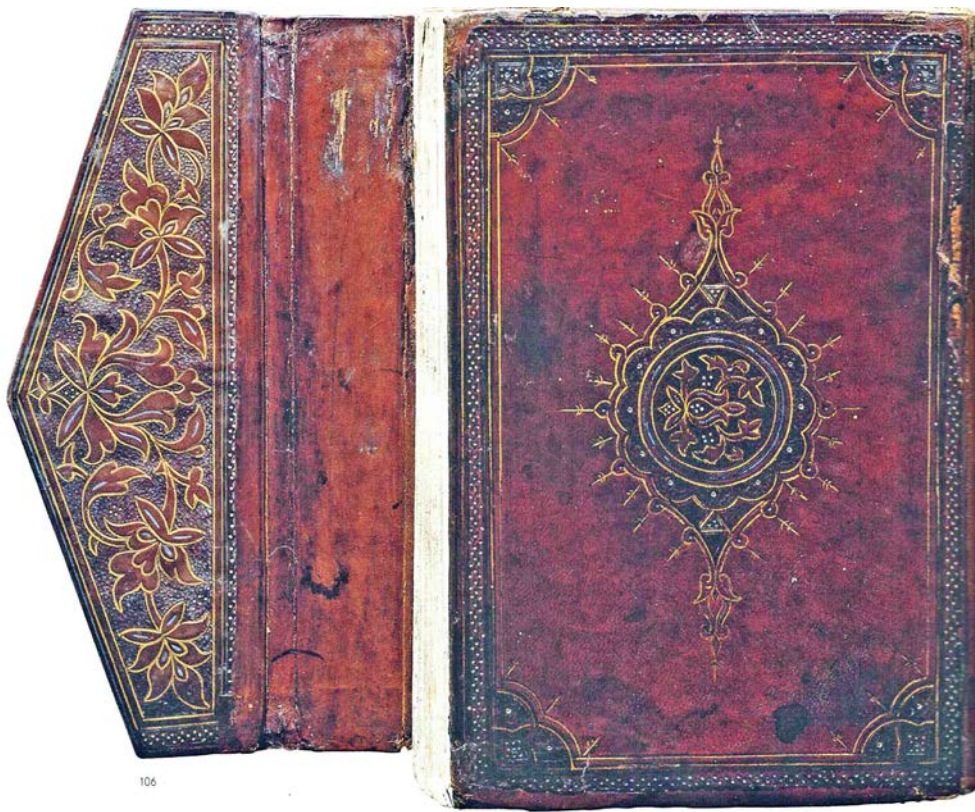


Fig. 4.106: BNF arabe 1604, 26 x 18cm dated 879/1475. After BNF, op.cit., 2001, p.146.

The rosette profile, along with patterns of geometrical interlace, constitute the main designs for bindings of the 14th and the first half of the 15th century. In the

²²¹ Ibid.

1460s, however, lobed almond profiles make their appearance and came to dominate the repertoire. These will now be discussed below.

Almond Profiles

The almond profile begins to appear in some numbers on the covers of Mamluk bindings in the 1460s. The lack of earlier dated examples from the Mamluk period provides some food for thought because when Al-Ishbili writes in the 13th century about what he believes constitutes suitable decoration for small format codices (*al-asfār al-mukhtasarah*) he refers to a binding in the Egyptian style (*al-tasfīr al-miṣrī*), recommending that a *lawzah* be used with *'ushar* in the centre.²²² *Lawzah* in Arabic means almond, the shape that matches this profile while the word *'ushar* has been translated by Gacek to mean a type of vine.²²³ According to Al-Ishbili the typical Egyptian binding should therefore consist of an almond profile filled with some kind of vegetal ornament. No examples prior to the 15th century that adhere to this description have been found in this study, however, which calls into question the authenticity of the original text of which only one copy survives which was collated in 1044/1634.²²⁴ In his didactic poem on binding methods, written in the 15th century and discussed in Chapter 3, Ibn Hamidah does, however, employ another term to describe a stamp or *ḥūt* – in the shape of a fish – for use as the central profile. This stamp corresponds with those found on Mamluk bindings from the second half of the 15th century.²²⁵

Two examples of bindings with almond profiles have been published where the binding is considered contemporary with its manuscript. In their discussion of

²²² Gacek, op.cit.,1990, p.110 refers specifically to *ascelpias gigantea*, a Eurasian vine.

²²³ Ibid., p.109.

²²⁴ Ibid. The manuscript which served as the basis for the edition was discovered in the Maktabah al-Ammah in Tetuan, Morocco. The printed edition edited by Abd Allah Kanun, op.cit., 1959-60, contains several errors.

²²⁵ Gacek, op.cit.,1992, p.42.

Mamluk bindings Raby and Tanındı note the occurrence of a lobed almond profile on a Mamluk binding, published by Weisweiler which is dated 729/1329 and attributed to Syria or Egypt.²²⁶ This must, however, be a later rebinding as not only is the lobed almond profile incongruous with this date but also the border tools of the flap which have a rhomb meander pattern are only found on Mamluk bindings from the late 15th century.²²⁷

A cover of a binding in the Bibliothèque Nationale de France also has a pointed almond profile with a lobed border. Dated by manuscript to 548/1153 it was, however, endowed to the new mosque in Azbakiyya, a quarter of Cairo developed by Qaytbay's close confidant Amir Azbak min Tutukh between 880/1476 and 888/1484, suggesting that it was bound at the same time.²²⁸

Thus, from the lack of available evidence, this profile does not seem to have been included in the Mamluk binders' repertoire of profiles until the late 15th century.

The almond profile for the decoration of the central panel of the covers occurs in two ways: lobed and plain. Lobed profiles on both front and back covers are usually filled with floral ornament or arabesques and are accompanied by half cloud-collar profiles on the flaps.²²⁹ Geometrical ornament is not generally used to decorate the interiors of these profiles.²³⁰ Other types of decoration include

²²⁶ Leiden University Library Or.640, 21.9 x 15cm; Weisweiler, *op.cit.*, 1962 no.379, Pl. 63; Raby and Tanındı, *op.cit.*, 1993, p.9.

²²⁷ See Appendix 2, no.39.

²²⁸ BNF arabe 709, 26 x 17.5cm, BNF, *op.cit.*, 2001, no.108; see Behrens-Abouseif, *op.cit.*, 1985.

²²⁹ Cloud-collar profiles are discussed on pp. 254-259.

²³⁰ Only two examples in this study include geometrical shapes in a pointed almond profile. See fig. 4.134.

employ small tools for the interior, creating dense knotwork that is gilded or sometimes decorated with tear-drops painted over blind tooling.

The binding of a Qur'an copied by Muhammad Abu'l Fath al-Ansari in Ramadan 847/ December 1444 contains a *waqf* inscription which is dated 18 Rabia II 848/3rd August 1444 for the mosque of Qadi Zayn al-Din, founded in 848/1444.²³¹ The decoration of the front and back covers is different. The central panel of the front cover has a large lobed almond profile with pendants that is filled with densely tooled intertwining floral ornament and split palmettes. (Fig. 4.107, *left*) The back cover has a pointed almond profile and is made up of densely tooled gilded ornament over which a trellis-like design has been painted. (Fig. 4.107, *right*) The corner-pieces of both covers comprise quadrants of a circle containing tooling and trellis-work in the same style as the back cover. The flap is decorated with a large cloud-collar profile filled with the same vegetal and palmette ornament as the front cover. (Fig. 4.109)

²³¹ CBL 1507, 58.5 x 42.5cm; Arberry, op.cit., 1967, p. 31; James, op.cit., 1980, Cat.39. See, Behrens-Abouseif, op.cit., 2007, pp.262–3 for a description of the mosque of Qadi Zayn al-Din. He held the position of major-domo under Sultan Jaqmaq and, having accumulated a vast fortune, founded several religious institutions; see fig. 5.43 for further discussion of the ornament of this binding.



Fig. 4.107: Front (*left*) and back (right) covers of Qur'an dated 847/1444 CBL 1507 58.5 x 42.5cm. Image courtesy of the Chester Beatty Library



Fig. 4.108: Detail of corner-piece of front cover of a Qur'an dated 847/1444 CBL, 1507 58.5 x 42.5cm. Image courtesy of the Chester Beatty Library



Fig. 4.109: Flap of Qur'an dated 847/1444 CBL 1507. Image courtesy of the Chester Beatty Library.

Both covers have an outer border of small s-shape stamps enclosing another border of quatrefoil tools with a petalled cross that appear to be only found on other bindings of the late 15th century.²³² (Fig. 4.108)

This binding is illustrative, however, of the problems that are faced when trying to decide if a binding is contemporary with its manuscript. The densely tooled vegetal ornament of the central profile of the front cover can be compared to an all-over tooled pattern of spiraling vegetal ornament on an earlier binding with a manuscript which was made *waqf* for the Sultan Barsbay in 831/1428 whose doublures can be closely compared to Ottoman examples dated to the 1430s.²³³

²³² See Appendix 2, no.51.

²³³ BL, Or.13286, 32.5 x 28.5cm, a copy of *al-Kashshāf* of al-Zamashari copied by Muhammad ibn Kizill ibn Abd Allah al-Isawi. See fig. 5.44 for binding and doublure and fig. 6.50 for comparison

(Fig. 4.110) The appearance of the almond and half cloud-collar profile is, however, completely incongruous with other binding styles of this period and suggests a later 15th century date. A number of other elements point to the same conclusion. The tools of the outer border of the flap only appear on bindings from the 1460s and the tooled doublures can be compared to those of another binding dated 897/1491.²³⁴ Given there are no other examples of these profiles in the earlier period, this is most probably a later rebinding.



Fig. 4.110: *left* Detail of front cover of Qur'an dated 847/1444 CBL 1507, 58.5 x 42.5cm. Image courtesy of the Chester Beatty Library. *right* Binding with a *waqf* for Sultan Barsbay dated 831/1428, BL Or.13286, 32.5 x 28.5cm. Image British Library.

The earliest example of the lobed almond profile filled with arabesque ornament that can be firmly considered contemporary with its manuscript is found on the second volume of the *al-ī* of al-Bukhari which was copied by Shahin bin

with Ottoman doublures; see pp. 382-4 for further discussion of this binding; see fig.6.50 for comparison with an Ottoman example.

²³⁴ CBL 1486, 47.5x33.6cm, see fig. 4.196 for further discussion of these doublures.

Abdullah al-Nuri al-Shahir bi'l Inbabi²³⁵ on 23 Ramadan 867/11 June 1462. It bears a finely illuminated opening page with a title roundel to the library of Sultan Khushqadam and a *waqf* in the name of Qaytbay.²³⁶ This binding is very interesting for a number of reasons and represents the first example of several elements that appear on later bindings of the Qaytbay period. (Fig.4.111) The binding has an outer border tooled with a rhomb meander stamp, the first such use on Mamluk bindings in this study.²³⁷ The border of the central panel has segmented stamps, alternating between squares and rectangles, tooled with individual stamps of eight-pointed stars in gold, each section being outlined by a border of s-shape stamps in gold.²³⁸ The borders are delineated by blue paint. The central panel has a large lobed almond profile with two pendants outlined in blue paint. The central almond profile is filled with intertwining palmettes and four large gilded fleur-de-lis are placed at each of the cardinal points.²³⁹ The centre of each of the fleur-de-lis is decorated with a bud lying on a gilded ground. This binding is distinguished by the use of gilding for the background of the pattern, a style used extensively on Turcoman bindings of the 15th century.²⁴⁰ The corner-pieces are cusped quadrants of a cloud-collar profile, also outlined in blue, and are filled with split palmettes painted in gold. A large cup-like split

²³⁵ In describing the departure of the Hajj caravan in 888/1484, Ibn Iyas says that the Sultan had sent a very large Qur'an to Mecca, so large that one camel was allocated to transport it. This Qur'an had been partly written by Shahin Nuri before he died and completed by Shaykh Khattab: Ibn Iyas, trans. Wiet, op.cit., 1945, p.226.

²³⁶ TSK 247/2, 43.4x 30cm, Karatay, op.cit., 1964, no.2256; Raby and Tanındı, op.cit., p.12, fig. 10 have mistakenly attributed this binding to Qaytbay.

²³⁷ See Appendix 2, no. 39; see also fig. 6.38 for occurrence of these tools on *Jāmi' al-uṣūl*, CBL Ms. Ar. 5282.

²³⁸ See Appendix 2, no. 52 and no. 41.

²³⁹ See fig. 5.47 for similar patterns in architectural decoration.

²⁴⁰ See fig. 6.40 for example of Turcoman gilded binding.

palmette encloses the ornament of the corner-piece and this is found both on bindings and illumination of the period.²⁴¹ The flap repeats the gilded fleur-de-lis of the central panel and the whole field is filled with dense intertwining arabesques.

This binding demonstrates the use of pattern books or stencils as the design is replicated for the filigree doublures of a later binding for Qaytbay which is discussed below.²⁴²



Fig. 4.111: Front cover and detail of *Sahih* of Bukhari dated 867/1462, TSK A.247/2, 43.4 x 30cm.

A further binding of a copy of *Mashārī' al-ashwāq ilā al-'ushshāq* of Dimyati copied by Muhammad bin Hasan al-Tayyibi al-Azhari al-Shafi'i with no date of copying contains a finely illuminated page dedicating the volume to Qaytbay's

²⁴¹ See fig. 4.113 for detail of corner-piece of TSK A.649 and fig. 5.55 for illumination of TSK A.2829.

²⁴² See fig. 4.190 for the filigree doublures of TSK A.649.

library and a *waqf* inscription dated 26 Dhu'l Qa'dah 895 /11 October 1490.²⁴³ (Fig.4.112) The binding has an outer border with a rhomb meander stamp painted in gold followed by a border of small s-shape tools delineating the segmented border of quatrefoil stamps with petalled crosses at the centre framing the central panel.²⁴⁴ (Fig. 4.113)



Fig. 4.112: Front cover and flap of *Mashārī' al-ashwāq ilā al-'ushshāq* with *waqf* for Qaytbay dated 895/1490, TSK.A.649, 36.5 x 26cm.

The flap has a half cloud-collar profile and is tooled all-over with fine floral ornament. (Fig. 4.112) The binding's filigree doublures are decorated with the same pattern as the cover on the previous binding and a cloud-collar profile is

²⁴³ TSK A.649, 36.5 x 26cm, Karatay, op.cit., 1966, no. 4907; Raby and Tanındı, op.cit., 1993, Fig.21.

²⁴⁴ See Appendix 2, no.51, 39,47.

found in filigree on the doublure of the flap.²⁴⁵ The corner-pieces contain large cup-like palmettes which were also noted on the previous binding with a manuscript copied for Sultan Khushqadam. (Fig. 4.111)



Fig. 4.113: Detail of the front cover and corner-piece of TSK A.649.

This binding represents the earliest example of what can be termed the ‘quatrelobe split palmette’ group of bindings where elegant arabesques stem from this centrally placed motif.²⁴⁶ (Fig. 4.113) Several other bindings use this motif for the centre of their decoration and are discussed below.

A later binding contains the manuscript entitled *Majmū’a min al-tārīkh min awwal ādam ‘alayhi al-salām ilā ākhir dawlat al-malik Nāṣir Faraj ibn Barqūq*,

²⁴⁵See fig. 4.190.

²⁴⁶ This term is used by Auld, *Renaissance Venice, Islam and Mahmud the Kurd*, London, 2004, pp.86–9, Fig. 43–9. She notes that the origins of this motif are very old, it being derived from the lotus. It was widely used on metalwork of the Timurid period and on Mamluk, Persian and Anatolian metalwork of the 15th century. See fig. 5.48 -50 for examples in other media; see 4.185 for doublures with this motif.

completed on 12 Rabi' II 910/21st September 1504.²⁴⁷ (Fig. 4.114) The binding has an outer border of a tooled knot meander followed by a border tooled in the blind with an interlace stamp followed by a border of s-shaped stamps painted in gold.²⁴⁸ The corner-pieces are composed of split palmettes enclosed within a leaf-like form that is also used for the composition of the half cloud-collar profile of the flap.



Fig. 4.114: Front cover and flap of *Majmū'a min al-tārīkh min awwal ādam 'alayhi al-salām ilā ākhir dawlat al-malik Nāṣir Faraj ibn Barqūq* dated 910/1504 TSK A.2984, 27.8 x 18.2cm.

²⁴⁷ TSK A.2984, 27.8 x 18.2cm, Karatay, op.cit., 1966, no.6138.

²⁴⁸ See Appendix 2, nos. 26, 42, 41.

Another example of the 'quatrelobe split palmette' group contains a manuscript of *Khawāṣṣ Kitāb al-'Azīz* copied for Sultan Qansuh al-Ghuri by the Mamluk Qanmur min Janmur with a finely illuminated page dedicating the volume to his library.²⁴⁹ The manuscript is not dated but, given the dedication, must have been bound during his reign. The outer borders are tooled with the same complex interlace tool as the previous binding illustrated in Fig. 4.114. The flap contains a small rosette made up of the quatrelobe split palmette detail while the corner-pieces are composed of knotwork. (Fig. 4.115)



Fig 4.115: Front Cover and flap of *Khawāṣṣ Kitāb al-'Azīz* dateable to the reign of Qansuh al-Ghuri, TSK A.137 27.5 x 18.5cm.

²⁴⁹ TSK A.137, 27.5 x 18.5cm, Karatay, op.cit., 1966, no.5651.

An almost identical binding covers a manuscript copied for Sultan Qansuh al-Ghuri by Abu Fadl Muhammad al-A'raj in 912/1506.²⁵⁰ The main difference is the use of segmented borders that are outlined in gold.



Fig. 4.116: Front cover and flap of *Kamāl al-farḥa fī daʿ al-sumūm wa-ḥif al-iḥḥa* 912/1506 for Qansuh al-Ghuri, TSK A.1952, 28 x 18.4cm.

Floral ornament in the Timurid style is also used for the lobed almond profiles. A binding of a manuscript *al-Jawhar al-naqī fī al-radd 'alā Bayhaqī* completed on 27 Safar 888/5th April 1483 contains a finely illuminated page with a dedication to the library of Muhammad al-Walid al-Marhum al-Janab al-Shahabi Ahmad min al-Marhum Inal Ala'i Dawadar al- Muqarr al-Ashraf al-Karim al-'Ali al-Sayfi Barsbay

²⁵⁰ TSK A. 1952, 28 x 18.4cm. Karatay, op.cit., 1966, no.7380; Sakhawi mentions that Abu Fadl was renowned for his calligraphy. His full name is given as Abu Fadl ibn Abd al-Wahab ibn Abd al-Latif ibn Ali ibn Abd al-Kafi al-Sunbati al-Qahiri al-Shafi'i. He learned his calligraphy from Yasin and was associated with Abd al-Rahman al-Sunbati, a bookseller. Al-Sakhawi, *Al-Daw' al-lāmi' fī a'yān al-qarn al-tāsi'*, ed. Husam al-Qudsi, Cairo, 1355/1934, Vol.11, p.129, no.416. Ibn Iyas records his death in October 923/1517 saying he died suddenly from an attack and that his calligraphy was remarkable; Ibn Iyas, op.cit., Trans. Wiet, 1960, p.307. Eight manuscripts can ascribed to him: TSK K.905, Karatay, op.cit., 1966, no.5913 dated 879/1474 see fig. 4.137; TSK K.1008, ibid., no.5911 for Dawadar Yashbak min Mahdi in 880/1475 see fig. 4.137 for binding; TSK 1621, ibid., no.5256 dated 911/1505; TSK.A.1621, ibid., 5256 for Qansuh al-Ghuri; A.2798, ibid., 6039 for Qansuh al Ghuri; TIEM 196 large-volume Qur'an dated 920/1514; Museum of Islamic Art, Cairo, inv.no.5676 dated 921/1515; TIEM 436, Qur'an with no date, see fig. 4.123.

Muhammadi Ra's al-Naubah.²⁵¹ The binding of brown leather has an outer border of a rhomb meander stamp in gold followed by another border of x-stamps tooled in the blind.²⁵² (Fig. 4.117) This is followed by a border of small s-shape stamps in gold while a line in blue pigment delineates the central panel. The lobed almond of the central panel, outlined in blue, is filled with leafy and floral ornament and the pendants at either end have leaves sprouting as finials. The corner-pieces use a split palmette/leaf profile stamp that has been described above. (Fig.4.114) The title of the manuscript is tooled on the fore-edge flap. The flap has a half cloud-collar profile and is filled with same floral and leafy ornament found in the profile of the cover. (Fig. 4.118) The earliest occurrence of this stamp is on a binding with a lobed almond profile and the same leafy finials dated 7 Ramadan 874/ 10th March 1470 in the Chester Beatty Library.²⁵³

²⁵¹ TKS A.643, 18 x 27.3cm, Karatay, op.cit., 1964, no.2956, The dedication is extremely difficult to read in gold, blue and white paint and not written very clearly. This may refer to the grandson of Inal al-Ala'i who became Sultan in 857/1453 and died in 865/1461 as he was appointed Ra's Naubah under Sultan Barsbay in 830/1426. See Mayer, op.cit., 1933, p.88.

²⁵² See Appendix 2, no. 12, 39, 47.

²⁵³ CBL 3571, 27.6 x 18.8cm; Arberry, *A Handlist of the Arabic Manuscripts in the Chester Beatty Library*, Vol. III, Dublin, 1958, p.31; Bosch, Carswell, Petherbridge, op.cit., 1981, Cat. 67, p.184.



Fig. 4.117: Front cover and flap of binding of *al-Jawhar al-naqī fī al-radd 'alā Bayhaqī*, 888/1483, TSK A.643, 27.3 x 18cm.



Fig. 4.118: Detail of central profile and corner-piece of binding dated 888/1483, TSK A. 643.

The binding of a copy of *Kitāb al-Khabar 'an al-bashar* of Maqrizi has a lobed almond profile with a ten-pointed star set at the centre of the quatrellobe

palmette motif.²⁵⁴ (Fig. 4.119) The borders are made up of a ten-pointed star tool that has already been noted on the binding of the manuscript copied for Khushqadam but on this binding it is tooled in the blind.²⁵⁵ (Fig. 4.111) This bears a finely illuminated roundel dedicating the volume to the library of the patron of the previous manuscript but is not dated. The third volume of the manuscript with a dedication to the same library has new *ebru* covers but contains a colophon dated the 23 Rabi' I 894/23rd February, 1489 stating it was copied by Umar bin Abd Allah bin Muhammad bin Mahmud Al-Manzrawi, so it can be assumed that both volumes were bound about the same time as they are bound in a similar style and were copied within ten years of one another.²⁵⁶



Fig. 4.119: Front cover and flap of *Kitāb al-Khabar 'an al-bashar* dated c. 894/1489; TSK A.2926, 27.5 x 18cm.

²⁵⁴ TKS A2926/1, 27.5 x 18.5cm, Karatay, op.cit., 1966, no. 5899.

²⁵⁵ See Appendix 2, no.52.

²⁵⁶ TSK R.1561, 27.3 x 18cm; Karatay, op.cit., 1966, no. 5905.

This series of bindings with the distinctive leaf /palmette stamp which is used for corner-pieces of covers and doublures – and in one instance to create the profile for the cover – is found only in the late 15th century.²⁵⁷ This gives rise to the thought that perhaps it is a mark or logo specifically used by a particular bindery. To my knowledge the stamp has not been found on any other media and only exists on this group of bindings.

A very fine binding of a Qur'an without a date of copying or the name of a scribe can be assigned to the Mamluk period because its doublures contain the name and titles of the patron in fine filigree leather which begin on a cartouche on the front cover and continue on to the doublure of the flap.²⁵⁸ A small cartouche on the doublure of the spine of the flap reads *Qānsū amīr ākhūr kabīr*.²⁵⁹ At first it was thought that such a fine binding must have been commissioned by Sultan Qansuh al-Ghuri himself but he never held the post of *amir akhur*. A recent article by Tanındı discusses another manuscript whose patron carries the same titles: a copy of the *Dīwān of Aşik Paşa* which contains an opening folio dedicating the volume to his library.²⁶⁰ As she points out, more than a dozen amirs bore the name 'Qansuh' in the second half of the 15th century though she identifies the patron as Amir Qansuh Khamsmiyya min Tarabay who was appointed *amir akhur kabir* in 885/1481 and held this position until 901/1496 when he became

²⁵⁷ See fig. 4.139 for TSK A. 2425 where four impressions are used to create a cloud-collar profile.

²⁵⁸ TIEM 508 50 x 38cm and see fig. 4.191-2 for a description of the filigree doublures.

²⁵⁹ The title *amir akhur* refers to the *amir* in charge of the stables, see fig. 4.192.

²⁶⁰ Tanındı, 'Two Bibliophile Emirs: Qansuh the Master of the Stables and Yashbak the Secretary', *The Arts of the Mamluks in Egypt and Syria-Evolution and Impact*, ed. Behrens-Abouseif, Bonn, 2012, pp.267–83.

atabak or commander of the army.²⁶¹ The manuscript must therefore have been commissioned and bound for Amir Qansuh Khamsmiyya during this period.

This large-volume Qur'an has an outer border of a knot meander tool.²⁶² This is followed by a segmented border which contains a meander of buds on a gilded background which is, in turn, followed by a border of s-shape tools in silver which delineates the central panel. A large lobed almond profile fills the central panel, decorated with palmettes, flowers and buds. The palmettes are gilded creating a pattern over the tooled floral ornament. (Fig. 4.120) The corner-pieces are cusped, forming quadrants of the central lobed medallion and are filled with the same floral and split palmette ornament of the central profile. This floral ornament can be compared to that on the flap of a pressure-moulded binding of a Qur'an that is dated 897/1491.²⁶³ The flap of the Qur'an for Qansuh Khamsmiyya contains an elegant cartouche which can also be compared to the binding with pressure-moulded decoration and is illustrated below for comparison. (Fig. 4.122) Both these bindings also use gilding for certain parts of the pattern as has already been noted on the binding of the manuscript copied for Sultan Khushqadam.²⁶⁴ The leather of the background is gently stippled to give a textured effect. Of note are the large gilded, cup-like split palmettes of the corner-pieces which envelope the other design elements and have already been noted occurring in illumination and other bindings. (Fig. 4.121)

²⁶¹ Ibid., p.273.

²⁶² See Appendix 2, no. 26,45,47.

²⁶³ CBL 1486, 47.5 x33.6 cm; see fig. 4.159.

²⁶⁴ TSK A.247/2, see fig. 4.111 ; TSK A.649 see fig. 4.112.



Fig. 4.120: Front cover of Qur'an, dated to between 805–901/1481–96, TIEM 508, 50 x 38cm.



Fig. 4.121: Detail of borders and flap of Qur'an, dated to between 805–901/1481–96, TIEM 508.

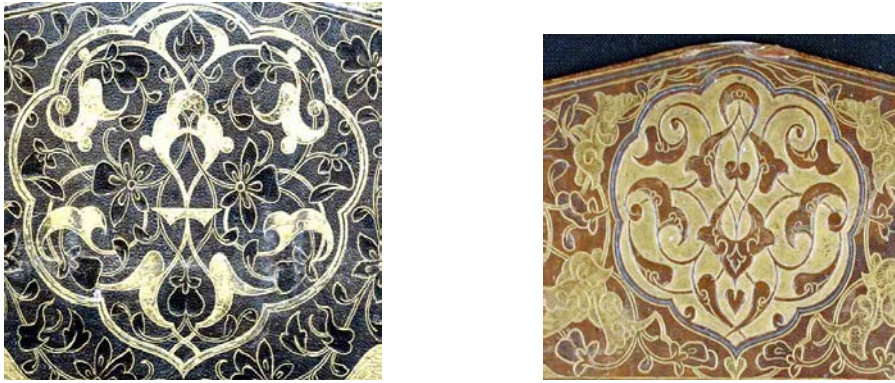


Fig. 4.122: *left* Detail of the cartouche on the flap of Qur'an dated to between 805–901/1481–96, TIEM 508. *right* Detail of the cartouche on the flap of Qur'an dated 897/1491, CBL 1486.

Another Qur'an binding contains no date or name of patron but was copied by Abu Fadl Muhammad A'rag, who copied several other manuscripts in the late Mamluk period.²⁶⁵ The binding has a large lobed medallion with two pendants which are filled with floral ornament emanating from a central diaper. The flowers and buds are painted in gold and lie on a gently hatched background. The cusped corner pieces are also filled with the same floral ornament. The palmettes of the pattern are gilded and the flowers and buds are outlined in gold; the binding has fine filigree doublures.²⁶⁶ (Fig. 4.123)

²⁶⁵ TIEM 436, 42 x 30.5 cm; see Ch.4, n.250 for listing of manuscripts copied by Abu Fadl al-A'raj.

²⁶⁶ See fig. 4.193.

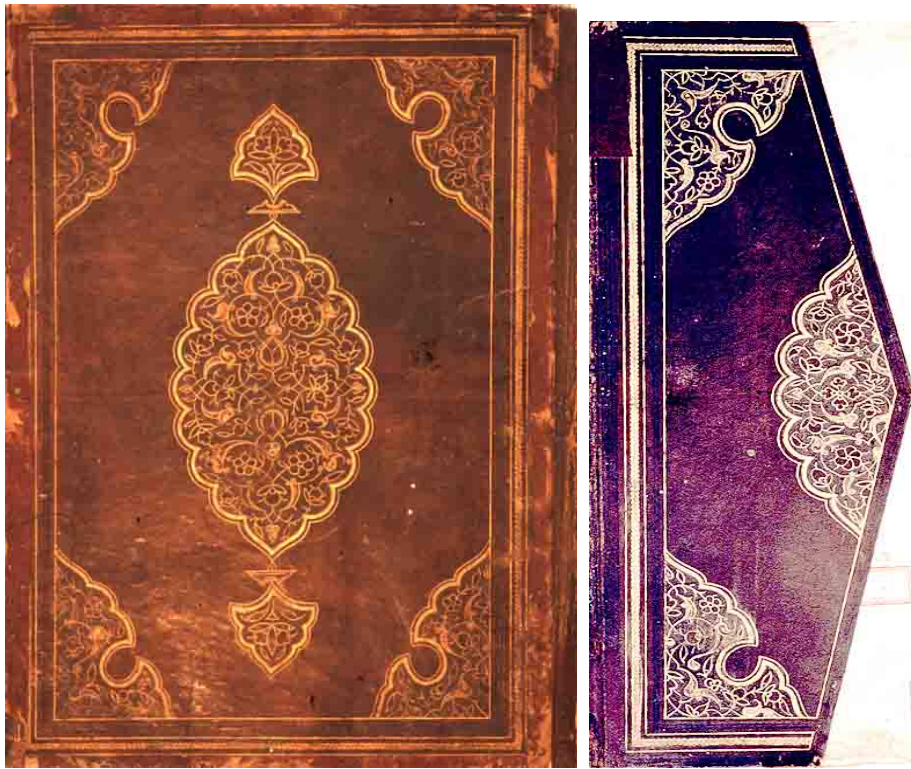


Fig. 4.123: Front cover of Qur'an, late 15th century, TIEM 436, 42 x 30.5cm.

In addition to floral ornament, bindings with the lobed profile can be filled with small stamps which are usually gilded. A manuscript of *Arba'ūn adīthan*, completed by Ahmad ibn Ali al-Fayyumi al-Mukatib on the 16 Sha'ban 900/11 May 1495, bears a dedication to the library of the Sultan Qaytbay.²⁶⁷ In the colophon of another manuscript, the scribe is described as the teacher of the mamluk Santabay al-Sharifi from the *ṭabaqāt al-Hawsh*.²⁶⁸ The binding has an outer border tooled in the blind with a rhomb and meander tool and is followed by another border decorated with an eight-pointed star tool.²⁶⁹ (Fig. 4.124) The central lobed profile is tooled with x-shape stamps over which brackets have been tooled and painted in gold. The flap has a variation of the cloud-collar

²⁶⁷ TKS A. 360, 30.5 x 20.5 cm; Karatay, op.cit., 1964, no. 3132.

²⁶⁸ TKS. A. 2796, 30.5 x 20.5 cm; Karatay, op.cit., 1966, no. 6019.

²⁶⁹ See Appendix 2, no. 39,52

profile without cusps that can be compared to a very common profile which will be described in more detail below.²⁷⁰

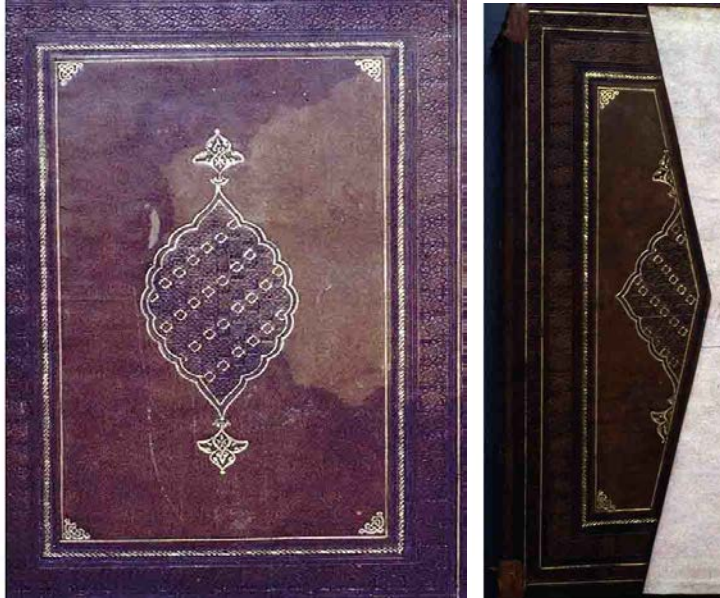


Fig. 4.124: Front cover and flap of *Arbaʿ ūn Hadithan* dated 900/1495, TSK A.360, 30.5 x 20.5.

Other lobed almond profiles are filled with a trellis-like pattern, for example those found on the covers of a manuscript *Al-Kawākib al-durriyya fī mad khayr al-bariyya* copied by the mamluk Qanmur al-Sharifi.²⁷¹ The manuscript contains a very fine double page of illumination with a dedication to the Sultan Qaytbay but has no date of copying. The cover has an outer border of quatrefoil stamps with petalled crosses followed a border of s-shape stamps in gold.²⁷² The central panel has a lobed almond profile with two pendants painted in gold and finials projecting into the central field. The interior of the almond is filled with a

²⁷⁰ See fig.4.130.

²⁷¹ CBL 4168, 43 x 29.8 cm; see fig. 6.65 for comparison with Ottoman example.

²⁷² See Appendix 2, no. 51 and 47.

honeycomb pattern with each cell outlined in gold and painted in blue. The centre of the flap has a large half cloud-collar profile which retains much of the original paint of the cells that are outlined in gold and painted in blue. An annular dot in gold is tooled at the centre of each cell. The binding of a manuscript copied by Umar al-Danjawi has the same design on the covers and is dated 883/1478, it contains a *waqf* inscription to Sultan Qaytbay.²⁷³

The borders of the flap repeat the outer quatrefoil tool and the corner-pieces of the central panel. The doublures are tooled with circles with a filling of painted tear-drops which can be compared to those of two other bindings.²⁷⁴

²⁷³Victoria and Albert Museum, 7219–1869, 36.3 x 27.5cm; Haldane, op.cit., 1983, Cat.24, p.43; Umar al-Danjawi also copied a Qur'an which is beautifully illuminated but whose binding has had extensive repairs. It was copied in 889/1484 and was made *waqf* to Qaytbay's *madrassa* in Qala't-Kabsh in 890/1485, DAK Rasid126.

²⁷⁴ See fig. 4.196 for the doublures of CBL 1496, and CBL 1507.



Fig 4.125: Back cover and flap of *Al-Kawāḳib al-durriyya fī madḥ khayr al-bariyya* copied for Sultan Qaytbay, CBL Ms. 4168, 43 x 29.8cm. Image courtesy of the Chester Beatty Library.

Other bindings with lobed profiles have fillings composed of small tools which are also used to decorate the outer borders of the central panel. A manuscript of *Sirāj al-mulūk wa-'l-khulafā' wa-minhāj al-wulāt wa-'l-umarā'* carries a dedication to the library to the library of Qansuh al-Ghuri while he was Hajib al-Hujjab or Grand Chamberlain of Aleppo a position to which he was appointed in 894/1489. The dedication states that the manuscript was copied for Al-Ghuri's library.²⁷⁵ This manuscript was completed on 6 Sha'ban 896/14 June 1491 by Abd al-Qadir ibn Ibrahim ibn Muhammad al-Dimashqi al-Shafi'i. As this manuscript was

²⁷⁵ TKS A1396, Karatay, op.cit., 1966, no. 6948, 27 x 11.5cm.

copied for him while he was in Aleppo, it seems likely that it was also bound there. Its cover is decorated with a lobed profile, painted in gold and filled with small pallet tools in the blind. The flap has a smaller cartouche with a swastika motif at the centre tooled in gold. What is unusual on this binding is the use of a small knot tools for the upper and lower borders where alternate impressions are painted in gold and blue.²⁷⁶

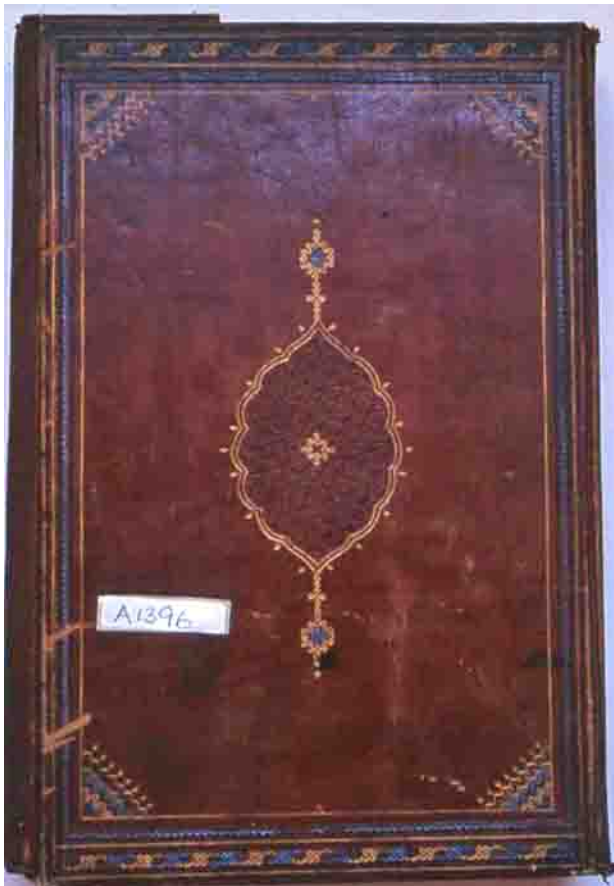


Fig. 4.126: Front cover of *Sirāj al-mulūk wa-'l-khulafā' wa-minhāj al-wulāt wa-'l-umarā'* dated 896/1491, TSK A.1396, 27 x 11.5cm.

A copy of *Arba' wa-khamsun farīda* was copied in Jumada I 901/22 January 1496 for Sultan Muhammad, the son of Qaytbay who ruled briefly between 901–4/1496–8 by the mamluk Qatabay min Abd al-Karim min tabaqat al-Muqqadam

²⁷⁶ Appendix 2, no.32.

al-Maliki al-Nasiri.²⁷⁷ (Fig. 4.127) The binding has an outer border of gold-tooled knotwork followed by a border of blind-tooled eight-pointed stars followed by a chain border outlined on either side by blue paint.²⁷⁸ The lobed almond of the central panel is filled with a pattern based on the use of two small curved tools, The corner-pieces contain the palmette/leaf tool which has already been noted on several bindings.²⁷⁹

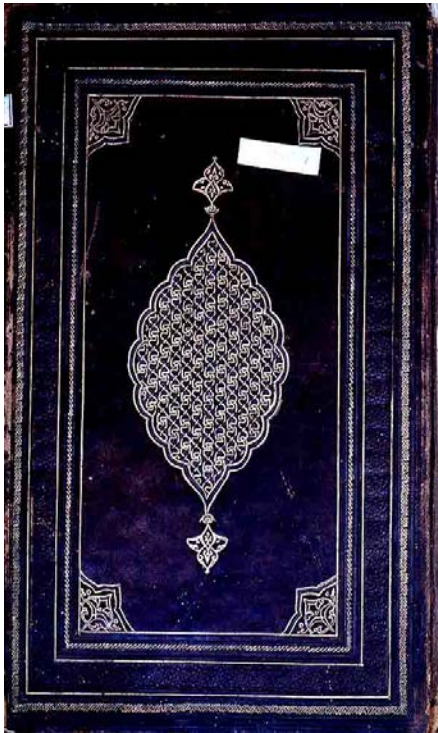


Fig. 4.127: Front cover of *Arba' wa-khamsūn farīḍa* dated 901/1496 TSK A.1214, 31.5 x 19cm.

A binding with a dedicatory roundel to Sultan Qansuh al-Ghuri contains a manuscript entitled *Kitāb fī tartīb mamlakat al-diyār al-miṣriyya wa-umarā'ihā wa-arbāb al-wazā'if* copied by the *mamluk* Kasabay min Aqbirdi but with no date

²⁷⁷ TSK.A 1214, Karatay, op.cit., 1966, no. 5309, 31.5 x 19cm.

²⁷⁸ See Appendix 2, no. 52 and 47.

²⁷⁹ See fig. 4.114, 4.117 and 4.119.

of copying.²⁸⁰ (Fig. 4.128) The binding has a lobed almond filled with the knot stamp painted in gold which is usually found on the borders and the outer border comprises of blind-tooled interlace.²⁸¹ The corner-pieces are comprised of tooled knot interlace. The flap has the half cloud-collar profile which is filled with the same ornament.



Fig. 4.128: Back cover of *Kitāb fī tartīb mamlakat al-diyār al-miṣriyya wa-umarā'ihā wa-arbāb al-waṣā'if* copied for Qansuh al-Ghuri, Staatsbibliothek, Berlin, Ms.or.quart.1817, 31.5 x 21cm. Image Staatsbibliothek Berlin.

A binding with a manuscript which has a finely illuminated dedication to the library of Qansuh al-Ghuri and was copied by the *mamluk* Janibak min Tanmur al-Khassaki has an interlace tool border in the blind with tear-drops painted over

²⁸⁰ Staatsbibliothek Berlin Ms.or.quart.1817, 31.5 x 21cm; Weisweiler, op.cit., 1962, no.28, Pl. 60.

²⁸¹ See Appendix 2, no.42.

each impression.²⁸²(Fig. 4.129) The lobed almond profile is filled with x-shaped tools whose outlines have been painted over in gold and are surrounded by painted interlace.²⁸³ Small nodes with attached finials form the outline of the border. The corner-pieces are filled with knotwork. The doublures are of block-printed leather with a complex design based on heart-shaped knots and palmettes.²⁸⁴



Fig. 4.129: Front cover of binding of *Qasida yaqul al-'abd* dated to the reign of Qansuh al-Ghuri, TSK A.1767, 26.5 x17.5cm.

There are also a series of bindings, of which there are several examples in the Topkapi Palace Library Collection and the two flaps in Chester Beatty Library, in a style that appears to have begun during the reign of Qaytbay and continues into

²⁸² TSK. A 1767, 26.5 x17.5cm, Karatay, op.cit., 1964, no. 4772.

²⁸³ The same type of decoration for the centre of the profile is noted on a binding with a dedication to the library of Qansuh al-Ghuri; Staatsbibliothek, Berlin, Ms.Or.Quart.1817(Tüb), 31.9 x 21cm; Weisweiler, op.cit., 1962, no. 28, Pl.60.

²⁸⁴ See fig. 4.176 for the doublure pattern and see fig. 5.69-5.71 for comparison with other media..

the reign of Al-Ghuri.²⁸⁵ The bindings of this group usually have a tooled lobed almond whose profiles are painted in gold. The interior of the lobed almond is filled with blind-tooled knotwork which is painted over in gold with small tear-drops. The borders are usually blind tooled sometimes separated from the central panel with a border of gold painted s-stamps. The flaps have a variation of the cloud-collar profile and usually have the same filling as the central roundel. The example below bears a dedication to the library of Al-Sayfi Inal al-Ashqar al-Ashrafi al-Maliki al-Zahiri who died in 883/1479 and occupied at various stages of his career the posts of *ra's nauba al-kabir*, *amir silah* and the governorships of Cairo, Malatia and Aleppo.²⁸⁶ (Fig. 4.130)



Fig. 4.130: Front cover and flap of a binding of *Sīrat al-Sulṭān al-Shahīd al-Malik al-Zāhir Jaqmaq* dated to the late 15th century, TSK A.2992/3, 27.3 x 18.5cm.

²⁸⁵ For example: TSK K.950, 27 x 18.4cm, Karatay, *Topkapı Sarayı Kutuphanesi Türkçe Yazmalar Kataloğu*, Istanbul, 1961, Vol.1, no.2253; TSK A.1452, Karatay, op.cit., 1966, no.4718 presented to the library of Qansuh al-Ghuri by Ahmad ibn Hasan al-Tuluni al-Mimar who was Al-Ghuri's controller of public works. TSK A.2790, Karatay, op.cit., 1966, no.5899; CBL Moritz Collection of loose bindings, No.40 and 40b.

²⁸⁶ TSK A.2992/3, 27.3 x 18.5cm; Karatay, op.cit., 1966, no. 6456.

Bindings using the plain almond profile (i.e. without lobes) were also produced in Mamluk Cairo in the late 15th century. Among these is a very unusual cover produced for Sultan Qaytbay which is covered with impressions of a single tool which is normally used for border decoration.²⁸⁷ (Fig. 4.131) This is a copy of the *Muqaddima* with an interlinear Turkish translation.²⁸⁸ It contains an illuminated page with a dedication to library of Sultan Qaytbay and a *waqf* inscription dated the 27 Jumada II 881/ 16th October 1476 endowing the volume to his *madrassa* in the desert. The centre of the cover has a plain almond profile which is marked by a border of small complex knot tools which are also used to delineate the central panel. The complete field is tooled with a quatrefoil stamp tooled in the blind with only the border painted in gold.

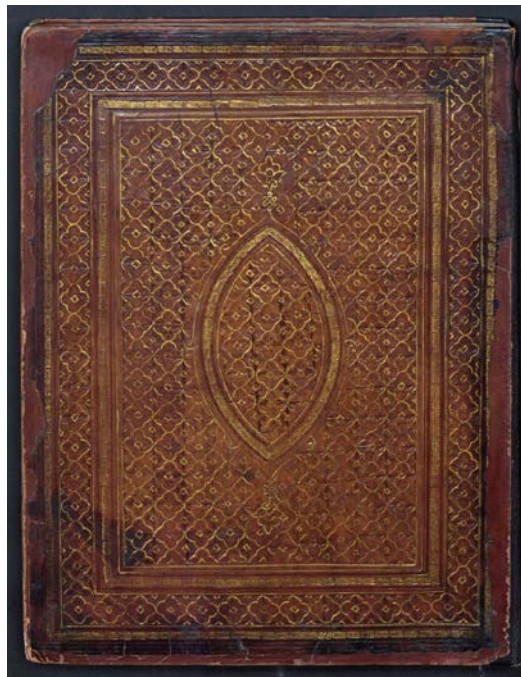


Fig. 4.131: Front cover of the *Muqaddima* dated 881/1496 of Staatsbibliothek, Berlin, Ms.or. Fol.1624, Marberg, 37 x 26.5cm. Image Staatsbibliothek Berlin.

²⁸⁷ See Appendix 2, no.43.

²⁸⁸ Staatsbibliothek Berlin, Ms.or.fol. (Marberg), 37 x 26.5cm; Weisweiler, op.cit., no.7, Pl.59.

Other more common types of binding are decorated with a simple almond profile filled with small stamps tooled in the blind. One such binding contains four manuscripts copied for the *dawadar* Yashbak min Mahdi in 881/1476.²⁸⁹ (Fig. 4.133) Each manuscript is accompanied by a title in the same style of illumination and the date. The cover has a plain almond profile which is outlined in gold paint in small s-stamps, creating a cable design surrounded by an outer border of small gold painted knots. (Fig.4.132) The interior of the profile is filled with blind tooled rhomb meander stamps.²⁹⁰ The outer border is composed of a finely engraved square format tool which has a delicate symmetrical calyx within a cloud-collar frame.²⁹¹

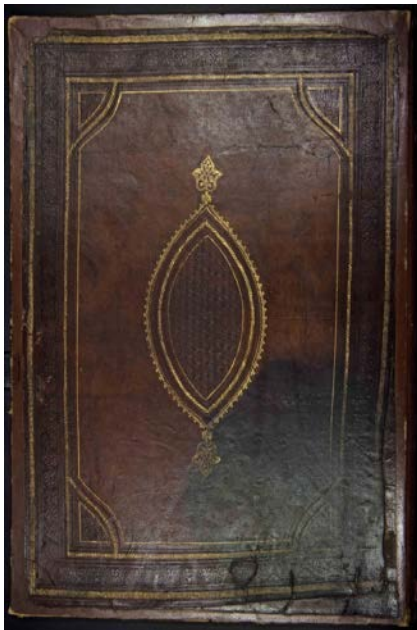


Fig. 4.132: Front cover of *Compendium* dated 881/1476, Staatsbibliothek Berlin, Ms.Or.Fol.4249 (Tub) 41.5 x 29.8cm. Image Staatsbibliothek Berlin

²⁸⁹ Weisweiler, op.cit., 1962, no. 4249, p.83, not illustrated; Yashbak min Mahdi was the *dawadar kabir* of Sultan Qaytbay and a known bibliophile, see fig. 4.137 for other manuscripts copied for him and pp. 472-3 for an account of his death. See also, Tanındı, op.cit., 2012, pp. 247-67.

²⁹⁰ Appendix 2, no.39.

²⁹¹ See Appendix 2, no. 48. A similar tool is found decorating the borders of a binding with a plain almond profile; Oriental Institute, Chicago, A.12110, 26 x 17.5cm; Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.72.



Fig. 4.133: Fol. 52b of *Compendium* dated 881/1476, Staatsbibliothek Berlin, Ms. or.fol.4249(Tub). Image Staatsbibliothek Berlin.

Two bindings have the same simple almond profile and must therefore be the work of the same binder. (Fig. 4.134) These binding styles have no parallels elsewhere and are representative the diverse nature of the styles of bindings of the late Mamluk period. One volume contains a manuscript of *Talkhīṣ nūr al-ʿuyūn* and was copied for Qansuh al-Ghuri by Bektimur al-Ramadani of the *tabaqat* al-Ashrafi but does not have a date.²⁹² The other contains a manuscript of a work composed by Al-Ghuri, *Shajarat al-nasab al-sharīf al-nabawī*, and was completed in 909/1503.²⁹³ (Fig.4.134) Both contain finely illuminated pages with dedications to the Qansuh al-Ghuri and must have been bound at the same time. Geometric shapes decorate the interior of both almond profiles. A six-pointed star based on a six-petalled rosette is placed at the centre on a gilded ground tooled with small sun-burst stamps on both bindings. One binding has torch-like pendants above and below the star (TSK A.3032) while the other has

²⁹² TSK A.3032, 32 x 21cm; Karatay, op.cit., 1966, no. 6025.

²⁹³ TSK A.2798, 36.5 x 27cm; Karatay, op.cit., 1966, no. 6039.

triangles (TSK A.2798). The borders of both bindings are composed of quatrefoil/petalled cross tools whose outlines are painted in gold found on numerous bindings, most notably the all-over tooled pattern on the cover of the copied for the Sultan Qaytbay which has just been described. (Fig. 4.131)



Fig. 4.134: *left* Front cover of *Talkhīṣ nūr al-‘uyūn*, TSK A.3032, 32 x 21cm *right* Front cover of *Shajarat al-nasab al-sharīf al-nabawī* TSK A.2798, 36.5 x 27cm.

These two bindings represent the diversity of binding ornament during the late Mamluk period and, although they include elements that are found in binding decoration of the period, they are quite unique in terms of their design.

The final two bindings considered in this section are representative of the elements of binding decoration found on bindings with the almond profile of the late 15th century. The first is a binding with a manuscript of *Ākām al-marjān fī*

aḥkām al-jānn that was completed on the 23 Muharram 897/25th November 1491 though it must have been bound later as it contains a finely illuminated page dedicating the volume to Sultan Janbalat (r.905–6/1500–1) who came to power briefly in the political instability that ensued after the death of Qaytbay and continued until the accession of Qansuh al-Ghuri.²⁹⁴ The plain lobed profile has a centre filled with small knot meander tools in the blind. Tear-drops are painted over them in gold in the same manner as on the common type of lobed profile discussed previously.²⁹⁵ The second binding is of a manuscript of *al-ṭarīq al-maslūk fī siyāsāt al-mulk* and contains a finely illuminated page to the library of Qansuh al-Ghuri and is dated 916/1510.²⁹⁶ It has a central almond profile filled with small stamps creating an interlace pattern and knotted pendants with small swastikas at their centres. The borders are segmented decorated with a quatrefoil stamp and the corner-pieces are cut at angles to the main panel and filled with knotwork.²⁹⁷

²⁹⁴ TSK, A 1773, 27 x 18cm, Karatay, op.cit., 1964, no.4909.

²⁹⁵ TSK, A 2992/3, 27.3 x 18.5cm, Karatay, op.cit., 1966; see fig. 4.130 for tear-drop pattern.

²⁹⁶ TSK, A 1608, 27.5 x 18cm, Karatay, op.cit., 1966, no. 6982; see fig. 4.176 for doublure and 5.67 for comparison of doublure pattern with textiles.

²⁹⁷ See Appendix 2, no. 43.

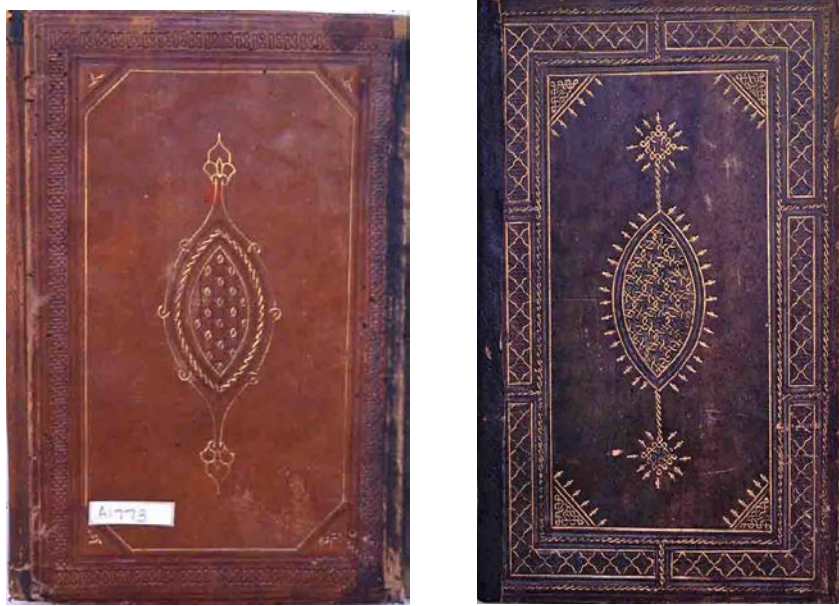


Fig. 4.135: *left* Front cover of *Ākām al-marjān fī ahkām al-jānn* 27 x18cm dated 905–6/1500–1, TSK A.1773. *right* Front cover of *al-ṭarīq al-maslūk fī siyāsāt al-mulk* 27.5 x 18cm dated 916/1510, TSK A.1608.

The introduction of the almond profile, both lobed and plain, along with floral and arabesque ornament marks a clear change in the development of bookbinding decoration during the Mamluk period. These are first noted on bindings from the reign of Sultan Khushqadam and continue to be produced under Qaytbay.

The ornament of the lobed profile type bindings is characterized by the use of arabesque and floral ornament with half cloud-collar profiles for the flaps can be seen to derived from developments in Persian binding decoration at the end of the 14th century, developments later found on Ottoman bindings from the 1450s. These will be discussed in more detail in Chapter 6. They are combined, however, with elements that are distinctly Mamluk: for example, the quatrefoil petalled cross tool used for the borders and decoration of the covers is not found on Persian or Ottoman bindings of the 14th and 15th century neither is the tear-

drop motif painted over the blind tooled decoration of many Mamluk covers.

Many of these bindings examined are also distinguished by the distinctive leaf/palmette tool used for their corner-pieces which may have been characteristic of a particular bindery.

Small tools are used to decorate the interiors of both the lobed and plain almond profiles, which were then painted over in gold paint. Floral and arabesque ornament is, however, always restricted to the lobed almond profile, indicating a clear association of certain profiles with the type of ornament that should be used. Of note also is the use of small swastikas as a single element, a shape which is not noted on earlier bindings.

The changes that took place in the late 15th century in the Mamluk binders' repertoire are reflected in architectural decoration and metalwork and mark a dramatic departure from previous styles. They drew on a variety of influences and, in translating them into a Mamluk context, exhibited great diversity and vitality, marking the apogee of the Mamluk binding tradition.

Cloud-Collar Profiles

The term ‘cloud-collar’ is used to refer to bindings with a distinctive four-lobed profile, it is borrowed from a descriptive term used to describe the profiles of textile collars on Chinese robes from the Yuan period.²⁹⁸ It was adopted as part of court dress during the Timurid and Turcoman periods and is seen on the apparel of figures in miniatures during the Mamluk period. (Fig. 4.136)



Fig. 4.136: Timurid cloud-collar, 184.5 x 95cm, Iran, c.1400– 50, Moscow, Kremlin Armouries, TK-3117. After Lentz and Lowry, op.cit., 1989, Cat.116.

The cloud-collar profile appears on Persian bindings from the end of the 14th century and on Ottoman bindings from the 1450s.²⁹⁹ The cloud-collar profile, however, only makes its appearance on Mamluk bindings in the second half of

²⁹⁸ For cloud-collar patterns see Lentz and Lowry, op.cit., 1989, Cat.90, 95– 7, 114, 115; for cloud-collars see Kadoi, *Islamic Chinoiserie: The Art of Mongol Iran*, Edinburgh, 2009, p. 32 and fig. 1.15.

²⁹⁹ Raby and Tanındı, op.cit., pp.37– 45 date the earliest occurrence of the cloud-collar in Timurid bindings to 809/1407 where it appears on the filigree-leather doublures of the *Yazd Anthology*, TSK H.796 see fig. 6.33 of this text; Wright, op.cit., forthcoming 2012, dates its appearance to the end of the 14th century where it makes its appearance in the corner-pieces of a cover of a *Shāhnāma* produced in Shiraz dated 772/1371: See Ch. 6 of this text, fig.6.28.

the 15th century.³⁰⁰ The use of the full profile is rare in Mamluk bindings but it is commonly used as a half profile, cut vertically on the flaps or as a quarter profile for the corner-pieces accompanying lobed almond profiles on the covers.³⁰¹ The overwhelming preference for the use of the half cloud-collar profile for the flaps and avoidance of the full profile cannot be easily explained. It may be that the cloud-collar with its cruciform appearance was rejected in the Mamluk context because of Christian connotations although several of the small stamps and the quatrelobed split palmette motif used on Mamluk bindings have cruciform profiles and there do not seem to have been any reservations concerned with their use.

The earliest examples in this study of full cloud-collar profiles are found on the bindings of two manuscripts copied for Dawadar Yashbak min Mahdi by Abu Fadl A'raj al-Sunbati.³⁰² The first manuscript is a copy of Maqrizi's *Kitāb al-Sulūk li-ma'rifat duwal al-mamlūk* and was completed in Dhu'l-Qa'dah 879/ March 1475.³⁰³ The second is a copy of the second volume of Abd al-Rahman al-Sakhawi's (d.902/1497) *Al-tibr al-masbūk fī dhayl al-sulūk* on 6 Ramadan 880/4 January 1476 '*bi-manzil al-mu'allif*' which must refer to the house of the noted

³⁰⁰ Sakisian, op.cit.,1934a, p.84 published the binding of TIEM 1678, 26.4 x 17.8cm, which has a cloud-collar profile and contains a manuscript dated 788/1386 and was copied by Yusuf ibn Ahmed bin Yusuf al Shadli for the caliph al-Mutawakkil in Cairo, who held the position three times (764– 78/1362– 76, 779-1377 792– 809/1389– 1406). The cover is decorated with a cloud-collar profile which is filled with gold-painted arabesques and the centre of the pattern is marked with a variation of the quatrelobe split palmette motif which is only found on Mamluk covers in the late 15th century. Sakisian speculated that the binder must have come from Iran but as the earliest occurrence of this profile on Iranian bindings is only found at the end of the 14th century, this must therefore be a rebinding.

³⁰¹ See for example, TSK A. 649, fig.4.112.

³⁰² See Ch. 4 n.250 for other manuscripts copied by Abu Fadl A'raj and see fig. 4.132 for another manuscript copied for Dawadar Yashbak min Mahdi.

³⁰³ TSK K.905, 20.8 x 31.5 cm; Karatay, op.cit., 1966, no. 5911.

Mamluk historian Muhammad ibn Abd al-Rahman al-Sakhawi (d. 902/1497).³⁰⁴

These manuscripts carry a special significance as al-Sakhawi in his *I'lān bi-Tawbīkh li-Man Dhamma Ahl al-Tawārīkh* explains that he was specifically asked to write a sequel to Maqrizi's history of the Mamluk period by Dawadar Yashbak min Mahdi and he therefore wrote the *Tibr al-Masbūk*:

*The dawadar Yashbak bin [sic] Mahdi Azim al Daula who had a considerable taste in this respect [later on] asked me to write for him a supplement to Maqrizi's Suluk. After much deliberation and consultation I complied with his request and compiled the Tibr al Masbuk. Yashbak was very happy with the work. He took [the parts] that had reached him along with him on his travels. He made his company read the book and showed how proud he was of it to courtiers, chiefs and even more highly placed persons who were interested in being praised and gaining for themselves a good memory and who draw to themselves those who they suspected would report on them in detail. All this is a thing of the past. Nothing now remains but stupidity boorishness and an interest in worldly trifles.*³⁰⁵

The full cloud-collar profiles of the bindings of these two manuscripts are identical and must be the work of the same binder. The covers are decorated with a cloud-collar motif whose outlines are painted in gold. (Fig. 4.137) A single matrix has been used for the decoration of the interior of the profile, which is composed of a quatrelobe split palmette motif lying at the centre of palmettes and has already been noted on a number of bindings with the lobed almond

³⁰⁴ TSK K.1008, 20.8 x 31.5cm, Karatay, op.cit., 1966 ,no.5913.; for details of Al-Sakhawi see Little, 'Historiography of the Ayyubid and Mamluk Epochs', in *Cambridge History of Egypt*, ed. C. Petry, Cambridge, 1998, p.443.

³⁰⁵ Al-Sakhawi, '*I'lān bi-Tawbīkh li-Man Dhamma Ahl al-Tawārīkh*', English Translation in Rosenthal, *A History of Muslim Historiography*, Leiden, 1968, p.329.

profile.³⁰⁶ The flaps have half cloud-collar profiles and the border tools are unusual – in the shape of a rectangular cartouche with floral ornament.³⁰⁷ The lobed corner-pieces differ from the usual quarter cloud collar cusped type with pointed lobes project into the central field. These and the pattern of the central profile can be compared to a loose binding in the Chester Beatty Library.³⁰⁸ On this cover, however, a lobed almond profile has been tooled around the centre. (Fig. 4.138)

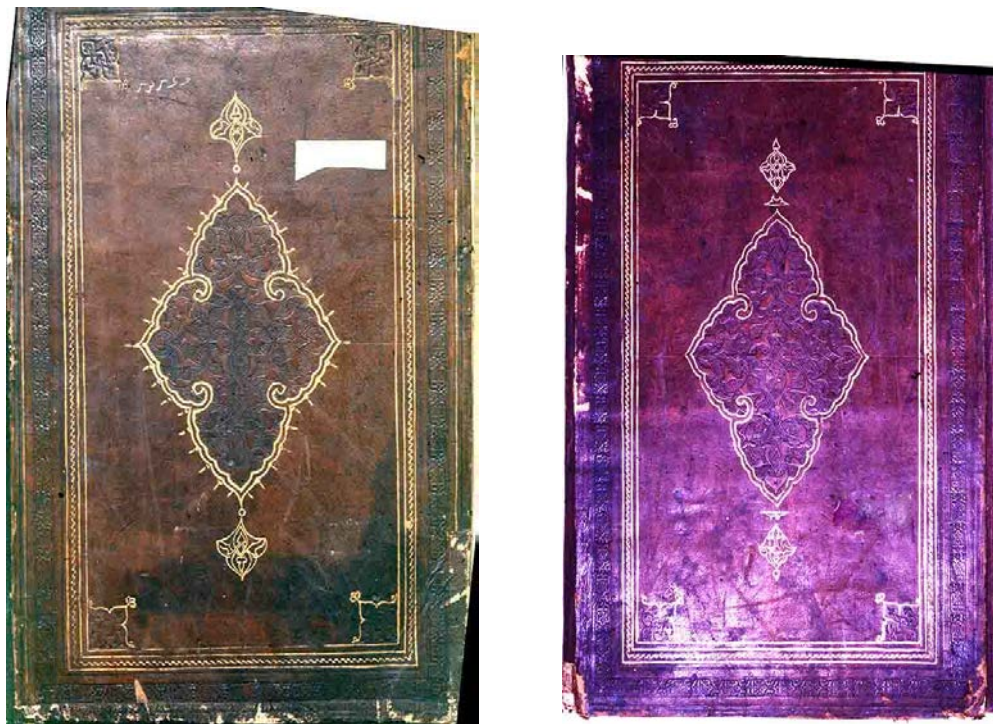


Fig. 4.137: *left* Front cover of *Kitāb al-Sulūk li-ma'rifat duwal al-mamlūk* dated 879/1474. TSK K.905 31.5x 20.8cm *right* Front cover of *Al-tibr al-masbūk fī dhayl al-sulūk* dated 880/1475, TSK K.1008, 31.5 x 20.8cm.

³⁰⁶ See fig.4.113.

³⁰⁷ See Appendix 2, no.50.

³⁰⁸ CBL Collection of Moritz loose bindings, no.60.



Fig. 4.138: CBL Loose binding dateable to c.880/1475, CBL Moritz Collection no.60. Image courtesy of the Chester Beatty Library.

Only one other binding in this study employs the cloud-collar profile. It contains a copy of *Ghars al-inshāb fī al-ramy bi-l-nushshāb* of Jalal al-Din al-Suyuti and was copied by the *mamluk* Moghulbay Isma'ili of the *ṭabaqat* al-Mustajadda.³⁰⁹ The manuscript has no date of copying but it does contain a fine opening title page dedicating the volume to the library of the Sultan Qaytbay and must therefore have been bound during his reign. The pattern of the profile is very cleverly conceived containing four impressions of the leaf/palmette stamp arranged in a cruciform shape which has been noted on bindings with lobed profiles.³¹⁰ (Fig. 4.139) These appear to be gold tooled given the clarity and

³⁰⁹ TSK A.2425, Karatay, op.cit., 1969, no. 8998, 26.5 x 17.5cm.

³¹⁰ For other examples; TSK A. 2928, fig. 4.114; TSK A.643, fig. 4.117, TSK A.2926, fig. 4.119.

brightness of the impressions. The outer border is decorated with knot meander tool, which is also found on other bindings of the period and the inner border contains the same tool but is stamped in the blind.³¹¹ The lines delineating the borders' main panel and the outline of the profile were originally outlined in a blue paint that has largely disappeared.



Fig. 4.139: Front cover and flap of *Ghars al-inshāb fī al-ramy bi-'l-nushshāb* dated to the reign of Qaytbay, 26.5 x 17.5cm, TKS A. 2425.

These few examples represent the use of the full cloud-collar profile on covers of the period. The overwhelming preference was for the cloud-collar profile cut vertically in half for the flaps.

³¹¹ See Appendix 2, no.26.

Filigree bindings

The technique of filigree leather for the decoration of bindings is an ancient one and is found on Coptic bindings and fragments from Turfan dated to between the 8th and 9th century.³¹² (Fig. 4.140)

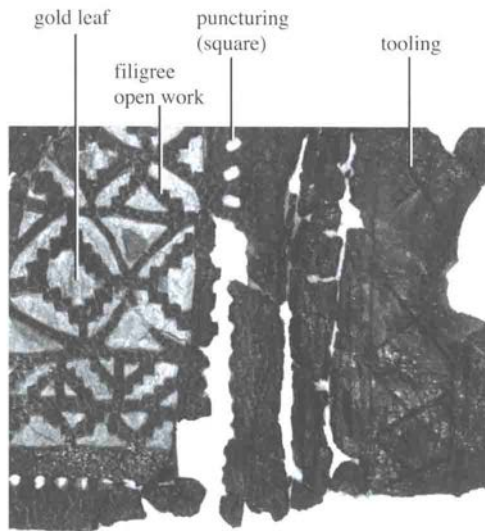


Fig. 4.140: Fragment of Manichaean cover with filigree work, early tenth -mid-11th century, Museum für Indische Kunst, Berlin, MIK III, 6268, 9 x 11cm. After Gulácsi, op.cit., 2005, Fig. 3/12a and 3/14a.

Filigree work appears on Mamluk bindings at the end of the 14th century when it is used for the decoration of covers and is placed on a textile backing.³¹³ The filigree work is usually restricted to the central profile and corner-pieces and its designs include floral and vegetal ornament. The technique then seems to fall out of fashion as no later examples are found until the late 15th century. It is

³¹² For Coptic examples see: Hobson, 'Some early bindings and binder's tools', *The Library*, IV, 19, 1939, pp. 210–11; The British Library, *The Christian Orient*, London, 1978, nos. 142, 147, 148; For the fragments from Turfan, see Von le Coq, op.cit., 1923, pp. 17, 40, Pl. IVe; Klimkeit, *Manichaean Art and Architecture*, Leiden, 1982, p. 50, fig. 56; Gulácsi, op.cit., 2005, pp. 85–8, Fig. 3/12–3/14.

³¹³ Sarre, op.cit., 1923, Pl. 9 published a binding in a private collection that has a cloud-collar profile with arabesque filigree decorating the field which he assigns to the fourteenth century, but given that the cloud-collar profile only occurs on bindings of the late 15th century this must be a later example of this period.

found on the covers of a series of Qur'an *juz'* with a *waqf* for the Sultan Khushqadam when a lobed almond profile and its corner-pieces decorated in filigree leather are placed on a textile backing.³¹⁴ (Fig.4.147) During this period other changes were, however, beginning to take place. First of all, the filigree decoration is placed on a pasteboard instead of a textile backing, providing a firmer base to fix it and allowing for polychromy to highlight different parts of the pattern. Filigree leatherwork is also now used for the doublures as well as the covers. Pasteboard, as a backing for filigree work, is found on doublures of Persian bindings from the beginning of the 15th century while the earliest example of filigree on a pasteboard ground on a Mamluk cover is found on binding with a manuscript copied for the Sultan Qaytbay in Rabi' II 889/April 1484 by Isma'il Qasim al-Hanafi.³¹⁵

Little is known about the methods involved in filigree production. Mustafa Ali, writing in 996/1587, mentions the technique and praises the skill of Persian binders in the art of *maqṭa'* but gives no information on how it was done.³¹⁶

Gottlieb suggested that it was achieved by stamping out the design with a metal stamp although no extant stamps have been found.³¹⁷ As the term used to describe filigree work is derived from the Arabic *qaṭa'*, 'to cut' it seems likely that stencils were used and then the leather was cut with scissors or knives. As the leather filigree is extremely fine on a number of bindings, it is hard to imagine how it could have been produced using scissors. A further suggestion

³¹⁴ DAK Rasid 104, 27 x 18cm.

³¹⁵ TSK A.2829, 32 x 21.5cm, Karatay, op.cit., 1966, no.6032.

³¹⁶ Mustafa Ali, *Menakib-i-Hünerverān*, Istanbul, 1926, p.74.

³¹⁷ Gottlieb, *Bucheinbände*: K.K.Hofbibhothek, Vienna, 1910, p.4.

may be that it was pounced and then a blade was used to cut the pattern out before it was placed over the pasteboard or textile. Conversations with modern-day Turkish binders trained in the traditional methods have revealed that they have no knowledge of the methods employed and for this reason they do not decorate contemporary bindings in the traditional filigree style.

In some of the literature on Islamic bookbinding, the invention of filigree has been attributed to Master Qiwan al-Din, a bookbinder at Sultan Baysunghur's court in Herat who had previously been in the service of Sultan Ahmad Jalayir who ruled intermittently in Baghdad and Tabriz between 783- 812/1382-1410.³¹⁸ This assumption arose from the translation of the word *munabbat*, meaning filigree work, in Dust Muhammad's (fl.938-72/1531-1564) preface to the Bahram Mirza album (TSK H.2154) dated 951/1544 where he traces the history of the development of the arts of the book.³¹⁹ We are told that Master Qiwan al-Din had been brought to the court of the Timurid prince, Baysunghur Mirza (d.836/1433) in Herat from Tabriz and ordered to produce a book with the same format, layout and scenes that appeared on Sultan Ahmad's Miscellany. Dust Muhammad adds that Master Qiwan al-Din invented the technique of *munabbatkārī*, always a very puzzling attribution given that it had been used to decorate bindings long before this period.³²⁰ A recent exploration of the meaning has, however, suggested that, in view of the existence of filigree before

³¹⁸ Binyon, Wilkinson and Gray, *Persian Miniature Painting*, Oxford, 1933, p.185; Aslanapa, op.cit., 1979, p.59; Bosch, Carswell and Petherbridge, op.cit., 1981, p.69; see fig. 6.34, 6.35 for bindings associated with Sultan Ahmad Jalayir.

³¹⁹ Thackston, *A Century of Princes: Sources on Timurid History and Art*, Cambridge, Mass, 1989, pp. 4-18; Thackston, *Album Prefaces and other documents on the history of Calligraphers*, Leiden, 2000, pp.4-18.

³²⁰ See fig. 4.140 for filigree work on a Manichaean binding.

this period and the meaning of *munabbat* as relief work and its associated meaning in metalwork, the term must refer to the technique of pressure-moulding, a technique discussed in the next section.³²¹

The earliest Mamluk example which uses filigree for the outer covers on a textile backing that has been published to date is a binding dated by a manuscript completed in Ramadan 736/ April 1336 and most probably produced in Damascus.³²² This manuscript is entitled *Manāzil al-aḥbāb wa-manāzih al-albāb*, copied by Hasan b. Yusuf b. Ibrahim al-Ansari, Sahib Diwan al-Insha' bi Sham.

The attribution of the date of the manuscript to the binding has to be treated with some caution. It is an example of rather poor workmanship, bearing little resemblance to other contemporary bindings. The front cover has been damaged but the back cover is intact. The cover is tooled all-over in the blind with spiraling palmettes. Gold is used sparingly for the simple s-stamped border, the outline of the central lobed almond profile and the corner-pieces. The filigree work of the central medallion lies on a ground of pale blue silk. The doublure is tooled in blind with a variety of small stamps and the corner-pieces are simple quarters with blind tooling rather than a repeat filigree corner-piece which is usually found on filigree bindings. The lobed almond profile with small pendants, as discussed previously, only appears on Mamluk bindings of the second half of the 15th century. Likewise, the outer border uses small s-shaped tools which also

³²¹Raby and Tanındı, op.cit., 1993, n. 60, p.13.

³²² TSK A.2471, 18.7 x 12.5cm, Karatay, op.cit., 1964, no. 2605; Tanındı, 1990, op.cit., p. 111, Pl. 22; Raby and Tanındı, op.cit., 1993, p.10 reservedly cite this binding as the earliest example of Mamluk filigree work.

commonly occur on bindings of the late 15th century.³²³ The central panel is, however, tooled with all-over palmettes in the blind, a design that can be compared to the ornament of the filigree covers of a later binding dated 20 Rabia I 793/ 25th February 1391 which is covered with all-over tooled floral ornament, whose outlines have been painted in gold. This binding will be discussed below.³²⁴ (Fig. 4.143)

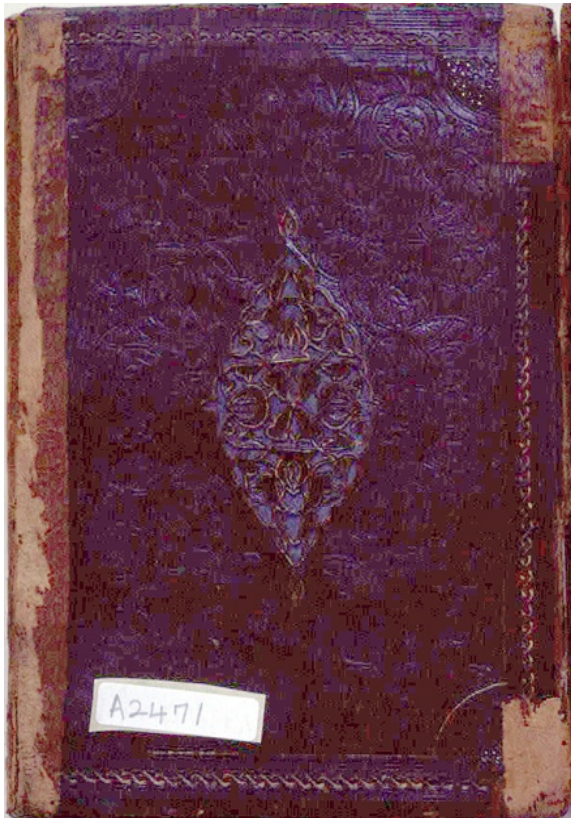


Fig. 4.141: Front cover with filigree leather of *Manāzil al-aḥbāb wa-manāzih al-albāb* dated to 736/1336, TSK A.2471, 18.5 x 13cm.

A comparison may also be drawn with the binding of a Qur'an that also has a lobed medallion cut in filigree on a blue silk background and a *waqf* inscription

³²³ See for example Appendix 2, no.41

³²⁴ TSK A.317, 26.5 x 17cm, Karatay, op.cit., 1964, no. 2744; Tanındı, 'Cilt Sanatında Kumaş', *Sanat Dunyamız*, No.32, 1985, p.28; Tanındı, 1990, op.cit., pp.113–14, Pl.33. See fig. 4.413; See Ch.5 pp.398-402 for discussion on the relationship between the technique and layout of these bindings with metalwork fittings for doors during the reign of Barquq.

for Sultan Qaytbay in the Bibliothèque Nationale de France.³²⁵ The cusped corner-pieces and pendants in filigree of this example are noted on other bindings of the period. (Fig. 4.142) Given the presence of the lobed profile, this binding dated 736/1336 should probably be reassigned to the mid-15th century.

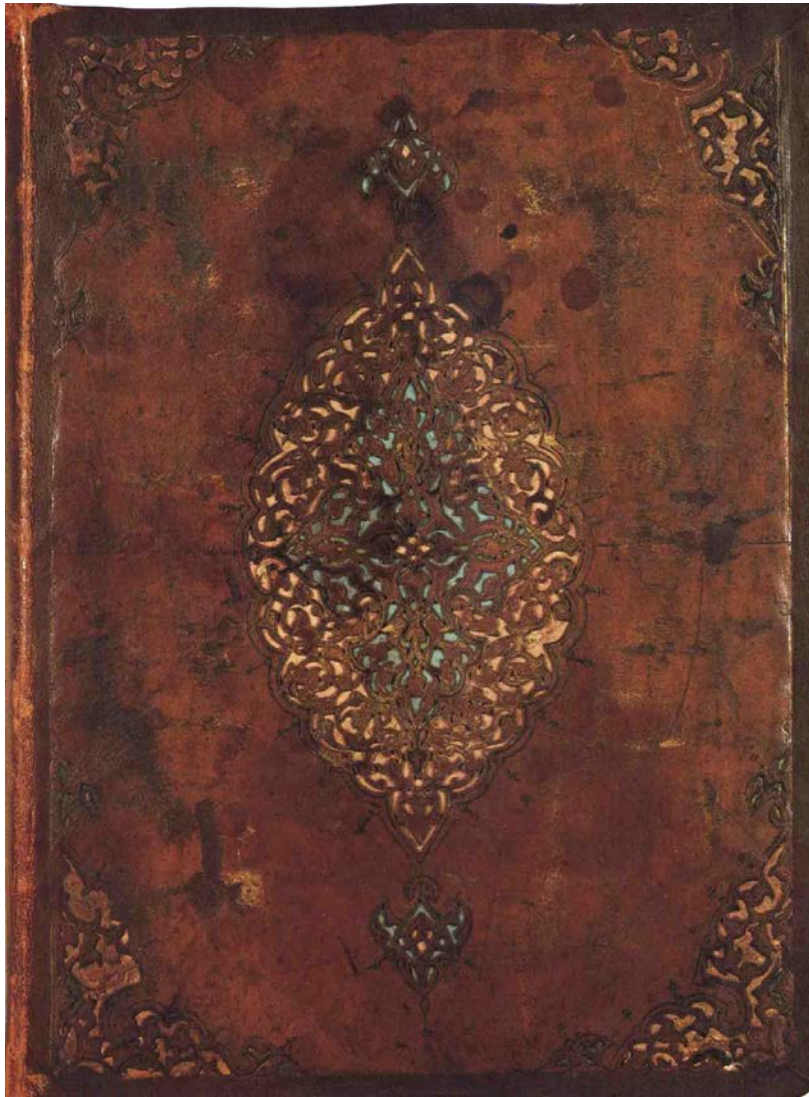


Fig. 4.142: Front cover of binding dated by *waqf* for Sultan Qaytbay, BNF, Smith-Lesouëf 220, 39.6 x 30.6cm. After BNF, op.cit., 1982, Cat.48

Filigree bindings in the Mamluk realm, which can be dated more securely, occur in some numbers towards the end of the 14th century. The earliest example,

³²⁵ BNF Smith-Lesouëf, 220, 39.6 x 30.6cm, BNF, op.cit., 1982, Cat.48.

which has already been mentioned, is dated by manuscript to 20 Rabi' I 793/25th February 1391; a copy of *al-Shifā' fī ta'rīf ḥuqūq al-Muṣṭafā* which was copied by Ahmad bin Muhammad al-Balisi al-Shafi'i.³²⁶ The front and back covers of the binding are different.

The central panel of the front cover is tooled with large floral forms including lotuses outlined in gold. A rosette profile with pendants has a centre of filigree leather cut into floral forms which lie on a background of green silk and are outlined in gold. (Fig. 4.143) The remaining field of the panel is tooled all over in large floral forms, lotus blossoms, rosettes and spiraling tendrils. The use of such abundant floral ornament on a binding of this period is very unusual and this is the only example of the period with such ornament. The corner-pieces, also in filigree, are quadrants of the central medallion with finials projecting into the central field. The outer borders of both the front and back covers are composed of a series of small tools creating a knot pattern which are found on other bindings from the period of Barquq.³²⁷ The inner borders are composed of s-shaped tools. The back cover repeats the same treatment for the central rosette and corner-pieces but the central field is tooled in the blind with small rectangular tools and punches in no particular pattern creating a textured effect.³²⁸ The doublures are of textured green silk and are also found on a loose cover with a similar design.³²⁹

³²⁶ TSK A.317, 26.5 x17cm, Karatay, op.cit., 1964, no.2744.

³²⁷ See Appendix 2, no. 16 and 17.

³²⁸ The same back cover is found on a loose binding of a similar type published by Sarre, op.cit., 1923, pp.13,14, Pls. VII and VIII.

³²⁹ Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.71 ,



Fig. 4.143: Front and back cover of *al-Shifā' fī ta'rīf ḥuqūq al-Muṣṭafā*, dated 793/1391 TSK A.317, 26.5 x 17cm.

There are three bindings which differ slightly from the example described above. One of these is a *juz'* of from a thirty-part Qur'an (one in the Bibliothèque Nationale de France and the other in the Chester Beatty Library) whose bindings are identical.³³⁰ (Figs 4.144 and 4.145) The binding of *Juz' 21* in the Bibliothèque Nationale has a *waqf* inscription to the Sultan Barquq.

³³⁰ *Juz' 21* of Qur'an, BNF, arabe 5845, 37.3 x 26.4cm; BNF, op.cit., 1987, Cat.17, p.45; BNF, op.cit., 2001, Cat.105. There are two other *juz'* from the same Qur'an: *Juz' 26*, BNF arabe 5844 and *Juz' 27*, BNF arabe 5846. However, the ornament of the bindings is different, see fig. 4.96 of this text for *Juz' 26* BNF arabe 5844 and for *Juz' 27* BNF arabe 5846, see fig. 4.55; *Juz' 10* of a thirty-part Qur'an, CBL 1474, 36.5 x 26.6cm; Arberry, op.cit., 1967, No.77; James, op.cit., 1980, Cat.104; World of Islam Festival Trust, op.cit., 1980, p.127.



Fig. 4.144: *Juz'* 10 of a thirty-part Qur'an dateable to the late 14th century, CBL, 1474, 36.5 x 26.6cm. Courtesy of the Chester Beatty Library.

Both these bindings must be the product of the same bindery since the use of arabesque ornament for the flap and the leafy decoration of the central roundel of the rosette are unprecedented in Mamluk binding decoration before this period. The densely tooled fields of both volumes are made up of small bars and tiny punches which were once gilded. The same tool is noted on the densely hatched background of the flap of the covers of the *juz'* for Aytmiş al-Bajasi. The outer borders are composed of knotwork squares built around tiny circular stamps with bar tools and the inner frame is decorated with s-shaped tool

creating a gullioche pattern with interstitial gold dots.³³¹ The flap of the Chester Beatty is an example of filigree arabesque scroll work and can be compared to the tooled flaps of another series of *juz'* with a *waqf* for Sultan Barquq.³³²

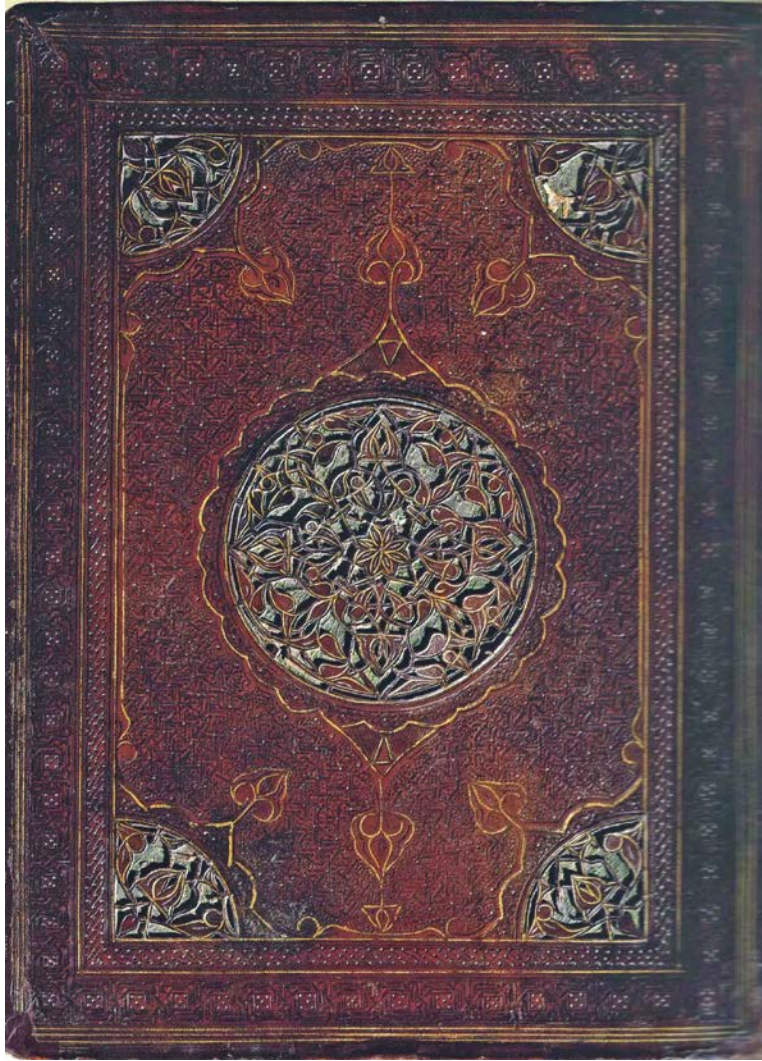


Fig. 4.145: *Juz'* 21 of a Qur'an with a *waqf* for Barquq, 37.3 x 26.4cm, BNF, arabe 5845. After BNF, op.cit., 1987, Cat.17. After BNF, op.cit., 2001, Cat.105.

³³¹ CBL 1495, see fig. 4.94; see Appendix 2, no. 11.

³³² DAK Rasid, 120, fig. 4.54

The cover of a loose binding in Berlin published by Sarre also has the same decoration.³³³ Another loose binding in the Oriental Institute Chicago employs the same tools and a similar design for the cover but the corner-pieces do not have projections into the central field.³³⁴ After this brief appearance there are no further examples of filigree leather until the 1460s when it appears on a series of *juz'* of a Qur'an for Sultan Khushqadam. (Fig. 4.147)



Fig. 4.146: Front cover of loose binding dateable to the end of the 14th century, 37.1 x 27.1cm, Oriental Institute, Chicago, A.12159. After Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.70.

A series of *juz'* of a thirty-part Qur'an with a *waqf* for Sultan Khushqadam is decorated with a central lobed almond profile with filigree leather decoration for its centre and the corner-pieces. The filigree decoration of the central profile lies

³³³ Museum of Islamic Art, Berlin, Inv. 832, 35.6 x 15cm, Sarre, op.cit., 1923, Pl. 6.

³³⁴ Oriental Institute, Chicago, A.12159, 37.1 x 27.1cm; Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.70.

on a background of blue silk providing a contrast with the green silk background of the corner-pieces. The filigree decoration extends from a central diaper with two lotus flowers on the vertical axis and two palmettes on the horizontal. The borders of the central panel are composed of a knot meander pattern and the inner border consists of gold s-stamps.³³⁵ The flap has half a cloud-collar profile and its corner-pieces repeat the design of those found on the cover.



Fig. 4.147: Back cover of *Juz' 4* of a Qur'an dated to the reign of Sultan Khushqadam, DAK Rasid 104, 27 x 18cm.

A binding of the *Kawākib al-Durriyya* with a dedication to Sultan Qaytbay also uses a green textile backing for the filigree work in the central roundel.³³⁶ (Fig. 4.148) It contains a *waqf* dated 17 Jumada II 881/6th October 1476 endowing it

³³⁵ See Appendix 2, no. 26, 41.

³³⁶ Staatsbibliothek Berlin, Ms.or.fol.1623 (Marburg), 42.5 x 31.2cm; Weisweiler, op.cit., 1962, no.6, Pl.51; See, fig. 5.41 for detail of the dedication of the manuscript.

to the Sultan's funerary complex. Sadly, the filigree has been damaged but the superb work on the flap communicates the high level of workmanship that it once exhibited. (Fig. 4.149) The lobed almond profile on the flap is decorated with intertwining small palmettes stemming from a central bud which are outlined in gold paint.



Fig. 4.148: Back cover of *Kawāḥib al-Durriyya* with *waqf* dated 881/1476, 42.5 x 31.2cm, Staatsbibliothek Berlin, Ms. or. fol.1623 (Marburg). Image Staatsbibliothek Berlin.



Fig. 4.149: Detail of flap *Kawākib al-Durriyya*, 42.5 x 31.2cm, Staatsbibliothek, Berlin, Ms.or. fol.1623 (Marburg). Image Staatsbibliothek Berlin

However, it is during the reign of Qaytbay that filigree work on a pasteboard in which different colours are used to distinguish parts of the backing pattern makes its appearance. It occurs, for example, on the binding of *Al-Durra al- al-muḍiyya wa-'l-'arūs al marḍiyya* was copied for the Sultan Qaytbay in Rabi' II 889/ April 1484 by Isma'īl Qasim al-Hanafi.³³⁷ The binding of red leather has an outer border tooled in the blind in a knot meander with a border of s-tools on either side, outlined in blue. The central field is decorated with a lobed almond profile whose centre is divided into small cartouches. Each segment forms a four-lobed profile outlined in gold with red filigree leather arabesques on alternating blue and silver pasteboard backgrounds. The lobed corner-pieces are also segmented and have the same pattern of filigree work. The flap has a cartouche and two lobed corner-pieces which echo the design of the cover. The tan doublures have small oval medallions with two pendants and an outer chain border in silver which have been pressure-moulded.³³⁸

³³⁷ TSK A 2829, 32 x 21.5cm, Karatay, op.cit, 1966, no.6032; see fig. 5.55 for the illumination and fig. 5.62 for discussion of the ornament.

³³⁸ See fig. 4.195 for the doublures.

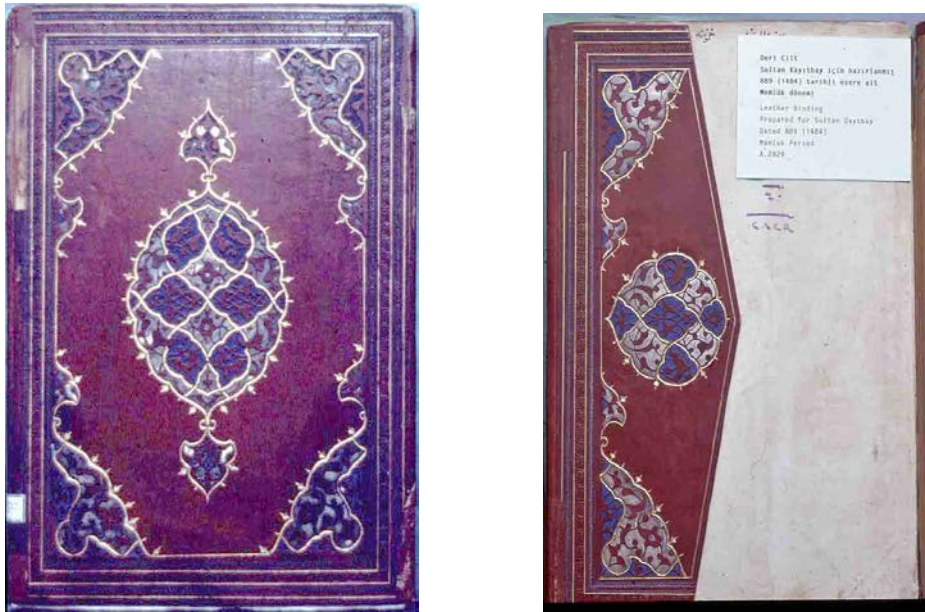


Fig. 4.150: Back cover and flap of *Al-Durra al-muḍiyya wa-l-'arūs al marḍiyya* dated 889/1484, TSK A.2829, 32 x 21.5cm.

A further binding which also uses filigree work on pasteboard for its covers is of a copy of the *Kitāb al-Furūsiyya* which was completed in 778/1376–7 by Muhammad Sawukh al-Faqiyya.³³⁹ (Fig. 4.151) This is, however, a rebinding as the volume contains a finely illuminated roundel dedicating the volume to the library of the Sultan Abu Sa'id Qansuh who ruled briefly between 904–5/1498–1500 and was the brother of Asal Bay, a concubine of Sultan Qaytbay and the mother of Sultan Muhammad, Qaytbay's heir.³⁴⁰

The covers in dark brown leather have segmented borders of densely tooled knotwork in gold with blue squares at the centre of each unit.³⁴¹ The central

³³⁹ TSK A.2129, 30 x 24cm, Karatay, op.cit., 1966 ,no7408 ; Tanındı, op.cit., 1990, p.113, Pl.32.

³⁴⁰ See fig. for the large-volume Qur'an TIEM 508, which has been attributed to him when he was known as Qansuh Khamsmiyya, see fig. 4.120

³⁴¹ See Appendix 2, no.46.

lobed profile contains arabesques in filigree leather stemming from a central quatrelobed split palmette motif whose background is coloured green, distinguishing it from the blue of the rest of the field. The quatrelobe split palmette motif contains two bud-like elements on a golden ground on the horizontal axis. The finials of a further four-lobed form created by the palmettes are also marked by a golden ground. The corner-pieces, all identical, have gilded floral sprays on a blue ground, indicating the use of stencils. The use of distinct floral forms in filigree leather is not noted on any other bindings of the period and a comparison can be drawn with the doublures of a Turcoman manuscript copied for Prince Yusuf Bahadur Khan 874-884/c.1470–80 which have the same delicate floral ornament which will be discussed in Chapter 6.³⁴²



Fig. 4.151: Front cover and flap of *Kitāb al-Furūsiyya*, TSK A. 2129, 30 x 24cm dated to 904/1500.

³⁴² See fig. 6.46 for the filigree doublures and 6.44 for another manuscript and binding made for him with a *waqf* for Sultan Qaytbay.

The lack of filigree bindings that could be assigned to the reign of Qansuh al-Ghuri provoked some thought during the course of this study as he was a renowned bibliophile known for his appreciation of literature.³⁴³ It was difficult to explain this dearth of fine bindings from his reign and the only plausible explanation was that they were removed and taken to the Aleppo citadel with other precious objects from his treasury for safe-keeping before the decisive defeat by the Ottomans at the battle of Marj Dabiq in 921/1516. A recent discovery in the Dar al-Kutub does, however, confirm that filigree work was produced during his reign.³⁴⁴ (Fig.4.142) The binding of a large volume Qur'an completed by Ahmed bin Ali al-Fayyumi is dated Ramadan 908/February 1503.³⁴⁵ Both front and back covers are the same, although the back cover has suffered some damage and the flap is missing. The frontispiece contains a dedication to the library of Qansuh al-Ghuri.³⁴⁶ The outer cover is decorated with a quatrefoil stamp which has not been noted on any previous binding.³⁴⁷ The centre is decorated with a large lobed profile containing arabesque ornament on a blue ground. Four large fleur-de-lis are arranged around a central diaper; the design resembles that of the cover of the binding made for Khushqadam and the filigree doublures of the binding dated for Qaytbay,

³⁴³Flemming, *op.cit.*, 1977; Behrens-Abouseif, *op.cit.*, 2002.

³⁴⁴ DAK Rasid 73, 62 x 41cm.

³⁴⁵ See fig. 1.3 for the colophon and p. 9 for other manuscripts by this scribe.

³⁴⁶ See fig. 5.11 for the frontispiece.

³⁴⁷ See Appendix 2, no.53.

showing the continued use of patterns over long periods of time.³⁴⁸ The corner-pieces have small trefoil indentations, rather than the usual quarter cloud-collar, which are also noted on a Turcoman binding with a *waqf* for Qaytbay suggesting Turcoman influences.³⁴⁹ (Fig. 4.154) No other Mamluk examples have been found with this type of corner-piece.

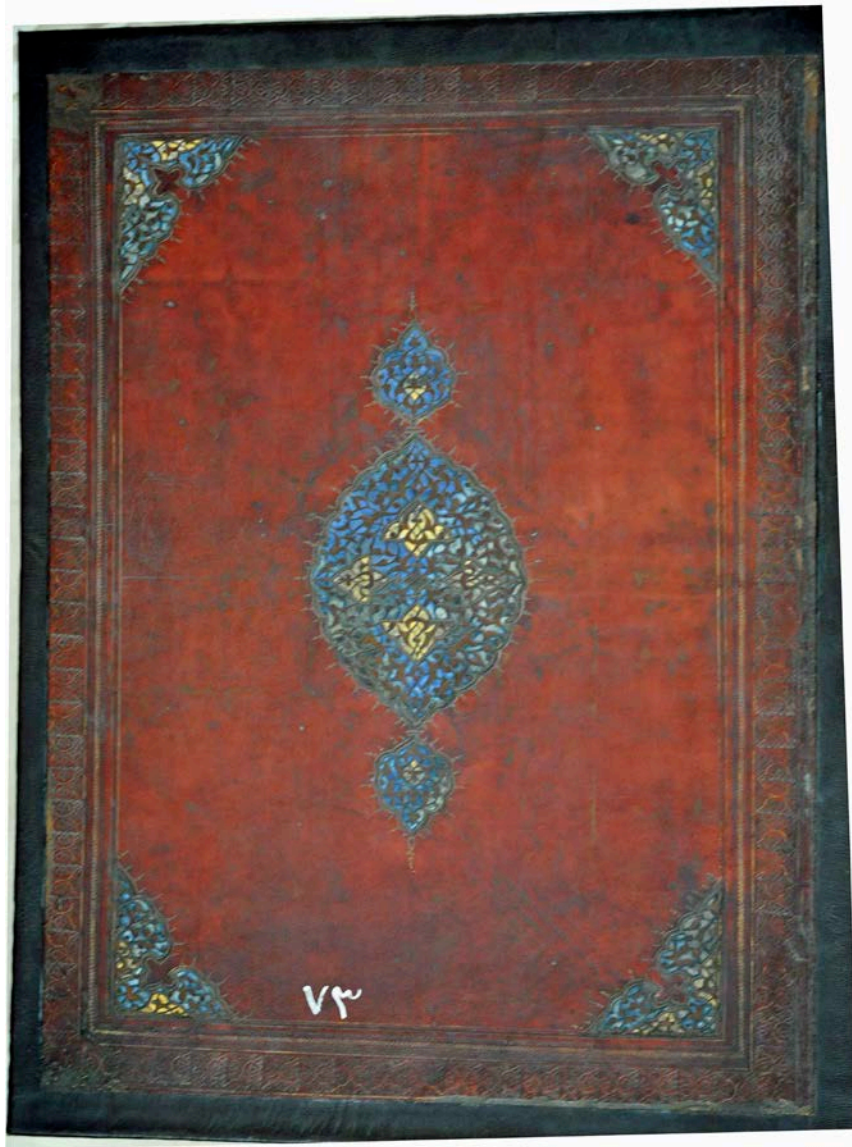


Fig. 4.152: Front cover of Qur'an dated 908/1503 for Sultan Qansuh al-Ghuri, DAK Rasid 73, 62 x 41cm.

³⁴⁸ See fig. 4.111 for the binding for Khushqadam and fig. 4.192 for the binding for Qaytbay.

³⁴⁹ See fig. 6.44



Fig. 4.153: Detail of cover of Qur'an dated 908/1503, DAK Rasid 73.



Fig. 4.154: Detail of corner-piece of Qur'an dated 908/1503, DAK Rasid 73.

The tradition of using filigree for the outer covers is a particular feature of Mamluk bindings in spite of its susceptibility to damage. This was a technique

reserved for especially fine bindings; the examples cited above constituted particular commissions for the sultan's library. The filigree bindings of the late 14th century form a defined group and no further examples are found until the reign of Qaytbay when the method appears to have been revived with bindings decorated in filigree on a textile backing. With this revival, the doublures are also decorated in filigree, as new styles of ornament derived from the Persian binders' repertoire were adopted. These changes will be discussed more fully in Chapter 6.

Pressure-Moulded Bindings

The technique of pressure moulding appears on Mamluk bindings of the late 15th century but, from the scarcity of examples that remain, it does not appear to have been used extensively. The technique developed in Iran and is found on bindings from the early 15th century. According to Dust Muhammad, the invention is attributable to Master Qiwam al-Din, a bookbinder at the court of Sultan Ahmad Jalayir.³⁵⁰

The technique involved the pressing of the leather with large stamps so that the pattern stood in relief. Al-Sufyani, writing in the 16th century, gives a description of the method.³⁵¹ The board for the cover was cut in the centre creating a depression to fit the stamp or what he terms the *turunja*.³⁵² (Fig. 4.155)

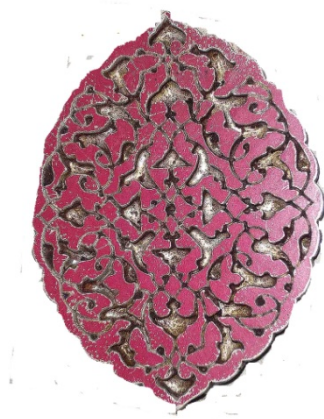


Fig. 4.155: Modern stamp used by Turkish binders.

³⁵⁰ See Raby and Tanındı, op.cit., 1993, p. 13 for discussion of the term and its translation; Thackston, op.cit., 1989, pp.4-18.

³⁵¹ Al-Sufyani, op.cit., trans. Levey, op.cit., 1962, p.53.

³⁵² Al-Sufyani, op.cit., ed. Ricard, op.cit., Paris edn, 1925, p.14; The word in Arabic refers to a large lemon-like fruit, *citrus medica* which has a lumpy, oval appearance resembling the lobed almond profile.

It was then covered in glue and the leather laid over it. The stamp was, then, placed on the board and hammered gently, the surplus paste being wiped away. The matrix was then removed and the impression in the leather remained 'as clearly as if it had been made in wax'.³⁵³ (Fig. 4.156) In addition to single matrices for the central element, corner-pieces and metal plates were also used, allowing for the whole central panel to be decorated in a single strike.



Fig. 4.156: Modern pressure moulded designs on gilded leather.

The Chester Beatty Library has one example of a Qur'an completed on 21st Ramadan 896/ 28th July 1491 by Ahmad ibn Bakht Khuja al-Shafi'i al-Tarabulsi which bears a *waqf* in the name of Inal Bay, the governor of Tripoli dated

³⁵³ Al-Sufyani, trans. in Levey, op.cit., 1962, p.53.

Ramadan 903/April 1498.³⁵⁴ James described the illumination of this Qur'an as an interesting example of provincial Mamluk style and thinks it was most probably copied in Tripoli.³⁵⁵ The binding does, however, represent an important example of the technique of pressure-moulding. (Fig. 4.157) The outer segmented border is decorated with a knot meander tool in a very similar manner to that found on the large-volume Qur'an copied for Qansuh Khamsmiyya (TIEM 508).³⁵⁶ The central panel has a lobed almond profile which is filled with intertwining palmettes that stand in relief on a gilded ground. (Fig. 4.157) The flap has become separated from the binding but retains its original gilding, giving some idea of its former glory. This has tooled decoration of intertwining buds and palmettes, some of which has been gilded which can again be compared to the binding of Qansuh Khamsmiyya.³⁵⁷ The cartouche of the flap can also be compared to that on the flap of the same binding. (Fig. 4.159).

³⁵⁴ CBL Ms.1486, 47.5 x 33.6cm; Arberry, *op.cit.*, 1967, no.105; the fore-edge flap was published in Bosch, Carswell and Petherbridge, *op.cit.*, 1981, Cat.82.

³⁵⁵ James, *op.cit.*, 1980, Cat.41. James notes that the calligrapher later moved to Istanbul where in 909-10/1504-5 he copied another Qur'an in the Topkapı Palace Library.

³⁵⁶ See Appendix 2 no. 26, 47.

³⁵⁷ TIEM 508, see fig. 4.151 for the border.



Fig. 4.157: Front cover of Qur'an dated 903/1491, 47.5 x 33.6cm, CBL 1486.
Image courtesy of the Chester Beatty Library



Fig. 4.158: Detail of the front cover of CBL, 1486 showing traces of gilding.



Fig. 4.159: Flap and detail of CBL, 1486.

The binding of a *Takhmīs* of the *Burda* which was copied for Sultan Muhammad the son of the Sultan Qaytbay in Rabi' I 903/October 1497 is very unusual and no other examples in this style were found.³⁵⁸ (Fig. 4.160) The outer border is composed of intertwining tendrils followed by another border of a floral meander. These borders are separated from one another by a blue paint laid over the gilding which is now visible as the paint has worn away. The central panel contains a large lobed almond profile with pendants and cusped corner-pieces, also delineated by blue paint. (Fig.4.161) Two impressions of the same plate have been used to produce the panel as indicated by the line across the centre. The use of all-over gilding for covers appears on later Safavid and

³⁵⁸ TSK A.2303, 30 x 42.5cm, Karatay, op.cit., 1969, no.8549.

Ottoman pressure-moulded covers in some numbers and at first glance this binding does not fit within the Mamluk binders' repertoire as it is such a singular example. However, the use of blue paint to delineate the borders and the outlines of the central almond and corner-pieces which is used on Mamluk bindings of this period does not occur to my knowledge on any bindings of this type produced during the Ottoman or Safavid periods. The ornament with its spiralling tendrils which occupies the central field and the small floral meanders of the borders can be compared to Turcoman styles from Shiraz derived from the Timurid repertoire.³⁵⁹ The doublure is of cherry red leather with a small lobed profile with filigree work on a blue background.³⁶⁰

³⁵⁹ See fig. 6.41.

³⁶⁰ See fig. 4.194



Fig. 4.160: Pressure-moulded front cover of a *Takhmīs* of the *Burda* dated 903/1497, TSK A.2303, 42.5 x 30cm.



Fig. 4.161: Detail of front cover and flap of TSK A.2303

There was also one example of a binding which is not as impressive as the previous examples but it employs the technique of pressure-moulding with gilding. The manuscript *Ad^ciya al-Ayyām al-Sab'a* was copied for the library of the Sultan Qansuh al-Ghuri without a date of completion by the *mamluk* Moghulbay min Qarduq from the *tabaqat* Raf Raf.³⁶¹ The binding has an outer border of a floral meander in small cartouches which is stamped in the blind, very similar in style to those of the binding described above.³⁶² Only two other Mamluk bindings employ these cartouche shaped tools which are used on Turcoman bindings³⁶³ The central panel has a small medallion whose centre is made up of pressure moulded tendrils which have been gilded, along with two oval shapes

³⁶¹ TSK B.80, 17.7 x 13.3cm, Karatay, op.cit.,1966, no. 5610.

³⁶² See Appendix 2, no. 49.

³⁶³ See Appendix 2, for example no. 48 and 50 and compare with no.54, a Turcoman example.

which have been left plain. The pendants are painted in gold. The corner-pieces are cut at right angles to the central panel and contain a small knot.



Fig. 4.162: Front cover of *Ad'iya al-Ayyām al-Sab'a* dateable to the beginning of the 16th century, TSK B.80, 17.7 x 13.3cm.

Extant examples of the technique of pressure-moulding are very few. The technique does not seem to have been included in the Mamluk binders' repertoire to any great extent, in stark contrast to Turcoman and Ottoman bindings where the technique dominated binding decoration of the 15th and 16th century. The technique was, however, practised as evidenced by the examples

discussed above and it was also used for the borders of medallions used on doublures.³⁶⁴ The technique of tooling the designs remained an important part of the Mamluk binder's repertoire as evidenced by the complex geometrical designs found on bindings of the period and the tooled covers with lobed profiles with patterns which echo those found on these pressure-moulded examples above. Thus, it may be assumed that it was these tooled bindings that were preferred by the binders and their patrons.

³⁶⁴ See fig. 4.196.

Doublures

Binding doublures from the Mamluk period exhibit great variety: several materials and techniques were used in their production. The most common material used was block-pressed leather, which is found decorating Mamluk bindings throughout the period. Textile doublures are also used but, as they are very susceptible to damage, only a few have survived the ravages of time. Leather doublures were also tooled and pressure-moulded but the most remarkable examples found on fine bindings of the late 15th century are those made of filigree leather. The following discussion on Mamluk doublures has been organised according to material and technique.

Textile Doublures

Textile doublures are used on a number of bindings and are usually of plain pale blue, green or pink silk. Patterned or textured silk doublures are rare but an early example of a green silk doublure with a pattern of ogival forms and floral stems surrounded by an inscription which reads '*al-malik al-sulṭān*' is found on the binding of a manuscript which includes a dedicatory roundel to the library of Sultan Sha'ban.³⁶⁵ A later inscription with the date 2 Jumada II 906/23rd December 1500 is written in ink on the doublure and records the title of the manuscript. (Fig. 4.163)

³⁶⁵ TSK A.804, see fig. 4.47; Tanındı, op.,cit., 1990, p.113 records another example of this textile in the Museum of Islamic Art, Cairo but does not give an inventory number.



Fig. 4.163: Silk patterned doublure dated to the reign of Sultan Sha'ban, TSK A.804, 31.5 x 21.5cm. After Tanındı, op.cit., 1990, Pl.31.

Mackie notes that Mamluk society was saturated with textiles, numerous fragments of which include Arabic inscriptions.³⁶⁶ She makes the point that textiles with inscriptions were considered prestigious, suggesting that the wearer was close to the Sultan; this silk doublure was therefore fittingly placed on the binding of a manuscript destined for the Sultan's library.³⁶⁷ Some silk

³⁶⁶ Mackie, 'Towards an Understanding of Mamluk Silks: National and International Considerations', *Muqarnas*, Vol. II, 1984, p.130.

³⁶⁷ *Ibid.*, p.131.

textiles were produced in Egypt and Syria but others were made for the Mamluk market in China and either traded or sent as diplomatic gifts.³⁶⁸ Mackie notes that silks with ogival patterns were very common and illustrates two examples: one of a Chinese silk damask with a pattern adapted for the Mamluk market and the other produced in Egypt but influenced by these imported styles.³⁶⁹ (Fig. 4.164)

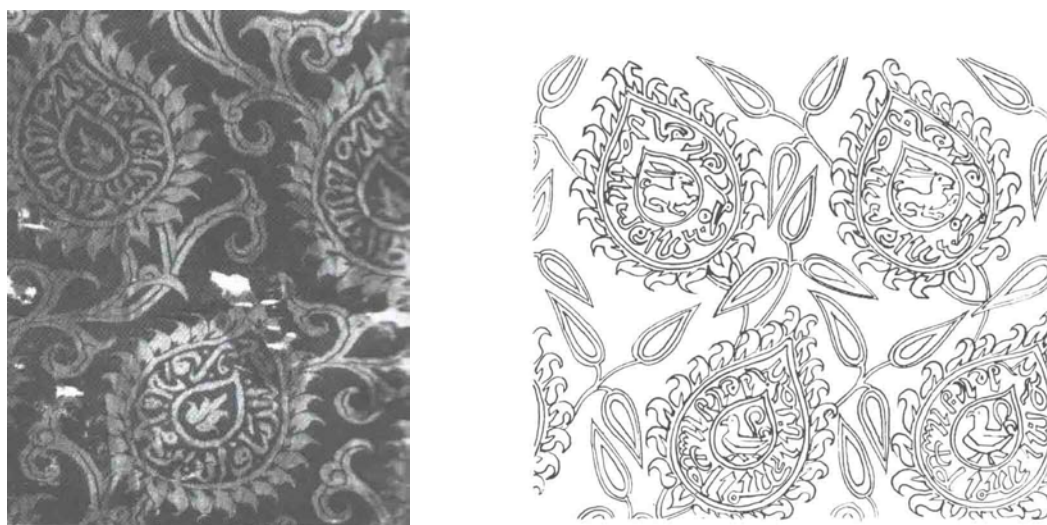


Fig. 4.164: *left* Chinese silk damask with undulating vertical stem pattern with titles of Sultan al-Nasir Muhammad, V&A, no.769. 1898. After Mackie, op.cit., 1984, Pl.21. *right* Drawing of red silk damask with undulating vertical stem pattern influenced by Chinese silks adapted for the Mamluk market. Islamic Museum, Berlin, no. I 3214. After Mackie, op.cit., 1984, Fig. 3.

³⁶⁸ A gift of 700 textiles were dispatched to Sultan Nasir al-Din Muhammad in 722/1323 as part of a gift woven with his titles by the last Ilkhan Abu Sa'id, Mackie, op.cit., p.132; Von Folsach and Bernsted, *Woven Treasures: Textiles from the World of Islam*, Copenhagen, 1993, p.30; see, Little, 'Diplomatic Missions and Gift Exchanges by Mamluks and Ilkhans' in Komaroff, ed. *Beyond the Legacy of Genghis Khan*, Leiden, 2006, pp.30–42.

³⁶⁹ Mackie, op.cit., p.140.

As Mackie notes, the difference between the two patterns is that design of the Mamluk example appears to use more rigid forms in interpreting the stem pattern in comparison with the undulating Chinese forms.³⁷⁰

A second pattern of large lobed cloud-like forms indicating Chinese influences was found on the doublures of a binding which contains a *waqf* in the name of Uljay al-Yusufi and can therefore be dated to the end of the 14th century.³⁷¹ (Fig. 4.166)

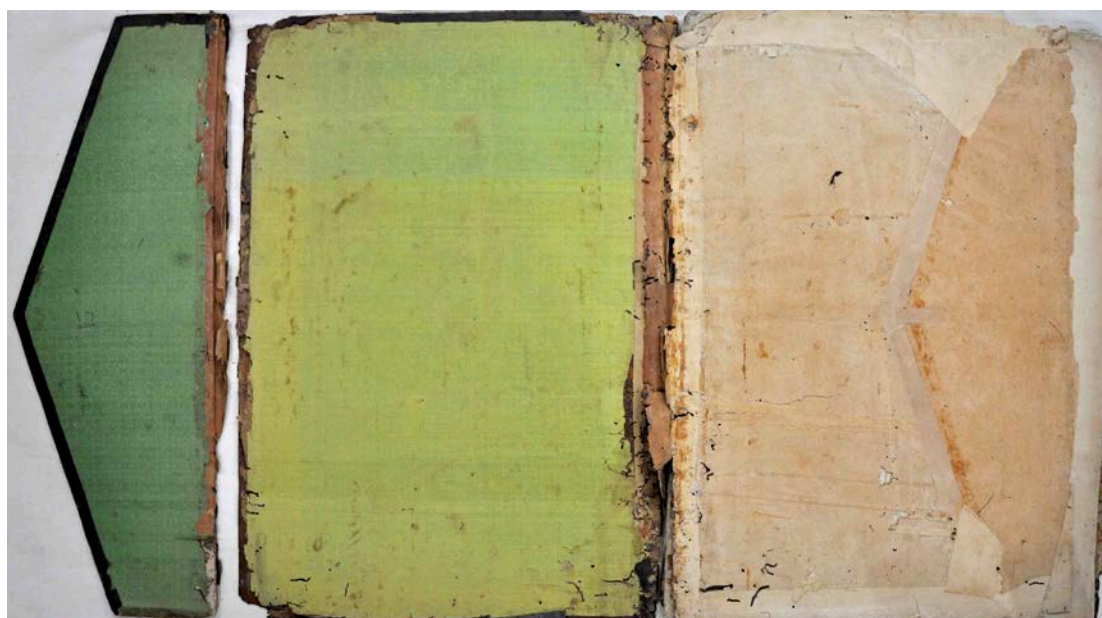


Fig 4.165: Doublures of green silk of back cover and flap dateable to the end of the 14th century DAK Rasid 62, 26 x 18cm.

³⁷⁰ Ibid., p.132.

³⁷¹ DAK Rasid 62, see fig. 4.48.



Fig. 4.166: Detail of silk doublure dateable to the end of the 14th century of DAK Rasid 62.

A further example of a patterned silk is found on the flap of the same binding where the geometrical pattern is arranged symmetrically highlighted by the darker green of the weave. (Fig. 4.167)

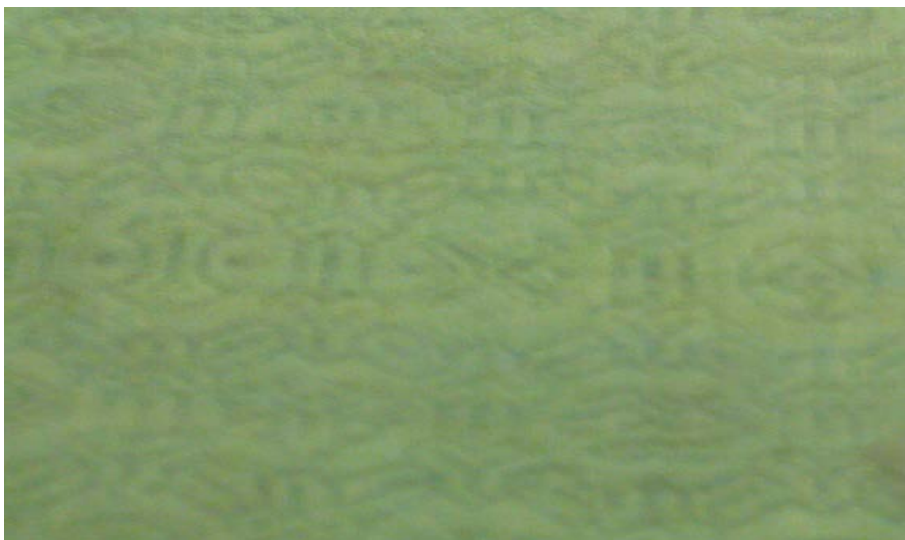


Fig. 4.167: Detail of silk doublure of the flap of DAK Rasid 62.

Further examples of textile doublures were found on the covers of a Qur'an with a *waqf* for Sultan Barquq.³⁷² The pattern is composed of a trellis design and is also found on a loose binding in the collection of the Oriental Institute, Chicago Chicago.³⁷³

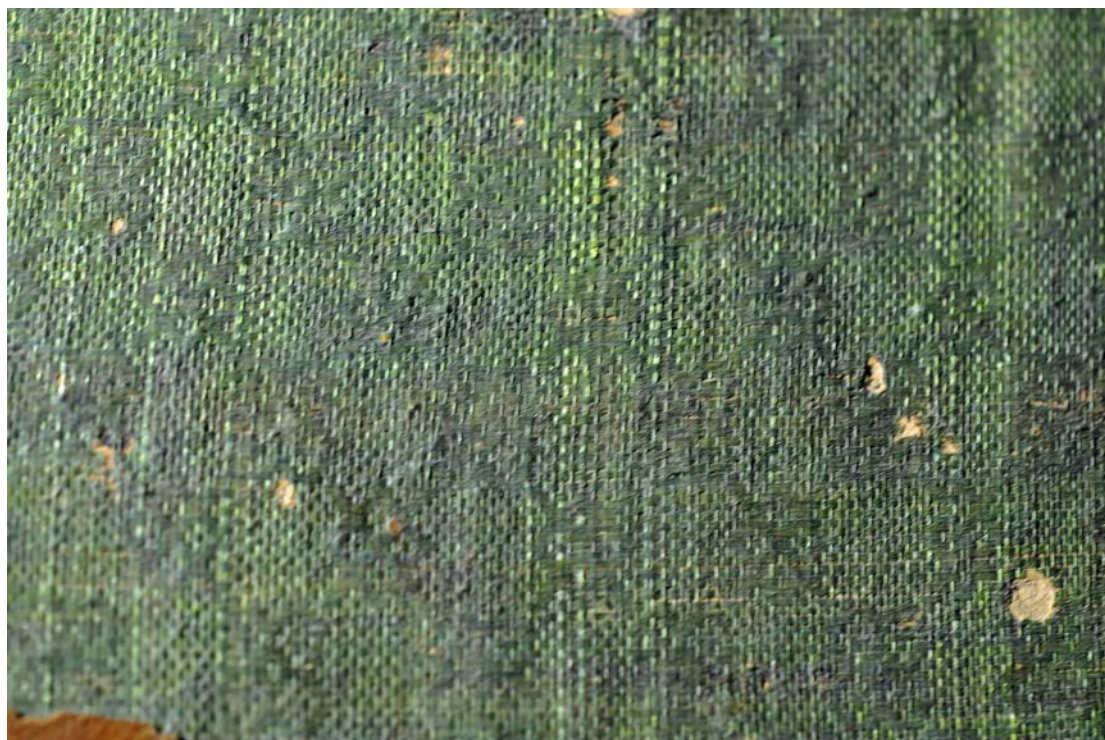


Fig. 4.168: Detail of green silk doublure dateable to the reign of Sultan Barquq, Juz' 3, DAK Rasid 123.

³⁷² DAK Rasid 123, see fig. 4.100. The bindings of this Qur'an also have block-pressed leather doublures, see fig. 4.173.

³⁷³ Bosch, Carswell, Petherbridge, op.cit., 1981, Cat.71. and is also found on TSK A. 317, fig. 4.143.

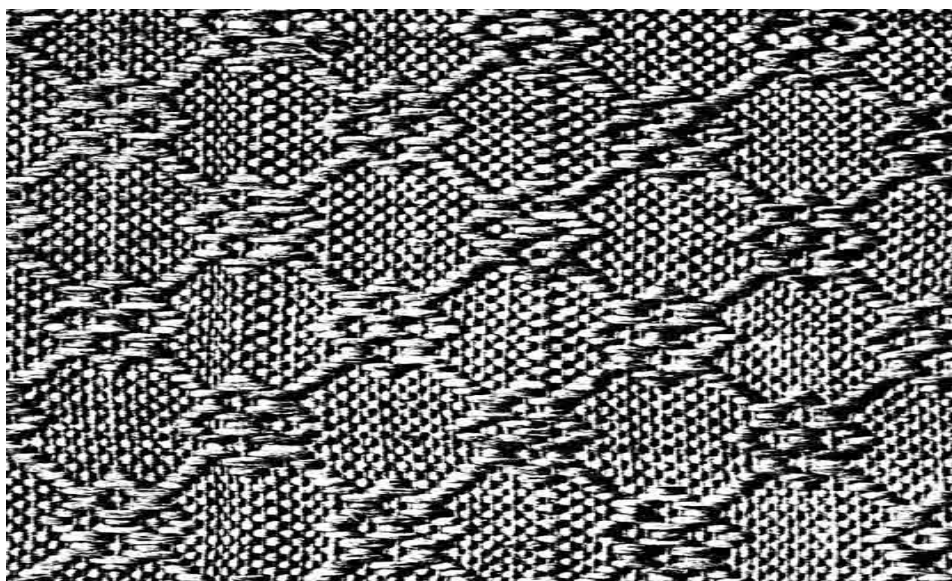


Fig. 4.169: Detail of green silk doublure of loose filigree binding dateable to the late 14th century, Oriental Institute, Chicago, A.12159. After, Bosch, Carswell, Petherbridge, op.cit., 1981, Cat. 71.

The use of patterned textiles for doublures appears from the evidence at hand to have declined during the 15th century although plain silk in green and blue was found on several examples.³⁷⁴ A similar pattern based on a trellis grid incorporating geometric shapes was noted on the silk textile doublure of a loose flap which was found with *Juz' 28* of the Qur'an with a *waqf* for Khwand Baraka, the mother of Sultan Sha'ban.³⁷⁵ The flap was tooled with an almond profile and, as such, probably represents a later repair during the second half of the 15th century. Whether the flap was placed over the pasteboard with the old doublure or a new doublure provided cannot be firmly established. (Fig. 4.170)

³⁷⁴ See, for example, DAK Rasid 123, fig. 4.97.

³⁷⁵ DAK Rasid 80, see fig.4.65.



Fig. 4.170: Detail of green silk doublure of a flap probably added as a later repair to *Juz' 28* of a Qur'an, DAK Rasid 80.

Block-pressed leather

The use of block pressed leather doublures for bindings can be traced from the late 13th century until the end of the Mamluk period. Many of the patterns are composed of crowded patterns of leaves, scrolling arabesques or palmettes, lotuses and flowers while others are based on trellises or geometrical interlace.³⁷⁶ Just two examples that include the name 'Mahmud' have been found; it appears within a pattern of geometrical interlace on the doublures of two Qur'an *juz'* in the Chester Beatty Library.³⁷⁷ (Fig. 4.171-2)

³⁷⁶ See fig. 5.67 and 6.58 for comparison of these patterns with textiles.

³⁷⁷ CBL 1465, 26.3 x 11cm; Arberry, op.cit., 1967, no.76; Van Regemorter, op.cit., 1961, Pl.15; James, op.cit., 1980, Cat.33; Bosch, Carswell, Petherbridge, op.cit., 1981, Pl. 52. This binding was not included in this study as it contains no bibliographical information.

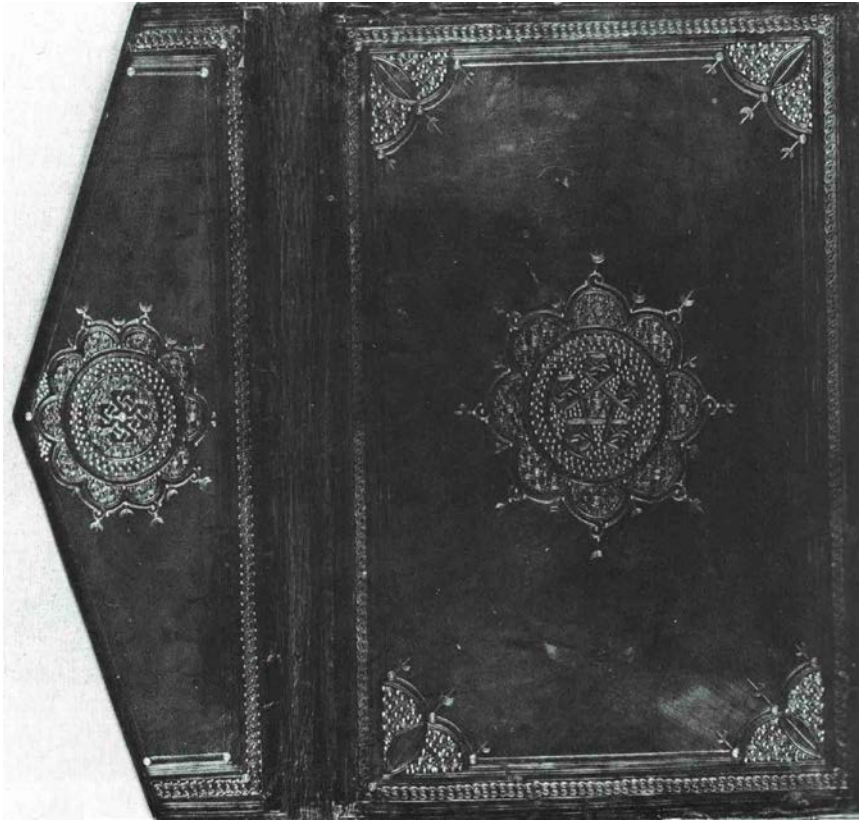


Fig. 4.171: Front cover of *Juz' 11* of a Qur'an dateable to the middle of the 14th century. CBL 1465, 26.3 x 11 cm. After James, op.cit., 1980, Cat. 32.

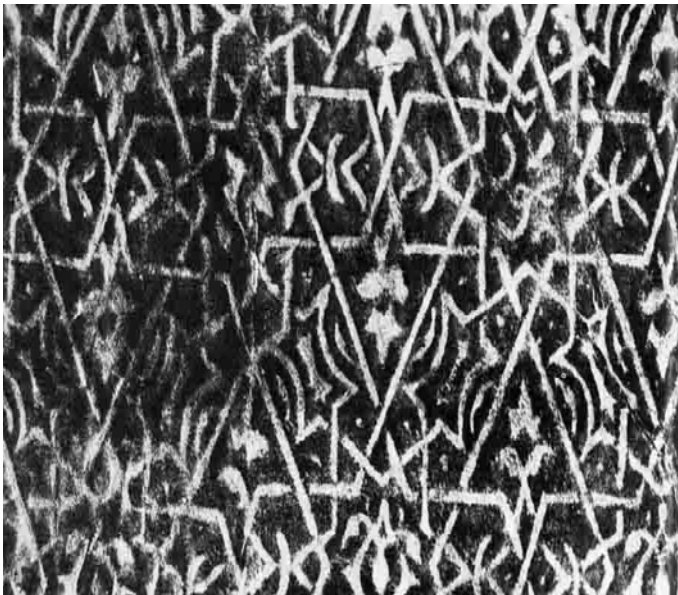


Fig. 4.172: Detail of a doublure with the name 'Mahmud', CBL 1465. After Bosch, Carswell, Petherbridge, op.cit., 1981, Pl. 52.

When manufacturing a block-pressed doublure, the leather was probably dampened first and then the printing block was painted with a tanning stain to darken the leather pressed against it. Many of the blocks for the doublures must have been carved in intaglio although several examples indicate that blocks were also carved in relief since the pattern appears in a darker leather than that of the background.

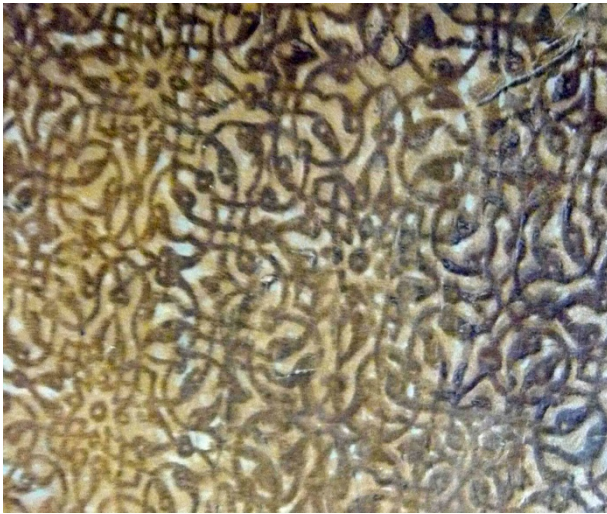


Fig. 4.173: Detail of block-printed doublure stamped in relief dateable to the reign of Barquq, *Juz'* 28, DAK Rasid 123.³⁷⁸

³⁷⁸ See fig. 4.100 for DAK Rasid 123

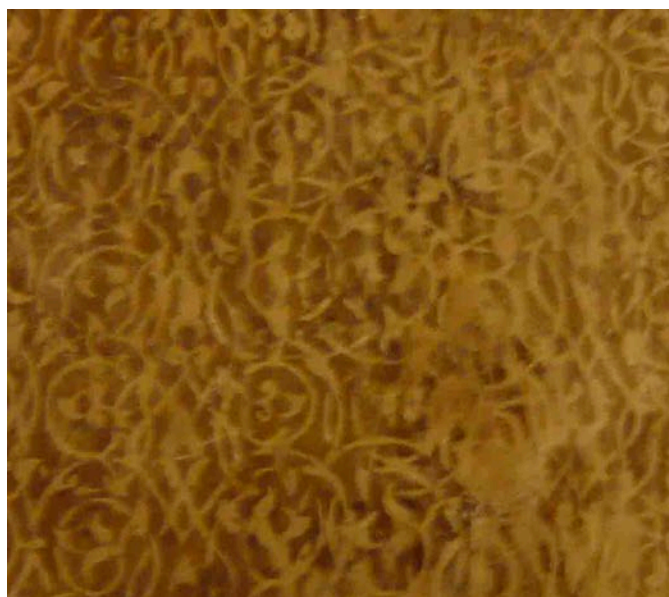


Fig. 4.174: Detail of block-printed leather doublure with the pattern stamped in intaglio dated to the reign of Sultan Hasan. DAK Rasid 59.³⁷⁹

The origins of block-pressed leather doublures and their means of production have been the subjects of much discussion. Bosch thought it probable that the Egyptian/Syrian region was the centre of production and that rolls of block pressed leather were exported to other regions.³⁸⁰ Having established that many of the doublures appear to have been stamped after their application to the boards, it seems likely that the stamps were available in the binding work-shops and that the preparation of doublures was not a separate part of the production process.³⁸¹

Block-pressed doublures were widely used throughout the Islamic world. Ralph Pinder-Wilson has shown that the technique was well-developed in Khurasan by

³⁷⁹ See fig. 4.75 for binding.

³⁸⁰ Bosch, *op.cit.*, 1952, p.168.

³⁸¹ See fig. 4.4 for doublures created from small fragments of leather.

the end of the 12th century.³⁸² He points out that many of the primary motifs found on silver inlaid brasses also occur on block-pressed leather. One of the four stone-press moulds in the Khalili collection bears a pattern which also appears on the doublures of two volumes of a thirty-part Qur'an in the collection dated to between 648– 751/1250– 1350.³⁸³ However, this pattern of inhabited *waq-waq* scrolls is very unusual and is not found among the Mamluk examples that have been examined.

Block-pressed doublures are found on Ilkhanid bindings contrary to Bosch's assumption that they were only found on bindings of the Western Islamic lands.³⁸⁴ The doublures of a *Manāfi' al-Hayawān* dated to the end of the 13th century are decorated with scrolling arabesques that can be compared to the example illustrated in fig. 4.174.³⁸⁵ Also a *juz'* of a Qur'an copied for the Ilkhanid sultan Uljaytu in Baghdad between 706-8 /1306– 8 has doublures with a similar pattern.³⁸⁶ Likewise, the doublures of the Uljaytu Hamadan Qur'an are also block-pressed with scrolling arabesques.³⁸⁷ Aritan records their presence on Anatolian Seljuq bindings and they are also found on Ottoman bindings of the

³⁸² Pinder-Wilson, 'Stone-Pressed Moulds and Leather-working in Khurasan', *Science, Tools and Magic*, Part 2, ed. Savage-Smith, London, 1979.

³⁸³ Khalili Collection, QUR 433 and QUR 132, 23.5 x 17cm; James, op.cit., 1992, Cat.48.

³⁸⁴ Bosch, op.cit., 1952, p.169 assumed that 'the block pressed doublures, although found on bindings in the Western Islamic style, are not found on those in the Eastern Islamic style in our collection, nor do any descriptions of published Persian or Persian-Turkish bindings mention such doublures'.

³⁸⁵ Pierpont Morgan Library, New York, M.500, see fig. 6.5 for the binding.

³⁸⁶ TSK EH.245, Gray, 1985, op.cit., Pl.7a and b; see fig. 6.9 for the binding.

³⁸⁷ DAK Rasid, 72, see fig. 6.15 for the doublures.

1430s and 1450s.³⁸⁸ However, they were discarded by Persian binders by the 15th century and do not occur on Ottoman bindings after the 1450s.³⁸⁹ It is only on Mamluk bindings that they are found throughout the period from the 13th to the 16th century. The earliest example in this study was found on a binding of a manuscript published by Tanındı dated by manuscript to 698/1298–9 and the same pattern is found on DAK Rasid 124 which is dateable to the end of the 14th century.³⁹⁰ The continued use of these patterns over long periods of time, however, do not make them a reliable dating tool unless the binding cover is also taken into consideration as the examples below illustrate. (Fig. 4.175)



Fig. 4.175: *left* Doublure pattern with manuscript dated to 697/1298–9, TSK A.1965, 25.3 x 18.5cm. *right* Doublure dateable to the late 14th century, DAK Rasid 124, 33 x 24cm.

³⁸⁸ Aritan, op.cit., 2008, Pl.31 for Seljuq bindings and Ch. 6 of this text; Tanındı, op.cit.,1991, Figs 3, 9, 11, 15a, 15b and 17; See fig. 6.51 of this text for Ottoman doublures.

³⁸⁹ Raby and Tanındı, op.cit, 1993, p. 9.

³⁹⁰ TSK A.1965, 25.3 x 18.5cm; Karatay, op.cit., 1966, no.7168 (binding is not included in the discussion); See Tanındı, op.cit.,1990, p.106, Pl.14, (there is an error in the catalogue number which reads 716 not 7168) for this binding; see also Bosch, Carswell,Petherbridge, op.cit., 1981, Cat.12 for the same doublure and binding pattern as DAK Rasid 124 and fig. 4.51 of the binding.

The latest examples of block-pressed doublures are dateable to the reign of Qansuh al-Ghuri demonstrating their continued use throughout the Mamluk period.³⁹¹ (Fig. 4.176)

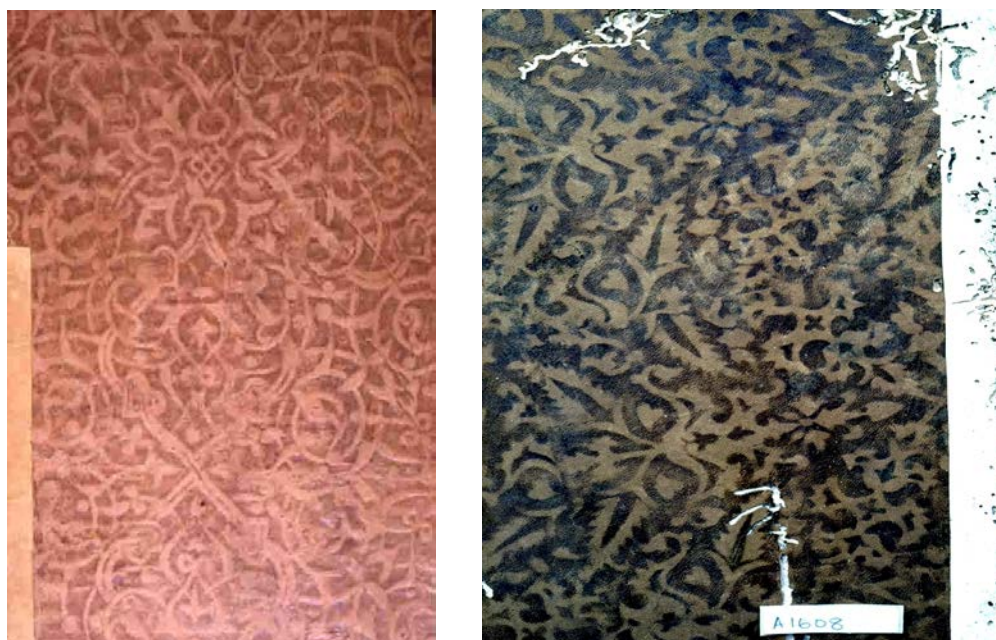


Fig. 4.176: Detail of doublures of bindings of manuscripts copied for Qansuh al-Ghuri. *left* TSK A.1767. *right* TSK A.1608.

Grohmann has shown that the technique of block printing was used for the decoration of end papers of Coptic codices dated to the 10th century.³⁹² He says 'It was natural to make such an endless pattern mechanically by stamping from a pattern, a process, which was used not only in the production of cloth stuffs with a pattern but also for ornamenting leather'.³⁹³ Bosch also pointed to the similarity in technique between the printing of textiles and that of block-pressed leather. She notes that textiles fabricated in Egypt were printed with wooden

³⁹¹ See fig. 4.129 for binding of TSK A. 1767 and fig. 5.40 and fig. 5.69-5.73 for further other occurrences of the heart-shaped knot pattern; See fig. 4.135 for binding of TSK A.1608.

³⁹² National Library, Vienna, Rainer Collection, Inv. Chart Ar.14100, Arnold and Grohmann, op.cit., 1929, p. 54, Fig.19.

³⁹³ Arnold and Grohmann, op.cit., 1929, p.53.

blocks from classical times, then exported throughout the Mediterranean.³⁹⁴ The association of block-pressed doublures with textiles was dismissed by Raby and Tanındı who cite the example of a stone saddler's mould, published by Ettinghausen, whose designs of harpies and griffins on a background of arabesques can be linked to metal-work of the 13th century from northern Mesopotamia and that 'it therefore seems unnecessary to link the Islamic tradition of block-pressed doublures to textile production in Egypt, as Bosch has done, indeed, the blocks for printing textiles were carved in relief while those for pressing the pattern into the leather were always carved in intaglio.'³⁹⁵ Extant examples have, however, already indicated that the blocks were carved both ways, although blocks carved in relief were used for the majority of designs.

An examination of block-printed textiles which were produced in Egypt dated to between the mid-13th and the end of the 14th century only revealed two examples whose patterns can be directly compared to those found on doublures of the Mamluk period.³⁹⁶ However, in terms of technique and style the doublure patterns do appear to have a resonance with those found on textiles.

The most common type of pattern was that of scrolling palmettes which are found on numerous bindings throughout the Mamluk period.³⁹⁷ (Fig. 4.177)

³⁹⁴ Bosch, *op.cit.*, 1952, p.106.

³⁹⁵ Boston Museum of Fine Arts, Nos 31–374, 23.3 x 13.6 cm; Ettinghausen, *op.cit.*, 1954, p.472, Fig.359; Raby and Tanındı, *op.cit.*, 1993, pp.9–10.

³⁹⁶ Barnes, *op.cit.*, 1997, Cat.41- 42; See fig. 5.68 - 9.

³⁹⁷ DAK Rasid 70, see fig. 4.21 for binding. See Bosch, Carswell, Petherbridge, *op.cit.*, 1981, Cat. 3, 4, and CBL Collection of loose bindings no. 63 and 64 for similar patterns.



Fig. 4.177: Detail of doublure with scrolling palmettes dateable to the middle of the 14th century, DAK Rasid 70.

Floral patterns were also popular, one with luxuriant foliage and flowers is found on a number of examples.³⁹⁸ (Fig.4.178)

³⁹⁸ This pattern is also found on the doublures of DAK Rasid 64, see fig. 4.48 for binding, DAK. Rasid 70, fig. 4.21 DAK Rasid 71 see fig.4.22. It is also found a doublure in the CBL Collection of loose bindings, CBL. no.63.



Fig. 4.178: Detail of block-pressed doublures with floral pattern dateable to the middle of the 14th century, DAK Rasid 61.

Large lotuses occur on the doublures of *Juz'* 30 of a Qur'an with a *waqf* for Sultan Hasan while another pattern of daisies occurs on the doublures of two Qur'ans dateable to the reign of Sultan Barsbay.³⁹⁹ (Fig. 4.179)

³⁹⁹ DAK Rasid 59, *Juz'* 30, see fig. 4.75 for binding; DAK Rasid 99, see fig. 4.101 for binding.

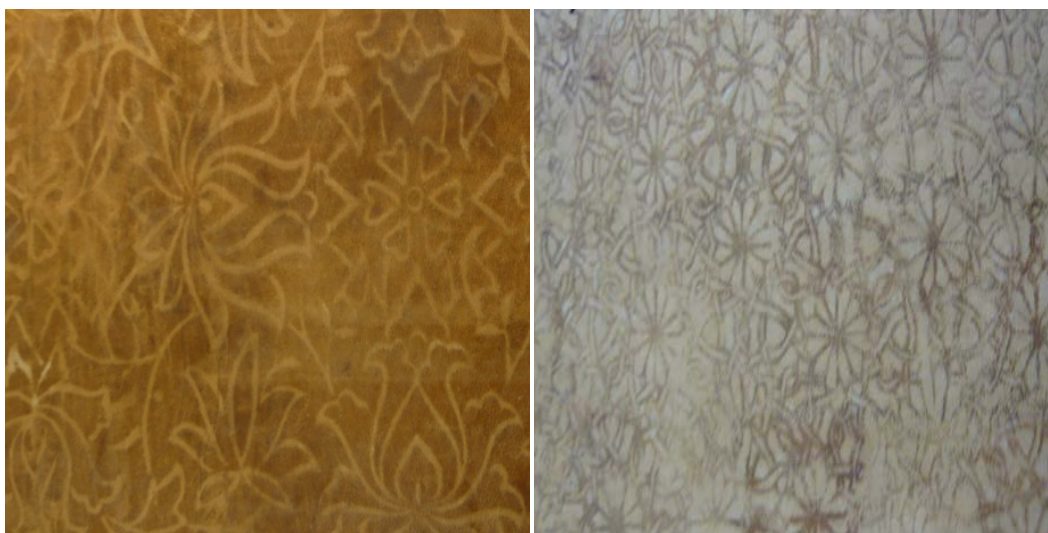


Fig. 4.179: *left* Detail of block-pressed doublures with lotus pattern of *Juz'* 30 of a Qur'an dateable to the reign of Sultan Hasan, DAK Rasid 59. *right* Detail of doublures block-pressed in intaglio of Qur'an *juz'* dateable to the reign of Sultan Barsbay, DAK Rasid 99.

Other doublure patterns are based on geometrical interlace but, rather than being arranged around as central star as on binding covers, they appear in repeat blocks, for example, this is found on a binding with a *waqf* for Khwand Baraka, dated 770/1368.⁴⁰⁰ (Fig. 4.180) Eight-pointed stars in a repeat pattern are also noted on the doublures of DAK Rasid 103, which is undated.⁴⁰¹

⁴⁰⁰ DAK Rasid 80, see fig.4.65 for this binding.

⁴⁰¹ DAK Rasid 103, 27 x18cm and has not been discussed in this study.



Fig. 4.180: *left* Detail of doublure with interlace pattern of *Juz'* of a Qur'an dated 770/1368, DAK Rasid 80. *right* Detail of doublure with repeat eight-pointed star pattern of DAK Rasid 103, undated.

A trellis pattern which contains ogival forms can be compared to those found on the textiles doublure illustrated above (Fig. 4.163) and is indicative of the links that existed between textile patterns and those found on block-pressed doublures.⁴⁰²

⁴⁰² TSK A .1769, see fig.4.41 and DAK Rasid 101 fig. 4.64 and also Bosch, Carswell, Petherbridge, op.cit., 1981, Cat. 9.



Fig. 4.181: Detail of doublure with pattern of ogival forms of binding dated 856/1446, TKS A.1769.

Diaper patterns were also found, for example that noted on the doublures of the several *juz'* of the Qur'an with a *waqf* for Kwand Baraka.⁴⁰³ The outline of the blocks can be discerned in the joins of the pattern.



Fig. 4.182: Doublure with diaper pattern on binding with *waqf* for Khwand Baraka, DAK Rasid 80.

⁴⁰³ DAK. Rasid 80, see fig. 4.170, 4.180 for other doublure patterns found on this Qur'an. A similar pattern is also found on the doublures of a loose binding, see Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.27.

Doublures with small six-pointed stars with rosettes at their centres on a pattern very similar to that found on watered silks also occur were found on bindings with a *waqf* for Sultan Barquq.⁴⁰⁴



Fig. 4.183: Doublure of *Juz'* of a Qur'an dateable to the reign of Barquq, DAK Rasid 120.

Other doublures are decorated with large four-petalled flowers, also with a *waqf* for Barquq.⁴⁰⁵

⁴⁰⁴ DAK Rasid, 120, see fig. 4.53 and 54 for this binding; For the same pattern see Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.16, 17 whose covers can also be compared to DAK Rasid 120.

⁴⁰⁵ TIEM 546, see fig.4.88 for this binding.

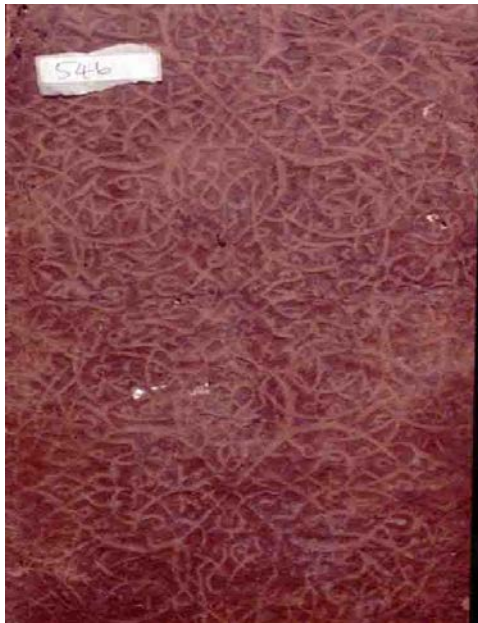


Fig. 4.184: Doublure of binding with a *waqf* for Sultan Barquq, TIEM 546.

Several patterns also incorporated large quatrelobe split palmettes into their designs, similar to those found on block-pressed textiles.⁴⁰⁶



Fig. 4.185: *left* Doublures with the quatrelobe split palmette motif dateable to the reign of Barquq, DAK *Juz'* 27, DAK Rasid 120. *right* Doublures dateable to the reign of Sultan Barquq, *Juz'* 30, DAK Rasid 76.

⁴⁰⁶ DAK Rasid 120, see fig. 4.53 and 4.96 for the bindings and fig. 5.68 for comparison with block-pressed textiles; see fig. 4.80 for DAK Rasid 76; see Ch.4, n.243 for the origins of this motif.

Tooled Doublures

The tooling of the doublures with small stamps of designs that are also found on the covers was another method of decoration. The earliest example in this study was recorded on a binding dated 742/1341 whose doublures consisted of tooled interlace based on a repeat pattern of eight-pointed stars.⁴⁰⁷ A binding whose manuscript contains a *waqf* for Sultan Barsbay is an elegant example of this practice.⁴⁰⁸ (Fig. 4.186) The doublure of the front cover is decorated with a rosette profile made up of overlapping circles and gold punches to create a central rosette, a method of decoration which is found on several bindings which were produced in the same period.

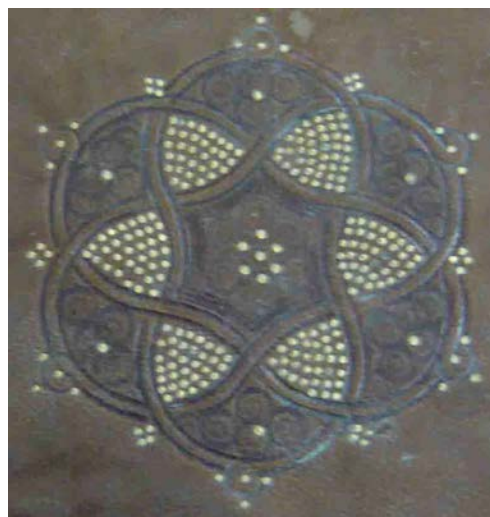


Fig. 4.186: Detail of decoration of tooled doublure of the flap and front cover of a binding dated to the reign of Sultan Barsbay. DAK Rasid 108.

Two examples were found, both dated to the late 15th century, which incorporate the quatrefoil tool with petalled crosses which decorates the borders of several

⁴⁰⁷ TSK M5, see fig. 4.67; An image has not been included because it was too dark to photograph.

⁴⁰⁸ DAK Rasid 108, see fig. 4.102 for discussion of this binding and fig. 5.34 for comparison with metalwork. .

bindings of the late 15th century.⁴⁰⁹ The doublure of a binding dated 888/1483 is divided into three sections, in the same manner as a title page, and the whole field is covered with repeated impressions of the quatrefoil tool. (Fig. 4.187)



Fig. 4.187: Doublure with decoration of quatrefoil with petalled cross tool dated 888/1483. TSK A.643.

The doublure of the one loose binding included in this study replicates designs that are found on tooled covers of the period. At first it was thought that these doublures might represent covers of another binding but, given the relationship between the designs of the front and back doublures which are slightly different and the presence of the very finely tooled designs of geometrical interlace of the

⁴⁰⁹ TSK A. 643 see fig.4.117 for this binding. Exactly the same pattern is found on the 14th volume of the *Sahîh* of Bukhari dated 878/1473, Süleymaniye Library, 238; Özen, *Türk Cilt Sanatı*, Türkiye İş Bankası, 1998, Pl.11. See Appendix 2, no.51.

covers, it seems likely they represent the original doublures of what is a magnificent binding that combines the two styles that represent the expertise of Mamluk binders of the late 15th century: the cover is decorated with a complex geometrical pattern of interlace and the doublures are tooled with large lobed almond profiles.⁴¹⁰ (Fig. 4.188) Both the doublure and the cover have segmented borders of knotwork marked by borders of s-tools and the knot meander tool.⁴¹¹ The finials of the pendants are composed of cartouches which appear on the flaps of two other bindings.⁴¹² Both doublures have large lobed almond profiles filled with arabesque ornament, the centres of which are marked by a quatrelobe split palmette motif which extend into four large lobed finials at each of the cardinal points, in the same manner as is found on other bindings.⁴¹³ The field of the front doublure is tooled with small stamps with a wave-shape and the back doublure is tooled with small stamps, including swastikas, creating a net-like effect within the dense tooling. (Fig. 4.189) The detailed tooling of these doublures further supports the argument put forward in the last section to explain the paucity of examples of pressure-moulded bindings; it seems that Mamluk binders continued to prefer to decorate with small tools rather than use pressure-moulding.

⁴¹⁰ See fig. 4.61 for the covers.

⁴¹¹ See Appendix 2, no. 27 and 47.

⁴¹² TIEM 508 and CBL 1486 see fig. 4.122.

⁴¹³ For example, see fig.4111.



Fig. 4.188: Front and back doublure of loose binding in DAK Cairo (no accession number) but dateable to the end of the 15th century.



Fig. 4.189: Detail of front doublure loose binding in DAK Cairo (no accession number) but dateable to the end of the 15th century.

Filigree Leather Doublures

The techniques associated with filigree work for the covers have already been discussed but filigree was also used for the doublures from the late 15th century.

The earliest example of filigree doublures on a pasteboard ground is found on the doublures of a binding which has already been discussed.⁴¹⁴ The manuscript was copied for Sultan Qaytbay and bears a *waqf* inscription in his name dated 26 Dhu'l-Qa'dah 895/11th October 1490. (Fig. 4.190) The doublures have a large central medallion of arabesque filigree work on a gold background. Four filigree fleur-de-lis on a deep blue background are distributed at the cardinal points of a small central medallion on brown leather. The corner-pieces are stamped in gold incorporating a large split palmette within a leaf-like form which is found on several covers of the period.⁴¹⁵ The design can be compared to that of the tooled front cover of a binding copied for Sultan Khushqadam and is illustrative of the use of stencils in this period to replicate patterns.⁴¹⁶ The doublure of the flap is also in filigree with a blue cloud-collar cartouche at the centre repeating the fleur-de-lis and gold background.

⁴¹⁴ TSK A.649 see fig. 4.112.

⁴¹⁵ See for example, TKS A.643, see. fig. 4.113.

⁴¹⁶ TSK 247/2, see fig. 4.111

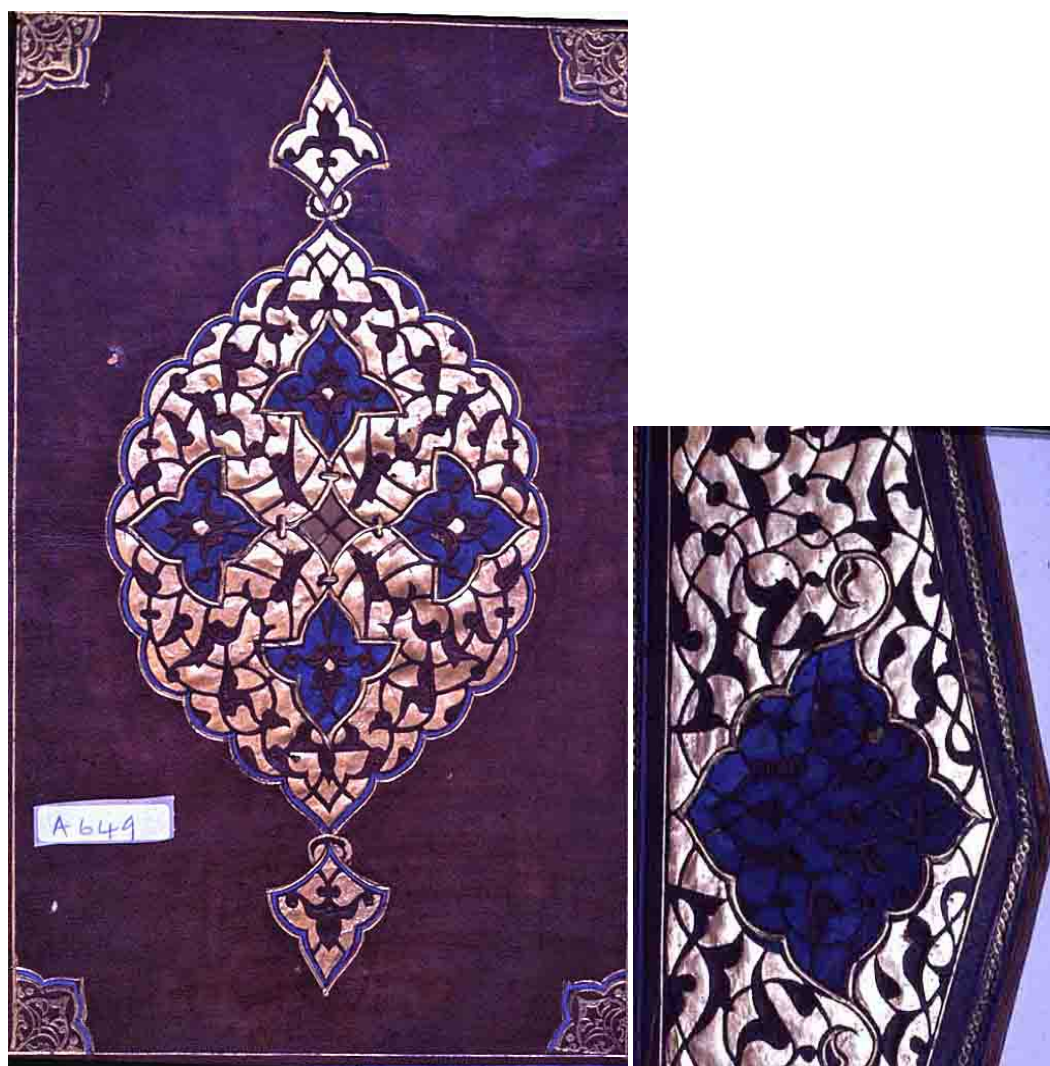


Fig. 4.190 : Filigree doublure of binding and flap of the binding of a manuscript copied for Sultan Qaytbay, TSK A. 649.

The apogee of filigree work during the Mamluk period is to be found on a large-volume Qur'an made, most probably, for Amir Qansuh Khamsmiyya.⁴¹⁷ The binding is remarkable for a gilded filigree cartouche inside the medallion of doublure dedicating the Qur'an to the amir's library; his names and titles also carry across to the back cover from the front with a small cartouche on the spine. The inscription reads '*bi rasm al-khizāna mawlānā al-muqarr al-ashraf al-karīm al-ālī*' (front doublure), '*al-mawlawī al-sayyidī al-malikī al-makhdūmī al-sayfī*'

⁴¹⁷ TIEM 508 see fig. 4.120 for discussion of the cover.

(back doublure) and *Qānṣūh Amīr Akhūr Kabīr* (on the small lobed cartouche on the spine of the flap) *al-malikī al-ashrafī a'azz Allāh anṣārah*. (Figs 4.191 and 4.192) The lobed central roundel lies on a golden ground, with pendants outlined in blue, is filled with overlapping, burgundy arabesques. The inscription in gilded filigree is on a blue background in a cartouche with two smaller pendants on either side. The lobed corner-pieces have filigree arabesques in red leather on a gold ground with arrangements of groups of three small punches in the pasteboard. Blue is used for the central cartouche with finials as a contrasting colour. The combination of red burgundy leather with golden yellow can be compared to the palette of the filigree doublures of a binding prepared for Mehmed II, dated 881/1476.⁴¹⁸ Unlike the Ottoman arabesques which are detailed with veins and droplets, however, the Mamluk ones are plain.

⁴¹⁸ Raby and Tanındı, op.cit., 1993, Cat. 22, p.164, see fig.6.42.

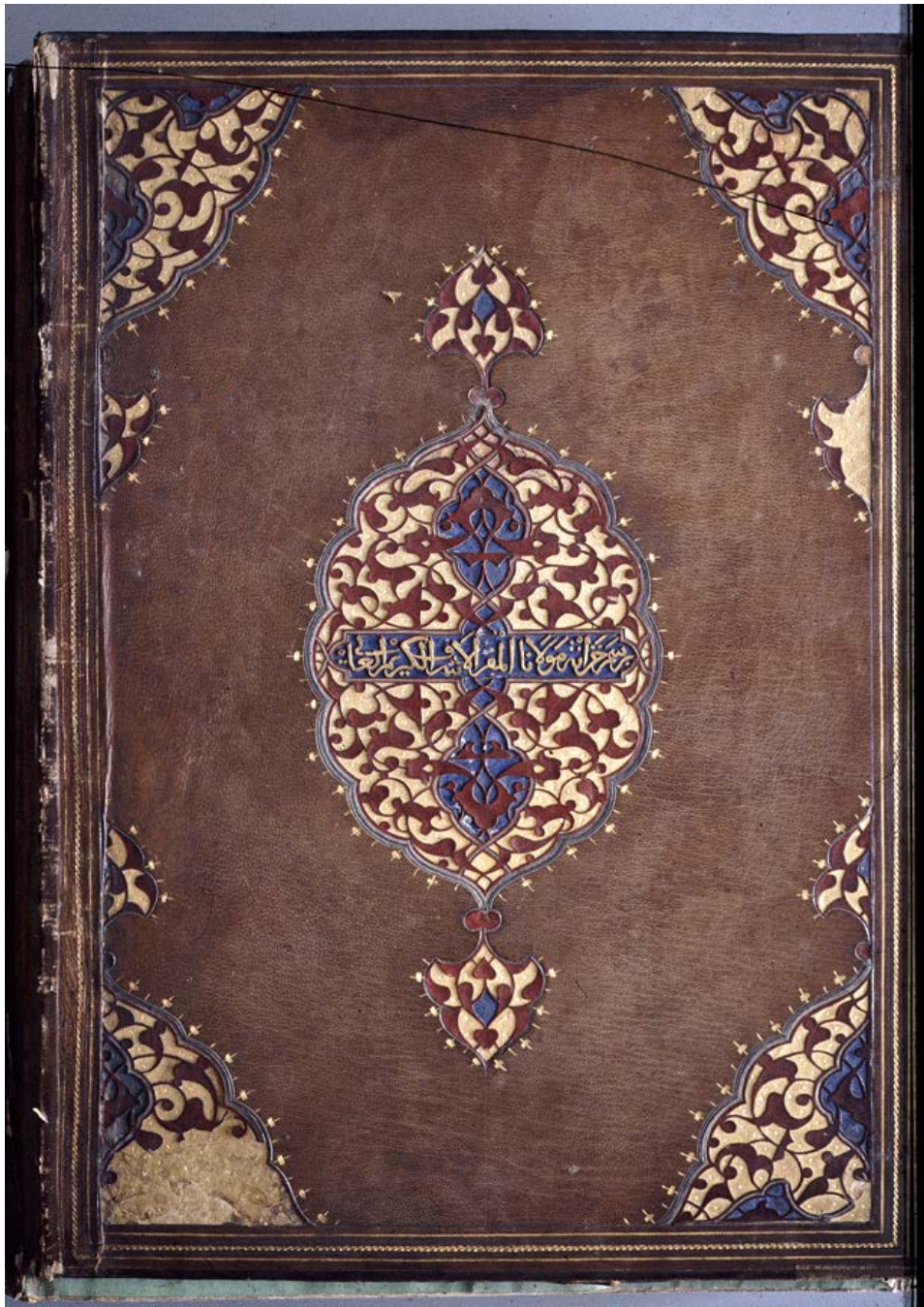


Fig. 4.191: Front filigree doublure dateable to the late 15th century, TIEM 508.



Fig. 4.192: Filigree doublure of flap and detail of cartouche on the spine which reads *Qān ūh Amīr Akhūr Kabīr*.

Filigree doublures are also to be found on another binding where a similar arrangement is to be noted, but with different colours: black arabesques are used on a yellow and green pasteboard background.⁴¹⁹ (Fig. 4.193)

⁴¹⁹ TIEM 436, fig. 4.123.



Fig. 4.193: Filigree doublure dateable to the end of the 15th century, TIEM 436.

A further example of filigree work in a different style is found on the doublures of a pressure-moulded binding made for Sultan Muhammad, the son of Qaytbay.⁴²⁰ The filigree is set at the centre of a lobed almond profile of a blue pasteboard ground. (Fig.4.194). The filigree in this example is made of small thin cut pieces of leather which have been arranged to represent delicate tendrils echoing the decoration of the cover.

⁴²⁰ TSK A. 2303, see fig. 4.160.

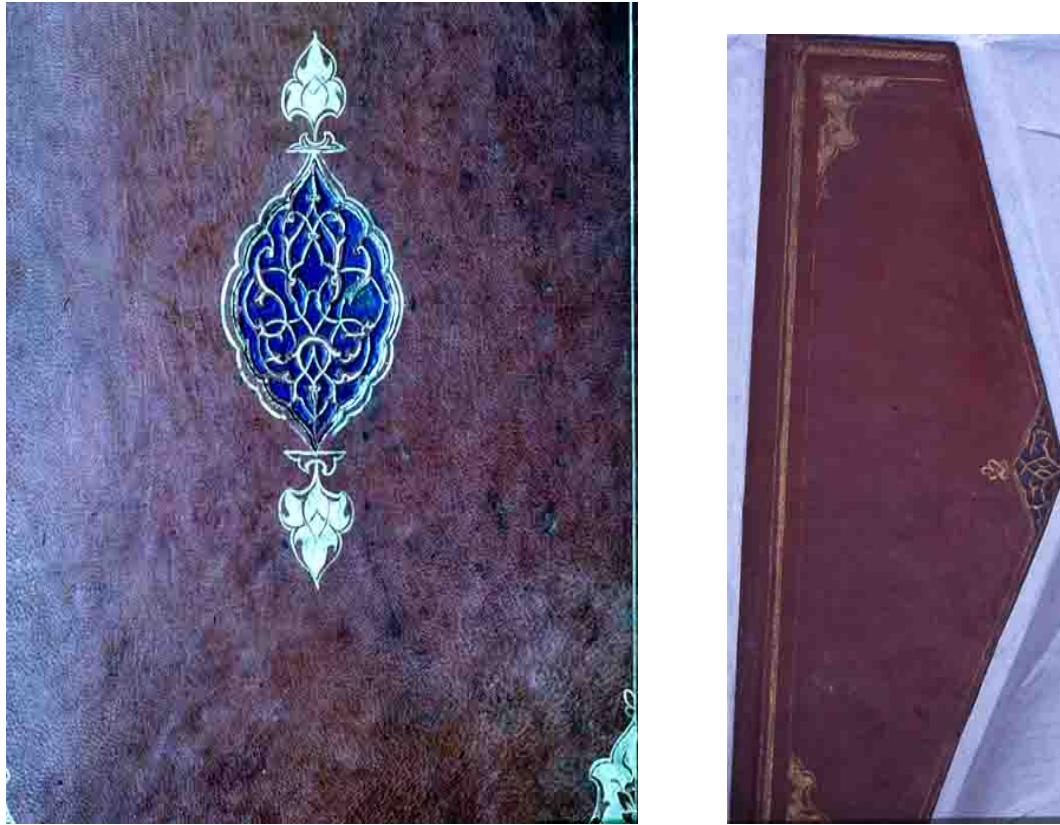


Fig. 4.194: Front doublure and flap of cover made for Sultan Muhammad, TSK A.2303.

Pressure-Moulded

As was noted in the previous section, the technique of pressure-moulding was not extensively used during the Mamluk period. It is, however, noted for the border decoration of the profiles found on two doublures. The first example is on the doublure of a filigree binding dated 889/1484 made for the Sultan Qaytbay.⁴²¹ The border of the almond profile has been pressure moulded in silver and the centre contains knotwork in blue and silver. (Fig. 4.195)

⁴²¹ TSK A. 2829, see fig. 4.150 for binding.



Fig. 4.195: Detail of the doublure of the cover and flap of a filigree binding dated 889/1484, TSK A.2829.

The same technique is used for the roundel of the doublure of a pressure-moulded binding dated 903/1491.⁴²² (Fig. 4.196) The same treatment is noted on the doublure of a Mamluk binding which contains a Florentine manuscript of Petrarch's *Canzoniere* and *Trionfi*.⁴²³

⁴²² CBL 1486, see fig. 4.157 for the binding.

⁴²³ Bodleian Library, Ms. Canon Ital.78, see fig. 6.72.



Fig. 4.196: *left* Doublure with pressure-moulded decoration for the outer perimeter of the central roundel of a binding dated 896/1491, CBL 1486. *right* Front doublure of a binding dated by *waqf* to 847/1444, CBL 1507.

The use of this style of roundel (without the pressure-moulded border) also occurs on the doublure of a binding, which has been previously discussed, with a *waqf* dated 847/1444.⁴²⁴ (Fig. 4.195) The similarity, in terms of the design and the tooled ornament of the centre, contributes to the view that this manuscript was most probably rebound at sometime in the late 15th century.

The doublures of Mamluk bindings present a marvelous diversity in terms of the techniques and the range of decoration that is used. Block-pressed and textile doublures continue to be used throughout the 14th and 15th centuries, showing the establishment of a long tradition. The association with textile patterns cannot be discounted – in terms of both technique and pattern – and although parallels have been drawn with the decoration of stone moulds and metalwork these all

⁴²⁴ CBL 1507, see fig. 4.107.

relate to very specific examples of patterns which are not normally found on the doublures of bindings. By the late 15th century the binders of the Mamluk realm incorporate new styles of filigree derived from the Iranian tradition to decorate the doublures of fine bindings but they still retain the more traditional methods of tooling, as noted on the magnificent doublures of the loose binding examined together with block-pressed doublures.

Conclusion

This chapter has traced the changes in ornament and technique that were used on bookbindings during the Mamluk period. The earliest bindings in this study date from the beginning of the 14th century and are decorated with star patterns and large lobed rosette profiles filled with densely tooled work. These styles appear to be derived from earlier traditions of decoration as similar ornament is found on the bindings from Marrakesh dated to the 13th century which were discussed in Chapter 3. Geometrical rosettes are also used for the decoration of bindings in the early Mamluk period, the earliest example in this study occurring on a binding dated by manuscript to 744/1344 where it is used to decorate the interior of the rosette profile and the flap.⁴²⁵ These profiles are elaborated further as the number of the arms of the geometrical rosettes increase and individual rosettes overlap to form a sun-burst rosette on several bindings produced during the reign of Sultan Hasan. By the end of the 14th century the geometry of the designs of the star patterns had changed again to include ten-pointed stars which, when constructed on grids including *giri*h shapes as

⁴²⁵ TSK Y. 2468, fig. 4.93.

identified by Steinhardt and Lu, form repeat patterns of interlace.⁴²⁶ The rosette profiles are now provided with pendants and their interiors are also filled with geometrical ornament.

Filigree work for the covers makes its appearance on a group of bindings which contain *waqf* notices in the name of Sultan Barquq.⁴²⁷ Their ornament includes flowers and palmettes – noted for the first time in the decorations of Mamluk bindings. The tradition of filigree does not, however, seem to have been sustained as no further examples are found until the second half of the 15th century. Also, the flaps of several tooled bindings are decorated with arabesque ornament which again was not found on earlier examples.⁴²⁸ These scrolling arabesques on the flap can be compared to Ilkhanid and Jalayirid bindings which will be discussed in more detail in Chapter 6.⁴²⁹ Arabesque and vegetal ornament appears again on the flap of a binding for Sultan Jaqmaq, albeit in a different style, as the arabesques and scrolling vegetal ornament are smaller. This type of ornament can also be compared to the decoration of a cover for Sultan Barsbay whose doublure patterns of trellis filigree can be compared to Ottoman examples of the 1430s.⁴³⁰ As these examples are very few, it might be surmised that they are representative of influences from the Persian tradition but it is difficult to construct an argument based on such limited evidence.

⁴²⁶ See fig. 4.52.

⁴²⁷ See figs. 4.143-4.145

⁴²⁸ See fig. 4.54.

⁴²⁹ See fig. 6.26.

⁴³⁰ See fig. 6.56.

By the reign of the reign of Khushqadam new styles and techniques derived from Persian bindings of the early 15th century appear. Filigree leather on a pasteboard backing is now used for doublures along with almond and cloud-collar profiles whose interiors are decorated with elegant arabesques and floral ornament. The technique of pressure moulding is also introduced in this period but does not appear to have been widely adopted by the Mamluk binders.

The material, as it stands, raises several interesting questions. First, what were the sources of inspiration for the ornament of these bindings and how are these reflected in other media of the period? Also, to what extent were other contemporary binding traditions influenced by Mamluk designs and patterns and vice versa and, finally, what prompted the changes that are noted in the late 15th century? These are the questions which will be addressed in the following chapters: Chapter 5 will consider the relationship of the binding designs with other media and Chapter 6 will examine their relationship with contemporary binding traditions.

Chapter 5

Parallels with other Media

The bookbindings that were discussed in Chapter 4 were chosen to chart the developments that took place in terms of technique and decoration during the Mamluk period; their patterns are reflected in the illumination of manuscripts, metalwork, woodwork and architectural decoration. In many instances, these designs reflect the continuation of a tradition of ornament that was drawn from the pre-Mamluk period and that continued to be developed and refined until the end of the sultanate. On bindings, as in other media, geometrical patterns were the dominant form of decoration, either as all-over decoration for the covers based on interlaced star patterns or filling circles and rosette profiles placed on a plain leather background.

Bindings of the late Mamluk period, however, represent the introduction of a new defined aesthetic that was drawn from Timurid and Turcoman repertoires, along with new techniques for decoration. These patterns included the cloud-collar and lobed almond profiles, both of which were filled with naturalistic floral ornament and elegant arabesques. These 'new styles' were a radical innovation in the Mamluk context and have, in the main, been associated with the reign of Sultan Qaytbay although, as noted in Chapter 4, the lobed profile appears earlier on two bindings of manuscripts copied for Sultan Khushqadam.¹

The accession of Qaytbay heralded a period of extensive patronage as he pursued an active policy of restoration of existing monuments, which in turn led to the

¹ See fig. 4.111 for TSK 247/2 and fig. 4.147 for DAK Rasid 104; Newhall, *op.cit.*, 1987, p.192 also records changes in the ornament of metalwork during the reign of Sultan Khushqadam with the appearance of floral ornament on a fragment of a chandelier dated 872/1467 in the Museum of Islamic Art, Cairo, Inv.no. 8535, published in Wiet, *op.cit.*, 1932, Pl.42.

revival of metal work, stone carving and manuscript production.² More importantly, as his reign was twenty-eight years long, he created an environment of political stability allowing for the maintenance of his patronage; the impetus of this revival was not lost on his death but continued under Sultan Qansuh al-Ghuri.

Before embarking on a drawing of parallels between specific patterns of binding decoration and their relationship with those found in other media, some general discussion is needed of the context that generated the ornament found on bindings of the Mamluk period.

Geometrical patterns and shapes dominate the ornament found on bindings from the 14th century until the middle of the 15th century with few exceptions. Grabar, in his series of essays on ornament, chooses geometry along with writing, architecture and nature as one of his four intermediaries in Islamic art.³ In showing that geometry was used as a means of decoration on a variety of surfaces and in different contexts from early Islamic times, he asserts the universal values of Islamic geometric design. He cites the example of the decoration of the Umayyad palace of Khirbat al-Mafjar where he identifies three types of geometry: geometry related to the organization of ornament, geometry employed in the composition of patterns for a prescribed space and a third type which he refers to as the 'wallpaper method' whereby a design simply repeats itself and stops when it is no longer required.⁴ The patterns used in these stucco panels and mosaic floors at Khirbat al-Mafjar were derived from late antique and

² See Newhall, op.cit., 1987 for an account of his patronage.

³ Grabar, *Mediation of Ornament*, Princeton, 1992.

⁴ Ibid, pp. 137-141; see Hamilton, *Khirbat al-Mafjar: An Arabian Mansion in the Jordan Valley*, Oxford, 1959, for an account of the decoration of Khirbat al-Mafjar.

early Byzantine decoration. Stars circumscribed by a circle and patterns based on designs of interlace were also used in the 10th century for the illumination of Qur'an frontispieces which shows the long association of this type of ornament with the 'Arts of the Book'. (Figs.5.1 and 5.2)



Fig. 5.1: Frontispiece of a Qur'an dated c.286/900, 12 x 28.5cm, CBL 1406. After Ettinghausen, *La Peinture Arabe*, Geneva, 1977, p.168.

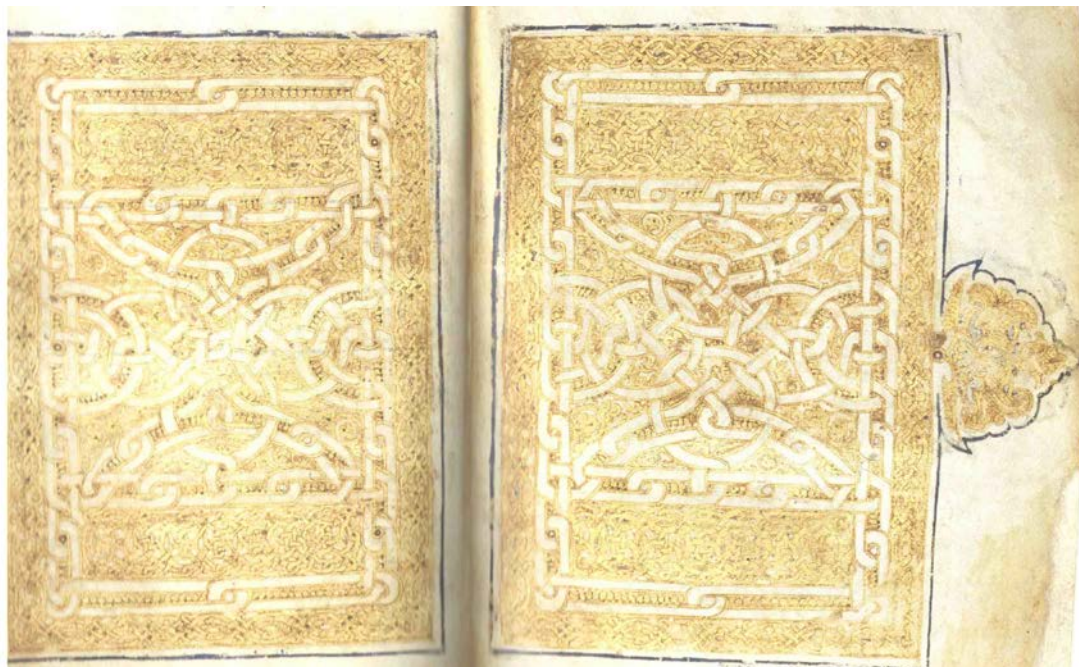


Fig. 5.2: Frontispiece of a Qur'an dated to the 10th century, Egypt. BL, Add.11735. After Baker, op.cit., 2007, Fig.14.

He notes, however, that in the 11th century in north-eastern Iran a new style of geometric patterns was introduced that transformed the nature of geometrical ornament in the Islamic world.⁵

The system for the creation of such complex patterns is also found on the drawings of the Topkapı Scroll dated to the 15th century and is thought to be a series design blueprints for Timurid architects who were drawing on a long and established tradition.⁶ Necipoğlu, in her analysis of the geometry of the Topkapı Scroll, discusses the significance of these patterns termed *giriḥ* after the Persian word for 'knot'.⁷ Her argument, written from the perspective of an art-historian, is supported by the identification of the shapes consisting of pentagons, decagons, hexagons, rhombi and 'bowties' that permit the creation of such patterns as was discussed in Chapter 4.⁸ These *giriḥ* shapes are found in patterns of Mamluk illumination at the beginning of the 14th century and subsequently on bindings produced during the reign of Barquq.⁹

Necipoğlu shows that these patterns originated during the period of the Great Seljuqs in Iran and Iraq and are found in the brick architecture of the period.¹⁰ As she says, these *giriḥ* patterns represent 'a highly codified mode of geometric patterning with a distinctive repertoire of algebraically definable elements, and

⁵ Ibid., p.142.

⁶ TSK H.1956.

⁷ Necipoğlu, op.cit., 1995.

⁸ See fig. 4.52 for the *giriḥ* shapes

⁹ See fig. 4.53, for examples of these patterns on bookbinding, TSK DAK Rasid 120.

¹⁰ Necipoğlu, op.cit., 1995, p.99.

for some reason was preferred over other forms of non-figural design'.¹¹ She points out that earlier geometrical patterns such as those found in the brick patterns of the Samanid Mausoleum in Bukhara (dateable before 331/943) use rectilinear arrangements (Fig.5.3) that betray no relationship with the patterns of geometrical interlace that appear in the brickwork of the tomb towers of Kharraqan (459/1067) (Fig. 5.4) and the north dome of the Great Mosque of Seljuq Isfahan (480/1088).¹²

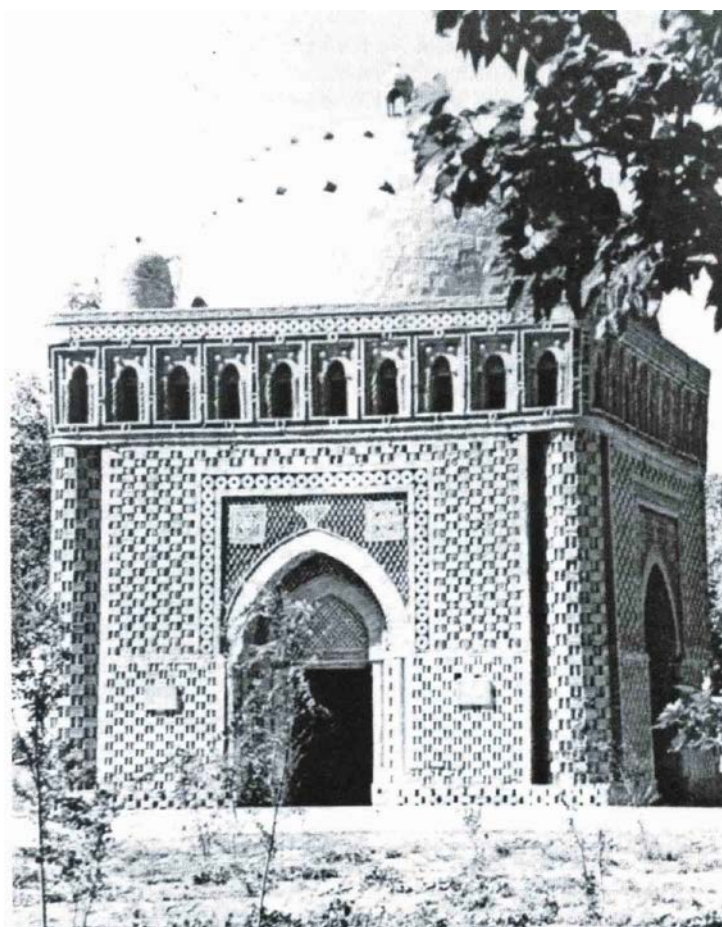


Fig. 5.3: Samanid Mausoleum, Bukhara, before 331/943. After Fehérvári, 'Islamic Incense- burners and influence of Buddhist Art', *The Iconography of Islamic Art*, ed. O'Kane, Edinburgh, 2005, Fig. 8.2.

¹¹ *ibid.*, p.92.

¹² See Hillenbrand, *Islamic Architecture*, Edinburgh, 1994, pp. 287-290 and fig. 199, 200 and 201 for the Tomb of the Samanids; pp. 276-77 and fig. 191 for the Towers of Kharraqan. The geometric brick patterns are analyzed in Stronach and Young, 'Three Seljuq Tomb Towers', *Iran*, Vol.4, 1966, pp.1-2.



Fig. 5.4: Interlace patterns on the tomb towers of Kharraqan Iran, 486/1093. After Grabar, op.cit, 1992, Fig.73.

She proposes that these patterns may have originated in Baghdad although 'Abbasid and Seljuq architecture in the city has long since disappeared.¹³ She notes, however, the high quality of the designs on late 'Abbasid architecture such

¹³ See Allen, 1988, *Five Essays on Islamic Art*, California, 1988; Strika and Khalil, *The Islamic Architecture of Baghdad*, Naples, 1987.

as the Mustansiriya *madrasa* (631/1233) in Baghdad reflect 'the continuing vigor of the geometric mode' after the demise of the Seljuqs in 591/1194.¹⁴

From Baghdad these designs spread east and west throughout Anatolia and Syria where they are found decorating the monuments of the Rum Seljuqs, Zengids and Ayyubids. The earliest buildings in Damascus that used such ornament is the hospital (548/1154) and funerary *madrasa* of Nur al-Din Zangi (562/1167-68) where a band of interlaced star polygon patterns frame the portal and *muqarnas* dome.¹⁵

Both Necipoğlu and Grabar note that the new proportioned script *al-khaṭṭ al-mansūb* which was codified under the Abbasid vizier Ibn Muqla (273-328/886-940) in Baghdad and later perfected by the calligrapher and illuminator Ibn al-Bawwab (d.413/1022) was rooted in the principles of geometric design.¹⁶ For Yasser Tabbaa it represented a 'final break with the majestic but ambiguous script of the first three Islamic centuries replacing it with a perfectly legible and cursive script'.¹⁷ Necipoğlu points out that the use of geometric principles in the formulation of the script and in the *giriḥ* patterns 'represents related aesthetic phenomena that seem to have originated within the same milieu' of 10th century Baghdad.¹⁸ This relationship is illustrated in the Ibn al-Bawwab Qur'an dated

¹⁴ Necipoğlu, op.cit., 1995, p.100; See Schmid, *Die Madrasa des Kalifen al-Mustansir in Baghdad: Eine baugeschichtliche Untersuchung der ersten universalen Rechtshochschule des Islam*, Mainz, 1980.

¹⁵ Necipoğlu, op.cit., 1995, p.100; Allen, 'Madrasah of Nur al-Din', *Ayyubid Architecture*, California, 2003, accessed <http://www.sonic.net/~tallen/palmtree/ayyarch/ch.2.htm#damas.mnad> [Accessed January 2, 2012]

¹⁶ Necipoğlu, op.cit., 1995, pp.104-7; Grabar, op.cit., 1992, pp.69-73.

¹⁷ Tabbaa, 'The Transformation of Arabic writing, Part 1 Arabic Calligraphy', *Ars Orientalis*, Vol. 21, 1991, p.133.

¹⁸ Necipoğlu, op.cit., 1995, p.104.

391/1001 and written in Baghdad, the earliest complete example of a Qur'an in cursive script and the pages of illumination include bands of geometrical interlace based on star and polygonal patterns.¹⁹ (Fig.5.5)



Fig. 5.5 : Illuminated pages of the Ibn al-Bawwab Qur'an, fol. 7r and 8a. CBL.1431. Image courtesy of Anna Contadini.

Necipoğlu relates the adoption of such patterns to the emergence of Sunni 'Ashari thought in 10th century Baghdad, based on Tabbaa's argument that linked these calligraphic innovations to the promulgation of an official Sunni theology to combat religious dissent promoted by variant readings of the consonantal text of the Qur'an.²⁰ She says 'it is tempting to correlate the stringent geometrization of non-figural patterning through the logical coherence and crystalline clarity of a linear geometric language with the puritan sensibilities of the Sunni revival

¹⁹CBL 1431, 17.7 x 13.7cm; Arberry, op.cit., 1967, no.41; A complete study of the Qur'an was published by Rice, *The Unique Ibn al-Bawwab Manuscript*, Dublin, 1955.

²⁰ Tabbaa, *The Transformation of Islamic Art during the Sunni Revival*, London, 2001.

during which it flourished'.²¹ Furthermore, she says 'The geometric mode seems to have represented a new visual order projecting a shared ethos of unification around the religious authority of the 'Abbasid caliphate, the locus to orthodoxy and ultimate source of legitimacy for the fragmented Sunni states.'²² As such this mode was then adopted wholeheartedly in Cairo, the seat of the new 'Abbasid caliphate, re-established by Sultan Baybars (660- 675/1260-77) after the last 'Abbasid caliph had been killed by the Mongols during their invasion of Baghdad in 656/1258.²³

However beguiling this argument may seem there is no evidence to support such an association between the development of these patterns and ideology and, as Blair points these changes in the script arose over a long period of time and are more likely linked to the move from parchment to paper, the adoption of black soot ink and the development of the chancery scribe as a copyist during the 'Abbasid period.²⁴ She also points out that Tabbaa concentrated his study on Qur'ans, failing to take into account that the new script was used for diverse manuscripts many whose subjects had little to do with official Sunni theology.²⁵

²¹ Necipoğlu, op.cit., 1995, p.103.

²² Ibid., p.108.

²³ Ibid., p.100; Although the Caliph in essence had no political power, he played an important ceremonial role investing the sultan with his authority on his accession.

²⁴ Blair, *Islamic Calligraphy*, Cairo, 1996, pp.174-6; Déroche, op.cit.,1992, p.133 also notes that the use of the new rounded script involved a completely different writing technique which may have been prompted by changes in the type of pen that was used, the method of sharpening the nib or the way the pen was held.

²⁵ Blair, op.cit., 1996, p.175; Allen, "Islamic Art and the Argument from Academic Geometry", Solipsist Press, California, 2004 (electronic publication) has also argued against this stating that there is no such thing as *girih* and that geometric patterns were derived from a long tradition stemming from classical times. The crux of the problem seems to be one of definition and the mathematical analysis of Steinhardt and Lu, op.cit, 2007 of the patterns has defined the *girih* shapes needed to create ten-fold geometrical repeat patterns. These can be seen clearly in the

Grabar notes that the introduction of the cursive script brought clarity and efficiency to the administration and was accompanied by the availability and spread of paper which replaced the earlier parchment and papyrus and was comparatively cheaper.²⁶ Designs and patterns were therefore able to disseminate relatively quickly and be transferred from one medium to another. A picture of a design for a metal door with a star patterns based on geometrical interlace is found in Al-Jazari's *Kitāb fī ma'rifat al-ḥiyal al-handasiyya* dated 602/1206 showing the dissemination of these designs on paper. (Fig.5.6)



Fig. 5.6 : Design for a cast metalwork door with star and polygon interlace pattern from *Kitāb fī ma'rifat al-ḥiyal al-handasiyya* of Isma'il al-Razzaz al-Jazari, Diyarbakir, 1206, TSK. A.3472, fols.165b and 166a. Image courtesy of Anna Contadini.

Necipoğlu also points to the resistance of this geometric mode by the Fatimids and the Spanish Umayyad caliphs who favoured vegetal rather than geometric

changes of the geometry found on bookbindings and are easily identifiable. The origins and development of these patterns, however, remains a matter of conjecture.

²⁶ Grabar, op.cit.,1992, p.77.

ornament because of the 'Abbasid association. However, Bloom discounts this stating that geometric patterns are found in Fatimid art as demonstrated by the decoration on two wooden *mihrahs* of the late Fatimid period.²⁷ The portable *mihrahs* of Sayyida Nafisa (539/1145) (Fig. 5.7) and Sayyida Ruqayya (548-554/1154-60) are decorated with strapwork bands which are interlaced with vegetal arabesques and can be compared to the geometrical interlace patterns found on the wooden *minbar* of the Kutubiyya Mosque in Marrakesh (532/1137).²⁸ The presence of a six-pointed star above the *mihrab* with its arms extending forming patterns of interlace marks the use of patterns which are later found on Mamluk bindings which use twelve-pointed stars of the late 13th century.²⁹ However, this is not representative of the *girih* patterns as described by Steinhardt and Lu, only of geometric interlace. However, as already noted, these *girih* patterns appear on bindings from the end of the 14th century, marking a change in the geometry of the designs found on bookbindings.³⁰

²⁷ Bloom, 'Almoravid Geometric Designs in the Pavement of the Capella Palatino in Palermo', in *The Iconography of Islamic Art, Studies in Honour of Robert Hillenbrand*, ed. O' Kane, Edinburgh, 2005, pp.69-72.

²⁸ Bloom, *Arts of the City Victorious*, Cairo, 2008, p.165; Bloom et al, *The Minbar from the Kutubiyya Mosque*, New York, 1998.

²⁹ See fig. 4.38.

³⁰ See fig. 4.53.



Fig. 5.7: *Mihrab* of Sayyida Nafisa, Museum of Islamic Art, Cairo. After Bloom, op.cit., 2005, fig. 4.6.

The ornament of bindings in the late 15th century included new types of profile - the lobed almond and the cloud-collar- as well as floral ornament. For their origins it is necessary to examine the impact of the Mongol invasions and the establishment of the lkhante in Iran in the middle of the 13th century. The Mongols brought with them a new aesthetic, inspired by the Chinese repertoire of ornament with its abundant floral and curvilinear motifs, into which the geometrical mode assimilated itself. As Pope put it, 'the most relentless geometry is set beside the most exuberant floriation'.³¹ Necipoğlu points out that the Mongol invasions also brought about a cultural split between the Turco-Iranian world in the east, extending from Anatolia to China, and the Arabic speaking realms in the west, extending from the Mamluk territories to North Africa and

³¹ Pope and Ackerman, *A Survey of Persian Art from Prehistoric times to the Present*, 1938 Vol.3, p. 2756.

Spain.³² The Mamluks, situated as they were in the transitional zone, selectively appropriated some of the new floral *chinoiserie* into their repertoire. It is found in architecture, metalwork and illumination of the 14th century but only appears later on a group of filigree bindings produced during the reign of Barquq in the late 14th century.³³

Baghdad remained an important centre for book production where the renowned calligrapher Yaqut al-Mustasimi and his pupil Ahmad ibn Suhrawardi continued the legacy of Ibn Muqla and Ibn al-Bawwab.³⁴ It was here that further developments were made in calligraphy with the introduction of the *aqlām al-sitta*, the six calligraphic styles. The Ilkhans encouraged 'the Arabic speaking population of Iraq to continue cultivating their centuries old tradition of paper and book production, calligraphy, and illumination'.³⁵ These developments are reflected in manuscript production in Cairo; in the next section comparisons are made between specific patterns found in illumination produced in Baghdad or the work of artists in Cairo trained in the Baghdad style and bookbindings.

The Ilkhanid legacy continued to be elaborated between the late 14th and early 16th centuries by the Timurid and Turcoman dynasties. By the beginning of the 14th century, ornament on Persian bindings had undergone a dramatic change and the geometric ornament found on the bindings of the monumental Ilkhanid Qur'ans was discontinued to be replaced by a more dynamic aesthetic that saw

³² Necipoğlu, op.cit., 1995, p.111.

³³ See fig. 4.143-146.

³⁴ See fig. 6.7 and 6.9 for Qur'ans written by Ibn al-Suhrawardi.

³⁵ Carboni, 'Synthesis: Continuity and Innovation in Ilkhanid Art', in *The Legacy of Genghis Khan*, New Haven, 2002, p.202.

the creation of pictorial designs through the use of panel stamps, an abundance of floral ornament and a greater use of colour.

Binding decoration in Iran from the early 15th century is marked by the use of lobed and cloud-collar profiles which appear on Mamluk bindings of the second half of the 15th century.³⁶ Rawson notes that the first appearance of such lobed framing devices is found in metalwork on the borders of a bronze mirror dated to the 13th century in Iran that are derived from Chinese prototypes.³⁷ In her view, however, although metalwork may have provided one of the means by which such frames became well-known, a major source of inspiration seems to have been furniture and related items such as sutra boxes and chests.³⁸ Lobed outlines are represented in Chinese furniture on the brackets of tables which formed part of the miniature burial pieces recovered from a tomb in Shanxi province dated 584/1189.³⁹ These lobed forms appear decorating the thrones of rulers in the miniature paintings of the *Jāmi' al-tawārīkh* and in one particular example dated c.792/1390, the back and sides of the throne are decorated with floating lobed panels within rectangles mirroring the lobed profiles that were transferred to bookbinding covers.⁴⁰

³⁶ Rawson, *Chinese Ornament: The Lotus and the Dragon*, London, 1984, p.156 notes lobed profiles without points were used in Islamic ornament long before the advent of the Mongol invasion, however these were derived from the guilloche, a pattern which resembles a twisted rope whose origins lie in the ancient Near East and was used in ceiling and mosaic patterns of the Roman and Byzantine period. These lobed profiles are found in metalwork and illumination of the 13th and 14th century where they are used as framing devices; see fig. 4.137-9 for cloud-collars and 4.111-130 for lobed almond profiles; see fig. 6.28 for an early example of a lobed profile in Persian binding.

³⁷ Ibid., p.159, fig.139.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid. fig.140 c, TSK H.1654, fol. 179b.

Lobed framing devices derived from the quarter cloud-collar profile are noted in the illumination of the *waqfiyya* of Juz' 15 of Uljaytu's Mosul Qur'an dated 706/1306-7.⁴¹ A page from the *Anthology of Iskandar Sultan* dated 813-4/1410-11 shows several examples of different lobed profiles and as Rawson notes reproduce the outlines of the braces found on the furniture of the miniature paintings.⁴² (Fig. 5.8)



Fig. 5.8: Drawings of lobed and cloud-collar binding designs from the *Dīwān* of Iskandar Sultan, Shiraz, 812-13/1410-11, BL, Add.27261. After Rawson, op.cit., Fig.142.

Komaroff has also emphasized the crucial role that textiles played in the dissemination of these motifs and has suggested that paper drawings also played an important intermediary role in the dissemination of these patterns and motifs into various media.⁴³

⁴¹ TSK EH.232; James, op.cit., 1988, Cat.42 and fig.72 ; Tanındı, op.cit.,1990, p.108; see fig. 6.8 for discussion of this binding.

⁴² BL Add. 27261,15.5 x 9.8cm; Rawson, op.cit., 1984, fig.142.

⁴³ Komaroff, op.cit., 2002, pp.168-196.

These lobed profiles make their appearance on bindings in Mamluk Cairo in the 1460s where they are filled with arabesques and floral decoration while the figural representations favoured by the Iranian binders are never used on bindings in the Mamluk context. Although these profiles predominate on fine bindings, only a few examples are found in other media during the late Mamluk period. This would seem to suggest that they were directly derived from bound manuscripts or drawings specifically associated with bindings and for that reason did not have the time to percolate to any great extent into the design repertoires associated with other media before the end of the Sultanate.

We will now turn to examining the relationships between binding decoration and other media citing specific examples. The previous chapter categorised the bindings according to techniques used in decoration and the same format will be followed in this chapter comparing each category of bindings with ornament of other media starting with illumination.

Tooled and Stamped Patterns

As we have seen in Chapter 4, the circle profile appeared on bindings from the early period, providing the base for many other patterns. As the simplest means of delineating areas of ornament, the circle profile occurs in illumination, metalwork and architectural decoration. It is frequently used in illumination to contain the dedication to the library of the patron and also occurs bearing the colophon in manuscripts throughout the Mamluk period. (Fig. 5.9)



Fig. 5.9: Fol.29b and 30a of *Al-Kawātib al-Durriyya* copied for the Sultan Qaytbay by Qanmur al-Sharifi min *al-ṭabaqāt al-arbaʿīn*, CBL 4168.⁴⁴ Image courtesy of the Chester Beatty Library.

It is also commonly used in metalwork and architectural decoration to carry the names, titles and blazons of the patron and as a decorative roundel delineating patterns and motifs.

⁴⁴ The term *ṭabaqāt al-arbaʿīn* refers to the name of the barracks of the Mamluk scribe. See fig. 4.125 for this binding.

In the section discussing the decoration of bindings with a circle profile, I referred to a series of bindings produced in the middle of the 14th century which I termed the 'ten-pointed star/decagon' group.⁴⁵ The same pattern was also noted on the binding of the Uljaytu Hamadan Qur'an and the binding of a Qur'an produced in Maragha dated by manuscript to 738/1338 which will be discussed in Chapter 6, examining the relationship of Mamluk bindings and their Ilkhanid counterparts.⁴⁶

The ten-pointed star - in combination with a decagon, surrounded by 'bow-ties' and hexagons which correspond to the '*girih* tiles' necessary for the creation of these complex repeat patterns - occurs in the illumination of Aydughdi ibn Abdullah al-Badri in the frontispiece of a single volume Qur'an copied in Cairo.⁴⁷ (Fig.5.10) It contains a certificate of commissioning for Sultan al-Nasir Muhammad and the colophon stating that the Qur'an was completed on the 3rd Ramadan in 713/22nd December, 1313. (Fig.5.10) The same geometric arrangement is also found on a Qur'an illuminated and bound by Abdallah al-Halabi dated 714/1314⁴⁸ which presages the developments in binding decoration where such repeat patterns based on ten-pointed stars appear in

⁴⁵ DAK Rasid 60,61,70,71. See fig.4.26, 4.28, 4.22, 4.21.

⁴⁶ DAK Rasid 72 and Boston Museum of Fine Arts, 29.58; See fig. 6.8, 6.20 for the bindings.

⁴⁷ TIEM 450, 34.5 x 24.5cm and other folios in Boston Museum of Fine Arts and Freer Gallery, 38.15 and 37.32; James op.cit.,1988, Cat. 6, Fig.34; Aydughdi ibn Badri served as an assistant to the illuminators Sandal and Ibn al-Mubadir in the illumination of the Qur'an of Baybars Jashnagir dated 704-05/1304-6 which is the earliest dated extant Qur'an of the Mamluk period. Sandal's work in this Qur'an also contains a ten-pointed star interlace pattern but not with this configuration. See James, op.cit., 1988, Cat.1, Fig. 24-25.

⁴⁸ TIEM 447, 33 x 24cm; James, op.cit.,1988, Cat.8, fig. 39.

illumination and bindings in the late 14th century, first noted in the reign of Sultan Barquq.⁴⁹

On this group of Mamluk bindings, the decagon intertwines with the arms of the ten-pointed star whose tips are cut at the perimeter of the circle on the bindings of Rasid 70 and 71 but extend to the perimeter on Rasid 60 and 61.⁵⁰ (Fig.5.10).



Fig. 5.10: *left* Right frontispiece of Qur'an dated Cairo, 713/1313, TIEM 450, 35.5 x 24.5cm. After James, op.cit., 1988, Fig.32. *right* Detail of front cover of Juz'1 of Qur'an dated 757/1356. DAK Rasid 70.

This combination of the decagon with the ten-pointed star continues to be used in illumination as it is found in the frontispiece of a Qur'an copied for Al-Ghuri representing the long-term use of these patterns although by this period the

⁴⁹ See fig. 4.53.

⁵⁰ See fig. 4.26, 4.28, 4.22, 4.21.

style and techniques used to decorate fine bindings had changed considerably as noted by the filigree cover of this manuscript.⁵¹ (Fig. 5.11)

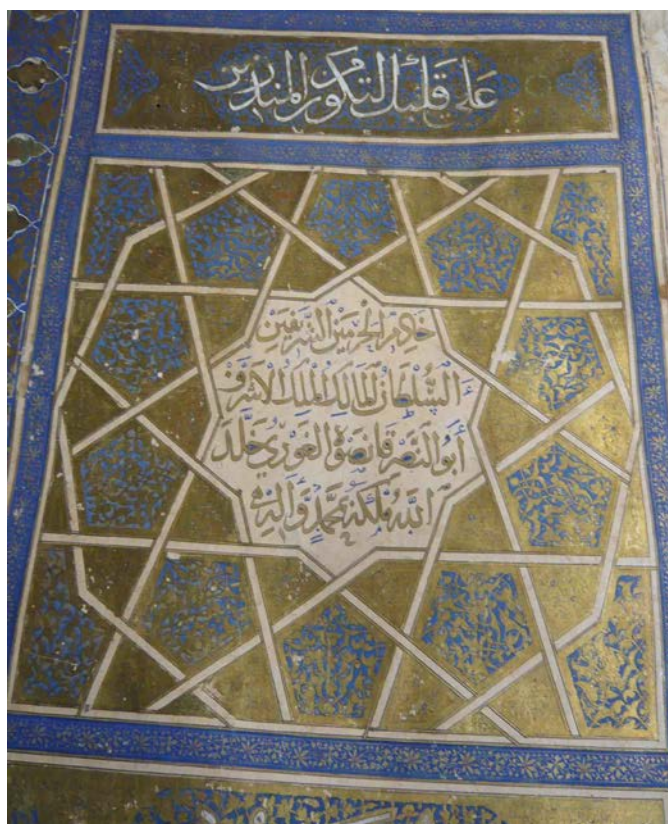


Fig. 5.11 : Frontispiece of Qur'an (fol.1b) for Qansuh al-Ghuri dated 908/1503. DAK Rasid 73, 62 x 41cm.

The use of geometrical rosettes or star polygons on bindings are found in binding patterns from the end of the fourteenth until the middle of the 15th century both as single motifs and parts of a repeat pattern. The earliest example of a simple six-rayed geometrical rosette in Cairo on the bindings in this study and other dated published examples occurs on the flap of a Qur'an copied by Mubarak Shah al-Suyufi in Ramadan 744/January 1344.⁵² It is probable that this was used much earlier for bindings, given the number of examples that occur in

⁵¹ DAK Rasid 73, see, fig. 4.152.

⁵² TSK Y.2468; See fig. 4.93 for this binding.

architectural decoration from the beginning of the 14th century which will be discussed, below but unfortunately there are few bindings extant from this early Mamluk period. Later a single ten-rayed geometrical rosette is used to decorate the covers of a series of *juz'* of a thirty-part Qur'an made *waqf* for the *madrassa* of Sultan Sha'ban's mother dated 770/1368.⁵³ The same arrangement is used for the illumination of the frontispieces of the series of *juz'*, but here it is part of a repeat pattern. (Fig. 5.12)



Fig. 5.12 : Frontispiece of *Juz'* 1 of a Qur'an for Khwand Baraka dated 770/1368 DAK Rasid 80.

The use of geometrical rosettes as part of a repeat pattern occurs in illumination much earlier. For example, repeat patterns of twelve-rayed geometrical rosettes are found in the work of Ibn Mubadir in the frontispiece of a single-volume

⁵³ DAK Rasid 80, see fig. 4.65. CBL.1457, 35 x 25cm, James, op.cit.,1988, Cat.4, fig.29; Ibn al-Mubadir is noted as one of the illuminators who worked on the Qur'an of Baybars Jashnagir which is the earliest dated extant Mamluk Qur'an, 704-705/1304-6, BL. Add.22406-3;

Qur'an dated to between 705-9/1306-10.⁵⁴ (Fig. 5.13) In his analysis of the illumination style of Ibn al Mubadir, James notes that his work shows Ilkhanid influences and that he was familiar with styles from Baghdad, indicating the transfer of styles from Baghdad to Cairo in this period.⁵⁵



Fig. 5.13: Frontispiece of Qur'an illuminated by Muhammad ibn Mubadir, c. 705-9/1306-10, CBL 1457. After James, *op.cit.*, 1988, Fig. 29.

The use of geometrical rosettes in the illumination of this Qur'an presages developments that occur in the middle of the 14th century where twelve-rayed geometrical rosettes occur in illumination and on bindings.

There are two examples of bindings with repeat geometrical rosette patterns. One is the binding of a Qur'an that contains a dedicatory roundel to the library of

⁵⁴ See James, *op.cit.*, 1988, pp.40-47 for details of his career and style of illumination.

⁵⁵ *Ibid.*, p.47.

Sultan Sha'ban.⁵⁶ (Fig.5.14) This binding has a pattern of ten - rayed geometrical rosettes surrounded by five pointed stars. A direct analogy for the design of the panel of the binding can be made with the design of a frontispiece, copied most probably in Baghdad in 741/1340-1 by Arghun al-Kamili and illuminated by Muhammad ibn Sayf al-Din al-Naqqash.⁵⁷ (Fig.5.15) The illuminated pattern is based on a ten- pointed star surrounded by a ten- rayed rosette and is encircled by five pointed stars.

Furthermore, the design can be compared to the illuminated frontispiece of a Qur'an included in this study which contains a *waqf* for Sultan Hasan although, in this case, the geometrical rosettes have eight - rays.⁵⁸ (Fig. 5.14) The geometry of this frontispiece can be also compared to that of the frontispiece illuminated by Ibn Mubadir described above as the geometrical rosettes are organised on a grid separated by octagons and stars. (Fig. 5.13)

⁵⁶ TSK A. 804, see fig. 4.47.

⁵⁷ TIEM K. 452,36 x 27cm; James, op.cit., 1988, Cat. 65, pp. 157-160; Arghun al-Kamili was one of the six pupils of the master calligrapher Yaqut al - Mustasimi who died in 697/1298 in Baghdad.

⁵⁸ DAK Rasid 58, See fig. 4.70 for the binding.



Fig. 5.14 : *left* Front cover of Qur'an for Sultan Sha'ban TSK. A.804. *right* Frontispiece of Qur'an with *waqf* for Sultan Hasan. DAK. Rasid 58.



Fig. 5.15 : Frontispiece of Qur'an copied by Arghun al-Kamili dated 741/1340-1, TIEM K.452, 36 x 27cm. After James, op.cit., 1988, Fig.114.

Another repeat pattern of twelve-rayed geometrical rosettes stemming from a twelve-pointed star and surrounded by a duo-decagon is found on the bindings of *Juz' 1* of a Qur'an which contains a *waqf* in the name of Uljay al-Yusufi who died in 775/1373.⁵⁹ (Fig. 5.16) It has no direct correlation with the repeat geometrical rosette patterns in the illumination that have been studied but what is evident is that these geometrical arrangements were conceived with the arrangement of several key elements to achieve a complex geometrical pattern and there is therefore a definite relationship between the development of patterns used for book bindings and illumination.

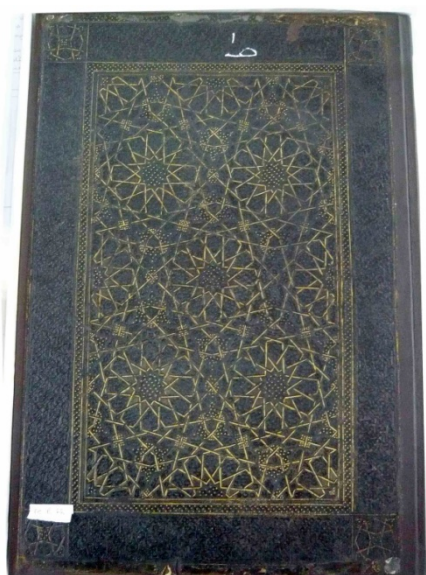


Fig. 5.16 : Front cover of *Juz' 1* of a Qur'an with a *waqf* in the name of Uljay al-Yusufi, DAK Rasid 62, 53 x 37 cm.

The geometrical rosette placed within a central panel occurs in some numbers in bindings of Qur'ans from the middle of the 14th century.⁶⁰ There are again earlier precursors to be found in illumination. For example, the design occurs on the

⁵⁹ DAK Rasid 62, see fig. 4.48 binding.

⁶⁰ See for example DAK Rasid 59, fig. 4.75 and 4.76.

finispiece of the Qur'an illuminated by Aydughdi ibn Badri which was endowed in the name of Sultan al-Nasir al-Din Muhammad dated 713/1313 and the frontispiece of a single volume Qur'an copied in Damascus in 741/1341, the binding of which was discussed in Chapter 4.⁶¹ (Fig.5.17) This arrangement of a single twelve-rayed geometrical rosette set within a square panel can also be directly compared to an Ilkhanid Qur'an of the same date.⁶² (Fig.5.18)

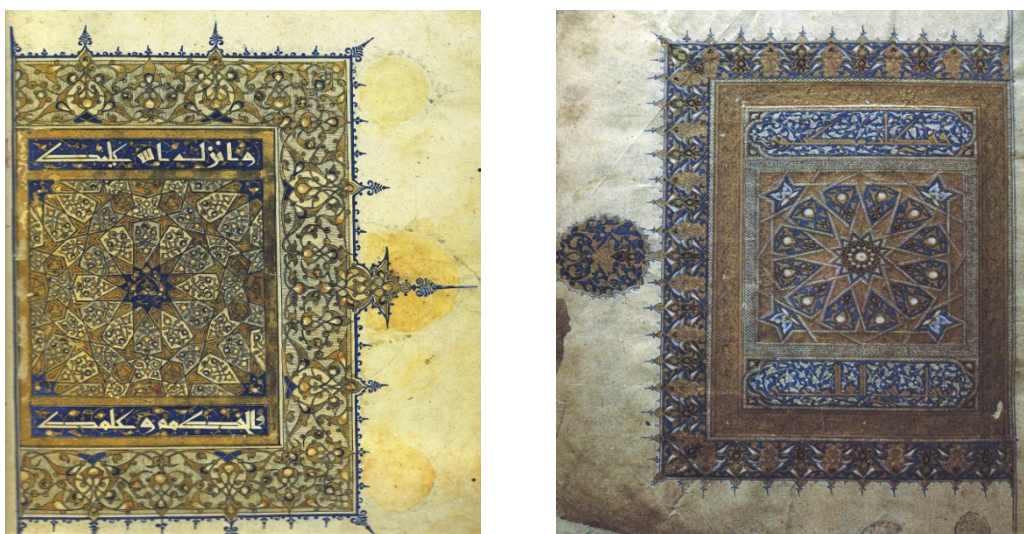


Fig. 5.17 : *left* Right-hand finispiece of a Qur'an illuminated by Aydughdi ibn Badri, 713/1313, TIEM 450. After James, op.cit., 1988, Fig.38. *right* Illuminated frontispiece of a Qur'an, TSK M5. After James, op.cit., 1988, Fig.97.

⁶¹ TIEM 450; James, op.cit., 1988, Cat.6.; TSK. M5, James, op.cit., Cat.21, See fig. 4.67 for the binding.

⁶² Canby, *Shah Abbas The Remaking of Iran*, London, 2009, pp.168-169.



Fig. 5.18: Frontispiece of an Ilkhanid Qur'an dated 739/1338-9, National Museum of Iran, Ms.4242. After Canby op.cit., 2009, Fig. 81.

The single twelve-rayed geometrical rosette occurs later in Cairo in the frontispiece of a Qur'an probably commissioned for the mosque of Sultan Hasan (757/1356) which was later endowed to Khwand Barakah's *madrasa* on the 3rd Dhu'l-Qa'dah 769/13th June 1368.⁶³ (Fig. 5.19) This is the arrangement that marks what James terms the beginning of the 'Star Polygon group' produced during the reign of Sultan Sha'ban.⁶⁴ A group of bindings of a series of *juz'* of a thirty-part Qur'an that contains a *waqf* inscription for Sultan Hasan are decorated with twelve-rayed geometrical rosettes where the arms of the rays are extended to create an outer pattern of rhombs enclosed within a rosette profile.⁶⁵ (Fig. 5.19) The style of geometrical rosettes on the bindings may be derived from Mamluk illumination of the 'Star Polygon' group rather than Ilkhanid binding examples as there are no extant Ilkhanid bindings with this pattern.

⁶³ DAK Rasid 9, 75 x 51cm; James, op.cit., 1988, Cat.24.

⁶⁴ Ibid., pp.180-182.

⁶⁵ DAK Rasid 59, see fig. 4.75, 4.76.



Fig. 5.19 : *left* Frontispiece of Qur'an dated 757/1356, DAK, Rasid 9, 75 x 51cm. After James, op.cit.,1988, Fig.131. *right* Detail of the cover of Qur'an with a *waqf* for Sultan Hasan, DAK Rasid 59, 46.5 x 36cm.

Bindings with repeat patterns of geometrical rosettes continue to be produced to the end of the Mamluk period. The binding of Rasid 88, a single volume Qur'an copied for Sultan Qaytbay, is an example of the development of star patterns with geometrical rosettes.⁶⁶ (Fig. 5.20) The pattern of ten-rayed geometrical rosettes with overlapping rhombs and 'bow ties' in different tones of leather and areas of stippling gives coherence and symmetry to the patterns which were developed and refined throughout the Mamluk period and in other media.

⁶⁶ DAK Rasid 88, 52 x 38cm; see fig. 4.59.



Fig. 5.20 : Detail of Qur'an cover for Sultan Qaytbay, DAK Rasid 88.

The use of the geometrical rosette is also noted in the illumination of this Qur'an where a half five-rayed geometrical rosette is used in the hasps of the illuminated page. (Fig. 5.21)

Girih patterns occur in both illumination and bindings in the Mamluk period. In drawing comparisons between the patterns, a number of parallels were drawn with examples produced in Baghdad or by illuminators who were trained there. They show that these patterns were disseminated widely, concurring with Necipoğlu's proposal that such patterns moved west through Syria into Egypt.⁶⁷ The Topkapı Scroll, although much later, shows the importance of paper in the dissemination of such patterns for by the 1220s, an extensive paper industry had developed in Tabriz which must have contributed to the transmission of designs and patterns during this period.⁶⁸

⁶⁷ Necipoğlu, op.cit., 1995.

⁶⁸ Bloom, *Paper before Print*, New Haven, 2001, pp.53-54; Bloom notes Baghdad was an important centre for the production of paper from the 10th century and that the production of large sheets known as *Baghdādī* increased after the Mongol invasion in 655/1258, see Ch.4, Table 4.1 for paper sizes.



Fig. 5.21 : Illuminated opening page of Fol.1a of Qur'an with *waqf* for Qaytbay, DAK, Rasid 88.

The use of the geometrical rosette in metalwork occurs on doors and pre - dates the Mamluk period. For example, eight-rayed geometrical rosettes are found in a repeat pattern with five-pointed stars and rhombs providing the connecting motifs on the doors from the Mausoleum of Imam al-Shafi'i (608/1211) that are now in the Islamic Museum of Cairo.⁶⁹ The same pattern is found decorating the doors of the Mosque of al-Salah Tala'i' (555/1160) whose current doors are copies of the originals in the Museum of Islamic Art in Cairo.⁷⁰ (Fig.5.22) The arrangement of the geometrical rosettes both horizontally and vertically bears a striking resemblance to the binding of Sultan Sha'ban and the illuminated page from a Qur'an with a *waqf* for Sultan Hasan described above. (Fig.5.14) These

⁶⁹ Museum of Islamic Art, Cairo, inv.no.1056; Mols, *Mamluk Metalwork Fittings in their Artistic and Architectural Context*, Delft, 2006, Pl. 279.

⁷⁰ Ibid., Cat.II/I, Pl.271; Original doors in Cairo, Museum of Islamic Art, inv.no.1055.

examples show that such patterns were in use from the beginning of the 13th century and continued to be refined and developed in Mamluk Cairo. The drawing for the design of doors from the *Automata* of al-Jazari (Fig.5.6) mentioned above attests to the use of drawings for the designs of metalwork and their dissemination.



Fig. 5.22: Copies of the original doors at the Mosque of Salah Tala'i' dated 555/1160, 434 x 246cm.

The continued use of such patterns for doors throughout the Mamluk period stands as testimony to a long and firmly established metal-working tradition. The door in the *madrasa* of Sultan Hasan of the *qibla iwān* has a large twelve-rayed geometrical rosette at its centre with overlapping arms which can be compared to the covers of bindings of the Qur'ans with a *waqf* in his name.⁷¹ (Fig.5. 23) A similar pattern decorates the entrance door of the *madrasa* of

⁷¹ See for example the binding of DAK Rasid 59, fig. 4.75.

Sultan Barquq and the door of the *sabīl-kuttāb* of the complex of Sultan al-Ghuri is decorated with a variation of this pattern.⁷²



Fig. 5.23: Doors of the *madrasa* of Sultan Hasan dated 757-61/1356-60, 604 x 348cm.

In looking at other objects of metalwork, the geometrical rosette as a single motif is also found on the *tannūr* of Amir Qusun and dated 730/1329-30.⁷³ (Fig. 5.24) Here, single twelve-rayed geometrical rosettes occupy the panels of two tiers of the five-storey twelve-faceted *tannūr*. A similar composition is later found on the six-storey sixteen-faceted *tannūr* produced for Sultan Qansuh al-Ghuri again demonstrating the persistence of such geometric patterns in the Mamluk repertoire.⁷⁴

⁷² Mols, op.cit., 2006, Cat.24/4 and Fig.62 and 63 for the doors of Sultan Hasan, Cat.26/1 for the doors of Sultan Barquq and Cat.54/1 for the doors Sultan Qansuh al-Ghuri.

⁷³ Behrens-Abouseif, *Mamluk and post-Mamluk Metal Lamps*, Cairo, 1995, p.13, Pl.3.

⁷⁴ Behrens Abouseif, op.cit.,1995, p.13, Pl.6.

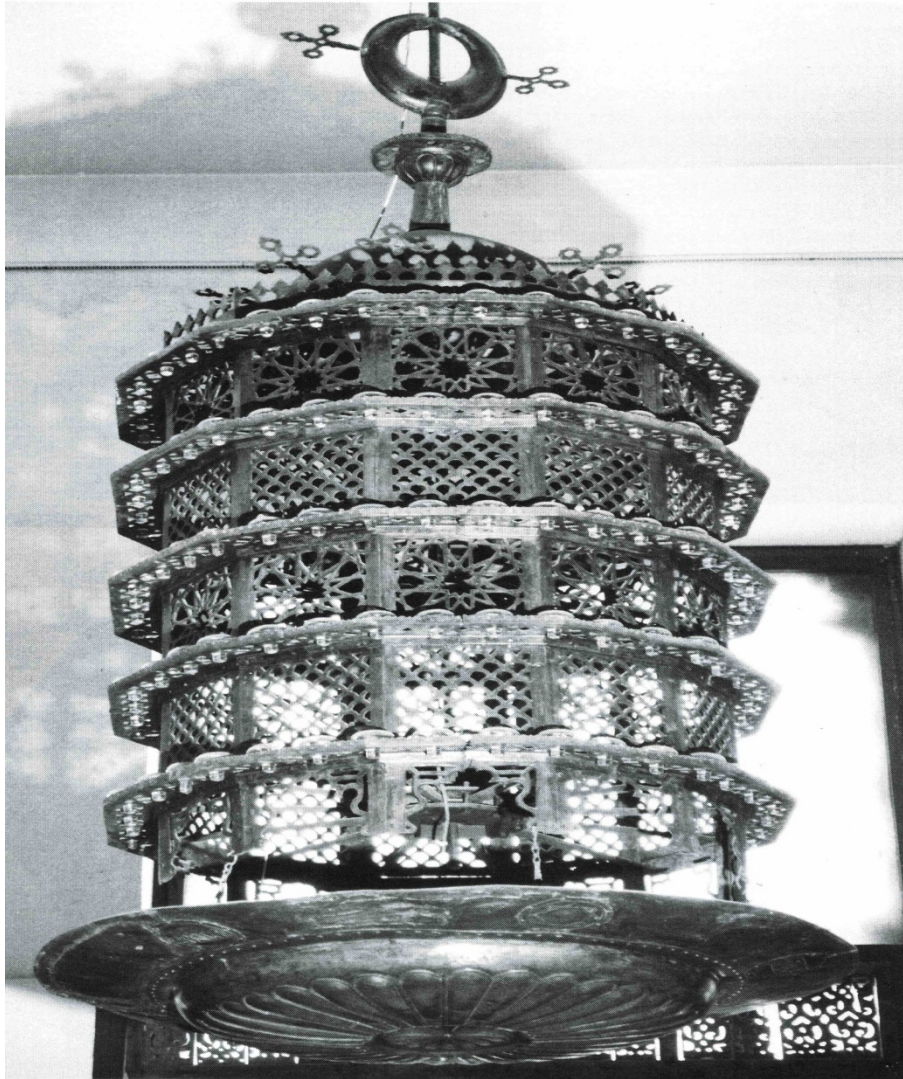


Fig. 5.24 : *Tannūr* of Qusun in the Museum of Islamic Art, Cairo. After Behrens-Abouseif, op.cit., 1995, Pl.3.

Geometrical rosettes occur in architectural decoration from the early Mamluk period. For example, the window grilles inserted into the transitional zone of the dome of the funerary complex of Sunqur al-Sa'di, built between 715-21/1315-21 offer a plethora of geometric designs which include twelve-rayed geometrical rosettes and ten-pointed stars in decagons.⁷⁵ (Fig. 5.25) Also of note is the

⁷⁵ Sunqur al-Sa'di was *naqīb al-jaysh* (Inspector of the army) and later head of the Sultan's Mamluks during the 3rd reign of Sultan Al-Nasir Muhammad; Behrens-Abouseif, op.cit., 2007, pp.166-169 for the complex; see Mayer, op.cit., 1933, pp.213-4.

appearance of roundels with pendants in stucco that contain ornament based on interlacing geometrical rosettes and can be compared to the bindings with the rosette profile and pendants that appear on bindings towards the end of the 14th century.⁷⁶

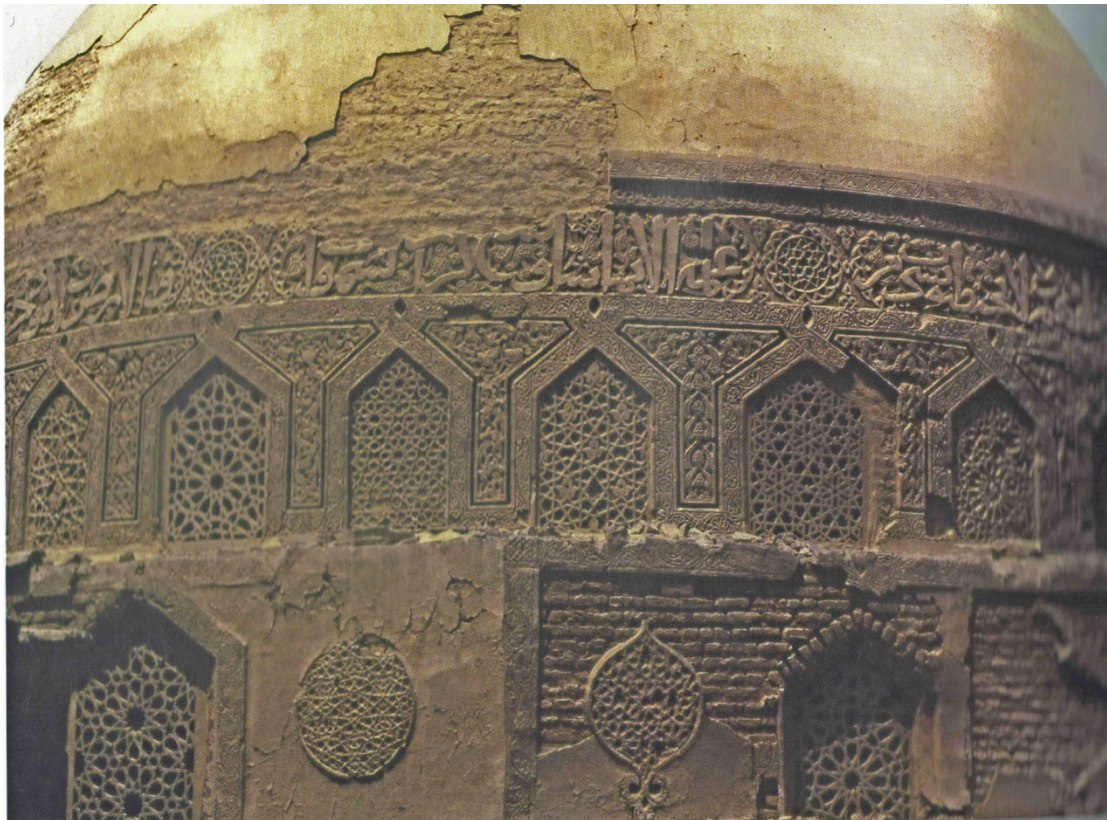


Fig. 5.25 : Façade of the funerary complex of Sunqur al-Sa'di. After Behrens-Abouseif, *op.cit.*, 2007, Fig.112.

As was noted in Chapter 4, during the reign of Barquq a change in the geometry of the star patterns used for bindings where the arms of the star pattern are extended creating overlapping rhombs and are highlighted in a lighter colour

⁷⁶ See CBL 1495, fig. 4.94 and DAK Rasid 74, fig. 4.95.

leather.⁷⁷ (Fig. 5.26) This same formulation of the pattern can be noted on the stucco window grilles of his *madrasa* and *khanqah* where the design includes overlapping rhombs projecting from a ten-rayed rosette. (Fig. 5.27) There are numerous examples of these types of star patterns in architectural decoration in Cairo continuing until the late Mamluk period as they also occur in the façade of the *sabil maktab* of Qaytbay behind the Al-Azhar mosque (823/1480).⁷⁸ (Fig. 5.28)

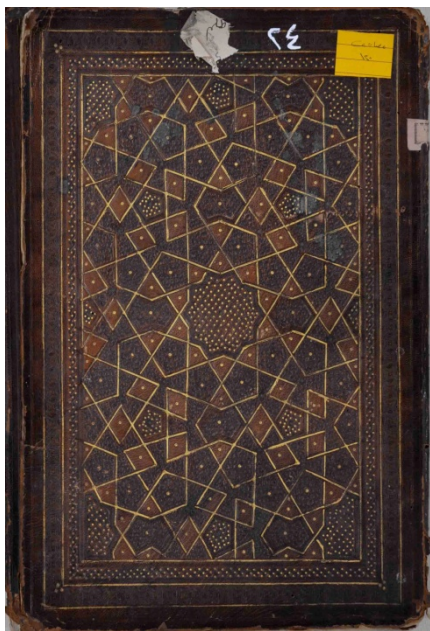


Fig. 5.26 : *Juz' 24* of a Qur'an cover with *waqf* for Sultan Barquq, DAK Rasid 120, 38 x 27cm.

⁷⁷ DAK Rasid 120, see fig. 4.53.

⁷⁸ Behrens-Abouseif, 2007, op.cit., pp.290-2.

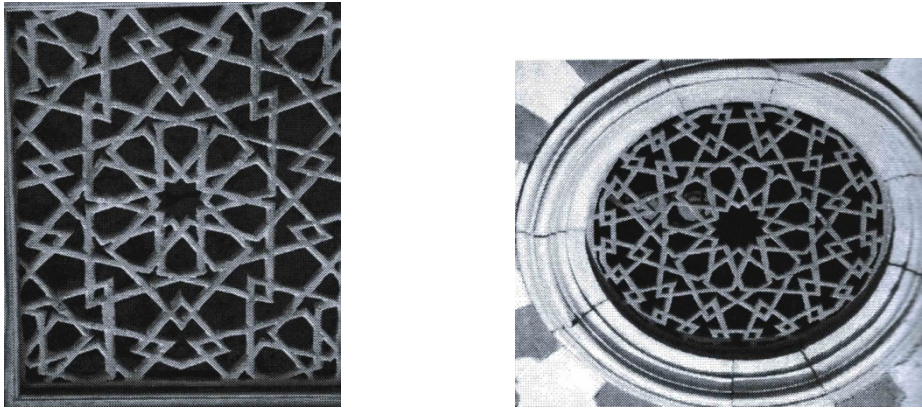


Fig. 5.27: Window grilles from the *madrasa* and *khanqah* of Sultan Barquq, 786-88/1384-6. After Mols, op.cit., 2006, Pls.93 and 95.



Fig. 5.28 : Panel from the *sabil maktab* of Qaytbay dated 884/1480.

These patterns of geometrical rosettes with overlapping rhombs also continue to be used in woodwork and are found decorating the *minbar* of Qaytbay in his funerary complex in the cemetery built between 876-8/1472-4.⁷⁹ (Fig. 5.29)

⁷⁹ Behrens-Abouseif, op.cit., 2007, pp. 273-78.

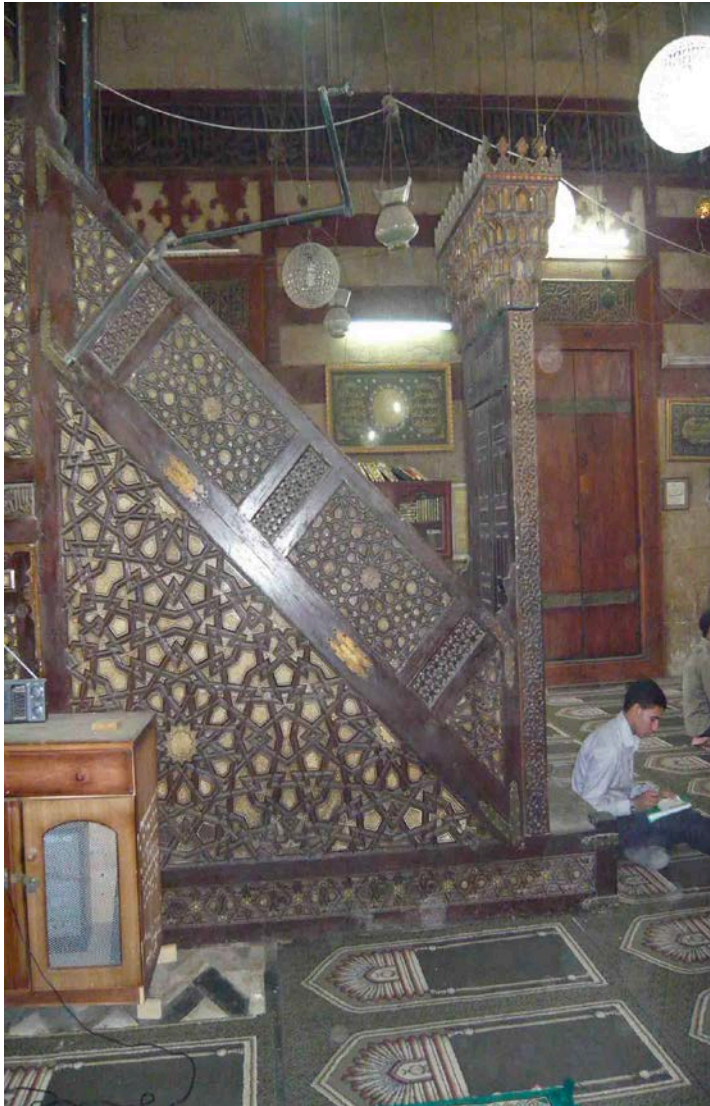


Fig. 5.29 : *Minbar* of Qaytbay in his funerary complex in the Northern Cemetery dated 876-8/1472-4.

The series of Qur'an *juz'* described above with a *waqf* for Sultan Barquq have elegant tooled arabesques on their flaps.⁸⁰ (Fig. 5.30) The use of the arabesque has a long history in Islamic ornament being found in various formulations and media from early times.⁸¹ In the Mamluk context arabesque decoration is found on metalwork and in the illumination of the borders of illuminated Qur'ans from

⁸⁰ DAK Rasid 120, see fig. 4.53, 4.54, see also fig. 6.26, for comparison with the flap of a Jalayirid binding.

⁸¹ Kuhnelt, *Die Arabeske*, Wiesbaden, 1949; Baer, *Islamic Ornament*, New York, 1998, pp. 7-27.

the early 14th century therefore it is surprising given the close relationship that exists between illumination and bindings, that they only appear on bindings in the last quarter of the 14th century.⁸² These arabesques are distinguished by their voluptuous leaves and a similar pattern is found decorating the niches of the transitional zone of the dome of the funerary complex of Faraj ibn Barquq (802-813/1400-11) in the Northern Cemetery.⁸³ (Fig. 5.30)



Fig. 5.30 : *left* Arabesque decoration in the niche of the mausoleum of Faraj ibn Barquq in the Northern Cemetery. *right* Flap of the binding with a *waqf* for Sultan Barquq, DAK Rasid 120.

The use of star patterns and the geometrical rosette appears in metalwork and architectural decoration representing a continuation of a decorative tradition

⁸² See for example, fig. 6.10 for the frontispiece of the Qur'an for Baybars Jashnagir.

⁸³ Behrens-Abouseif, op.cit., 2007, pp. 231-7.

from the pre-Mamluk period. From the evidence that we have to hand, these patterns appear in woodwork and architectural decoration earlier than in illumination and bookbindings which could suggest that the decoration was transferred from these media into illumination and bookbindings. However, since there is a dearth of dated illuminated manuscripts and bookbindings from this early period such assumptions need to be discounted; the arts of the book with the designs created on paper would seem a more probable source. Behrens-Abouseif notes that the designers, *rassāmīn*, who worked in the shops in Cairo's markets created designs for the élite as well as the bourgeoisie and drew analogies between the arts of the book and the decoration of the mosque of Sultan Hasan.⁸⁴ In his study of the complex of Sultan Hasan, Kahil also observes that many of the decorative features those of the arts of the book revealing a cross-fertilisation between the various media.⁸⁵

Comparisons have also been made between some of the bindings with illumination and bookbindings produced during the Ilkhanid period; the relationship will be discussed in more detail in Chapter 6. What can be established is that these patterns were used extensively and therefore provided the core of what is termed the Mamluk style. They are found on bookbindings from the end of the 14th century onwards and were most probably used before then although no extant dated evidence is available.

As far as the rosette profile is concerned, it is used extensively in illumination and metalwork as a cartouche, usually carrying the dedication to the library of a

⁸⁴ Behrens-Abouseif, *op.cit.*, 2007, p.41; Lecture Royal Asiatic Society, November 6th, 2010.

⁸⁵ Kahil, *The Sultan Hasan Complex in Cairo, 1356-1364*, Ph.D Thesis, New York University, 2002.

patron, the name of the scribe or the titles of the sultan. This simple profile is used throughout the period in manuscripts for the titles of the manuscripts and dedications to the patron's library. It is also used in metalwork as a cartouche to frame ornament or the names and titles of the commissioning sultan. This is also derived from a pre-Mamluk tradition and, as already noted, the origin lies in the guilloche, an ancient Near Eastern motif that was used in mosaics and ceiling designs in Roman and Byzantine eras.⁸⁶

In illumination, an eight-lobed rosette repeat pattern forms part of a double frontispiece of a two-volume Qur'an which was endowed by Sultan Sha'ban to the *madrasa* of his mother on 15th Sha'ban 770/25th March, 1369.⁸⁷ (Fig.5.31) The illumination is attributed to Ibrahim al-Amidi on the basis of stylistic comparison with the illumination of Qur'an signed by him and completed on 15th Muharram 774/12th July 1372 which was endowed by Sultan Sha'ban to his *madrasa* in Muharram 778/May-June 1376.⁸⁸ James notes that his work belongs to a completely different tradition of painting and suggests that it may reflect a style of illumination current in Iraq or Iran with some Anatolian connections as his *nisba* indicates.⁸⁹ Rosettes are also used in Ilkhanid illumination, for example a repeat pattern of eight-lobed rosettes also occurs also on the frontispiece of the Uljaytu Mosul Qur'an which supports James' proposal that al-Amidi had received his training outside Cairo in either Iraq or Iran.⁹⁰ It has to be noted that

⁸⁶ Rawson, op.cit., 1984, p.156; see Ch. 5, p. 350.

⁸⁷ DAK Rasid 9, 75.5 x 56cm; James, op.cit.,1988, Cat.31, pp. 209-211.

⁸⁸ DAK Rasid 10, 105 x 77cm; Ibid., Cat.32, pp. 198-201.

⁸⁹ Ibid., pp. 197-204.

⁹⁰ Ibid., p. 202-4; see fig. 6.8 for the binding.

although lobed rosette profile is found extensively on the bindings of Mamluk manuscripts, they appear as single entities filled with dense tooling or geometric ornament and not as repeat patterns.⁹¹



Fig. 5.31 : *left* One half of a double frontispiece of a Qur'an c.769-70/1367-9 bequeathed by Sultan Sha'ban to his mother's *madrasa*, DAK Rasid 9. *right* Frontispiece of Uljaytu Mosul Qur'an, Juz' 2, 706/1306-7, TIEM 540.

James attributes the illumination of another Qur'an which contains a *waqfiyyah* in the name of Sultan Faraj ibn Barquq to Ibrahim al-Amidi.⁹² The illumination of one of the frontispieces of this Qur'an is arranged in a pattern divided by irregular interlocking segments. (Fig. 5.32) The use of these irregular interlocking segments in the illumination can be compared to the decoration of two bindings published by Weisweiler which he dates on the basis of the date of the manuscript to Damascus and Kerak to 715/1314 and 719/1319

⁹¹ See fig. 4.67 and 4.70 for rosette profile binding.

⁹² CBL 1464, Juz' 4, 27 x 19.7cm; James, op.cit., 1988, Cat.35, Fig.144 and 145; Other volumes BL Or.848, Juz' 9; CBL 1465, Juz' 12.

respectively.⁹³ The occurrence of this organization of the pattern in the illumination of al-Amidi and on the bindings which were produced in Syria may be an indication of a separate binding tradition based on other influences because the pattern is not found on the bindings in this study that can be attributed to Cairo.



Fig. 5.32 : *left* Cover of binding with manuscript dated to Kerak 719/1319, Staatsbibliothek, Berlin, Ms. Or. Quart 2008 (Tub), 26.5 x 18cm. After Weisweiler, op.cit., Pl.20. *right* Left-hand frontispiece, Juz'4, fol.2b of a Qur'an illuminated by Ibrahim al-Amidi, CBL.1464, Juz'4, 27 x 19.7cm. After James, op.cit., 1988, Fig.144.

It was also noted in Chapter 4 that two bindings published by Weisweiler dated to Damascus 864-5/1461-2 can be compared to three loose bindings published in the Chicago catalogue which have been attributed to South Arabia.⁹⁴ The binding decoration is based on a six-pointed curvilinear star with overlapping

⁹³ Staatsbibliothek Berlin, Ms. Or. Quart. 2008, 26.5 x 18cm. (Tub), 26.5 x 18cm; Weisweiler, op.cit., 1962, no. 34, Pl. 18 (Damascus); Şehid Ali, Istanbul, 378, 25.5 x 18cm; ibid., no. 319, Pl.20 (Kerak); see fig.4.69 for the discussion of these bindings.

⁹⁴ Staatsbibliothek Berlin, Wetzstein II 1708 (Tub), 18.9 x 13.2cm; Weisweiler, op.cit., no. 164, Pl.52;

circles and a similar pattern is used for a tooled doublure on a Qur'an with a *waqf* for Sultan Barsbay.⁹⁵ (Fig. 5.33 and 5.34) The composition bears a close resemblance to patterns used in metalwork. For example, the internal pattern on the tray of an incense burner made for Sultan al-Nasir Muhammad is also based on a curvilinear interlaced six-pointed star.⁹⁶ (Fig. 5.33) Later, this is also included as one of the motifs of the inlaid marble panels on the tomb of Sultan Qansuh al-Ghuri. (Fig. 5.40) This shows the continual interchange of designs and patterns between various media over long periods of time.

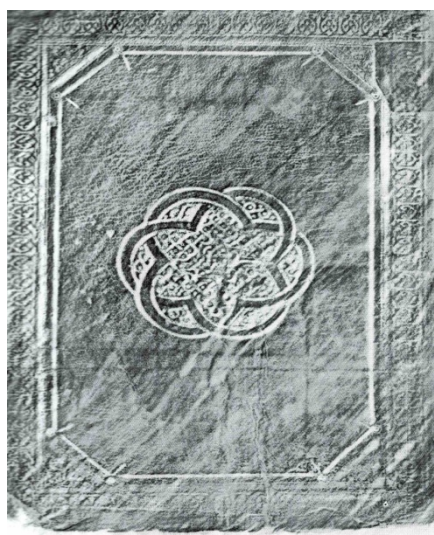


Fig. 5.33 : Cover dated by manuscript to Damascus, 864-5/1461-2, Staatsbibliothek Berlin, Wetzstein II 1708 (Tub), 18.9 x 13.2cm. After Weisweiler, op.cit., Pl.52.

⁹⁵ Staatsbibliothek Berlin, Wetzstein II 1708 (Tub), 18.9 x 13.2cm; Weisweiler, op.cit., no. 164, Pl.52; DAK Rasid 108, see fig. 4.102 for the binding.

⁹⁶ Allan, op.cit., 1982, Cat.15, p. 89.



Fig. 5.34: *left* Incense burner tray made for Sultan Muhammad ibn Qala'un (693-741/1294-1340. After, Allan, op.cit.,1982, Cat.15, p.89. *right* Detail of a tooled doublure of a binding for Sultan Barsbay, DAK. *Juz'* 28, Rasid 108.

In Chapter 4, it was noted that the lobed rosette profile with geometrical ornament is first found on the bindings of this study on the covers of the Mubarak Shah al-Suyufi Qu'ran dated by manuscript to 745/1344 and on later bindings produced at the end of the 14th century.⁹⁷ (Fig.5.35) The use of the lobed rosette with and without pendants continues to be used on bindings during the reign of Sultans Barsbay and Jaqmaq. ⁹⁸ However, a medallion profile (without lobes) with pendants is found in several mosques decorating the walls with stucco ornament much earlier than this. It also occurs as stucco decoration on the exterior the transitional zone of the dome of the funerary complex of Amir Sunqur al-Sa'di where the medallions are filled with patterns of intricate geometrical interlace based on stars and geometrical rosettes. (Fig.5.24)

⁹⁷ TSK Y.2468; see fig. 4.93.

⁹⁸ See for example, fig. 4.94 for CBL 1495 and fig. 4.95 for DAK Rasid 74.

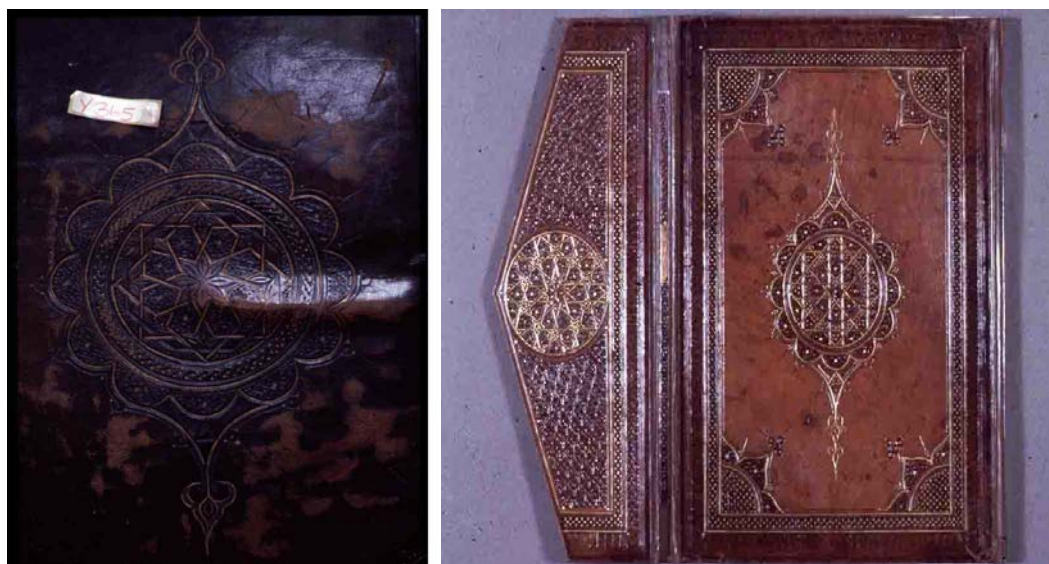


Fig. 5.35: *left* Detail of front cover of Qur'an copied in 745/1344, TSK Y.2468. *right* Front cover of *Juz' 28* of Qur'an dated before 802/1400 copied for Aytмыш al-Bajasi, CBL 1495.

They occur on the *qibla* wall of the Mosque of Maridani which was completed in Ramadan 740/March 1340 where they are filled with arabesque ornament.⁹⁹

(Fig. 5.36) They also appear in the mausoleum of Sultan al-Ashraf al-Din Kujuk, attached to the Mosque of Aqsunqur (747/1347)¹⁰⁰ and in marble in the *madrasa* of Amir Sarghitmish (756/1356) where they are also filled with carved arabesques.¹⁰¹ (Fig.5.36) The tooled bindings with the lobed rosette profile are usually filled with geometric ornament but filigree bindings dated to the end of the 14th century also use the arabesque for their central medallion.¹⁰² Given that these medallions with pendants can be closely associated with binding

⁹⁹ Altinbugha Maridini was one of the sons-in-law of Sultan al-Nasir Muhammad and died in 744/1343 while he was Governor of Aleppo; Behrens-Abouseif, op.cit., 2007, pp.183-185.

¹⁰⁰ Sultan Kujuk was a son of al-Nasir Muhammad and step-son of the Amir Aqsunqur and ruled briefly between Safar 742/August 1341 and Rajab 742/January 1342; Behrens-Abouseif, op.cit., 2007, pp.187-189, fig.143.

¹⁰¹ ibid., pp.197-199 and fig. 159.

¹⁰² See pp. 260-79 for discussion of filigree bindings.

decoration it suggests that they occurred most probably earlier on bookbindings as well but dated examples are not available to support this.



Fig. 5.36: Decoration of stucco medallions on the walls of the Al-Maridani Mosque dated 740/1340.

The lobed rosette profile, as opposed to the medallions noted above, occurs as stucco decoration on the walls of the funerary complex of Sultan Mu'ayyad Shaykh (815-824/1412-1421) built between 817- 822/1415-1420 where they are filled with elegant arabesques that were once gilded.¹⁰³(Fig. 5.37) The use of the lobed profile with arabesque ornament occurs on filigree bindings of the late 14th century and will be discussed below.

¹⁰³ Behrens-Abouseif, op.cit., 2007, pp.239-244.



Fig. 5.37: Gilded stucco decoration on the walls of the funerary complex of Sultan Al-Mu'ayyad Shaykh, 817- 822/1415-1420.

Wooden painted ceilings were used to adorn many religious institutions throughout the Mamluk period. Allan, in his study of wooden ceilings in the Islamic world, records the numerous geometrical patterns that occur on the ceilings from the middle of the 9th century, most notably on of the mosque at Shibam, Yemen dated to the middle of the 9th century.¹⁰⁴ Many of these patterns are reflected in the painted ceilings of the Mamluk period. The painted patterns that adorn the ceiling of the mosque and *khanqah* of Shaykhu al-Umari built between 749-58/1349-57 are a particularly appropriate example as they have

¹⁰⁴ Allan, 'The Transmission of Decorated Wooden Ceilings in the Early Islamic World', *Learning, Language and Invention: Essays presented to Francis Maddison*, ed. Hackmann and Turner, Aldershot, 1994, pp.1-24.

eight-lobed rosettes which contain patterns of interlace based on eight-pointed stars combining the two dominant forms of ornament found on bindings of the Mamluk period of the 14th and first half of the 15th century.¹⁰⁵ (Fig. 5.38)



Fig. 5.38: Painted ceiling in the *khanqah* of Shaykhu. After Behrens-Abouseif, op.cit., 2007, Fig.150.

The use of the star patterns, geometrical rosettes and lobed rosettes define the decorative repertoire of the 13th and 14th and the first half of the 15th century in Mamluk Cairo. These patterns continued to be used for book bindings to the end of the Mamluk sultanate but by the second half of the 15th century other repertoires of ornament based on a different aesthetic make their appearance and this is to be discerned in the almond and cloud-collar profiles which are discussed below.

¹⁰⁵ Behrens-Abouseif, op.cit., 2007, pp.191-195.

In discussing bindings with almond and cloud-collar profiles which occur on Mamluk bindings from the middle of the 15th century, the earliest Mamluk example in this study and other published examples is dated to 848/1444 by the *waqf* inscription endowing it to the mosque of Qadi Zayn al-Din where it appears on the covers as a simple almond profile used in combination with the half-cloud collar (cut vertically) profile for the flap.¹⁰⁶ The almond profile of the front cover is filled with dense vegetal ornament and although some doubt must be expressed as to whether the binding is contemporary with the date of the *waqf*, it will be considered. The second example is the binding of a *Saḥīḥ* of Bukhari which was copied for the Sultan Khushqadam dated 867/1462 and a series of *juz'* of a Qur'an whose covers have a lobed almond profile in filigree leather on a textile background which were dedicated to the library of Sultan Khushqadam.¹⁰⁷ From the period of Sultan Qaytbay both the lobed and plain almond profiles appear in great numbers on bindings usually accompanied by the half cloud-collar for the flap. There are, however, only a few examples which employ the full cloud-collar. Unlike the rosette, star patterns or the geometrical rosette, their occurrence in other media is quite rare. In fact, I have only been able to record four instances and all can be dated to the late Mamluk period.¹⁰⁸

The first example is the appearance of the lobed almond profile in the inlaid-marble decoration of the *mihrab* arch signed by Abd al-Qadir al-Naqqash in the Mosque of Abu Bakr ibn Muzhir (883-4/1479-80).¹⁰⁹ (Fig.5.39) Similar

¹⁰⁶ CBL 1507; see fig. 4.107 and 4.53 for discussion of this binding.

¹⁰⁷ TSK A.649, see fig.4.112. ; DAK Rasid 104, see fig. 4.147.

¹⁰⁸ A lobed almond profile in a stucco window occurs in the mosque of Barsbay in the Northern Cemetery but this appears to be a later addition inserted during its restoration.

¹⁰⁹ See Behrens-Abouseif, op.cit., 2007, pp. 284 – 286 for discussion of this mosque.

decoration, also signed by Abd al-Qadir al-Naqqash, is found above the *mihrab* of the mosque of Qijmas al-Ishaqi (884-886/1479-82), however here a large six-lobed rosette in red surrounds the signature.¹¹⁰



Fig. 5.39 : Inlaid marble decoration in the *mihrab* arch of the mosque of Abu Bakr ibn Muzhir. Image courtesy of S. de Giosa.

The second example of the lobed almond profile is found in the marble decoration of the inlaid panels of the funerary complex of Qansuh al-Ghuri which has an eight-pointed star at its centre and is surrounded by arabesques. A similar design is also found on one of the bindings of this study.¹¹¹ (Fig. 5.40) Along with the lobed almond, cloud-collar cartouches are also included with heart-shaped knots in their borders, the significance of which will be discussed below in relation to their appearance in other media and on bookbinding doublures.¹¹²

¹¹⁰ Ibid., pp. 286-290; see fig. 5.66 for the decoration in the mosque of Qijmas al-Ishaqi.

¹¹¹ See TKS A.2926, fig. 4.119.

¹¹² See fig. 5.69-5.73.



Fig. 5.40 : Details of inlaid marble panels of the funerary complex of Sultan Qansuh al-Ghuri. After Prisse D'Avennes, *Arab Art*, Reprint, Al-Saqi Books, 1983, Fig. 55.

The third example is the use of the cloud-collar profile in illumination as a cartouche giving the dedication of the manuscript to the library of the Sultan Qaytbay.¹¹³ (Fig. 5.41)

¹¹³ Staatsbibliothek Berlin, Ms. Or. Fol.1623, 42.5 x 31.2cm; Weisweiler, op.cit., 1962, no. 6, p. 80; see fig. 4.148 for the binding.



Fig. 5.41 : Fol.1a of *Kawātib al-Durriyya* copied for Sultan Qaytbay with *waqf* dated 881/1476. Staatsbibliothek Berlin, Ms. Or. Fol.1623 (Marburg), 42.5 x 31.2cm. Image Staatsbibliothek, Berlin.

The fourth example is the use of the cloud-collar profile on a steel standard for the Mamluk Sayf al-Din Tarabay whose mausoleum was completed in 908-909/1503-4.¹¹⁴ (Fig. 5.42)

¹¹⁴ New York Metropolitan Museum of Art, 36.25/1961; Atil, op.cit., 1982, Cat. 43;



Fig. 5.42 : Detail of steel standard made for Tarabay c.905/1500, Metropolitan Museum of Art, 36.25. 1961. After Atil, op.cit.,1982, Cat.43, p.116.

These examples beg the question why there is such a lack of these profiles in other media when they occur extensively on bindings of the late Mamluk period and why there appears to be a gap of some twenty years between the first example of an almond profile with a cloud-collar profile for the flap on a binding dated by a *waqf* inscription of 848/1444 (if it is contemporary with the binding) and later occurrences; the earliest in this study being 867/1462 which has a lobed almond profile for the cover.¹¹⁵ The proliferation of these profiles on bookbindings alone, as has been suggested already is because they were directly absorbed from bookbinding prototypes or designs that had originated in other bookbinding traditions. For this reason their transfer into other media was a gradual process.

¹¹⁵ CBL 1507 dated 848/1444 see fig.4.107; TSK A.247/2 dated 867/1462 see fig. 4.111 for discussion of this binding.

It would be easy to dismiss the binding with the *waqf* dated 848/1444 for the mosque of Qadi Zayn al-Din as a later rebinding which I have already considered in Chapter 4 but consideration of the ornament of the profile of the front cover broadens the discussion. The binding has an elongated lobed almond profile filled with dense vegetal ornament on the front cover while the plain almond profile for the back cover which has densely tooled work painted in gold and overlaid with a painted gold trellis. (Fig. 5.43) This vegetal ornament can be compared the cover of an earlier binding with a manuscript copied for the Sultan Barsbay and a *waqf* dated 17th Safar 831/6th December 1431 which has filigree doublures.¹¹⁶ (Fig. 5.44) The front doublure consists of a round circle filled with filigree work in a trellis pattern and the back doublure has a plain almond profile filled with the same trellis work. (Fig. 5.42)



Fig. 5.43: Detail of front and back covers of binding with *waqf* dated 848 /1444, CBL 1507. Image courtesy of Chester Beatty Library.

¹¹⁶ BL Or.13286, 32.5 x 28.5cm; see fig. 4.110 for discussion of this binding and 6.50 for comparison with an Ottoman binding.



Fig. 5.44: Front cover and front doublure of a binding for Sultan Barsbay with *waqf* dated 831/1431. BL Or.13286, 32.5 x 28.5cm. Image British Library.

The style of these doublures can be directly compared to those being produced in the Ottoman realm in the 1430s for the Ottoman Sultan Murad II (r.823-

854/1421-1451).¹¹⁷ These Ottoman bindings also have lobed almond profiles and the same segmented knotted borders as the Barsbay example. The interiors of the almond and medallion profiles were filled with arabesque work terminating in small trefoil forms but do not have the same dense nature of the intertwining scrollwork in the Mamluk examples. The relationship between the Mamluk and Ottoman binding traditions will be discussed in more detail in Chapter 6 but here it is necessary to offer a possible explanation for the early occurrence of these profiles in the context of the Mamluk binding tradition. It is conceivable that that this was bound for Barsbay in the Ottoman style as it stands as a singular example of binding decoration during this period. Sultan Barsbay was known to have had works translated into Turkish for him and enjoyed the company of the Qadi and historian Badr al-Din al- Ayni who lectured him on historical subjects reading books to the Sultan in Arabic and then explained by him in Turkish.¹¹⁸ Also, Barsbay's reign was marked by conflict with the Ottomans as both wrestled for control over the state of Karaman which tried to maintain its independence by shifting allegiance from one side to the other. In 836/1433, two cousins of Murad II, Suleyman and his sister Fatima Şehzade, sought refuge in Cairo where they were treated well by the Sultan who refused to surrender them to Murad II. A peace settlement was finally reached with the Ottomans in Shawwal 840/May 1437 and the alliance was cemented by Barsbay's marriage to Fatima who took the name Hund Şehzade.¹¹⁹

¹¹⁷ Raby and Tanındı, op.cit., 1993, pp. 29-33; see fig. 6.50.

¹¹⁸ Badr al-Din was born in 762/1360 in Gaziantep in present day Turkey. He had a distinguished career in Cairo and was appointed as ambassador to the Karamanids in 823/1420 by Sultan Al-Mu'ayyad Shaykh. He was appointed Qadi of the Hanafi rite by Sultan Barsbay and died at the age of ninety-three in 855/1451 and was buried in his own *madrassa* in Cairo. Schimmel, 'Some Glimpses of the Religious Life in Egypt during the Later Mamluk Period', *Islamic Studies*, Vol.4, 1965

¹¹⁹ Har-El, op.cit., 1995, p.73.

As such the ornament of the cover of this binding may then have been repeated on the binding made *waqf* in 848 /1444 contained within a simple almond profile with the addition of a cloud-collar profile for the flap. The cloud-collar also appears on Ottoman bindings in the 1440s inspired by Timurid examples.¹²⁰ The decoration of the front cover stems from an arrangement of a four lobed centre extending into four spade-like motifs which can be compared the arrangement found on Timurid bindings of the beginning of the 15th century. (Fig.5.45)

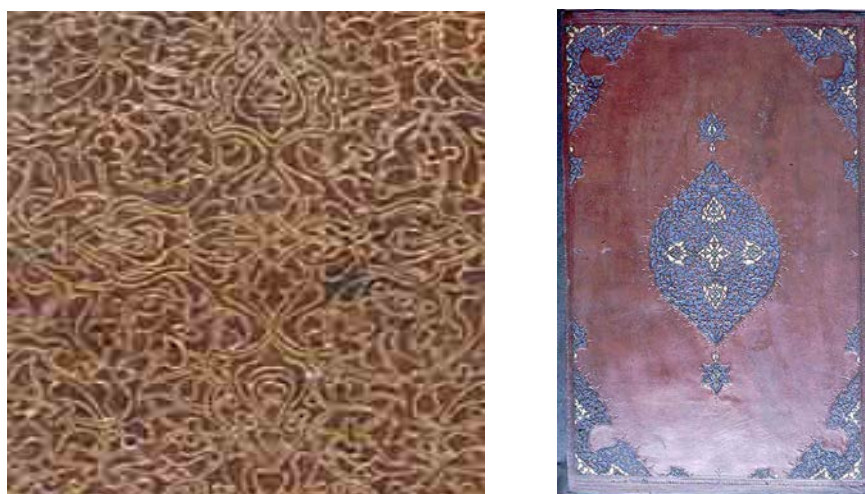


Fig. 5.45 : *left* Detail of decoration of front cover of Qur'an with *waqf* for 848 /1444, CBL 1507. *right* Doublure of binding of a *Kalila wa-Dimna* produced for Baysunghur in Herat with manuscript dated 833/1429, TSK R.1022.

In looking for parallels with this ornament, the illumination of the frontispiece of a Qur'an made *waqf* for Barsbay may hold some answers.¹²¹ (Fig. 5.46) The design of the illumination of this frontispiece is far more finely conceived than that of the ornament of the binding and the four-lobed centre is set differently but the spiralling scrollwork bears some resemblance to that of the ornament

¹²⁰ Raby and Tanındı, op.cit., 1993, p. 40.

¹²¹ DAK Rasid 98, 53 x 41cm, *Juz'1*, fol.1a; Atil, op.cit., 1981, Cat.7, p.42; Allan, op.cit., 1989, Fig.2.

described above and can be compared to that found in Timurid illumination and metalwork. As this style of ornament appears in illumination of the period then it might be expected that it occurs on bindings as well. It may also be an indication of Timurid influences on binding in Cairo in the first quarter of the 15th century and as such could explain the early appearance of the cloud-collar profile on the flap of CBL 1507.¹²²

Allan in an article on the potential provenance of Veneto-Saracenic metalwork drew a comparison with these illuminated designs of the frontispieces of the Qur'an for Sultan Barsbay described above and that of a dish by Mahmud al-Kurdi in the Louvre.¹²³ The illumination of the panel in the frontispiece of the Qur'an has the same cruciform stem highlighted in white and can be compared to the layout of the dish. Allan points to the decline of the metalwork industry in the late 14th century and suggests that when the metal industry revived, metalworkers had to turn to other sources for inspiration as there were no examples of inlaid metalwork in production to provide scope for development.¹²⁴ Similar comparisons can be made with a filigree cover of the late 15th century which will be discussed below.¹²⁵

¹²² Cloud-collar profiles occur on Ottoman bindings from the 1430s as a result of Timurid influences; see Ch. 6, p.480.

¹²³ Allan, *op.cit.*, 1989; Louvre, Inv. no. OA. 7526.

¹²⁴ *Ibid* and see Allan, *op.cit.*, 1984.

¹²⁵ See Fig.5.62 and 5.63.



Fig. 5.46: Half of an illuminated double frontispiece and detail of a Qur'an made *waqf* for Sultan Barsbay for his *madrasa* in Cairo, DAK Rasid 98, Fol. 2a, 51.8 x 41cm. After Atil, op.cit., 1981, Cat.7.

The bindings discussed above can be considered as Mamluk examples which bring together a combination of styles drawn from different contexts but unfortunately, given the lack of other binding examples in this style from this period, it is difficult to trace these developments. It might be that binding styles

incorporated the almond and cloud-collar profiles from the 1430's but there is not the extant evidence to support this.

It can be said, however, with some confidence that bindings with the lobed almond and cloud-collar profile begin to occur in some numbers from the 1460's. The earliest tooled example is dated by manuscript to 867/1462 which was copied for Sultan Khushqadam.¹²⁶ The centre of the lobed almond profile has four gilded fleur-de-lis at each of the cardinal points and the design was later repeated for a filigree doublure of another binding made for Qaytbay.¹²⁷ A similar pattern is also noted in the carved decoration of the *wakala* of Qaytbay where the placement of the four finials derived from those used in bookbinding are centred over intricately carved arabesque decoration in the same manner. (Fig. 5.47) Behrens-Abouseif notes that these panels were inserted and framed by mouldings in several monuments indicating that they were mass-produced and suggesting a dissemination of standardised elements derived from the arts of the book.¹²⁸

¹²⁶ See fig. 4.111.

¹²⁷ See fig. 4.190.

¹²⁸ Behrens-Abouseif, op.cit., 2007, p.90.



Fig. 5.47 : *left* Detail of binding for Khushqadam dated 867/1462, TSK. A.247/2. *right* Carved panel in the *wakala* of Qaytbay. After Behrens-Abouseif, op.cit., 2007, Fig.36.

In Chapter 4, I referred to a group of bindings which use the quatrelobe split palmette as a motif to mark the centre of the arabesque design of the interior of the profile.¹²⁹ (Fig.5.48) The motif also occurs as part of a pattern for a doublure of a binding with a *waqf* for the Sultan Barquq.¹³⁰

¹²⁹ See fig. 4.113.

¹³⁰ See fig. 4.185.

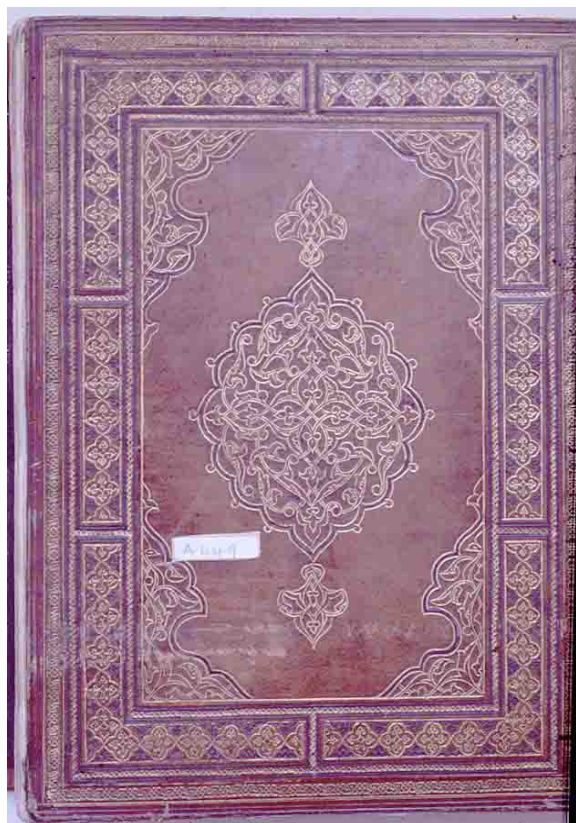


Fig. 5.48 : Front cover of binding with *waqf* for Sultan Qaytbay dated 895/1490, TSK A.649, 36.5 x 26cm.

As already noted in Chapter 4 this motif is used extensively in Timurid metalwork.¹³¹ Auld notes it is found in Timurid ornament on a lamp-stand which carries Timur's name and titles dated 781/1379 and in the illumination of the *Dīwān* of Sultan Ahmed Jalayir dated Dhu 'l- Hijjah 809/June 1406.¹³² She states that the motif is rare in the Mamluk context but it appears on the metalwork of the Veneto-Saracenic group of objects whose production she assigned to Mamluk Cairo or Syria.¹³³ A variation of the form also occurs at the centre of the illuminated frontispiece of the Qur'an copied for Barsbay illustrated

¹³¹ See, p.227 n.246; Auld, op.cit. London, 2004, p. 86-87.

¹³² State Hermitage Museum, St. Petersburg, inv. no., SA-15931 and SA-12686; Auld, op.cit., p.86, Komaroff, *The Golden Disk of Heaven, Metalwork of Timurid Iran*, California and New York, 1992, pls.19, 23, 24 and 64; *The Dīwān* of Sultan Ahmad Jalayir, TIEM 2046, see fig. 6.34 and 6.35 for binding.

¹³³ Auld, op.cit., 2004, p.60.

above.¹³⁴ (Fig.5.46) It also appears in illumination of the Qaytbay period
decorating the cartouche of a Qur'an made *waqf* for him. ¹³⁵ (Fig.5.49)



Fig. 5.49 : Detail of the illumination of a frontispiece of a Qur'an made *waqf* for Qaytbay, DAK Rasid 88.

It is also found in Mamluk metalwork for example on an incense burner in the Aron collection dated to the 15th century and on another in the British Museum both of which are included in the metalwork group dubbed Veneto-Saracenic and this association will be discussed in more detail below.¹³⁶ (Fig. 5.50).

¹³⁴ See fig. 5.46.

¹³⁵ See fig. 4.59 for this binding.

¹³⁶ British Museum, Inv. no.1882 3-21 20; Auld, op.cit., 2004, fig. 1.27, p.127; Allan, Metalwork of the Islamic World, The Aron Collection, London, 1986, Cat.17, p.102.



Fig. 5.50: Incense burner, late 15th century. After Allan, *Metalwork of the Islamic World, The Aron Collection*, London, 1986, Cat.17, p.102.

This motif has a long history but the important question is why it appears extensively on this particular group of bindings of the late Mamluk period. As we noted in Chapter 4, it is from the 1460's onwards that one notes the introduction of new techniques and ornament for the decoration of bindings derived from Iran. Atil has noted Turcoman influence in the painting of the miniatures of the *Iskandernāme* of Ahmadi dedicated to the Mamluk official Khushqadam ibn Abdallah, the treasurer of Al-Sayfi Ali Bay, who was the secretary to Sultan Timurbugha whose reign lasted for two months between Jumada I 872/December 1467 and Jumada II 872/ January 1468.¹³⁷ As his reign coincided with the fall of the Qarakoyunlu, she attributes this to the movement of artists to Cairo from the court atelier of Pir Budaq in Baghdad after its dispersal in 870/1466.¹³⁸ The lobed profile, does, however, occur earlier than this during the reign of Khushqadam which suggests earlier influences. The borders of an illuminated page of a copy of the *Kawākib al-Durriyya* with a dedication to the

¹³⁷ Atil, op.cit.,1981, pp.252-3, 'Mamluk Painting in the late Fifteenth century' *Muqarnas*, Vol.2, 1984, p.163.

¹³⁸ Ibid.

Sultan are decorated in gold with abundant floral decoration in the Shirazi style which also occurs later in the manuscripts for Qaytbay.¹³⁹ (Fig. 5.51)



Fig. 5.51 : Frontispiece of the *al-Kawākib al-durriyya fī madḥ khayr al-bariyya* copied for Sultan Khushqadam, BNF arabe, 3183, fol.3 30 x 21cm. After BNF, op.cit., 2001, Cat.74.

David James also notes changes in the illumination of Qur'ans at the end of the 15th century which are ascribed by him to the presence of Turcoman artists from the Aqqoyonlu dominions working in Egypt and Syria.¹⁴⁰

The quatrelobe split palmette motif occurs on Timurid and Turcoman bindings as a centre-piece for the cover which suggests is that the adoption of this motif formed part of the introduction of new styles of ornament for bindings.¹⁴¹ This

¹³⁹ BNF arabe 3183; BNF, op.cit., 2001, Cat.74, p.105; see fig. 5.55 for Qaytbay illumination.

¹⁴⁰ James, op.cit., 1992, p. 46 and Cat.16; Khalili Collection, QUR213, 21.5 x 15.5cm completed in 895/1489 in Aleppo however bears little resemblance to the styles of illumination found on the manuscripts for Qaytbay or Khushqadam.

¹⁴¹ The quatrelobe split palmette motif was also noted on block-printed doublures of a Qur'an *juz'* for Sultan Barquq but this may be a later repair. See fig. 5.68.

may have stemmed from the presence of binders, as well as illuminators, in Cairo who had previously been employed in the Turcoman court ateliers who brought with them new designs which served as inspiration for these bindings. The quatrelobe split palmette also occurs in Ottoman bindings and illumination at the same time as will be discussed in more detail in Chapter 6.¹⁴²

It is in this period that floral designs including lotus flowers, buds and oak leaves are found decorating the covers. The ornament of the binding thought to have been produced for Amir Qansuh Khamsmiyya, who was named in the filigree doublures as *Amir Akhur* a position which he held between 884-896/1480-91 is a very fine example.¹⁴³ (Fig. 5.52) All these forms are derived from the Timurid repertory and the use of gilded areas in a design is a feature found extensively on Turcoman bindings.¹⁴⁴



Fig. 5.52 : Detail of tooled flap of a Qur'an made for Qansuh Khamsmiyya dated to between 886-902/1481-1496, TIEM 508.

¹⁴² See fig. 6.62

¹⁴³ TIEM 508; see fig. 4.120.

¹⁴⁴ See fig. 6.40 and 6.41.

The combination of these floral forms with the arabesque mark the introduction of new styles as Behrens-Abouseif notes, ‘The arts of the Qaytbay period display new patterns in the floral repertoire of architectural decoration and in the decorative arts and book illumination. For the first time in Mamluk art, we find naturalistic flower motifs integrated between arabesques, in masonry, stucco, marble carving and inlay.’¹⁴⁵ The arabesque with floral motifs is used extensively in stone carving during the Qaytbay period, for example in the spandrels above the door at Al-Azhar which was built by Qaytbay (873/1479) and on the façade of the *sabil maktab* in Saliba Street, Cairo (884/1480).¹⁴⁶ (Fig. 5.53)



Fig. 5.53: Detail of floral decoration with arabesques on the façade of the *sabil-maktab* of Qaytbay in Saliba Street.

¹⁴⁵ Behrens-Abouseif, op.cit., 2007, p.90.

¹⁴⁶ Ibid., pp. 290-2.

These naturalistic floral forms are also noted in metalwork, for example on the candlesticks made for Fatima al-Khassbakiya, the wife of Qaytbay, thought to have been made in Damascus. Allan notes that although the inscription bands interspersed by roundels are typical of Damascus work, the decoration alludes to Turcoman metalwork from north-western Iran and Anatolia.¹⁴⁷ (Fig 5.54) The same floral motifs are also found on the candlesticks commissioned by Sultan Qaytbay for the Tomb of the Prophet and his gift is recorded in the inscription that they bear.¹⁴⁸



Fig. 5.54 : Candlestick made for Fatima al-Khassbakiyya, wife of Sultan Qaytbay, Museum of Islamic Art, Doha. After Allan, *op.cit.*, 2002. Cat.10.

¹⁴⁷ This candlestick has a companion in the Musée Historique de Berne. Fatima al-Khassbakiya was married to Qaytbay and after his death in /1496 she married Sultan Tumanbay; Allan, *op.cit.*, 2002, Cat.10.

¹⁴⁸ Wiet, *op.cit.*, 1932, no.4072 Pl.XXXIII dated 887/1482.

Several of these bindings are also marked by the appearance of large cup-like split palmettes in the corner- pieces that also occur in the illumination of a manuscript copied for Qaytbay which also has floral decoration in the Shirazi style in its borders.¹⁴⁹ (Fig. 5.55, 5.56) These cup-like split plamettes are also found in the illumination and bindings of Ottoman bindings and manuscripts of the same period.¹⁵⁰ The three small dots decorating the background are also repeated as small punches in the pasteboard filigree doublures of the binding for Qansuh Khamsmiyya.¹⁵¹

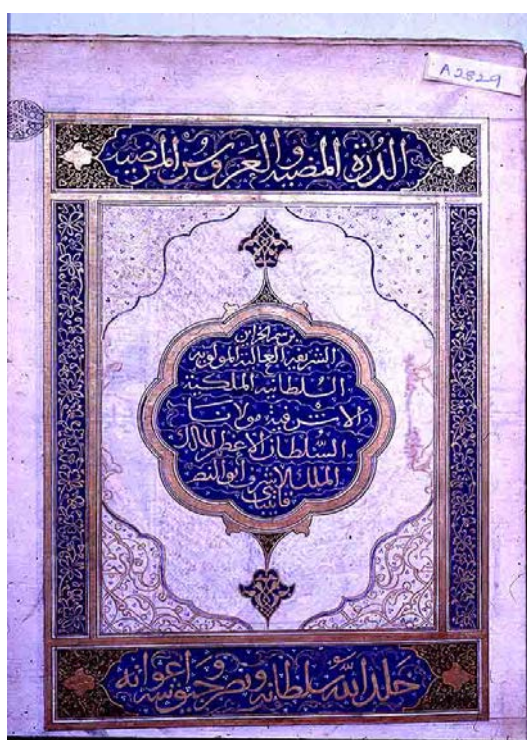


Fig. 5.55: Illuminated frontispiece with dedication to the library of Sultan Qaytbay dated 889/1484, TSK A.2829.

¹⁴⁹ TSK A.2829, see fig. 4.150 for the binding.

¹⁵⁰ See fig. 6.60-61.

¹⁵¹ TIEM 508, see fig. 4.120.

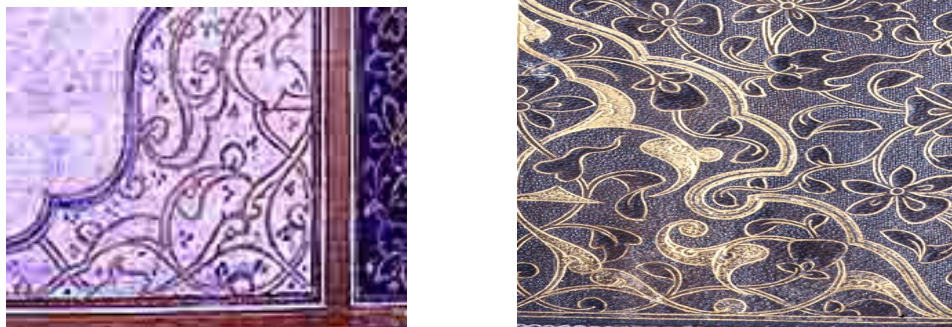


Fig 5.56 *left* Detail of illumination with large cup-like palmettes on frontispiece of manuscript copied for Qaytbay in 889/1484, TSK A.2829. *right* Detail of corner-pieces of binding for Qansuh Khamsmiyya. TIEM 508.

These bindings reflect the ornament found in other media during this period and a close correlation is to be noted between illumination and binding decoration. The arts of the book played an important role in the dissemination of ornament as it is found translated into architecture and metalwork.

Filigree

The technique of filigree work found on bindings was also used for paper-cuts to decorate manuscripts and in the production of leather figures used for shadow plays. The earliest extant example of a paper-cut design is found on a copy of the *Qasīdat al-Burda* dated to 773/1371-2 with an eight-lobed Chinoiserie lotus medallion with patterns of stylized Kufic.¹⁵² (Fig. 5.57) However, the ornament does not bear much resemblance to that used on the filigree bindings of the late 14th century. For example, on a filigree binding dated 793/1391, large lotus flowers are tooled on the cover but are not cut in filigree.¹⁵³

¹⁵² Rogers, 'Ornament, Patterns and Prints', *Islam and the Italian Renaissance*, ed. Burnett and Contadini, Warburg Institute Colloquia, 1999, p.150.

¹⁵³ See fig. 4.143.



Fig. 5.57 : Mamluk paper-cut, 773/1371-2. After Rogers, op.cit., 1999, Fig.10.

The technique is also found in leatherwork associated with the production of leather puppets made for the shadow plays. The figures were fixed to sticks and moved across a broad screen. Different parts of the figures are distinguished by geometrical designs. None of these, however, have parallels with the geometry used on bindings but a comparison can be drawn, as Behrens- Abouseif notes, since coloured parchment membranes were inserted to add colour to the figures in the same way that the filigree leather work was placed against a coloured

textile background.¹⁵⁴ (Fig. 5.58)

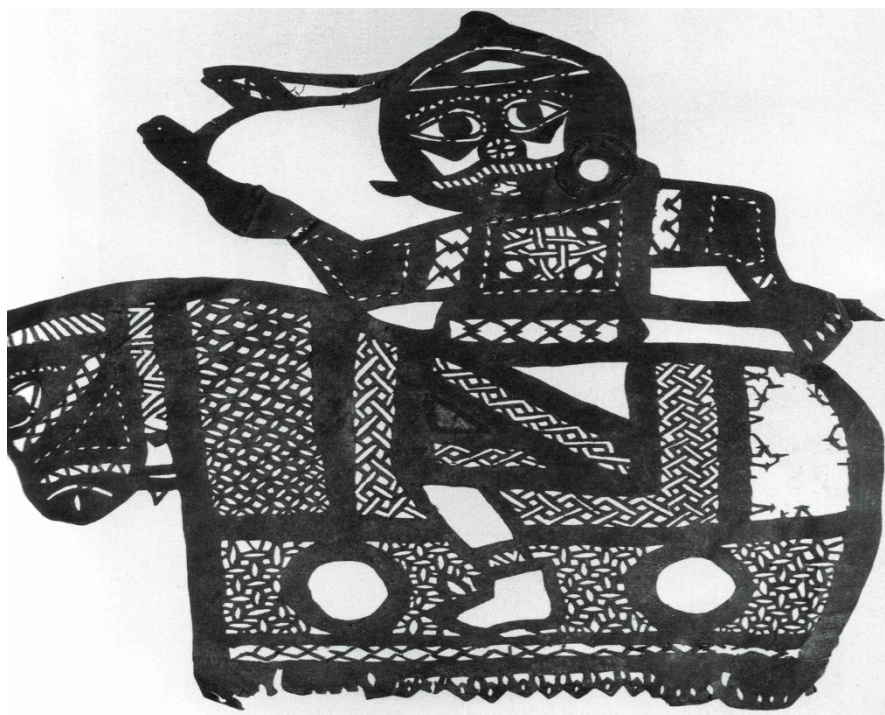


Fig. 5.58 : Filigree leather shadow play figure, Deutsches Ledermuseum Offenbach/M.No.4998. After Behrens-Abouseif, op.cit.,1995, Fig.19.

The use of filigree for both paper cuts and leather shadow-play figures show that this technique was used in other media although no direct parallels can be drawn in terms of the ornament with that found on book bindings.

The tradition of cut open-work to design a surface is also found in metalwork. A lamp from the reign of Sultan al-Nasir Muhammad in the David Collection in Copenhagen has a medallion with pendants that have already been noted occurring in stucco work to ornament the walls and façades of various institutions.¹⁵⁵ The medallion is placed at the centre of the medial panel of the

¹⁵⁴ Behrens-Abouseif, op.cit., 1995, p. 28; see also Kahle, 'Islamische Scattenspielfiguren aus Ägypten', *Der Islam* 1, 1910, pp. 264-298, 2 1911, 145-195; 'Das arabische Schattentheater in mittelalterlichen Ägypten', *Wissenschaftliche Annalen*, 12, 1954, pp.748-776; Milwright, 'On the date of Paul Kahle's Egyptian Shadow puppets', *Muqarnas*, 2011, pp.43-69 argues that these puppets should be assigned to the Ottoman period after c.1029/1620.

¹⁵⁵ David Collection, No. 37/1982; Behrens-Abouseif, op.cit., 1995, Pl.39, and p. 67 where she notes that the lamp is composed of elements from three different lamps. The door has a blazon

pyramidal lamp. A similar roundel with pendants in cut open work is also to be noted on a lamp with the name of Sultan Sha'ban in the Museum of Turkish and Islamic Arts in Istanbul.¹⁵⁶ (Fig. 5.59)



Fig. 5.59 : Lamp for Sultan Sha'ban in TIEM, No.165. After Behrens-Abouseif, op.cit., 1995, Pl.41.

A closer comparison can be made between the cut open-work used in metalwork for the doors of the period and binding decoration. Early examples of Mamluk filigree bindings date to the end of the 14th century and the filigree is usually contained within an inner medallion within the rosette profile and in the corner-pieces of the central panel.¹⁵⁷ Doors are also decorated with corner-pieces whose profiles are similar to those found on bindings. This arrangement appears

with a sword and polo sticks and the bulb is inscribed with the name of al-Nasir Muhammad while the main body which has the medallions in filigree work has amirial titles. She notes, however, that the style of the main body can be compared to the workmanship found on the *kursī* of al-Nasir Muhammad in the Islamic Museum, Cairo; see Wiet, op.cit., 1932, no.139, pl.1; See fig. 5.36 and 5.37 of this text, for stucco medallions used for architectural ornament.

¹⁵⁶ TIEM, no.165; *ibid.*, Pl.41 and p. 67.

¹⁵⁷ See fig. 4.144 for filigree bindings.

on the doors of the *madrasa* and *khanqah* of Sultan Barquq which has a large openwork medallion at its centre which is surrounded by an eighteen-point star from which foliate scroll-work with trefoils are interspersed with the design. (Fig.5.60) The corner- pieces of these doors have projections into the central field which resemble those found on bindings. The use of arrow-like projections into the central field is noted on lobed rosette bindings from the middle of the 14th century.¹⁵⁸ The earliest published example is dated to 739 /1339 and is tentatively assigned to Cairo.¹⁵⁹ These projections continue to be used on lobed rosette bindings with pendants and several examples can be attributed to the reign of Barquq so it is likely that bookbinding designs served as the inspiration for this layout.¹⁶⁰

Mols notes there are no open-work metal medallion doors extant from the pre-Mamluk period.¹⁶¹ The earliest example is found on the stables of the Amir Sunqur al-Tawil and was made before 699/1300, however, the ornament of this door includes scrollwork interspersed with animals and birds suggesting Seljuq influence.¹⁶² As she says, 'Summarizing, it may be stated that while Mamluk metalworkers are to be credited with applying the medallion design on metalwork doors for the first time, Seljuq woodworkers had already preceded them by using this layout on wooden doors. Except for the above-mentioned door of Sunqur al-Tawil, a direct influence in stimulating Mamluk metalworkers

¹⁵⁸ See fig. 4.72 for TSK. M.5 dated 742/1341.

¹⁵⁹ See fig. 4.72 for Köprülü Library, Istanbul, 407–410 dated 739/1339.

¹⁶⁰ See fig. 4.98 for binding DAK. Rasid 123.

¹⁶¹ Mols, op.cit., p. 88 records one occurrence of a medallion style door in the pre-Mamluk period dated to the 10th century in Fayyum in a Christian tomb with a central metal disk.

¹⁶² Mols, op.cit., p.91, Cat.7/1.

to apply the medallion design on doors seems, however, absent.¹⁶³ This style only comes to the fore during the reign of Barquq whose *madrasa* and *khanqah* boasts six identical medallion doors.¹⁶⁴ Mols suggests that pyramidal lamps may have been a source of inspiration as was noted above.¹⁶⁵ Their panels do not, however, contain the projecting corner-pieces and the space surrounding the medallion is filled with pierced foliate motifs in contrast to the doors where the space is left void. She notes that during the reign of Sultan Nasir Muhammad metalworkers begin to give prominence to the use of medallions as noted in the design of two *kursīs*, one dated to 728/1328 and the other assigned to the same period on the basis of style and execution.¹⁶⁶ She neglects, however, to point out that the corner-pieces with projections into the central field occur on bindings from the early Mamluk period and these were later refined and developed on filigree bindings during the reign of Barquq.¹⁶⁷ As this medallion style with cut-open work on doors appears to have begun also in Cairo during the reign of Barquq, a closer connection with book binding styles seems to exist rather than with the metalwork lamps. Allan points out that a scarcity in metal from 761/1360 to the accession of Barquq may have prompted the change from the earlier use of cast bronze or brass plaques for door decoration to those which employed openwork revetments from the late 14th century until the accession of Qaytbay and this development may have inspired binders to produce filigree

¹⁶³ Ibid., p.91.

¹⁶⁴ Mols, op.cit., pp. 47-50 and pp. 88-92, Cat.26/3-26/8.

¹⁶⁵ Mols, op.cit., p. 88.

¹⁶⁶ Ibid., p. 89; Museum of Islamic Art, Cairo, inv.no.138, Wiet op.cit., Cairo, 1932, Pl. 1 and 2 and no. 139, unpublished.

¹⁶⁷ See fig. 4.143-44.

work for bindings drawing on the metalwork tradition of cut-open work.¹⁶⁸

Within the Mamluk context the link between the design of these doors and bookbindings of the reign of Barquq can be established, however, as we have already noted no comparisons can be drawn between the decoration of these filigree bindings and other filigree traditions in Cairo at the time.



Fig. 5.60 : Internal doors of the *madrasa* and *khānqa* of Sultan Barquq, 1384-6.
After Prisse D'Avennes , op.cit., Paris, 1877, Pl.96.

The medallion style continued to be popular as it is found on numerous doors of various important institutions, for example, the doors of the *madrasa* of Al-Malik

¹⁶⁸ Allan, op.cit., 1984, pp.85-95.

al-Ashraf Sultan Barsbay, the mosque of Sultan Al-Mu'ayyad Shaykh and the mausoleum of Sultan Qaytbay in the Northern Cemetery.¹⁶⁹ (Fig. 5.61)



Fig. 5.61: *left* Door of the mosque of Mu'ayyad Shaykh. *right* Door of the mausoleum of Qaytbay in the Northern Cemetery, Cairo.

A comparison may also be made between the division of the field of the central almond profile on a filigree binding made for Qaytbay and that of the designs found on Veneto-Saracenic metalwork.¹⁷⁰ (Fig. 5.62) The connection between the designs of the Veneto- Saracenic metal work and bookbindings was discussed by Hans Huth in his article where he opposed the assumption that the wares were produced in Venice by Muslim craftsmen arguing that the Venetian guild system would not have allowed non-Venetians to work within the city.¹⁷¹ The designs of

¹⁶⁹ Mols, op.cit., 2006, p.89.

¹⁷⁰ TSK A. 2829, see fig. 4.150 for discussion of this binding.

¹⁷¹ Huth, "Sarazenen" in Venedig? in Bloch and Zich (ed), *Festschrift für Heinz Ladendorf*, Cologne, 1970, pp.58-68; Spallanzani, *Metalli Islamici - A Firenze nel Rinascimento*, Florence, 2010, pp. 11-12 has recently challenged this assumption based on records in the Venetian Archive which record a Syrian working in Venice producing fine inlaid metalwork in 1563.

the metalwork of Mahmud al-Kurdi employ cartouches which are outlined with inlay work in much the same way as the segments of the cartouches used in the central profile of this binding. (Fig.5.60) Although no direct correlation can be made between the medallions used in the metalwork designs and bookbindings of the period there is a resonance in the formulation of the pattern. Likewise, the placement in filigree of the dedication to the library of Amir Qansuh on the doublures of the fine binding of the Qur'an is unprecedented in binding decoration and in the same way as the name of Mahmud al-Kurdi appears prominently on his work.



Fig. 5.62 : *left* Front filigree cover of binding for Sultan Qaytbay, TSK.A.2829, 32 x 21.5cm. *right* Filigree doublure of flap of binding for Qansuh Khamsmiyya. TIEM 508.



Fig. 5.63: Salver signed by Mahmud al-Kurdi, British Museum, inv. no.1878 12-30 705. After Auld, op.cit.,2004, Cover.

Pressure-Moulded

Further comparisons can be made with Veneto-Saracenic metalwork when considering the pressure-moulded binding made for Sultan Muhammad, the son of Sultan Qaytbay, who ruled briefly between Dhu 'l-Qa'dah 901/August 1496 and Safar 904/October 1498.¹⁷² (Fig. 5.64) The binding with a large lobed almond outlined in blue has spiralling palmettes which cover the central field and the borders are composed of a floral meander which has already been noted in the illumination of the frontispiece of a manuscript dedicated to the library of Qaytbay.¹⁷³

¹⁷² TSK. A 2303, see fig. 4.160.

¹⁷³ See fig. 5.55

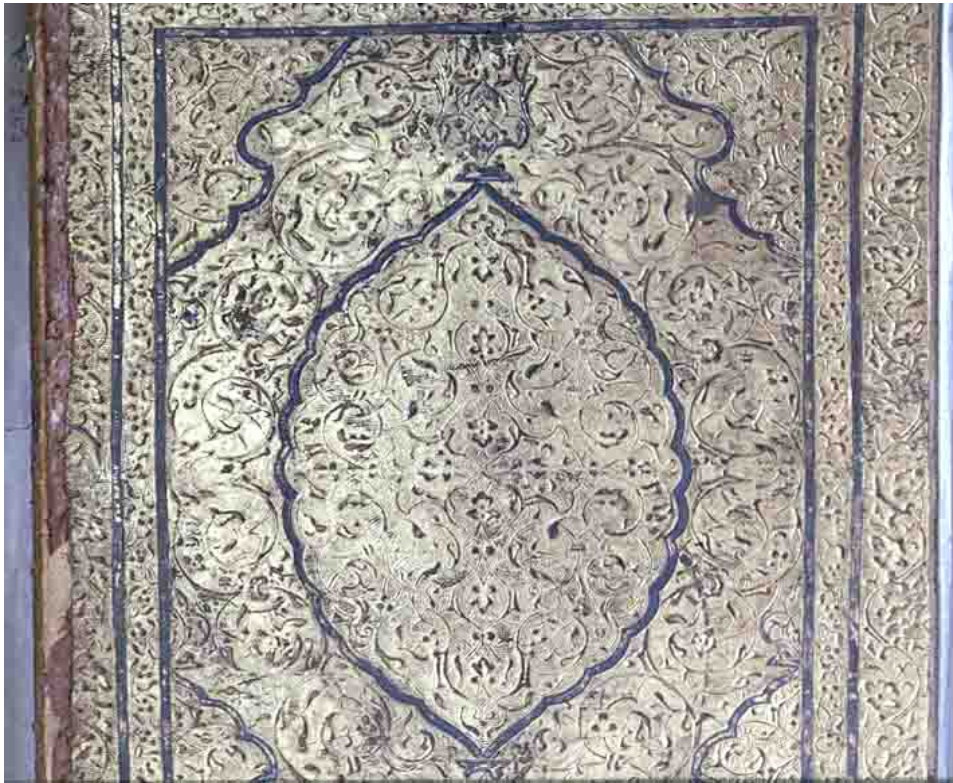


Fig. 5.64: Detail of pressure moulded binding for Sultan Muhammad. TSK A.2303.

It is difficult to find parallels with this ornament but some similarities may be found with the decoration of inlaid marble in the mosques of Abu Bakr ibn Muzhir ¹⁷⁴ and Qijmas al-Ishaqi, both the work of Abd al-Qadir al-Naqqash and signed by him.¹⁷⁵ (Figs. 5.65 and 5.66)

¹⁷⁴ See fig. 5.8.

¹⁷⁵ S. de Giosa, 'The world of Abd al-Qadir al-naqqash', M.A. Dissertation, SOAS, 2010.



Fig. 5.65: Inlaid decoration in the Mosque of Qadi Abu Bakr ibn Muzhir. Image with kind permission of Sami de Giosa.



Fig. 5.66 : Inlaid decoration in the spandrels of the mosque of Qijmas al-Ishaqi. Image with kind permission of Sami de Giosa.

Incorporated into the design of black scrolling palmettes are large lobed cartouches in red with points at either end which can be compared to the lobed almond profiles used for bookbinding covers; the design also incorporates the trefoil finials of pendants associated with bindings. Scrolling palmettes surround

the lobed profiles in a similar fashion to that of the binding for Sultan Muhammad. (Fig. 5.64) In considering the decoration of both these mosques, Behrens-Abouseif suggests that the layout of the design and the siting of the signature of Abd al-Qadir in the *mihrab* has a resonance with the designs found on Veneto-Saracenic metalwork.¹⁷⁶ Since Huth's article in 1972 various provenances have been assigned to the sub-groups that make up this category. We have already noted that Allan suggested that Mahmud al-Kurdi may have been working in Cairo and Melikian Chirvani was of the same opinion.¹⁷⁷ Sylvia Auld has put forward the argument that the metalwork signed by Mahmud al-Kurdi can be attributed to the Aqqoyonlu period in Tabriz during the reign of Uzun Hasan while that of another sub-group signed by the craftsman Zayn al-Din can be attributed to an Ottoman environment.¹⁷⁸ Doris Behrens-Abouseif has also suggested that the work of Mahmud al-Kurdi was produced in the Mamluk realm through interpretation of the inscriptions on each of the pieces and comparison with other pieces of metalwork that can be securely assigned to the reign of Qaytbay.¹⁷⁹

However, it is not the aim of this study to enter into the long and complex discussions that have taken place on this subject, but in terms of the relationship between the 'arts of the book' and their role in the dissemination of pattern and design links can be made between the illumination and bindings of certain Mamluk manuscripts in the late 15th century, the unprecedented decoration in

¹⁷⁶ Behrens-Abouseif, op.cit., 2007, p.290.

¹⁷⁷ Allan, op.cit., 1989, pp.167-184; Melikian-Chirvani, 'Venise entre l'Orient et l'Occident', *Bulletin des Études Orientales*, Vol.27, 1975, pp.109-26.

¹⁷⁸ Auld, op.cit., 2004.

¹⁷⁹ Behrens-Abouseif, op.cit., 2005.

Mamluk Cairo of the inlay work of the mosques of Abu Bakr ibn Muzhir and Qijmas al-Ishaqi and the designs of Veneto-Saracenic metalwork.

The relationship with other media of the patterns of block-pressed leather doublures used on bindings from the 13th century to the end of the Mamluk Sultanate which were discussed in Chapter 4 will now be considered.¹⁸⁰

The resemblance to block-pressed textiles was also noted in terms of technique and although the majority of the doublures were stamped in intaglio there are two examples among the doublures considered in this study which showed that they were printed with the block carved in relief. Given that according to early sources, textiles were used as covering for codices and for doublures, it is conceivable that there was a transfer of textile designs to leather which would provide a more durable material.¹⁸¹

In examining the textiles of the Newberry collection very few direct correlations were found but one doublure printed with a block carved in relief bears a close analogy in terms of its pattern which is illustrated below.¹⁸² (Fig. 5. 64)

¹⁸⁰ See fig. 4.173-4.183 for block-pressed doublures.

¹⁸¹ Bosch, Carswell and Petherbridge, *op.cit.*, 1981, p.64.

¹⁸² Barnes, *op.cit.*, 1997, 1997, Cat.42; TSK A.1608, see fig.4.135.

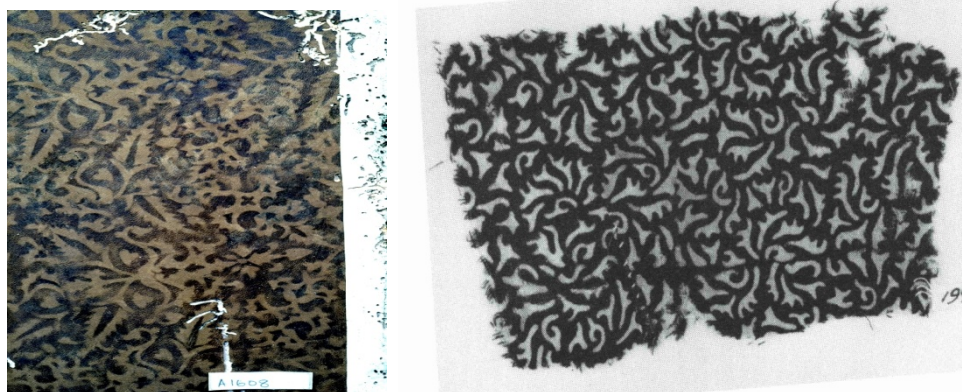


Fig. 5.67 : *left* Doublure of a binding with a manuscript dedicated to the Sultan Qansuh al-Ghuri, TSK.1608. *right* Block-printed textile, 1990.50, Newberry Collection, Ashmolean Museum, Oxford. After Barnes, op.cit., 1997, Cat.42.

In spite of the lack of direct comparisons with block-printed leather doublures and the patterns on these textiles there is, however, a decided resonance. Many of the doublures incorporate scrolling vines, floral designs and trellis patterns which are also found on these textiles and the quatrelobe split palmette motif is also found. (Fig.5.68)

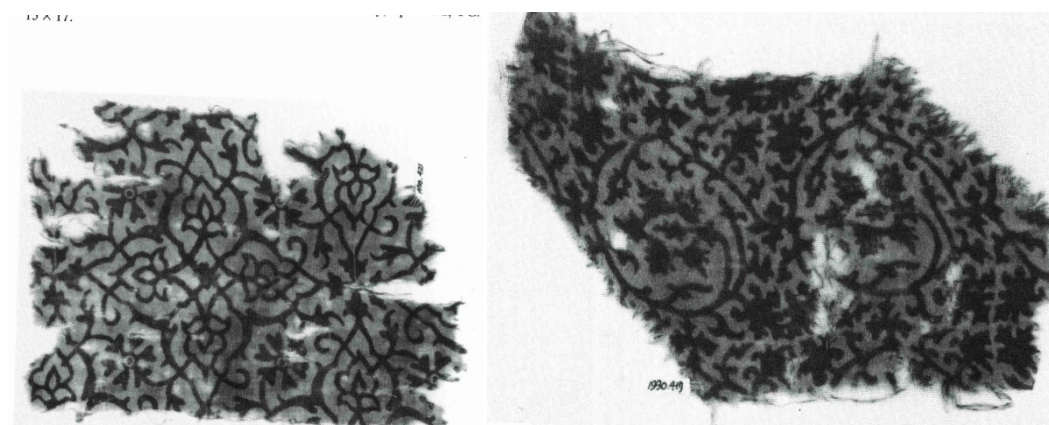


Fig. 5.68 : Block- printed textile fragments with quatrelobe split palmette motif and scrolling tendrils, Newberry Collection, 1990.421 and 1990. 419. After Barnes, op.cit.,1997, Vol .II, Cat.414 and 412.

Given the similarity in design concepts and also in the method of production, these block-printed textiles must have provided a source of inspiration for the craftsmen who carved the stamps for doublures.

One of the doublures of a binding whose manuscript bears a dedication to the library of Sultan al Ghuri has a pattern based on heart-shaped knots which frequently occur in architectural decoration of the period.¹⁸³ For example, part of the almost identical pattern is found on the stone carving of the mausoleum of Farag ibn Barquq which was restored by Qaytbay (Fig. 5.69) and the reproduction of the pattern below (Fig. 5.70) is derived from the doublure of a binding on the binding of a manuscript dated to Dhu 'l-Qa'dah 873/June 1401 in the collection of the Victoria and Albert Museum.¹⁸⁴ The date of 873/1401 appears very early but examination of the doublure shows that this was pasted over the turn-over of the binding cover which may be an indication that this was a later repair as in many cases the leather doublures were stuck to the boards and then the edges of the leather cover glued over it. A similar example of this pattern has been published on the binding of a manuscript dated to Muharram 593/November 1196 and attributed to Seljuq Anatolia but again this too must be a later rebinding, an assumption supported by the decoration of the covers.¹⁸⁵ This pattern reproduced by Thompson was chosen to illustrate a revolution that occurred in carpet design with the use of complex overall repeat patterns with

¹⁸³ TSK A.1767, see fig. 4.129.

¹⁸⁴ Haldane, *op.cit.*, 1983, Pl.1,p.22.

¹⁸⁵ Tanind, *op.cit.*,1990, Fig. 4, p.120.

curvilinear forms and the relationship of such patterns with the ‘arts of the book’.¹⁸⁶



Fig. 5.69: Stone carved panel on the *minbar* of Faraj ibn Barquq restored by Sultan Qaytbay.



Fig. 5.70: *left* Drawing of doublure pattern with heart-shaped knots. After Thompson, op.cit., 2010, fig.3. *right* Mamluk doublure of TSK A.1767.

The knotted heart appears on the architectural decoration of a number of monuments of the late Mamluk period. A similar design, for example, is found in the carving of the *wakala* of Qaytbay and later on the dome of the mosque of

¹⁸⁶ Thompson, ‘Carpets in the Fifteenth Century’, *Carpets and Textiles in the Iranian World, 1400-1700*, Oxford, 2010, pp.32-57.

Khayrbak (907-927/1502-21) (Fig. 5.71). They are also used on the decoration of the walls of the *sabīl-maktab* of the mosque of Khayrbak (Fig. 5.72) where they are outlined in black forming cartouches running over fine arabesques again recalling the method of decoration found in Veneto-Saracenic metalwork and on the filigree cover of the binding for Qaytbay.¹⁸⁷



Fig. 5.71 : Decoration of the dome of Kharybak with stone-carved knotted hearts.



Fig. 5.72: Detail of the *sabīl* decoration in the mosque of Khayrbak. After Behrens-Abouseif, op.cit., 2007, Fig. 330.

This heart-shaped knot motif also appears on Mamluk carpets, for example, in the border of a carpet where it is used to delineate the cartouches in the same

¹⁸⁷ Behrens-Abouseif, op.cit., 2007, pp. 312-5; see fig.5.62 and 5.63.

way it occurs in the architectural decoration and on the bindings.¹⁸⁸(Fig.5.73) For other parallels between carpet designs and ornament on bookbindings the association is tenuous at best. The woven patterns of Mamluk carpets are often based on octagons with a series of stacked geometric compartments accompanied by a profusion of arabesques. The only resonance is with the use of the geometrical shapes but generally eight-fold geometrical patterns are not common on Mamluk bindings. Mamluk carpets which appear in the late 15th century and whose production 'out of nowhere' have been seen as part of Qaytbay's policy for the revivification of the artistic production with the establishment of a court-carpet workshop. Samsel, in an article on the sources of design for these carpets, suggests that Turcoman weavers were employed in the production of such carpets in Cairo, having studied their technical and design features.¹⁸⁹ In examining possible sources for the designs of these carpets, he drew comparisons with the illumination of Qur'ans at the time of Sultan Sha'ban and suggested that that these manuscripts provided inspiration for the formulation of their designs. He also suggests that the 'lancet leaf' and 'umbrella leaf', distinctive features of these carpets, were based on the geometric regularisation of the complicated arabesque patterns that formed the borders of the illuminated pages. He also notes a move away from simple geometric medallions to more stylised and curvilinear designs as was discussed above with reference to the pattern of heart-shaped knots found on doublures.¹⁹⁰ The connection to the illumination of the Qur'ans of Sultan Sha'ban seems contrived

¹⁸⁸ Erdmann, 'Neuere Untersuchungen zur Frage der Kairener Teppiche', *Ars Orientalis*, Vol.4, 1961, pp. 65-105.

¹⁸⁹ Samsel, 'Illumination Underfoot: The Design Origins of Mamluk Carpets', *Sophia, The Journal of Traditional Studies*, Vol.10 part 2, 2004, pp.135-161.

¹⁹⁰ *Ibid.*, pp. 143-4.

given the long lapse of time between the illumination and the production of carpets. Thompson, in a recent article also sees this appearance of carpet production as the result of the recruitment of Turcoman weavers from Iran and Asia Minor as well as local weavers for a court- sponsored workshop who brought with them their own design tradition as is reflected in the designs of carpets referred to as 'tapedi damaschini' or 'alla damaschina' in Venetian and Florentine inventories and were exported from Turcoman Iran to Europe through Damascus.¹⁹¹

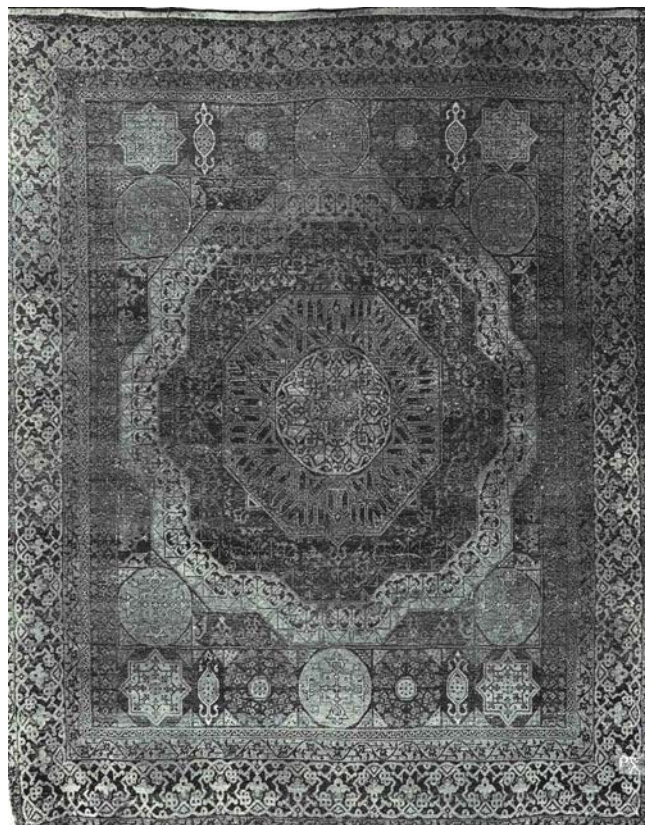


Fig. 5.73: Mamluk carpet with heart-shaped knot motif in the borders, Graf Moy, Schloss Steppberg. After Erdmann, op.cit., 1961 Fig.11.

¹⁹¹ Thompson, 'Late Mamluk Carpets: Some New Observations', University of Bonn, op.cit., pp.115-141.

Conclusion

This chapter has considered the relationship of the designs used for bindings to other media from the beginning of the Mamluk period to its end. The bindings of the 14th century usually relied on decoration which incorporated rosettes and geometrical arrangements based on star patterns, sometimes as single entities and in other instances as part of a repeat pattern. The appearance of these patterns in architectural decoration, metalwork and illumination all point to an established repertory of ornament which existed throughout the Mamluk period. The close relationship with the 'arts of the book' was also noted in the patterns that are found in illumination of Qur'ans of the 14th and 15th century. However, the lack of dated bindings from the early 14th century makes it hard to determine their significance as a source in the transmission of designs. However, by the middle of the 15th century and certainly by the 1460's a new aesthetic has appeared. It is noted in the use of different profiles for the covers consisting of lobed almonds and cloud-collars and the floral and arabesque ornament that inhabits them. It is interesting that these profiles are not found extensively in other media suggesting that they were specifically introduced from the Iranian bookbinding tradition; it is only towards the end of the 15th century that these profiles make their appearance in architectural decoration and metalwork. However, the floral and arabesque ornament that these profiles contain appears in architectural decoration and metalwork. Also a decided resonance can be found in the patterns used in Veneto-Saracenic metalwork, architectural decoration and bookbindings with filigree covers. In the discussion of the bindings and their ornament comparisons were made with the binding styles of

Ottoman and Iranian traditions and we will now turn to examining the relationship that existed between them.

Chapter 6

Binding relationships

In bindings, as in other media, relationships can be discerned with other traditions that suggest influences from other traditions, both in terms of ornament and technique. This chapter discusses the relationship of Mamluk bindings with those produced in Iran and Ottoman Turkey during the 14th and 15th centuries and concludes with a short section on the dissemination of the styles and techniques associated with Mamluk bindings and their influence on those of the Italian Renaissance. The theme of this chapter, therefore, essentially concerns the transmission of ornament from one cultural context to another. It should be noted that such discussion is hampered, particularly for the 14th and early 15th centuries by the lack of dated examples to support arguments on transmission of patterns and motifs. The case for the transmission of ornament and technique is a little clearer for the second half of the 15th century when new styles and techniques derived from the Persian binding tradition, established at the beginning of the 15th century, are adopted and adapted Mamluk binders.

Before embarking on this discussion, some mention must first be made of other binding traditions which are relevant, but for which no substantial studies have been undertaken.

The bindings of North Africa of the 14th and 15th centuries have not been studied in any depth and there are few published examples that are dateable to specific periods.¹ The bindings that Bosch assigns to North Africa are very similar to

¹ Ricard, *op.cit.*, 1933; This is the only study of North African bindings of the 13th century and there are no comprehensive studies on North African bindings for the 14th and 15th centuries; see

Mamluk bindings and many of these examples have block-pressed doublures with spiralling arabesques, also noted on Mamluk and Ilkhanid bindings.² Two Maghribi bindings in the Bibliothèque Nationale illustrate two markedly different binding styles. The first is dated by its manuscript to c. 808/1405 and has a single star on its cover filled with densely tooled bars and punches in the blind which are also repeated for the border decoration without gilding.³ (Fig. 6.1) From the extant bindings examined, this style of dense tooling and the use of a single star as a profile for the decoration of covers appears to have been discontinued by Mamluk binders by the beginning of the 15th century in favour of more complex star patterns.

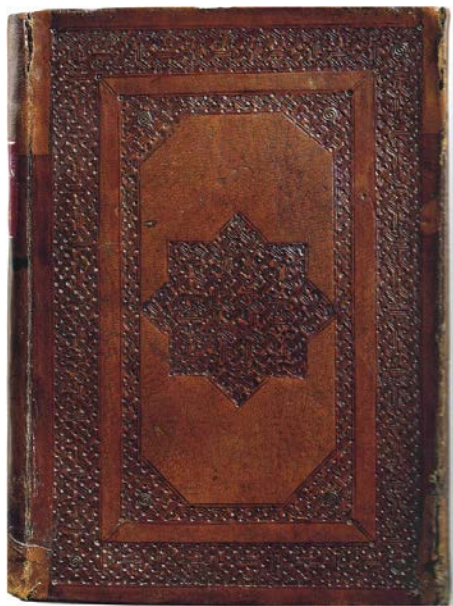


Fig. 6.1: Maghribi binding of the 15th century, BNF. Ms. arabe, 391, 17.5 x 11.1cm. After BNF, op.cit., 2001, Fig.111.

fig. 3.17-9; Weisweiler, op.cit., 1962, p.27, no.106 published one example from the Maghrib dateable to the 15th century.

² Bosch, Carswell and Petherbridge, op.cit., 1981, see for example patterns of geometric interlace based on 12 and 8-pointed stars (Cat.1 and 6), a single six-pointed star (Cat.26), lobed rosettes (Cat.57- 59), an 8-rayed geometrical rosette, (Cat. 60) and roundels which contain geometrical interlace Cat. 61 and 63.

³BNF arabe, 391, 17.5 x11.1cm, Déroche, op.cit.,1985, no. 307, BNF, op.cit. 1987, Fig.14 and B.N.F. op.cit. 2001, Fig.111.

Another binding dated to the 15th century has the same densely tooled borders but includes a variety of small rosette tools, all gilded, forming part of a complex knot pattern for the outer borders. The arrow-like corner-pieces, projecting into the central field, noted on Mamluk bindings of the 14th century, are still being used while in the Mamluk realm they have long been discarded.⁴ The central panel contains a lobed almond filled with arabesques and that is found on Mamluk bindings of the same period indicating the transmission of this profile and style of ornament further west.⁵ (Fig. 6.2)

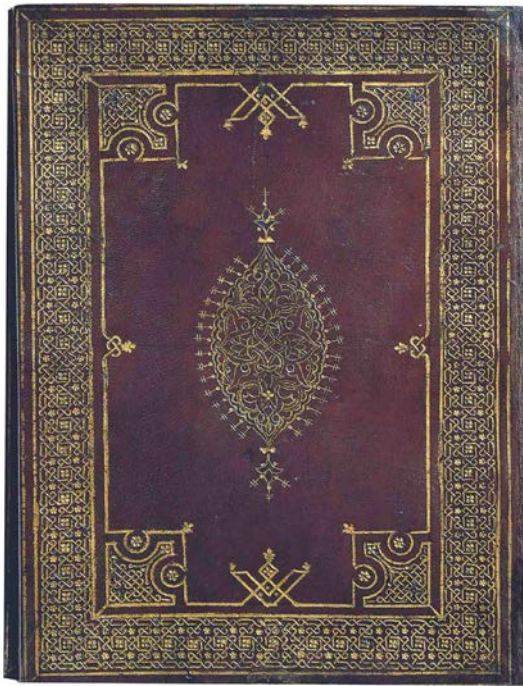


Fig. 6.2: Maghribi binding of the late 15th century, BNF. arabe. 440, 38.5 x 27.2cm. After BNF, op.cit., Fig. 112.

Also, the bindings of South Arabia (Yemen) for the same period remain largely uncharted territory although this area frequently forms part of the broad

⁴ See fig.4.73 for earlier example of these projecting corner-pieces.

⁵ BNF. arabe. 440, 38.5 x 27.2cm; Déroche, op.cit., 1985, No.307; BNF, op.cit., 2001, Fig. 112.

geographical assignation of loose covers in the catalogues of various collections.⁶ Bosch notes that the use of calligraphic stamps is their outstanding characteristic and on this basis the bindings are given their provenance.⁷ A number of Yemeni bindings reveal the use of a very distinctive method of tooling known as cuir ciselé which bears little resemblance to that found on their Mamluk, North African or Persian counterparts.⁸ These bindings employ large cruciform patterns for their covers and the borders are decorated with tooled verses from the Qur'an. (Fig. 6.3)

⁶ Bosch, Carswell and Petherbridge, op.cit. 1981, attribute Cat. 30, 32-36 to South Arabia ; Haldane, op.cit, 1983, attributes nos. 27-28 to South Arabia/Egypt/Syria but gives no reason for this. The attribution of South Arabia pervades bookbinding literature and the designation most probably stems from Graetz's publication, op.cit.,1924 when he published several examples from the collection in the Bayerischen Staatsbibliothek of what he termed 'South Arabian' bindings; Adam, 'Beiträge zur Entwicklung der frühislamitischen Einbände', *Archiv für Buchbinderei*, No.14, 1914, pp. 90-97 was the first to publish a South Arabian binding in the Dusseldorf Kunstgewerbemuseum dated to the 15th century. Later publications include James, op.cit.,1992, Cat.11, Khalili Collection, QUR.525, 26 x 24.5cm where it is attributed to Yemen. This attribution of 'South Arabian' should be changed to 'Yemeni' on the basis of Dreiholtz's observations of similar style bindings in Sana'a; Dreiholtz, Communication, June 1997.

⁷ Bosch, op.cit., p.152; However, Bosch, Carswell and Petherbridge, op.cit., 1981, Cat.2 also assign a loose binding which has finely engraved epigraphical stamps to Egypt.

⁸ See Glossary of Terms, Appendix 3; Cuir ciselé was also used on Austrian and German bindings of the 15th century. See, Szirmai, op.cit., 1999, pp. 241-2. A binding using this technique was published by Tanindi, op.cit.,1990, p.130 and attributed to Mamluk Cairo. It was not included in this study as in terms of design and technique, it bears no resemblance to Mamluk examples. TSK A.1965, Karatay, op.cit., 1966, no. 7168, dated by manuscript to 699/1299.

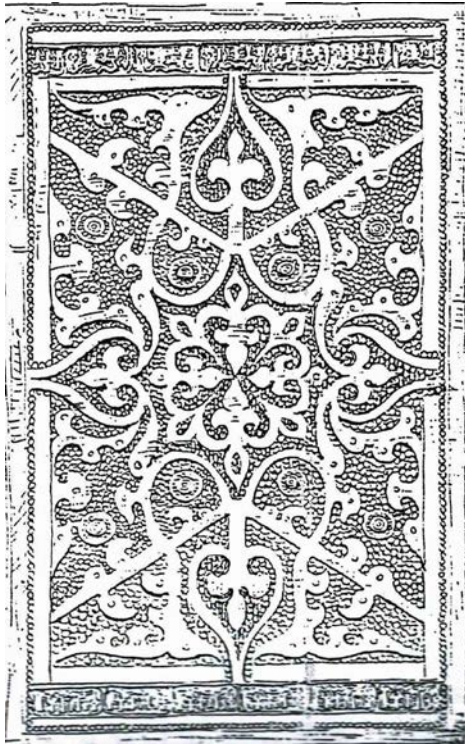


Fig. 6.3: Yemeni binding of the 15th century. After Adam, op.cit., 1914, p.90.

A second group employs a rosette profile composed of overlapping which are also found on Mamluk bindings.⁹ (Fig.6.4) A cover in the Khalili Collection dated to between 853-905/1450-1500 is one such example, however the inner and outer border are stamped with verses from the Qur'an.¹⁰ The distinguishing feature of both these Yemeni types is the use of stamps with Qur'anic texts for the borders which are not noted on any of the Mamluk bindings in this study.

⁹ See p. 226, fig. 4.105.

¹⁰ Khalili Collection, QUR, 525, 26 x 24.5cm; James, op.cit.,1992, Cat.11; The inner border contains the *Surat al-waqi'ah* and outer borders read *al'izz al-muqim al-da'im*.

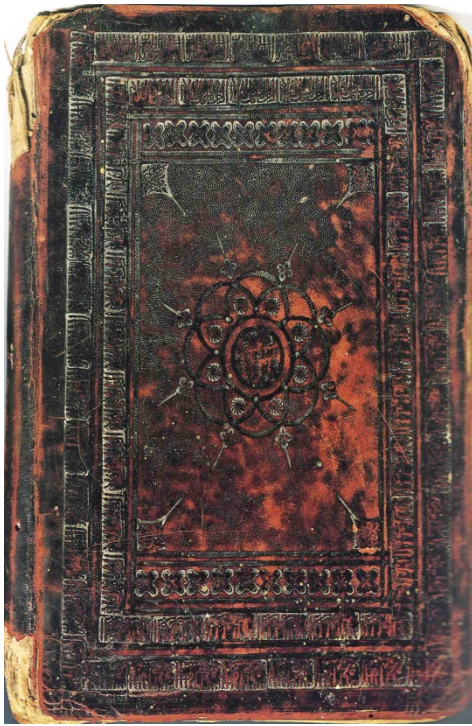


Fig. 6.4: Yemeni Binding, c. 853-905/1450-1500, Khalili Collection, QUR 525,26 x 20.4cm. After James, *op.cit.*,1992, Cat.11.

Likewise, the binding styles of Seljuq/Karamanid Anatolia remain poorly understood. Konya, the capital of Seljuq Anatolia in the late 13th century was an important centre for manuscript production and, after the fall of the Seljuqs, the Karamanids established themselves there. Raby records a ten -pointed star at the centre of a design filled with polygonal forms on a Karamanid cover dated 714/1315 which can be compared to Mamluk geometrical patterns.¹¹ He also notes that the corner-pieces comprise two overlapping segments of a circle also found on Mamluk bindings of the late 14th century and Ottoman bindings from the 1440s and 1450s. However, as this is the only example published in some detail, it is impossible to draw any further conclusions other than to point to elements of a shared repertoire.

¹¹ Raby and Tanındı, *op.cit.*, 1993, pp.4 -5.

In his study of Seljuq and Karamanid bindings Aritan cites the occurrence of interlace patterns based on six, eight, ten, twelve and sixteen-pointed stars and geometric shapes on covers and block-printed doublures as one of the main characteristics of the Anatolian binding tradition, but unfortunately, very few details on provenance, date or patron of their manuscripts are given.¹² He also notes that Anatolian Seljuq bindings were invariably signed by their binders, calling into question the assignation by Bosch of some of the loose bindings to South Arabia (Yemen) based on this premise.¹³

He makes the point that according to Evliya Çelebi, after the 643/1246 earthquake, 12,000 families emigrated to Cairo from Ahlat thereby transferring the styles of Seljuq bindings to Cairo.¹⁴ He states that 'In Anatolia, the Seljuq style continued in Mamluk bindings starting from the third quarter of the 13th century' but does not provide any support for this argument with reference to specific bindings.¹⁵ However, all these assertions raise interesting questions and until more rigorous and focused research takes place, they must remain unanswered.

Thus, in view of the lacunae in our knowledge of these binding traditions, it is very difficult to understand and draw any firm conclusions on the relationship between them and bindings produced in the Mamluk realm other than similar patterns were used for their decoration. For this reason, they will not be considered in this section.

¹²Aritan 'Turk Cild Sanati', *Türk Kitap Medeniyeti*, Istanbul, 2008, pp. 62-97.

¹³ *ibid.*, p.75-76; He states the earliest signature on a binding is found on the corner-piece of TSK Ms. 2334 with the date 654/1256.

¹⁴ *Ibid.*, pp.76-7; See also Rogers, 'Seljuq influence on the monuments of Cairo', *Kunst des Orients*, VII, 1970-1, pp.40-68.

¹⁵ Aritan, *op.cit.*, 2008, p.76.

For the purposes of this study, however, it is possible to examine the relationship with bindings produced during the Ilkhanid, Jalayirid, Timurid, Turcoman and Ottoman periods as several studies allow exploration of the relationships between these traditions.¹⁶

Binding Relationships: Mamluk, Ilkhanid and Jalayirid

Political relationships between the Ilkhanids (654 - 736/1256 -1335) and Mamluks continued to be marked by conflict after the defeat of the Ilkhanids at the Battle of 'Ayn Jalut in 658/1260. The Ilkhanids repeatedly tried to conquer in Syria but the Mamluks kept the military upper hand, defeating them at the battle Homs in 679/1281, and later at the battle of Marj al-Saffar south of Damascus in 702/1303 and in a series of border skirmishes. However, as Rogers points out, in spite of the hostilities that existed between the two sultanates frequent embassies were exchanged throughout the period and trade between Iran and Egypt continued uninterrupted.¹⁷ High-quality goods such as textiles, metalwork and manuscripts thus made their way to Cairo either as part of diplomatic gift exchanges or were passed along the trade routes, which remained open. The influence of Ilkhanid styles of ornament is reflected in Mamluk metalwork, glass, textiles and manuscripts.¹⁸ James notes that the influence of Ilkhanid styles of

¹⁶ Sakisian, op.cit., 1927, 1934a, 1934b and 1937; Ağa- Oğlu, op.cit.,1935; Gratzl, 'Book Covers', in Pope and Ackerman, op.cit., 1938-9, pp.1975-94; Ettinghausen, op.cit.,1954, pp.459-73; Aslanapa, op.cit., 1979, pp. 59-92; Gray, op.cit, 1985; Brend, 'The Arts of the Book', in *The Arts of Persia*, ed. Ferrier, New Haven, 1989, pp. 220-242; Raby and Tanındı, op.cit. 1993; Wright, op.cit., Forthcoming, 2012.

¹⁷ Rogers, 'Evidence of Mamluk Mongol Relations, 1260-1360', *Colloque international sur l'histoire du Caire, 27 mars-5 avril 1969*, General Egyptian Book Organisation, 1972, pp. 385-403.

¹⁸ Komaroff, op.cit., 2002, p.173 mentions an order of gold cloth woven in Tabriz, intended as a gift from the Ilkhan Teguder Ahmad for the Mamluk Sultan al-Nasir Muhammad.

illumination derived from manuscripts produced in Baghdad and also the presence of Baghdad-trained artists in Cairo such as Ibn Mubadir, one of the illuminators of the Baybars Jashnagir Qur'an.¹⁹ Negotiations were finally started in 720/1321 culminating in the peace treaty of 724/1324.²⁰

The Il-Khanids had inherited the rich tradition of calligraphy and manuscript production that flourished in Baghdad and continued after the Mongol invasion in 656/1258.²¹ The establishment of the Ilkhanate also brought closer contact with China and the introduction of Chinese motifs and painting styles transformed the arts of the period producing a new aesthetic, as was noted in Chapter 5.

The establishment of a scriptorium in Tabriz by Rashid al- Din, vizier to Ghazan Khan (694-703/1295-1304), was important in the development of the arts of the book since calligraphers, artists, binders and historians were brought together from a variety of religious and cultural backgrounds to produce volumes for dissemination throughout the Empire.²² Additionally, the endowment deed for the Rabi'-i Rashidi established specified quite clearly how manuscripts were to be produced in terms of the paper, collation and binding. Once the works had been finished they were to be displayed between the *mihrab* and the *minbar* of the south *iwan* of the congregational mosque of the scriptorium complex and

¹⁹ James, op.cit., 1988, p.43; see fig. 5.13 in this text.

²⁰ See Amitai, 'The Resolution of the Mongol-Mamluk War', in *The Mongols in Islamic Lands, Studies in the History of the Ilkhanate*, Aldershot, 2007, XVI, pp.360-385.

²¹ Shreve Simpson, 'The Role of Baghdad in the formation of Persian Painting', in *Art et Société dans le monde iranien*, ed. Chahryar Adle, 1982, pp.91-116; Hillenbrand, 'The Arts of the Book in Ilkhanid Iran', Metropolitan Museum of New York, *The Legacy of Genghis Khan*, New York, 2002, pp. 135-167.

²² Blair, 'Ilkhanid Architecture and Society: An Analysis of the Endowment Deed of the Rabi' Rashidi', *Iran*, Vol. 21, 1983, pp. 67-90.

then dispatched throughout the empire.²³ Unfortunately, no extant bindings can be ascribed to the manuscripts that were produced there.

The earliest extant example of an Ilkhanid binding is the cover of the Morgan *Manāfi' al-Ḥayawān* manuscript now in the Pierpont Morgan Library copied in 697/1297-98 or 699/1299-1300 in Maragha for Shams al- Dīn ibn Ziya al-Din al-Zushki.²⁴ (Fig. 6.5)

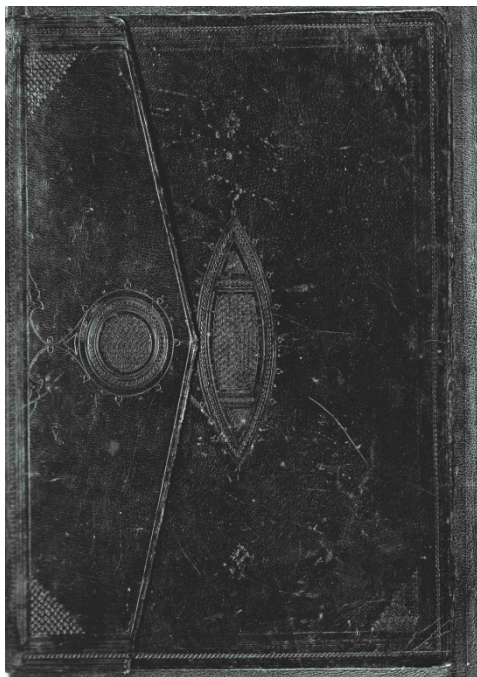


Fig. 6.5: Front cover of *Manāfi' al-Ḥayawān* Pierpont Morgan Library, M.500, 35.5 x 28cm. After B. Schmitz, op.cit., Fig.1.

This binding is of dark leather over pasteboard and has a central almond profile with small finials. A simple border of s-punches frames the profile divided into three sections horizontally and the central section is filled with the same punches. The binding has block-pressed doublures with a design of spiraling

²³ Blair, op.cit., n.138, p.81.

²⁴ Pierpont Morgan Library, M.500, 35.5 x 28 cm; Ettinghausen, op.cit., 1954; Schmitz, *Islamic and Indian Paintings in the Pierpoint Morgan Library*, New York, 1996, Cat.1.

arabesques which are also found on Mamluk bindings. Although Ettinghausen thought that this was the original binding, Schmitz believes that this is a later copy of the original.²⁵ However, other earlier Ilkhanid bindings have this profile; it is found on the covers of two copies of the *Zij i-Ilkhānī*, one published by Needham dated 687/1288 and copied in Maragha and the other published by Gardiner dated 676/1277-8.²⁶ The covers of the British Library manuscript are decorated with an oval medallion with a scalloped outline and have a narrow braided border. Neither of them have the tripartite divisions of the almond profile found on the Morgan *Manāfi' al-Ḥayawān* manuscript although Ettinghausen notes its occurrence on the binding of a copy of *Mu'nis al-aḥrār* dated 741/1341.²⁷ The use of the almond profile, both plain and lobed, continues throughout the 14th and 15th centuries on Persian bindings but did not enter the Mamluk binder's repertoire until the second half of the 15th century.

A group of three thirty-part Ilkhanid Qur'ans produced in Baghdad and Mosul are all distinguished by a method of tooling which reserves small squares in the densely tooled knotwork of their borders and does not normally occur on Mamluk bindings.²⁸ (Fig. 6.6)

²⁵Schmitz, op.cit., 1996, p.10; Schmitz notes that the existing binding of 34 x 25.2cm is approximately the same size as the cut down folios of the manuscript 33.5 x 25cm and very much smaller than the original size of the text leaves 37.5 x 31cm; Ettinghausen, op.cit., 1954, p. 464.

²⁶ Needham, *Twelve Centuries of Bookbinding*, New York, 1979, pp.65-7; Gardiner, "Three Early Islamic Book Bindings", *British Museum Quarterly*, 26, 1962-3, pp.28-30, cites BL, Or.7464.

²⁷ Ettinghausen, op.cit., 1954, p. 464, fig. 349.

²⁸ The flap of a loose binding in the Victoria and Albert Museum uses this method of tooling and is attributed to Egypt or Syria in the 14th century; See, Haldane, op.cit., 1983, p.25, Plate 2.



Fig. 6.6: Detail of tooling of *Juz' 2* of a Qur'an for Sultan Uljaytu, copied in Mosul between 705-710/1306-11, TIEM 540, 57 x 40cm.

The earliest example was written and illuminated in Baghdad between 701-07/1302-8 and its covers are decorated with an elongated star profile. (Fig. 6.7) Several of the *juz'* and fragments of folios are scattered in various collections but the Topkapi Palace library contains three of them: *Juz'2* illuminated in Ramadan 702/April 1303 (TSK EH. 250); *Juz'4* which is undated (TSK EH. 247) and *Juz'13*, illuminated in Rabi' I 705/ November 1305 (TSK EH. 249).²⁹ This has been termed the 'Anonymous Baghdad Qur'an' by James because the identity of its patron remains uncertain as it does not contain a *waqfiyya*, although he surmises that it may have been commissioned for the Ilkhanid vizier Rashid al-Din or for

²⁹ *Juz' 2*, TSK EH.250, 50 x 35cm, illuminated in Ramadan 702/April,1303, Karatay, op.cit., 1962, no.169; *Juz'4*, TSK EH.247, 52 x 35cm, undated, ibid., no.198; Gray, op.cit., 1985, Pl.VI a and b; Tanındı, op.cit.,1990, p.108; *Juz'13*, TSK. EH. 249, 50.1 x 35.5cm illuminated in Rabi' I 705/November 1305, ibid., no.166. The Iran Bastan Museum contains three parts of this Qur'an, nos. 3548, 3350 and 3532; Ettinghausen, op.cit, 1954, fig. 350, illustrated *Juz'10* but does not indicate the accession number; Bahrami, *Iranian Art. Treasures from the Imperial Collections and Museums of Iran*, New York, 1949, no.56, fig.27 illustrated Iran Bastan no.3550; See James, op.cit., 1988, Cat.39 with a full listing of the fragments and other parts of this Qur'an.

Ghazan Khan.³⁰ The Qur'an was written by the renowned calligrapher Ahmad ibn al-Suhrawardi and illuminated by Muhammad ibn Aybak.³¹ The binding of *Juz'* 4 is signed by Abd al-Rahman in small diapers on the border.³² The elongated star profile that decorates the covers is not found on any of the extant Mamluk bindings. The borders are segmented and are filled with densely tooled hatchwork with small gilded punches and small reserved squares appear in the textured pattern.³³

The earliest use of segmented borders on the examples in this study appears on the bindings of two *juz'* of a Qur'an (*Juz'* 1 and 30 of DAK Rasid 60) dateable to the first quarter of the 14th century and attributed to Baghdad or Tabriz by James.³⁴ The bindings of the other volumes of the Qur'an employ a different pattern so it is argued that these most probably represent the original bindings while the others were rebound in Cairo in the middle of the 14th century. The earliest Mamluk example is dated 815/1412 and by the end of the 15th century they are used widely for border decoration.³⁵

³⁰ James, op.cit., 1988, Cat. 39, pp. 78-95.

³¹ Ibid.

³² Ettinghausen, op.cit., 1954, p.463, and Tanındı, op.cit., 1990, p.108 have read this as Abd al-Rahman and Gray, op.cit., 1985, p.142 as Abd al-Rahim.

³³ In the illumination of Ilkhanid Qur'ans, small coloured squares are inserted in the braidwork of the borders. James, op.cit., 1988, Fig. 21 notes their early appearance in the work of Muhammad ibn Mubadir on *Juz'* 4 of the Qur'an of Baybars al-Jashnagir. Small squares are inserted into the strapwork borders of Qur'ans in Cairo from the middle of the 14th century; see for example, the Qur'an copied by Mubarak Shah al-Suyufi; James, op.cit., 1988, fig. 102.

³⁴ DAK *Juz'* 1 and 30 of DAK Rasid 60; ibid., Cat.72; see fig. 6.22 for discussion of their decoration and for the bindings of other *juz'* of this Qur'an see fig. 4.26 and 4.27; Out of the 80 loose Mamluk bindings from the Moritz collection in the Chester Beatty only one has segmented borders, CBL binding, no.12.

³⁵ TSK A.2909/1, see fig.4.40 for this binding; see TSK 649, fig. 4.112 for an example of a segmented border found on late 15th century bindings.

The doublures are of block-printed leather with an intertwining vine/floral pattern, also found on the doublures of Mamluk bindings.³⁶

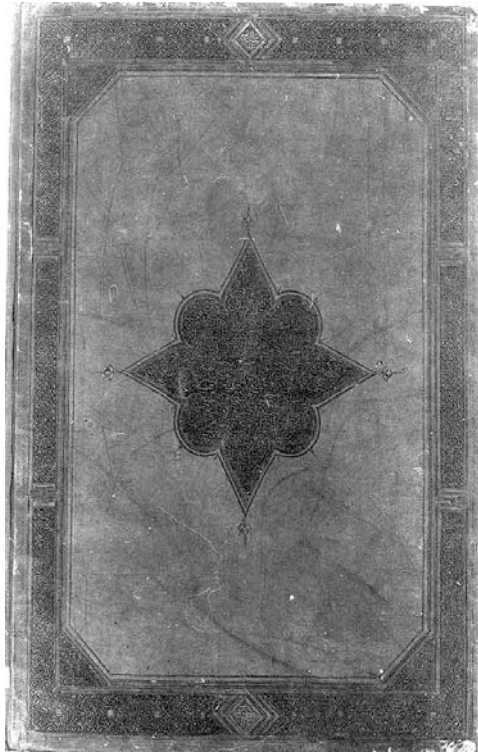


Fig. 6.7: Front cover of *Juz' 4*, of the 'Anonymous Baghdad Qur'an' copied in Baghdad 701-707/1302-1308, EH.247, 52 x 37cm. After Tanındı, op.cit., 1990, Fig. 18.

The second Qur'an has a large eight-rayed geometrical rosette on its cover and was written in Mosul between 706-711/1306-11 for the Sultan Uljaytu (703-716/1304 - 1316). Parts of this Qur'an are also scattered in various collections.³⁷

The layout differs from Mamluk examples with the insertion of thick multiple borders and a relatively small area for the elongated octagonal central panel.

³⁶ Ettinghausen, op.cit., 1954, fig. 347; see also fig. 6.15 of this text for the doublures of the Hamadan Qur'an of Uljaytu which have a similar pattern.

³⁷ TIEM, 540, *Juz' 2*, dated 706/1306-7; Sakisian, op.cit. 1934, Fig.1; Bayezit Library, Amasya, K.1052, *Juz' 4* dated 706/1306-7; TIEM 539, *Juz' 10* dated 706/1306-7; TSK. EH.232, *Juz' 15*, dated 706/1306-7; Tanındı, op.cit., 1990, p.108, fig.17; TIEM. 541, *Juz' 16*, dated Rabi' I 710/July 1310, Süleymaniye Library, Hacı Selim Ağa, K.22, *Juz' 20*; TIEM. 541, *Juz' 21* bound with *Juz' 2* dated Rajab 710/November 1310, Süleymaniye Library, Hacı Selim Ağa, K.22, *Juz' 22* dated Rajab 710/December 1310, British Library, Or. 4945, *Juz' 25* dated Sha'ban 710/December 1310; TIEM 539, *Juz' 27* bound with *Juz' 10*; Shah Nimatullah Library, Kirman, *Juz' 28* dated 710/1311; See James, op.cit. 1988, Cat. 42 for listing of all fragments of this Qur'an.

In Chapter 5, it was noted that the geometrical rosette as a single element of decoration does not appear on Mamluk bindings until the late 14th century, where it decorates the covers of a Qur'an for the mother of Sultan Sha'ban (DAK.Rasid 80) but it does occur earlier in illumination and in architectural decoration and is used as part of a geometric pattern to decorate the interior of a rosette profile binding in 745/1344.³⁸ (TSK.Y 2468)

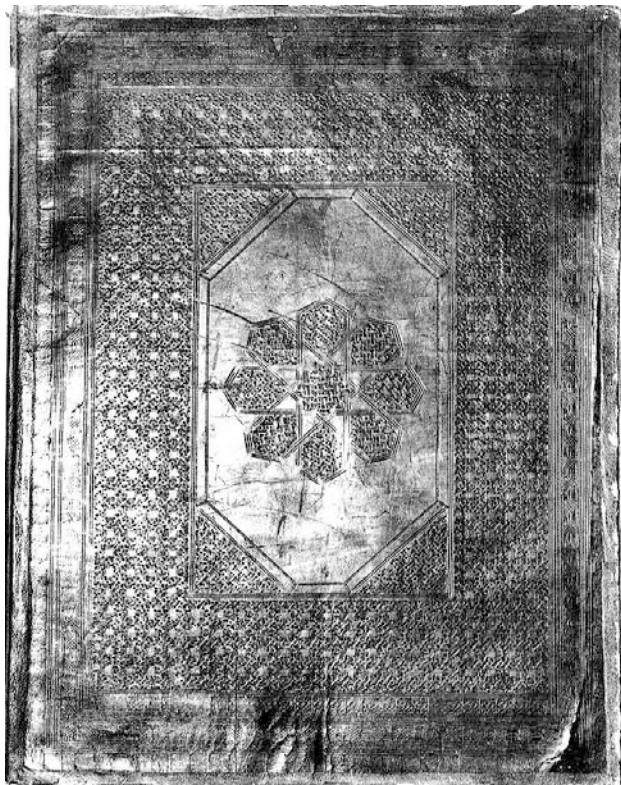


Fig. 6.8 : Front cover of *Juz' 15*, of a Qur'an copied in Mosul in 706/1306-7, EH. 232, 56.5 x 41.5cm. After Tanındı, op.cit., 1990, Fig.17.

The third Qur'an was written for Uljaytu in Baghdad between 706-8/1306-8 and the colophon of *Juz' 7* (EH.243) also gives the name of the illuminator

³⁸ See, fig. 4.65 for Rasid 80 and fig. 4.93 for TSK Y. 2468.

Muhammad ibn Aybak and the calligrapher Al-Suhrawardi.³⁹ This Qur'an, too, is dispersed in various collections.⁴⁰ The cover is decorated with an interlace repeat pattern of ten-pointed stars with broadly tooled straps. The same technique of reserving small squares is found in the tooling of the borders and interstices of the strapwork. It has been suggested that the cover was decorated by a Mamluk binder as Gray notes that when Karatay was cataloguing the manuscripts at the Topkapı Palace Library he gave it a Mamluk attribution.⁴¹ However, as the same tooling technique is used on the other Ilkhanid Qur'ans, it would appear that the binding falls firmly within the Ilkhanid binding tradition of Mosul and Baghdad. The flap has a pattern of large arabesques which appear incongruous in design terms with the contrast between their curvilinear quality and the rigidity of the geometrical interlace. This combination is found later on a Jalayirid binding dated 775/1373-4 which has recently been published and is found on a series of Qur'an *juz'* for the Mamluk Sultan Barquq and will be discussed below.⁴²

³⁹ *Juz'* 7, TSK. EH. 243, 73 x 50cm, Karatay, op.cit., 1962, no.171 copied in 707/1307-8 and illuminated in Dhu 'l Hijjah 710/April 1311; James, op.cit., 1988, Cat.40; Tanındı, op.cit., 1990, p.107.

⁴⁰ *Juz'* 1, Leipzig University Library, xxxvii Kl, copied in 706/1306-7 (Ottoman Cover); *Juz'* 4, Library of Dresden 444, (new cover); *Juz'* 7, TSK. EH. 243, 73 x 50cm, Karatay, op.cit., 1962, no.171 copied in 707/1307-8 and illuminated in Dhu al-Hijjah 710/April 1311; Tanındı, 1990, p.107, Fig.16; *Juz'* 10 bound with *Juz'* 4, Leipzig University Library, xxxvii, Kl; *Juz'* 17, TIEM 339, 70 x 49cm; *Juz'* 20, TSK.245, 71 x 49.5cm, Karatay, op.cit., 1962, no.195, Gray, op.cit., 1985, Pl.6c.; Tanındı, op.cit., 1990, p.107, fig.16; *Juz'* 21, TSK.234, Karatay, op.cit., 1962, no.178; 73 x 50cm, Tanındı, op.cit., 1990, p.107; *Juz'* 24, Royal Library Copenhagen, N7; *Juz'* 28, Library of Dresden, 444; *Juz'* 29 bound with *Juz'* 10 and *Juz'* 4, Leipzig University Library, xxxvii, Kl; All fragments listed in James, op.cit., 1988, Cat.40.

⁴¹ Gray, op.cit., 1985, p.145, Pl.6c.

⁴² TSK. A. 656, Çağman and Tanındı, 'Selections from Jalayirid Books in the Libraries of Istanbul', *Muqarnas*, Vol. 28, 2011, pp. 221-265, fig. 3; see fig. 6.26 for discussion of this binding and for Barquq example see DAK Rasid 120, fig.4.9 and fig. 5.30.

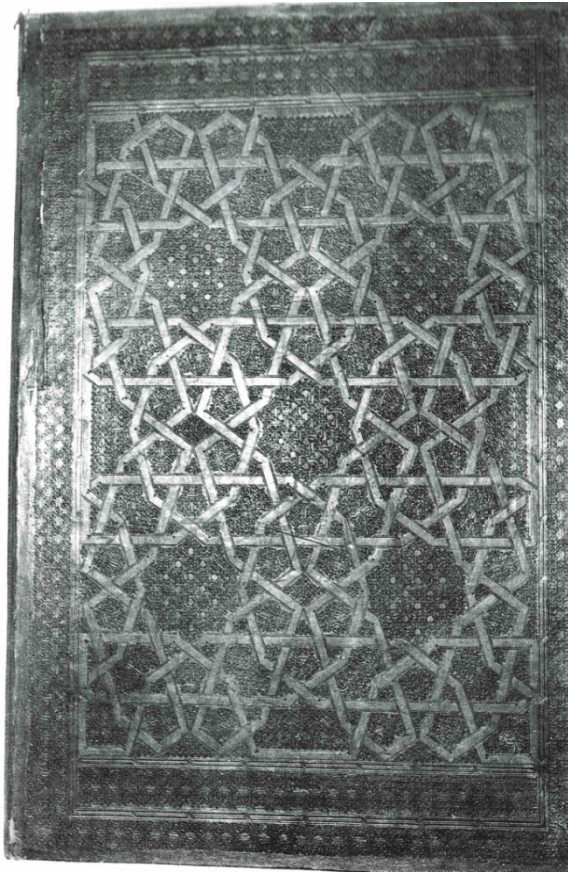


Fig. 6.9 : Front cover, of *Juz' 20* of a Qur'an copied in Baghdad between 706-8/1306-8, TSK EH. 245, 71 x 49.5cm. After Tanındı, op.cit., 1990, Fig. 16.

It would be tempting to say that these geometric patterns which appear in Cairo on bindings are the result of a direct influence of these Ilkhanid examples but, as was acknowledged in Chapter 5, these patterns - with the exception of the elongated star profile - are found in illumination and architectural decoration from the early Mamluk period. Thus, it is reasonable to suppose that they were found on the covers of earlier Mamluk manuscripts of the period only there is not the evidence to support this. For example, the repeat pattern based on a ten-pointed star is found in the illumination of a frontispiece of the Baybars al-

Jashnagir Qur'an by Sandal dated 704-5/1304-6 and the suggestion of the repeat pattern is found in the corner-pieces.⁴³ (Fig.6.10)

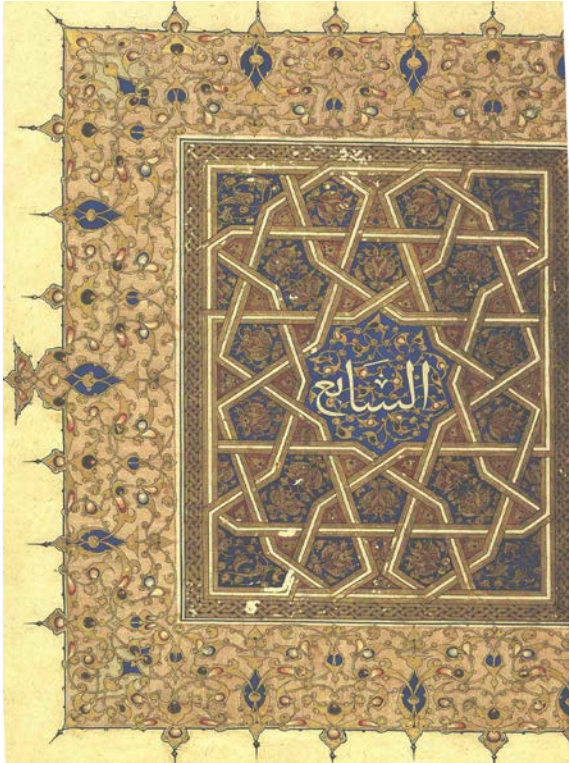


Fig. 6.10: Fol. 2b, *Juz' 7* of the Qur'an of Baybars al-Jashnagir, 704 - 5/1304 - 06, with ten-pointed star repeat pattern, BL. Add. 22412. After Baker, op.cit, 2007, Fig 1.

In addition to the Qur'ans described above, another binding with a manuscript copied in Shawwal in 705/April 1306 in Baghdad uses the horizontal format and employs the same method of tooling noted on the Qur'ans.⁴⁴ (Fig. 6.11) From the evidence that we have, the use of this format had greatly diminished by the 13th century in Egypt and North Africa but this volume shows it was still being used by Ilkhanid binders at the beginning of the 14th century. The central cover has a

⁴³ BL Add.22412 47 x 32cm; James, op.cit.,1988 (James gives another accession number Add.22406-13.); Cat.1, Fig. 25; Baker, op.cit, 2007, Fig1.

⁴⁴ TSK A.2301, Karatay, op.cit., 1969, no. 8516, 24.5 x 34.5cm, Tanındı,1990, p.136, Fig. 20 and 21.

distinctive lobed cartouche with finials extending to the border and is filled with tooled punches and bars. The flap again is tooled in the same manner but certain areas are reserved to form a stepped-knot motif created around small swastikas. The closest parallel for the profile is found on the cover of Juz' 18 of a sixty-part Qur'an in the Khalili collection where the central cartouche of the cover interlocks with a square although this uses the vertical format. The manuscript is dated to the 12th century but the binding is thought to be later, dateable to the 13th century.⁴⁵ (Fig. 6.12) Weisweiler has published a binding with the same type of profile but the manuscript is undated.⁴⁶ This type of profile is not noted on any of the Mamluk bindings of this study.

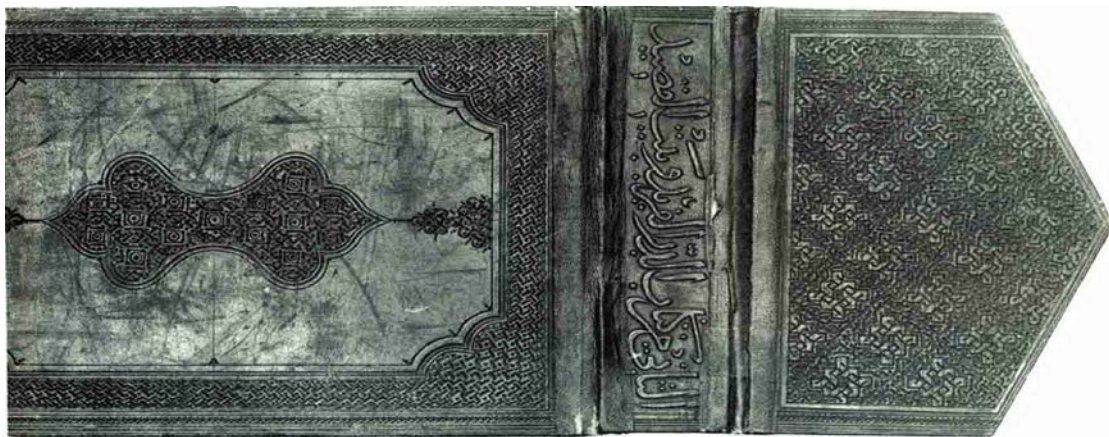


Fig. 6.11 : Back Cover and flap of Ilkhanid binding of manuscript copied in Baghdad and dated 705/1306, TSK A.2301, 24.5 x 34.5cm. After Tanındı, op.cit, 1990, Fig.20.

⁴⁵Khalili Collection, QUR.186, 15.7 x 10.4cm; James, *The Master Scribes, Qur'ans of the 10th to 14th centuries*, The Nasser D. Khalili Collection of Islamic Art, Vol.II, ed. Raby, Azimuth editions with Oxford University Press, London, 1992, Cat.4.

⁴⁶ Weisweiler, op.cit., 1962, no.133, Pl.17.



Fig. 6.12: Front Cover of *Juz'18* of a Qur'an attributed to eastern Iran in the 13th century, Khalili Collection, QUR 186, 15.7 x 10.4cm. After James, op.cit, 1992, Cat.4.

The bindings of the monumental Ilkhanid Qur'ans described above do not indicate a close relationship to Mamluk examples, with the exception of the use of geometrical ornament and block-pressed doublures. However, the same cannot be said for the Hamadan Qur'an in the Dar al-Kutub in Cairo which does not replicate the tooling method of the Qur'ans described above and whose decoration can be compared to several examples in Cairo.⁴⁷

This was copied in Hamadan in Jumada I 713/September 1313 by Abdullah al-Hamadhani for the Ilkhanid Uljaytu. It is not known how this Qur'an reached Cairo; Rogers has suggested that it was taken out of Iran in the negotiations that took place between the Ilkhanids and Mamluks before 726/1326 and James put forward that it might have been sent as a gift from the Ilkhanid Abu Sa'id in the

⁴⁷ DAK Rasid 72, 56 x 41cm, Pope and Ackerman, op.cit., Vol. 3, 1955-56, Pl. 934-5; Ettinghausen, op.cit., 1954, pp.461-462, fig.346; Gray, op.cit., 1985, pp.139-140 James, op.cit., 1988, pp.111-113, Cat. 45; see fig. 4.21, 4.22, 4.26, 4.28.

course of the peace negotiations of 724/1324.⁴⁸ Nothing is known of its life between 713/1313 and 726/1326 when it was bequeathed to the newly-founded *khanqah* of Amir Sayf al-Din Baktamur ibn Abdullah al-Saqi al-Maliki al-Nasiri who was a brother-in-law of al-Nasir Muhammad and during his reign was the *atabak al-jaysh*.⁴⁹ On that occasion each part of the manuscript was inscribed with a *waqf* in his name. The certificate of commissioning was also altered substituting the name of Uljaytu with that of al-Nasir Muhammad suggesting that it was first in the possession of the Sultan and was subsequently presented to Baktamur as a gift on the foundation of his *khanqah*.⁵⁰

The binding has a circle profile which has a ten-pointed star whose arms interweave with a decagon tooled around it. The design is repeated on the flap. (Fig. 6.13) The narrow borders are decorated with small s-tools in contrast to the broad tooled borders noted on the Baghdad and Mosul Qur'ans but are found on the binding of the Morgan *Manāfi' al-Ḥayawān*.⁵¹ The polygonal cells of the pattern are tooled with small swastikas with green and gilded punches at their centre and arms. When examined under a microscope, these punches of cut leather appear to have been stuck over the initial impression and in many cases

⁴⁸ Rogers, op.cit., 1973, p.388; James, op.cit.,1988, p.126.

⁴⁹ James, op.cit., 1988, pp. 125-6. The Amir Baktamur met an untimely end and was killed with his son on his way to Mecca on the order of Sultan al-Nasir Muhammad who was under the impression that Baktamur was going to poison him. He was later buried with his son in the *khanqah*. The significance of the Qur'an was to endure until the end of the Sultanate as it was later placed by Al-Ghuri in his complex.

⁵⁰ Ibid.

⁵¹ See fig. 6.7-9 for the Ilkhanid Qur'ans and fig.6.5 for Pierpont Morgan, M.500; see fig. 5.10 for comparison of this geometrical combination with illumination.

had fallen off. (Fig. 6.14) This technique has not been noted on any of the bindings examined in this study.⁵²



Fig. 6.13 : Front Cover and detail of flap of the Hamadan Qur'an copied for Uljaytu, DAK Rasid 72, 56 x 41cm.

⁵² This technique of decoration has been noted on bindings produced in Italy and Spain of the late 14th and 15th century by Goldschmidt, *Gothic and Renaissance Bookbindings*, London, 1928, p. 88 who described them as 'little round bits of plaster or gesso let into the leather, grounded with some reddish varnish and then painted in gold' and Miner, *The History of Bookbinding, 525-1950*, Baltimore, The Walters Art Gallery, 1957, p. 86 as 'punches of yellow, red and green, probably on roundels of stucco and leather'. No analysis has been made of the punches so it is impossible to say what they were made of.

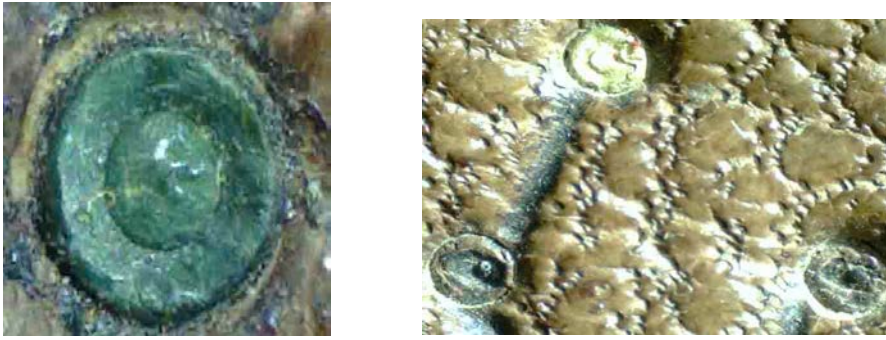


Fig. 6.14 : Detail of green and gilded punches on the cover of the Hamadan Qur'an copied for Uljaytu, DAK Rasid 72.

The doublures of the binding are of block-pressed leather with a pattern based on intertwining arabesques which are found on both Mamluk and Ilkhanid examples.⁵³ (Fig. 6.15)

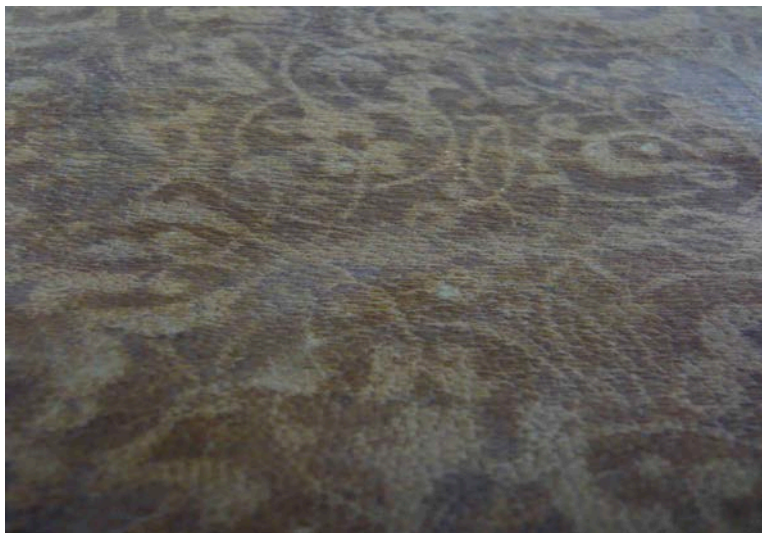


Fig. 6.15: Detail of block-pressed doublure pattern of *Juz' 2* of Hamadan Qur'an for Uljaytu, DAK Rasid 72.

Furthermore, it appears that the illumination of the *sura* headings of the final *juz'* were unfinished. For example, some of the petals of the rosettes of the border of the *sura* heading illustrated below are coloured red, suggesting that the painting had just begun. (Fig. 6.16) The *sura* headings of the earlier *juz'* were generally on

⁵³ See fig. 4.174 for example of Mamluk doublures.

a blue background or one of scrolling palmettes (Fig. 6.18) but the panel illustrated below shows that it has been painted in red with no obvious traces of painting beneath indicating that it had been added to a plain background. Also, the addition of the colour red as a background is completely out of keeping with the palette of the illumination of this Qur'an.⁵⁴ (Fig. 6.17) The illuminated final roundel of *Juz' 30* which covers the colophon is a Mamluk addition.

(Fig.6.19) The words *katabahu wa-dhahhabahu*, however, can still be discerned which again is puzzling as this clearly states that the copying and illumination had been completed. (Fig. 6.19)



Fig. 6.16: Fol.8b, *Juz'30*, of Hamadan Qur'an for Uljaytu, DAK Rasid 72.



Fig. 6.17: Fol.19a, *Juz' 30* of Hamadan Qur'an for Uljaytu, DAK Rasid 72.

⁵⁴ The palette of the illuminations of this Qur'an for which it is renowned are generally in blue, white, black and gold.



Fig. 6.18: Fol.16b, *Juz'* 30 of Hamadan Qur'an for Uljaytu, DAK Rasid 72.



Fig. 6.19: Mamluk illumination covering the final roundel containing the colophon of *Juz'*30, Hamadan Qur'an for Uljaytu, DAK. Rasid 72.

If the illumination was unfinished, it raises the questions of why such a gift would have been sent to Al-Nasir Muhammad and why the manuscript was bound before the illumination had been completed. James makes no mention of these additions, or the unfinished nature of the illumination in the final *juz'*, only that the colophons had been painted over at the end of each one.⁵⁵ This raises the possibility that the additions could have been added by an individual in the

⁵⁵ James, op.cit., 1988, pp. 111-126.

intervening period between his examination and mine, a period of some twenty-five years. If for some reason the illumination was unfinished then this might indicate that the manuscript was bound in Cairo.

This question was also addressed by Ettinghausen and Gray, but not for the reasons outlined above. Ettinghausen rejected the possibility of an Egyptian origin because 'Egyptian bindings would show a more complex design and dazzling execution' and Gray because 'it is inconceivable that such great books should have travelled to Egypt unbound or required rebinding soon after their arrival'.⁵⁶

The combination of the ten-pointed star and decagon along with small swastikas in compartments delineated by interlace is also found on the front covers of two *juz'* of another thirty-part Ilkhanid Qur'an copied in Maragha between Shawwal 738- Shawwal 739/April 1338- April 1339.⁵⁷ The covers are decorated with a lobed rosette profile and roundels form the attachment for their pendants. (Fig. 6.20) A cover with a manuscript attributed to Iran dated Muharram 767/1365 also has combination of a ten-pointed star and decagon decorating the interior of the rosette.⁵⁸ (Fig. 6.21) It is also found on the covers of a Jalayirid binding dated 774-5/1373-4.⁵⁹ (Fig. 6.25) This then indicates that this combination was used on Ilkhanid and Jalayirid bindings and earlier than the examples in Cairo dated to the middle of the 14th century.

⁵⁶ Ettinghausen, op.cit., 1954, p.462, note 7; Gray, op.cit., 1985, p.144 - 5.

⁵⁷ Etnoğrafiya Müzesi, Ankara, 10115-10137, *Juz'* 1-6, 8-9, 12, 14 - 23, 25 - 27 and 30; Boston Museum of Fine Arts, 29.58, *Juz'*13 and 29.57, *Juz'* 24; CBL. Ms. 1470, *Juz'*11, 33 x 24cm; Van Regemorter, op.cit., 1961, pl.15; Arberry, op.cit, 1967, no.137; James, op.cit., 1980, no. 49; James, op.cit., 1988, Cat.61.

⁵⁸ TSK EH.1171,70 x 50cm; Karatay, op.cit.,1966, no.6007; Tanindi, op.cit., 1990, p.109, fig.19.

⁵⁹ TSK A.656, 37.8 x 22cm; Çağman and Tanındı, op.cit., 2011, p. 223-24, fig. 2, 3, 4.

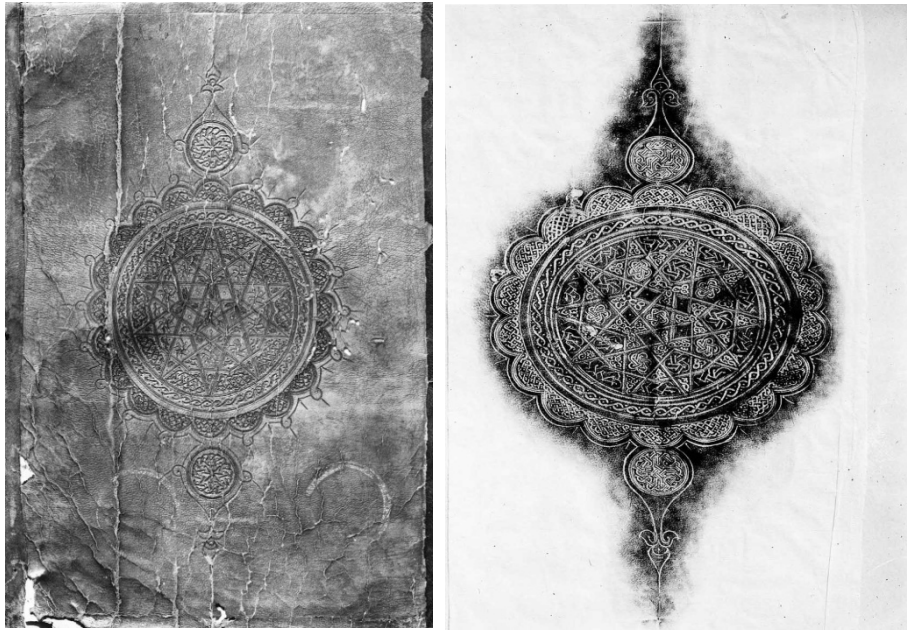


Fig. 6.20: Front cover and rubbing of back cover of *Juz' 13* of Qur'an, Maragha, 738-39/1338-9, Boston Museum of Fine Arts, 29.58, 33 x 24cm. Image Boston Museum of Fine Arts.

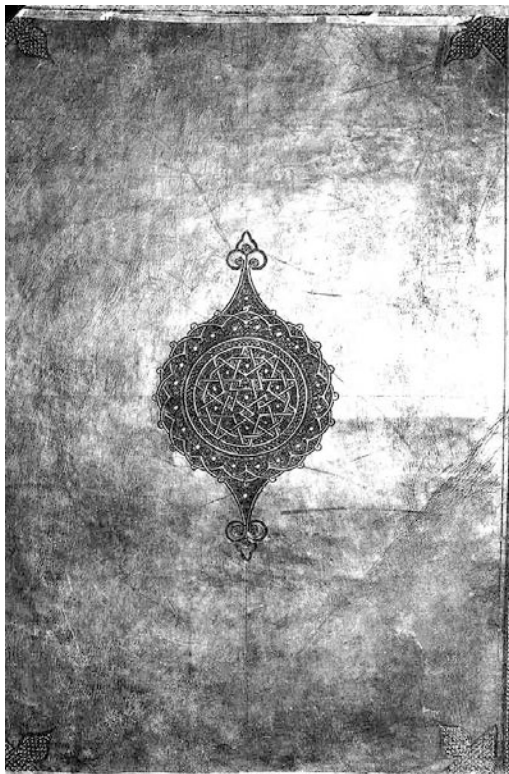


Fig. 6.21 : Front cover of binding, Iran, 766/1365, TKS EH 1171, 70 x 50cm. After Tanındı, op.cit., 1990, p.109, fig.19.

In turning to the possible relationship of these bindings with Mamluk examples, four thirty-volume Qu'rans (with the exception of *Juz'* 1 and 30 of Rasid 60) also used the same geometric combination of a ten-pointed star inscribed by a polygon within a circle profile and all are dateable to the middle of the 14th century.⁶⁰ The other covers of Rasid 60 also include knotted projections from their borders. (DAK Rasid 60, 61, 70 and 71)

The covers of *Juz'* 1 and *Juz'* 30 of DAK Rasid 60 are different from the other bindings of the same Qur'an employing the lobed rosette profile without pendants for the decoration of the covers. The interior of the lobed rosettes is decorated with a complex pattern of geometric interlace with 'bow ties' and rhombi in the *girih* mode. (Fig. 6.22) The compartments of the interlace are filled with five-fold knots and spidery five-armed swastikas. The five-fold knots are also noted for decorating the interstices of the pattern of a lobed rosette of the covers of a later Qur'an copied for Barquq.⁶¹



Fig. 6.22: Detail of central rosette of *Juz'* 1 of DAK Rasid 60.

⁶⁰ See fig. 4.27, 4.28, 4.21 and 4.22 for the bindings of Rasid 60, 61, 70, 71.

⁶¹ See fig. 4.100, DAK 123, *Juz'* 28, for comparison of the decoration where five-fold knots are used for the interstices of the geometrical interlace of the central rosette.

The borders are segmented using two different tooling methods on alternate segments: one with deeply tooled impressions to create a complex knot pattern and the other with spider-like lines following the same pattern, reflecting the same contrast that is found in the centre of the interstices of the lobed rosette on the cover. (Fig. 6.23) Also, knotted projections extend from the upper and lower borders into the central field.



Fig. 6.23: Border detail of *Juz' 1* DAK Rasid 60.

The following comparison of elements of the decoration of the covers of these two *juz'* with the covers of the Hamadan Qur'an can be made. The bindings use the same spider-like five-armed swastikas for the decoration of the compartments of the lobed rosette profile and these elements are not found on other Mamluk bindings of this study or indeed on any published examples.⁶²

⁶² Swastikas are used on Mamluk bindings but they usually occur as a single motif and then on later examples. Small swastikas appear on bindings as single motifs or as part of background tooling in the late 15th century but not as border decoration or for the filling of the cartouches created by the interlace. See, for example, TKS.A.1608, fig.4.135 and the doublure of the DAK loose binding, fig. 4.189; Allan, *Islamic Metalwork, The Nuhad Es-Said Collection*, Sotheby, London, 1982, p. 88 records the use of swastikas in Mamluk metalwork of the 14th century so it is surprising that they are not found in binding decoration until the late 15th century.



Fig. 6.24: Detail of central design of circle profile of DAK Rasid 72.

James attributes the manuscript of this Qur'an (Rasid 60) on the basis of its style of illumination to Tabriz or Baghdad in the first quarter of the 14th century.⁶³ The manuscript, as we have already noted, contains a *waqf* for the *madrassa* of Amir Sarghitmish dated 757/1356 and I propose that the covers of the other *juz'* were replaced at that time and *Juz'* 1 and *Juz'* 30 retained their original covers and were most probably bound in Iran. The remaining *juz'* of Rasid 60 were bound in Cairo using the same combination of the ten-pointed star decagon combination in perhaps what might be termed an 'Iranian style' along with the Qur'an *juz'* of Rasid 70 and 71.⁶⁴ Thus, these comparisons suggest that Hamadan Qur'an was most probably bound in Iran given the presence of the five armed swastikas on *Juz'* 1 and *Juz'* 30 of Rasid 60 and the ten-pointed star/decagon combination found on other Persian covers.

⁶³ James, op.cit., 1988, Cat.72.

⁶⁴ See figs.4.21, 4.22 and 4.32.

However, the problem remains of why the Hamadan Qur'an would have been bound with its illumination unfinished and if this is, indeed, the case at this point in time there is no satisfactory answer until further research is undertaken to firmly establish if this observation is correct.

After the break-up of the Ilkhanate with the death of the ruler Abu Sa'id (r.716-735/1317-35), the Jalayirids established their capital in Baghdad. Shaykh Uways (r.756-775/1356-74) and his descendants, most notably Sultan Ahmad Jalayir (784-812/1382-1410) were patrons of the arts and several fine illustrated manuscripts, distinguished by their graceful figures in elaborate settings in a 'new style' of painting are attributed to this period.⁶⁵ Only one binding, however, which has been recently published, can be attributed directly to the patronage of Shaykh Uways and contains a manuscript completed in 774-5 /1373-4.⁶⁶ (Fig. 6.25) This has a rosette profile which is filled with geometrical interlace whose compartments are decorated with small rosettes combined with five-fold knots. This can be compared to another late 14th century Persian binding dated 788/1387 and *Juz'1* and 30 of Rasid 60.⁶⁷

⁶⁵ See for example, Carboni, 'Synthesis: Continuation and innovation in Ilkhanid Art', Metropolitan Museum of Art, op.cit., 2002, pp.222-225.

⁶⁶ TSK A. 656, 37.8 x 22cm; Çağman and Tanındı, op.cit., 2011, p. 223-24, fig. 2, 3, 4.

⁶⁷ University Museum, Philadelphia, no. P. 80, 40.8 x 29.2cm; Ettinghausen, op.cit., 1954, p. 466 and fig. 352; Raby and Tanındı, op.cit., 1993, p. 466, n.14, fig. 37b, (corner-pieces only), see fig.6.55 for these.

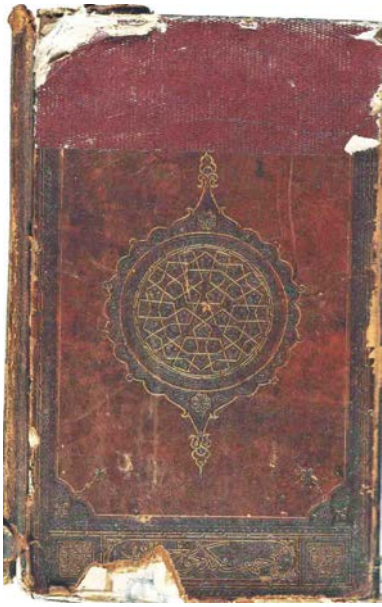


Fig. 6.25: Front cover of *al-Tuhfat al-najībiyya li-ḥaḍrat al-salṭanat al-Uwaysiyya*, Tabriz, 774-5/1373-4, TSK A. 656, 37.8 x 22cm. After Çağman and Tanındı, op.cit., 2011, Fig. 2.

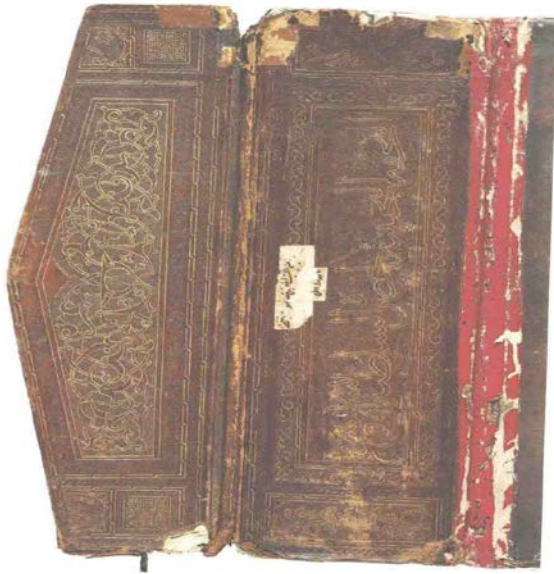


Fig. 6.26: Flap of *al-Tuhfat al-najībiyya li-ḥaḍrat al-salṭanat al-Uwaysiyya*, Tabriz, 774-5/1373-4, TSK A.656, 37.8 x 22cm. After Çağman and Tanındı, op.cit., 2001 Fig. 2.

Later Mamluk bindings which contain *waqf* inscriptions for Sultan Barquq also use five-fold knots for the interstices of the pattern of the rosette profile and the

roundel of the cover of Rasid 123 can be closely compared to *Juz'1* Rasid 60.⁶⁸ (fig.6.22) This indicates that these became part of the Mamluk binders' repertoire in the late 14th century, suggesting influences from the Persian tradition.

The corner-pieces of the Jalayirid binding (Fig. 6.25) and that of the Qur'an dated 788/1387 (Fig. 6.54) are made up of overlapping segments of quadrants of a circle which has not been noted on any of the earlier Ilkhanid examples. However, these occur for the first time in the bindings of this study on the Mubarak Shah al-Suyufi Qur'an copied in Cairo in 744/1344.⁶⁹ These corner-pieces, composed of overlapping segments, form a major design element on Mamluk bindings of the late 14th century. There are two possibilities to be considered here. Either these are representative of Mamluk influence on Persian bindings or they represent the introduction of a Persian style. The calligrapher, Mubarak Shah al-Suyufi was, as James points out, from Iran and the illumination of this Qur'an contains many Ilkhanid elements, so when in Cairo he might have chosen to have the manuscript bound in a Persian style.⁷⁰ This type of corner-piece also occurs on Ottoman bindings of the middle of the 14th century and will be discussed further below.

A further comparison can be made between the arabesque decoration found on the flap of the Jalayirid binding and that found on the flaps of the bindings with a

⁶⁸ See DAK Rasid 123, fig.4.100.

⁶⁹ See TKS Y. 2468, p. 211-12, fig. 4.93.

⁷⁰ James, op.cit., 1988, pp. 150-152.

waqf for Sultan Barquq.⁷¹ (Fig. 6.26) Arabesque decoration is not found on any other bindings of the period and may be the result of Jalayirid influence for, as Behrens-Abouseif has pointed out, the relationship between the two courts was close during the reign of Sultan Barquq as Sultan Ahmad, a noted bibliophile, fled to Cairo following the attacks by Timur on Baghdad and Tabriz in 795-6/1393-4.⁷²

The lobed rosette profile of the binding of two *juz'* bound together of a thirty-part Qur'an commissioned by Fars Malik Khatun, the sister the Injuid ruler of Shiraz between 736-7/1336-7 and bound in Shiraz in 776/1375 are also decorated with an eight-pointed star intertwining with an octagon.⁷³ (Fig. 6.27) The pendants include large circles similar to those of the Qur'an copied in Maragha in 739/1338 indicating a continuation of this style. (Fig. 6.20) Pendants with circles also occur later on Mamluk bindings for example, a binding with a dedication to the library of Sultan Jaqmaq suggesting that these small elements were transmitted at a later date.⁷⁴

⁷¹ See Rasid 120, see fig. 4.53 for the binding and 5.30 for comparison with architectural ornament.

⁷² Behrens Abouseif, op.cit., 2009, p.158.

⁷³ Khalili Collection QUR181, 42.9 x 31.2cm; James, op.cit., 1992, cat.30, p.130; The covers of these volumes are identical to the binding of *Juz'* 10 and 14 (bound as one volume) of Khalili Collection, QUR.182, 42.6 x 31cm also copied for Fars Malik Khatun.

⁷⁴ TKS A.1582 see fig. 4.91.



Fig. 6.27 : *left* Front cover of *Juz'24* and *Juz' 25* of a Qur'an bound as one volume in Shiraz, c.1375, Khalili Collection QUR 181, 42.9 x 31.2cm. After James, op.cit.,1992, p.131. *right* Front cover of TKS A.1582, 32 x 21cm with dedication to Sultan Jaqmaq.

Gray, in his examination of the relationship between Mamluk and Ilkhanid illumination and bindings, suggests the geometric patterns on the covers of these Ilkhanid Qur'ans were perfected in Iran and from there transferred into the ornament of Mamluk Egypt after 658/1260 through architectural decoration and then make their appearance in Mamluk illumination and bindings in the 14th century.⁷⁵ As we have already discussed in Chapter 5, geometric patterns had already made their presence felt by the end of the Fatimid period but it was during the Mamluk period that they were developed to constitute a defined repertoire of ornament used in a variety of contexts and different media.

Gray's comment was a spirited response to the comparison drawn by Ettinghausen on the decoration of the two Ilkhanid monumental Qur'ans which have been described above, (the Ilkhanid thirty-volume Qur'an of Uljaytu dated 713/1313, (Fig. 6.13), three volumes of the thirty-volume Qur'an from Maragha

⁷⁵ Gray, op.cit.,1985, p.140.

dated between 738-9/1338-9 (Fig. 6.20) and the cover of *Juz' 28* of a Mamluk Qur'an prepared for Aytмыш al-Bajasi for his *madrassa* in Cairo.⁷⁶ In his article, Ettinghausen asserts the superiority of the Mamluk covers with geometrical ornament over those of Iran. He says 'None of the Persian examples of this century, so far discovered, has a field which is completely covered with large geometric configuration as seems to have been popular in Egypt. While such an over-all design in Mamluk bindings is the natural outcome of most of the Coptic designs the force of such a heritage did not exist in the Persian craft.'⁷⁷ However, the Mamluk example that Ettinghausen chose to support his argument was bound almost a hundred years later than the Ilkhanid examples he chose to compare it with. By 803/1400, the *terminus ante quem* date for the Aytмыш al-Bajasi Qur'an, Persian binding had moved away from geometric patterns with the adoption of new profiles and ornament derived from the Chinese repertoire which will now be discussed.

In assessing the relationship between Ilkhanid and Mamluk bindings what can be said is that they drew on a shared repertoire of ornament which incorporated designs with geometrical ornament and the rosette profile. Given that Necipoğlu has argued that it was in Baghdad where this geometrical ornament based on *giriḥ* grids originated, these styles may well be a reflection of bindings produced there.⁷⁸ However, there is no evidence to support this and until further research is undertaken to understand the binding styles of the pre-Mamluk and Ilkhanid periods no firm conclusions can be reached.

⁷⁶ CBL 1495, see fig. 4.94.

⁷⁷ Ettinghausen, op.cit., 1954, p. 469

⁷⁸ See Ch.5

Binding Relationships: Mamluks and the new Persian style

It is from the end of the 14th and the beginning of the 15th century that new developments in the realm of the Persian bookbinding tradition can be charted.⁷⁹

The lobed almond and cloud-collar profiles make their appearance along with the techniques of pressure-moulding and fine filigree on a pasteboard ground for the doublures. Abundant floral and arabesque ornament is now used to decorate the interiors of these profiles. All these developments are later noted on Mamluk bindings of the late 15th century.

It is very difficult to trace binding developments in Iran during the late 14th century because of the lack of extant dated examples.⁸⁰ The earliest extant example of the lobed profile is found on a binding of a *Shāhnāma* dated Shawwal 772/May 1371 copied in Muzaffarid Shiraz.⁸¹ (Fig. 6.28) The tooled lobed almond profile is accompanied by corner-pieces composed of quarter sections of the cloud-collar profile which are filled with floral and vegetal ornament.⁸² The

⁷⁹ See Ch. 5, p.341.

⁸⁰ Wright, *The Look of the Book*, Chapter 5, forthcoming 2012 records the following examples that can be securely dated to this period: the binding of a late Muzaffarid copy of Nizami's *Haft Paykar*, dated 788/1386-7 (TSK. H. 690) which is decorated with an almond profile filled with geometric motifs and three bindings from the Injuid period, one of which has been illustrated above, see fig.6.27, Khalili QUR 159 and QUR181-82 and a *Shāhnāma* dated Shawwal 772/ May 1371 (TSK.H.1511) discussed in this text, see fig.6.28. She discounts TIEM 2485, 27 x 16cm dated 735/1334 which has a lobed profile filled with densely tooled work in the blind as a later rebinding, published by Sakisian, op.cit.,1934a, p. 83; Ettinghausen, op.cit.,1954, p.463; Brend, op.cit., 1989, p.235. She also does not include the binding of the CBL's *Collection of Epics* of 800/1397 (CBL Per.114) because the corner-pieces include small tear-drop impressions typical of Turcoman bookbindings which is considered by Brend, op.cit., p.235 as contemporary with the binding. She also discounts TIEM 1999 dated 781/1379 because the covers are stamped but it will be considered in this text, see fig. 6.30-2.

⁸¹ Wright, op.cit. forthcoming 2012, Chapter 5.

⁸² Raby and Tanındı, op.cit., 1993, pp. 37-8 and Chapter 1, n.93 record the earliest appearance of the cloud-collar in the illumination and binding of a copy of the *Shāhnāma* produced in Shiraz in 800/1397, CBL. Ms. Per.114, Arberry, op.cit.,1959, pp.30-31 record that the text is in considerable disorder suggesting the binding is not contemporary with the manuscript. The binding is published in Brend, op.cit., p.235, fig. 5.

flap repeats the ornament of the cover with a small roundel filled with blossoms and accompanying corner pieces.



Fig. 6.28: Front cover of *Shāhnāma* dated 772/1371, TSK H.1511, 18 x 16cm. Photograph courtesy of Elaine Wright.

As Wright points out this is not an innovation but the development of an established type as it occurs on the illuminated frontispiece of a copy of the *Khamsa* of Amir Khusraw Dihlavi dated 756/1355 (Tashkent 2179) and also on a wall painting in the tomb of Shams al-Din Muhammad, the son-in-law of the Ilkhanid vizier Rasid al-Din in Yazd, dated 767/1365 and within the illumination of the *Shahnāma* itself.⁸³ The lobed and cloud-collar profiles dominated Persian bindings of the 15th and 16th centuries and eventually become part of the Mamluk binders' repertoire in the second half of the 15th century.

⁸³ Wright, op.cit., forthcoming 2012 Chapter 5; The Yazd vault painting is illustrated in Wilber, *The Architecture of Islamic Iran*, Princeton, 1955, fig.206.

The technique of pressure moulding was also developed by Persian binders in the early 15th century.⁸⁴ The earliest extant examples of this technique are found on the bindings of the *Dīwān* of Sultan Ahmad in the Freer Gallery of Art dated 805/1402, most probably produced in Baghdad and the *Yazd Anthology* in Topkapı Palace Library dated 810/1407 (H.796).⁸⁵ (Fig. 6.29) Brend has shown that the same panel stamp was used for both these bindings and proposes that either the stamps were taken to Yazd and used for a second time or the binding of the *Dīwān* for Sultan Ahmad was taken unbound to Yazd and then placed in these covers.⁸⁶ Wright suggests that both these manuscripts were bound and illuminated at the same time, as the illumination of the *Dīwān* is in the Shirazi style as is also found in the *Yazd Anthology*.⁸⁷ These two bindings are also the earliest examples of figural decoration marking the beginning of an important feature of the Iranian binding tradition which was never found on Mamluk bindings and rarely on Ottoman examples.⁸⁸

⁸⁴ See Ch. 4 for Mamluk examples.

⁸⁵ Freer F 1932.29-37; Brend, op.cit., 1989, fig.8, p.236 and TSK. H.796; Aslanapa, op.cit., p.76.

⁸⁶ Brend, op.cit., p.236.

⁸⁷ Wright, op.cit., forthcoming 2012.

⁸⁸ A rare example of figural representation appears on Ottoman binding of the 15th century which was the work of Ghiyath al-Din, a Turcoman binder working at the Ottoman court. The flap is decorated with two foxes chasing two deer with two geese in flight. TIEM.2031 dated 881/1477; Raby and Tanındı, op.cit., 1993, Cat.33; see fig. 6.62.



Fig. 6.29: Front cover of the *Yazd Anthology* dated 1407, TSK H.796. After Aslanapa, op.cit. 1979, p.76, Fig. 32-3.

The technique of pressure-moulding appears to have originated in the Jalayirid ateliers from where it became part of the Timurid and later Turcoman binders' repertoire. As we have already noted, Dust Muhammad writing in the preface to the Bahram Mirza Album, mentions that Master Qiwam al-Din, who is attributed with the invention of the technique of *munabbatkārī* (translated as relief work), was brought to Herat from Tabriz and ordered to make a binding in the same

style as Sultan Ahmad's *Dīwān*.⁸⁹ This technique, in particular, dominates the mode of decoration of Turcoman bindings of the second half of the 15th century. The floral decoration of the Muzaffarid binding is found later on the outer covers of a Persian treatise on sufism entitled *Kitāb-i Kimiyā'-i sa'ādat* which can be compared to the ornament found on Mamluk bindings of the second half of the 15th century.⁹⁰ The manuscript was completed on the 5th Safar 781/22nd May 1379 in Shabaran for Prince Mal Shah Hushang the last of the Shirvani Shahs who can be identified as Hushang bin Kay Kavus (r.c.774 - 84/1372 -82).⁹¹ The name of the scribe and illuminator is given as 'Abd al-Rahman ibn 'Abd al-'Aziz ibn 'Abdallah al-katib al-mudhahhib al-Shirazi. The decoration of the front and back covers differ slightly: the front cover has a broad central lobed almond profile filled with elegant arabesques bordered by a meander of blossoms while the back cover has an elongated lobed almond profile filled only with arabesques. (Fig. 6.30 and 31) The borders of both covers are composed of cartouches with the same bud and floral forms with cloud-collar corner-pieces. Wright discounts this as a binding of the 14th century since the profiles and the borders are stamped, which would indicate a date in the 15th century when the technique is first noted on the *Dīwān* of Sultan Ahmad Jalayir dated 803/1402.⁹² Brend has expressed similar reservations.⁹³ However, as noted above, the

⁸⁹ Thackston, *A Century of Princes, Sources on Timurid History and Art*, Cambridge, Mass, 1989, pp. 4-18; Raby and Tanındı, op.cit., 1993, p.13.

⁹⁰ TIEM, 1999, 29.7 x 20.5cm; Sakisian, op.cit.,1934, pp. 83 - 84, fig. 3 - 5; Ettinghausen, op.cit., 1954, p.468; Brend, op.cit. 1989, p. 235; Çağman and Tanındı, op.cit., 2011, 226-7 Wright, op.cit., forthcoming 2012, Chapter 5, n. 25.

⁹¹ Von Zambaur, op.cit., 1927, p.181-2 and Bosworth, op.cit., 2004, p.141.

⁹² Wright, op.cit., forthcoming 2012, Chapter 5, n. 25.

⁹³ Brend, op.cit., 1989, p. 235.

profiles and decoration of the front and back covers are different as occurs sometimes on earlier tooled bindings, but, with the advent of panel stamps it is discontinued as the design could be easily replicated. However, given the very sophisticated nature of the stamps of the *Dīwān* of Sultan Ahmad (TKS. H.796) (Fig.6.29), this Shirvani example may be contemporary with its manuscript, reflecting the continuation of the ornament of earlier tooled bindings and the tradition of using two different designs for the front and back covers.

In examining the decoration of this binding, two comparisons may be made with that of late Mamluk bindings. The floral decoration with the pointed petals is typical of Shirazi illumination, and the small buds that provide the meander of the border can be compared to those of the binding of the Qur'an for Qansuh Khamsmiyya (TIEM 508).⁹⁴ (Fig. 6.32) The centre of the larger lobed almond profile is also marked by the presence of a quatrelobe split palmette which commonly occurs on Mamluk bindings of the second half of the 15th century.⁹⁵ This usage indicates that binders continued to draw on patterns over long periods of time transmitted through pattern books.

⁹⁴ See fig.4.21 for this binding.

⁹⁵ See fig. 4.113 for example of the quatrelobe split palmette motif in Mamluk binding.



Fig. 6.30 : Front cover and detail of central roundel of binding of *Kitāb-i Kimiyā'-i sa'ādat* for Hushang bin Kay Kavus of Shirvan dated 781/1379, TIEM 1999, 29.7 x 20.5cm.

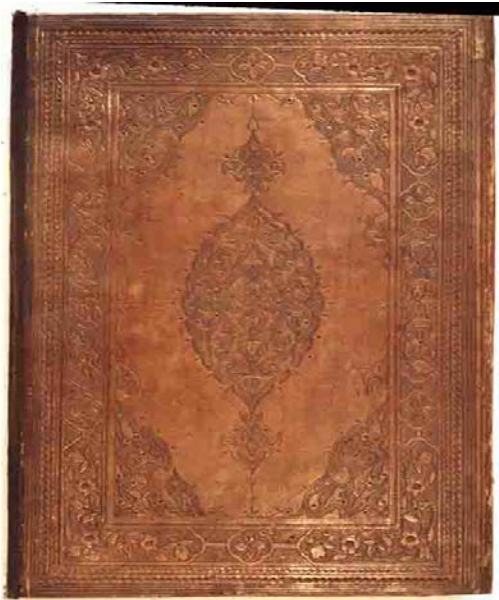


Fig. 6.31: Back Cover of *Kitāb-i Kimiyā'-i sa'ādat* for Hushang bin Kay Kavus of Shirvan dated 781/1379, TIEM 1999, 29.7 x 20.5cm.



Fig. 6.32: *left* Bud border detail of cover of binding of *Kitāb-i Kimiyā'-i sa'ādat* for Hushang bin Kay Kavus dated of TIEM 1999. *right* Border detail of cover of Qur'an for Qansuh Khamsiyya, late 15th century, TIEM 508.

Examples of what was to become a superb tradition of leather filigree work on a pasteboard ground is also found on Persian bindings of the early 15th century.⁹⁶ The doublure of the *Yazd Anthology* dated 809/1407 (TSK. H. 796) illustrated below has two foxes on a yellow pasteboard ground within a cloud-collar profile. (Fig.6.31) The use of figural compositions for filigree doublures and covers never finds any favour in the Mamluk repertoire or indeed in the Ottoman one.



Fig. 6.33: Detail of doublure of the *Yazd Anthology* dated 809/1407 TSK H.796. Photo courtesy of Elaine Wright.

⁹⁶ Mamluk bindings of the late 14th century, as was noted in Ch. 4, used filigree work for their covers on a textile ground and represent the earliest examples of filigree in the context of the Islamic binding tradition. See for example fig.4.143 and 4.144.

Filigree doublures of a non-figural nature are noted on two other bindings which appear almost identical.⁹⁷ The first has a manuscript of the *Dīwān* of Sultan Ahmad Jalayir which was copied in Baghdad, dated 809/1406-7 and the other, an *Anthology of Dīwāns* was copied in Yazd some thirty years later in 840/1436-7.⁹⁸ The sun-burst medallion of the front covers is repeated in filigree for the doublures and the whole composition is very finely detailed with filigree bands of rosettes and arabesques lying on blue and yellow grounds for the corner-pieces. (Fig. 6.34, 6.35) The flap has a cloud-collar profile on a blue ground with dense bands of filigree in a floral pattern extending to the border of the central panel. The conception of the pattern and techniques all point to a very sophisticated level of workmanship and design. Brend was of the opinion that the earlier binding was later imitated in Yazd but Wright has shown that the binding of the *Dīwān* of Sultan Ahmad Jalayir dated 809/1406 - 7 is not contemporary with the manuscript as all the features are typical of Shirazi bindings from the 1430s until the 1450s.⁹⁹ The manuscript was most probably rebound, at the same time as the *Anthology of Dīwāns* dated 840/1436-7 by the

⁹⁷ The only difference between the two bindings as Brend, op.cit, p. 236 notes is that 840/1436 binding uses triangular corner pieces for the doublures of the back cover as opposed to the quadrants used on the binding for the manuscript dated 809/1407 and the fore edge flap of the 840/1436 binding uses lobed almond profiles rather than knots for its decoration.

⁹⁸ *Divan* of Sultan Ahmad Jalayir, TIEM 2046, 27.5 x 18cm, dated Ramadan 809/ June 1406; Sakisian, op.cit., 1934, p. 88; Brend, op.cit., p.236; *Anthology of Dīwāns*, TIEM Ms.2009 copied in Yazd with the dates 837/1433 and 840/1436 in the manuscript; Brend, op.cit., p.236, Fig.7.

⁹⁹ Brend, op.cit., 1989, p.236; Wright, op.cit., forthcoming 2012.

same binder in either Yazd or Shiraz.¹⁰⁰ From the evidence cited above, it would appear that there are no reliably dateable filigree Jalayirid bindings.¹⁰¹

What is of relevance, however, is that these bindings represent the beginning of a style of filigree work that was used in Cairo in the second half of the 15th century. The filigree lies on a pasteboard ground which allows for different colours to be applied to the background to highlight various parts of the pattern. Likewise, the 'sun-burst' cloud collar profile that decorates the covers of both the *Dīwān* of Sultan Ahmad Jalayir and the *Anthology of Dīwāns* is found on a binding of the *Ṣaḥīḥ* of Bukhari copied for Sultan Khushqadam.¹⁰² (Fig. 6.34)

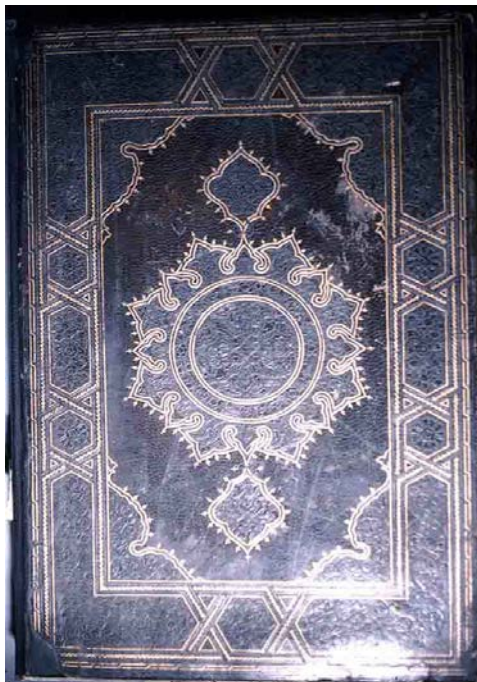


Fig. 6.34 Front Cover of the *Dīwān* of Sultan Ahmad Jalayir dated 809/1407 TIEM 2046, 27.1 x 18.3cm.

¹⁰⁰ The same rosettes in filigree are found on the corner-pieces of the doublures the binding of a *Jāmi' al-uṣūl* dated 839/1435, CBL.Ms.Arab, 5282, see fig. and p.

¹⁰¹ See Çagman and Tanındı, op.cit., 2011, pp. 221-265 for tooled Jalayirid bindings.

¹⁰² This sun-burst profile also occurs on the covers of a *Ṣaḥīḥ* of Bukhari copied for Khushqadam on TIEM 1673. Unfortunately, I was not permitted to photograph it.

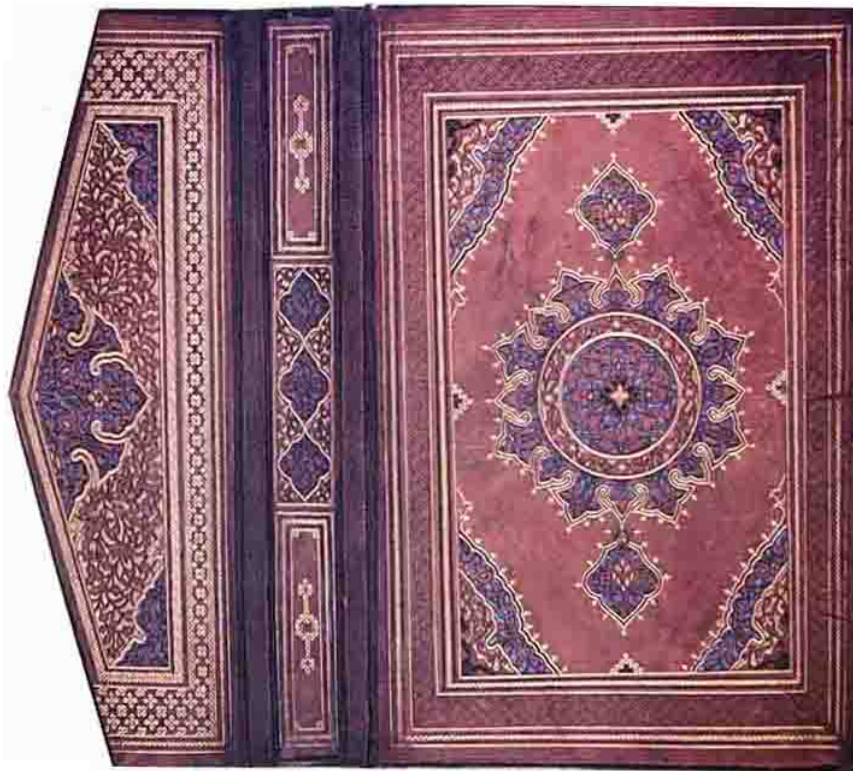


Fig. 6.35 : Doublure of the *Dīwān* of Sultan Ahmad Jalayir dated 809/1407, TIEM 2046, 27.1 x 18.3cm.

The production of bindings with pressure-moulded covers and fine filigree doublures were pushed to new heights of virtuosity under the Timurid court ateliers in Herat, Shiraz and Samarkand driven by the patronage of men of letters such as Iskandar Sultan, Ibrahim Sultan, Baysunghur and Ulugh Beg. The importance of the establishment of scriptoria that co-ordinated all aspects of book production was an extremely important factor in the development of styles and the transmission of patterns and motif.¹⁰³ The contents of the Diez Album in the Staatsbibliothek Berlin and Tokapı Sarayı album H.2152 contain drawings and sketches which show 'the Timurid penchant for standardization, repetition and refinement.'¹⁰⁴ Bookbinding designs on paper have already been noted in

¹⁰³ See Lentz and Lowry, op.cit.,1989, pp.159 - 238.

¹⁰⁴ Ibid., p.166.

the last chapter in the *Anthology* of Iskandar Sultan in the British Library.¹⁰⁵

As Lowry and and Lentz have shown, the codification of art forms into the pictorial, illustrative and decorative categories led to the formulation of an artistic vocabulary which was shared and understood by artists and craftsmen working in different contexts and media. The *Arzadasht*, thought to be a report by the head of Baysunghur's atelier, records the roles that were played by the artists and the variety of tasks that they undertook.¹⁰⁶ For example, we are told that Master Qiwan al-Din who is attributed with the invention of pressure-moulding had finished the margins for the binding of a *Shāhnāma* and was now drawing the design for the centre having finished the back, spine and decoration.¹⁰⁷

The binding of a copy of *Jāmi' al-uṣūl* of Ibn al-Athir copied in 839/1435-6 in Shiraz is also of relevance in examining the connection between Mamluk and Persian bindings.¹⁰⁸ (Fig.6.36) Wright suggests that it must be a product of the workshop of Ibrahim Sultan as the quality of the workmanship is outstanding.¹⁰⁹ She points to the distinctive styles found on this binding which have not been noted before; the predominant use of floral motifs, the wide knotwork borders and the extensive use of gold.¹¹⁰ However, in examining the relationship of this

¹⁰⁵ See fig. 5.8.

¹⁰⁶ The *Arzadasht* is found in Album H.2153 of the Topkapı Sarayı Library, Istanbul; See Lenz and Lowry, op.cit., 1989, p.159-160 and fig. 51; For translation see Thackston, op.cit., 2000, p.43.

¹⁰⁷ Thackston, op.cit., 2000, p.43.; see p. 262 for Master Qiwan al-Din as the inventor of pressure-moulding and his association with the invention of filigree.

¹⁰⁸ CBL Ar. 5282, 35 x 26.5cm; Van Regemortel, op.cit.,1961, Pl.26 and 27; Wright, op.cit. Chapter 5.

¹⁰⁹ Gratzl, op.cit. 1939, p.1978 states that estimates by a Swedish binder indicated that over 550,000 blind tooled impressions and 43,000 gold ones were used for the cover.

¹¹⁰ Wright, op.cit., forthcoming 2012, Chapter 5.

binding with the later Mamluk examples, of great interest is the use of two border patterns: one composed of a knot meander and the other a rhomb meander on the borders of the doublure, both of which predominate on the borders of Mamluk bindings in the second half of the 15th century.¹¹¹ (Fig. 6.37, 38) These border tools were widely disseminated as they are also found on Ottoman bindings of the 1450s.¹¹²

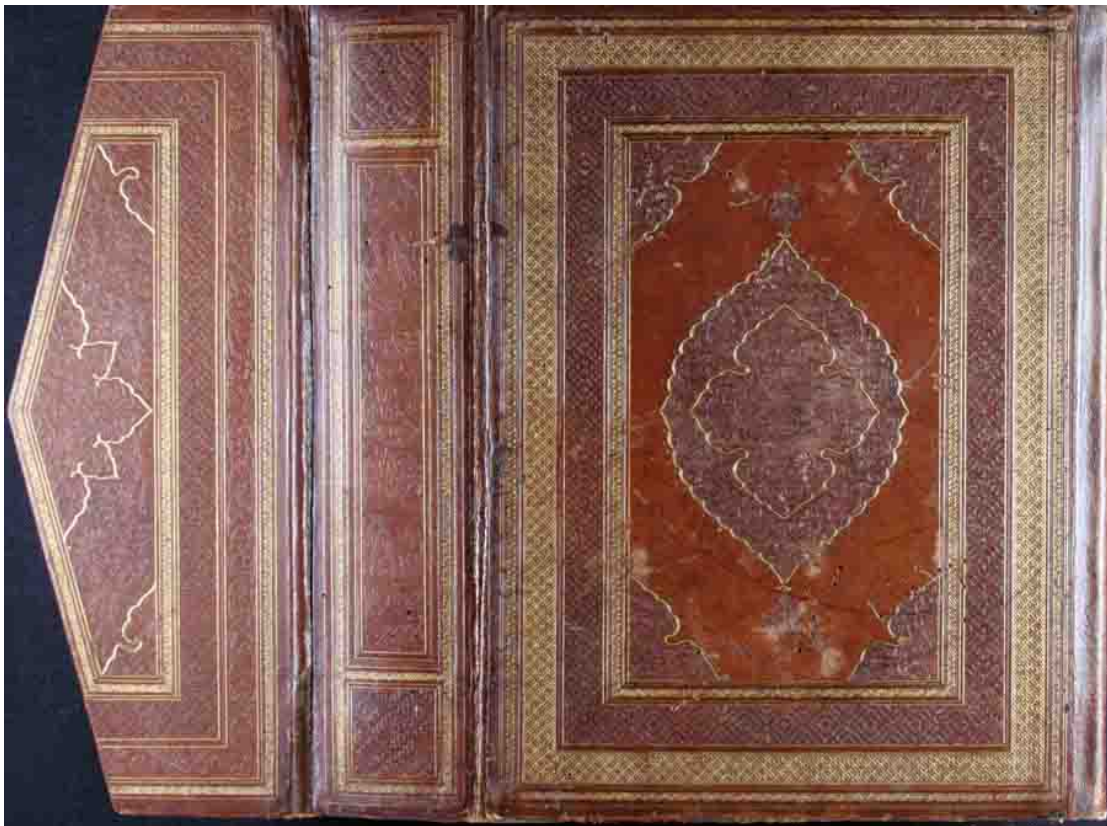


Fig. 6.36 : Back cover of *Jāmi' al-uṣūl*, 839/1435 CBL Ar. 5282, 35 x 26.5cm. Image courtesy of the Chester Beatty Library.

¹¹¹ See Appendix 2 ,no. 26 for the knot meander and 39 for the rhomb meander tool.

¹¹² For example, see Raby and Tanındı, op.cit, 1993 Cat. 6 and 7; Süleymaniye Library, Fatih, 3844 dated 857/1453 where the borders are composed of a similar rhomb pattern and ibid., Cat.1, Museum of Turkish and Islamic Arts, Bursa, Ms.207, dated to the second quarter of the 15th century.



Fig. 6.37: Doublures of *Jāmi' al-uṣūl*, 839/1435, CBL Ms. Ar. 5282, 35 x 26.5cm. Image courtesy of the Chester Beatty Library.



Fig. 6.38 Detail of knot meander tool on the doublure of *Jāmi' al-uṣūl*, Shiraz, dated 839/1435, CBL Ms. Ar. 5282, 35 x 26.5cm. Image courtesy of the Chester Beatty Library.

Also, the lobed almond profile of the filigree doublures contains four large fleur-de-lis arranged in a cruciform manner which can be directly compared to the decoration found on two bindings for Sultan Khushqadam and Qaytbay.¹¹³ This

¹¹³ See fig. 4.111. for TSK. A.247/2 and fig. 4.190 for the doublures of TSK. A.649.

was also noted in architectural decoration of the period discussed in Chapter 5.¹¹⁴

Comparisons can also be made with bindings produced in Herat which Wright notes tend to employ palmette arabesques rather than floral ornament favoured in Shiraz. The style of the arabesque filigree doublures of the *History of Isfahan* produced for Sultan Baysunghur in 834/1431 and those of the binding of a *Kalīla wa-Dimna* dated Muharram, 833/October 1429 can be compared to the filigree covers of a binding of a Qur'an for Qansuh al-Ghuri dated Ramadan 908/February 1503.¹¹⁵ (Fig.6.39) This suggests that patterns were available to be adopted by Mamluk binders of Shirazi and Herati bookbinding or pattern examples



Fig. 6.39: *left* Filigree doublure of *Kalīla wa-Dimna*, copied in Herat dated 833/1429 TSK R.1022, 30 x 20cm. *right* Filigree front cover of a Qur'an for Qansuh al-Ghuri dated 908/1503 DAK Rasid 73, 62 x 41cm.

¹¹⁴ See fig.5.47.

¹¹⁵ BL. Or. 2773, 23 x 14cm; Arts Council of Britain, *The Arts of Islam*, 1976, Fig. 559; TSK. R.1022, 30 x 20cm; Aslanapa, 1979, fig.52; Lentz and Lowry, 1989, op.cit., Cat.21; DAK Rasid 73, 62 x 41cm, see fig. 4.152.

With the decline of the Timurids and the ascendancy of the Qarakoyonlu at the end of the 14th century and the establishment of the Akkoyunlu dominion with its capital at Tabriz after 872/1467, these techniques and styles of decoration continued to be used for bindings. Oktay Aslanapa broadly divided Turcoman bindings into two broad groupings: those with animal scenes placed within embossed almond profiles on a gilded ground, which were decorated on the horizontal axis in opposition to the manuscript, and secondly, those with large lobed almond profiles filled with delicate arabesques and floral decoration.

¹¹⁶ The binding of the *Dīwān* of Farayabi copied by Murshid al-Katib and completed on the 20th Dhu 'l-Hijja 882/ 25th March 1478, is one example of the of the figural type which uses gilding for the background of the pressure-moulded lobed almond profile and the segmented cartouche stamps of the borders. ¹¹⁷

(Fig. 6.40)

¹¹⁶ Aslanapa, op.cit., 1979, p.65.

¹¹⁷CBL Per.331, 28 x 16.5cm; Van Regemorter, op.cit., 1961, pl.31 and 32; Arberry, op.cit. 1960, p. 80.



Fig. 6.40: Back cover, *Dīwān* of Farayabi, CBL, Per 331, 28 x 16.5cm dated 882/1478. Image courtesy of the Chester Beatty Library.

However, it was the second type with lobed profiles and all-over pressure-moulded patterns that served as models for the Mamluk binders although, given the few extant Mamluk examples, this technique was not commonly used.

(Fig.6.41)



Fig. 6.41 : Front cover of Qur'an attributed to Akkoyunlu Shiraz or Tabriz, c. 880-906/1475-1500, Khalili Collection, QUR.128, 22 x 15cm. After James, op.cit., 1992, Cat.8.

A pressure-moulded binding of a Qur'an attributed to Aqqoyonlu Shiraz or Tabriz and dated c.880-906/1475-1500 in the Khalili Collection has a central panel with a repeat pattern based on the quatrelobe split palmette motif and was brush gilded.¹¹⁸ (Fig. 6.41) The all-over gilding is found on a pressure-moulded binding of a manuscript produced for Sultan Muhammad, the son of Qaytbay where the cover is decorated with a large lobed almond profile surrounded by spiralling palmettes and small flowers, very much in the Turcoman style.¹¹⁹ (Fig.6.42) However, what is to be noted here is the use of blue paint for the outlines of the profile and corner-pieces which seems to be a particularly Mamluk addition and to my knowledge has not been noted on any other Turcoman binding. The binding of a pressure-moulded Mamluk Qur'an dated

¹¹⁸ Khalili Collection, QUR.128, 22 x 15cm; James, 1992, op.cit., Cat.8.

¹¹⁹ TSK A.2303, see fig. 4.160.

897/1491 also uses gilding for its background and has the quatrelobe split palmette motif for the centre of the lobed almond stamp.¹²⁰ (Fig.6.43)



Fig. 6.42 : *left* Pressure-moulded front covers of a manuscript copied for Sultan Muhammad, son of Qaytbay dated 903/1498, TSK A. 2303, 42.5 x 30cm. *right* Pressure-moulded front cover over of Mamluk Qu'ran dated 897/1491 CBL, Ms.1486 47.5 x 33.6cm. Image courtesy of the Chester Beatty Library.

A pressure-moulded Turcoman binding which was discovered in the Topkapı collections with a *waqf* for the Sultan Qaytbay shows that there were examples in Cairo which could serve as prototypes for Mamluk binders. (Fig. 6.43) However, the examples of Mamluk pressure-moulded bindings are not decorated with distinctive cartouche such as was often placed at the centre of many of the profiles of these Turcoman covers or replicate the very distinctive doublures of floral filigree.

¹²⁰ See fig. 4.160 for TSK A. 2303 and fig. 4.157 for CBL Ms.1486.



Fig. 6.43 : Front and back cover of Aqqoyunlu binding dated 870/1465-66, TSK K.783, 26.5 x 18cm.

The manuscript was copied and most probably bound in Hamadan in 870 /1465-66 by Zayn al-Abdin bin Muhammad al-Katib al-Shirazi for the library of Abu'l Nasr Yusuf Bahadur and was made *waqf* for the Sultan on 16th Dhu'l-Qa'dah 895/1489.¹²¹ (Figs. 6.43 and 6.44) Raby and Tanındı have identified another manuscript with a dedication to this individual in the Topkapı Palace library and have suggested that he may be identified with Yusuf Shah Mirza, a cousin of Uzun Hasan who was captured after the battle of Başkent in 878/1473 when the Akkoyunlu were defeated by the Ottomans and taken to Istanbul.¹²² He was subsequently released in 877/1472.¹²³ How the manuscript arrived in Cairo is not known but the period between the date of copying and the date of

¹²¹ TSK. K. 783, 26.5 x 18cm, Karatay, *Topkapı Sarayı Müzesi Kütüphanesi Farsça Yazmalar Kataloğu*, Istanbul, 1961, no. 84.

¹²² Raby and Tanındı, op.cit. 1993, n.60., p.97.

¹²³ See also Woods, *The Aqqoyunlu, Clan, Confederation, Empire*, Salt Lake City, 1999, p.115; Yusuf Bayandur led the attack of 877/1472 against the Ottomans but was later captured in Rabi' I 877/August 1472. Also, n.119, p.263 states the identity of this individual is a subject of confusion as he is referred to as Yusuf Mirza, Yusuf Shah, Yusufcha and described as Uzun Hasan's nephew and cousin.

endowment was one of active diplomatic exchanges between the Aqqoyonlu and the Mamluks.

Initially, relations were friendly as Uzun Hasan (r.861-882/1457-1478) sought an alliance with the Mamluks to stem the increasing power of the Ottomans.¹²⁴ The embassy of 873/1468, however, marked the end of peaceful relations when Uzun Hasan sent a proclamation in which he declared his independence from the Mamluk sultanate. After the death of Uzun Hasan, the Mamluks grasped an opportunity become involved in the dynastic ambitions of senior officers who wanted to displace his heir Yaʿqub, (882-895/ 1478-1490). A visiting Aqqoyunlu delegation in Rabiʿ I of 885/May-June 1480 persuaded Dawadar Yashbak min Mahdi to attack the Aqqoyunlu with the expectation that the 'Kingdom of Iraq would be his.¹²⁵ This attractive proposition saw the departure of Yashbak from Cairo and he attacked Urfa which was controlled by a vassal of Sultan Yaʿqub based in Mardin. The Mamluks were routed and Yashbak was taken captive and murdered. The defeat was met with disbelief in Cairo and in Safar 886/April 1481, Sultan Qaytbay entertained a delegation from the court of Yaʿqub who was suitably contrite and agreed to return Yashbak's head along with all the other prisoners.¹²⁶ It may have been on this occasion that this volume found its way to the possession of Qaytbay.

¹²⁴ The defeat of the Qarakoyunlu in 871/1466 and containment of the Timurids in Khurasan by Uzun Hasan of the Aqqoyunlu presented an opportunity for the Mamluks to form an alliance with him to stem the burgeoning power of the Ottomans. After each of these victories, Uzun Hasan sent an ambassador to Cairo, requesting a Mamluk robe of investiture; See fig. 4.137 and 4.132 for manuscripts copied and bound for him.

¹²⁵ Petry, *op.cit.*, 1993, pp.83-88.

¹²⁶ *Ibid.*

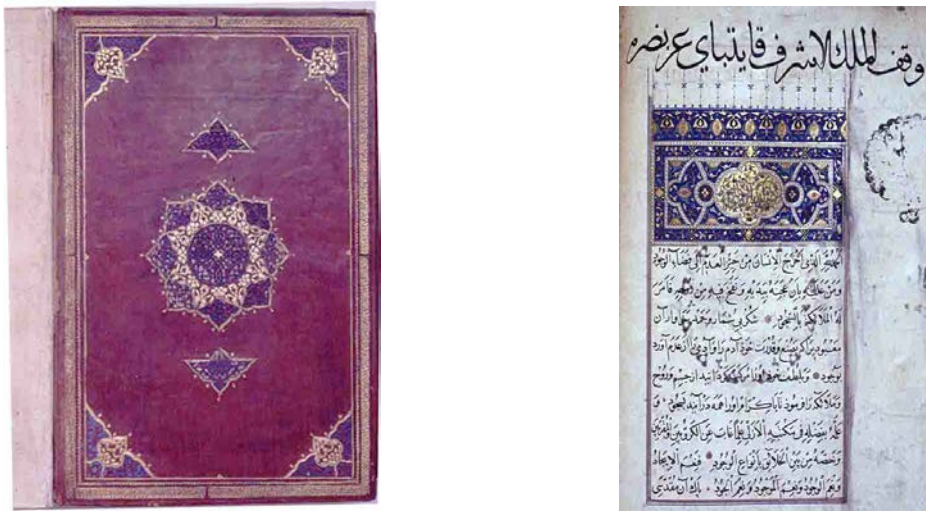


Fig. 6.44 *left* Doublure of Aqqoyunlu binding dated 870/1465-66, TSK K.783 26.5 x 18cm. *right* Fol. 1b of TSK.K.783 with *waqf* inscription for Qaytbay.

Other Turcoman bindings also suggest resonances with Mamluk examples. The doublure of a copy of Attar's *Manṭiq al-Ṭayr* copied for Yusuf Shah Mirza displays fine floral filigree work which can be compared to the the floral corner-pieces of a binding of a manuscript which was copied in 778/1376 but contains a very finely illuminated dedicatory page to the library of Sultan Qansuh (r.904-906/1498-1500).¹²⁷ (Fig.6.46) Although the floral filigree work can be compared to Timurid and Turcoman examples, this binding is illustrative, however, of the various sources of inspiration on which the Mamluk binders drew. The borders are segmented with a gilded tooled interlace pattern with small coloured squares being left in reserve which brings to mind the Ilkhanid method of tooling mentioned earlier and the filigree centre-piece can be directly compared to the filigree doublures that are found on Herati examples.¹²⁸

¹²⁷ TSK EH.1511, 20 x 12cm, Raby and Tanındı, op.cit., 1993, p. 72; for TSK, A.2126, see fig. 4.151.

¹²⁸ See fig. 6.6 for this method of tooling and TSK. R. 1022, fig. 6.39 for example of Herati filigree work.

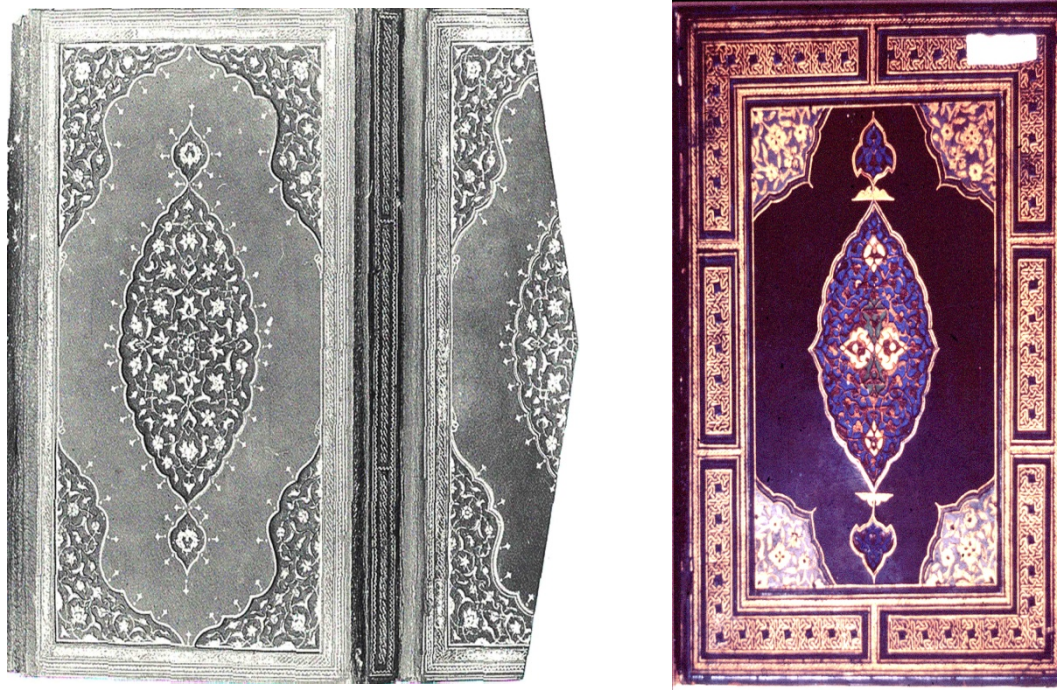


Fig. 6.46 : *left* Doublure of Aqqoyunlu binding dedicated to Prince Yusuf Bahadur Khan, c.874-884/1470-80 TSK EH.1511, 20 x 12cm. After Raby and Tanındı, op.cit., 1993, fig. 70. *right* Front cover of Mamluk binding dedicated to the library of Sultan Qansuh TSK A. 2126, 30 x 24cm.

The binding of the *Dīwān* of Hidayat, copied for the library of Sultan Khalil, who was Governor of Fars after 875/1470, brings together more elements that can be related to Mamluk bindings of the late 15th century.¹²⁹ At the centre of the pressure-moulded front cover is a large quatrelobe split palmette which appears often on the tooled bindings of the period of Qaytbay and al-Ghuri.¹³⁰ The background of the pasteboard doublures is coloured in ultramarine and yellow which is also found on Mamluk examples.¹³¹

¹²⁹ CBL T. 401, 17.3 x 12.3cm; Minorsky, *The Chester Beatty Library, Catalogue of Turkish Manuscripts, Dublin*, 1958, pp.1-3; Van Regemorter, op.cit., 1961, Pl.41.; Sultan Khalil was the son of Uzun Hasan who ruled briefly after the death of his father in 882/1478.

¹³⁰ See TSK. A. 649, fig.4.112 for examples of the quatrelobe split palmette.

¹³¹ See, for example the filigree doublures of TSK. A. 649, fig. 4.190 and TIEM 508, fig. 4.191.



Fig. 6.47 : Front cover and doublure of CBL T.401, 17.3 x 12.3cm. Photo courtesy of the Chester Beatty Library.

The diaper design in filigree on the flaps does not, however, occur on the Mamluk bindings of this study, or other published examples, although interestingly it is found in architectural decoration in the mosque of Azbak al-Yusufi (900-1 /1494-5), the treasurer and head of the Royal Mamluks at the court of Qaytbay, which suggests that they were used on bindings but the examples have just not survived.¹³² (Fig. 6.48)

¹³² See Behrens-Abouseif, *op.cit.*, 2007, pp. 292-4 for an account of the mosque of Azbak al-Yusufi.



Fig. 6.48: Diaper design in carved stone in the Mosque of Azbak al-Yusufi dated 900-1/1494-5. Image with permission of Sami de Giosa.

Bindings of the Ilkhanid, Jalayirid, Timurid and Turcoman periods illustrate the origins of the ornament and techniques that became part of the Mamluk binders' repertoire in the second half of the 15th century. These were found on fine bindings produced for members of the élite and, as such, seem to constitute specific commissions rather than representing a uniform style. However, each of the Mamluk bindings demonstrates that although these techniques and patterns were derived from the Persian tradition they are often combined with other elements which give them a distinct Mamluk twist.

Binding Relationships: Mamluk and Ottoman

In turning to the connection with Ottoman binding traditions, it is difficult to decipher the relationship with Mamluk bindings of the early period as little is known of Ottoman binding until the period of Sultan Murad II (806-854/1404-51) and even then it is restricted to a few examples.¹³³ From the 1450s, however, firmer parallels can be drawn. In examining the bindings from the first half of the 15th century, Raby and Tanındı distinguish two groups, one made up of three manuscripts bound for Sultan Murad II and the other comprises volumes donated by Umur Bey to his library in Bursa.¹³⁴

The bindings of Murad II are distinguished by their knotted segmented borders and the use of lobed almond and rosette profiles which are filled with symmetrical arabesques. (Fig 6.49) The covers of the example illustrated below, completed on 14 Jumada II 838/15th January 1435 for Murad II, bear little relation to Mamluk bindings of the same period. The plain almond profile is not found on Mamluk bindings until later as is the arabesque ornament and Mamluk bindings only adopt these distinctive knotted borders in the late 15th century.¹³⁵

¹³³ Raby and Tanındı, op.cit., 1993, p.27.

¹³⁴ Umur Bey was a member of an important family who served in a variety of important government roles. He established a number of religious foundations in Ottoman cities including Bursa which he supplied with books for their libraries. See Tanındı, '15th Century Ottoman Manuscripts and Bindings in Bursa Libraries', *Islamic Art*, IV, 1990-1, pp. 143-173; Raby and Tanındı, op.cit., 1993, pp. 33-37.

¹³⁵ See for example the knotted borders of the doublures of a loose binding dateable to the late 15th century, fig. 4.188 and fig. 4.189.



Fig. 6.49: Front and back covers of Ottoman binding for Sultan Murad II dated 838/1435, TSK R.1726, 31.3 x 21.8cm. After Raby and Tanındı, *op.cit.*, Cat.2.

However, the back cover is decorated with a lobed rosette profile with pendants incorporating roundels which are found on several other Ottoman bindings attributed to the same period.¹³⁶ As this profile occurs on Mamluk bindings from the middle of the 14th century, it may be indicative of Mamluk influences.¹³⁷ A hasp profile filled with tooled floral and arabesque decoration is found on the flap and a similar treatment is noted on the flap of a binding for Sultan Jaqmaq whose cover also has pendants which include roundels.¹³⁸ Pendants with roundels were first noted on an Ilkhanid Qur'an produced in Maragha between 738-9/1338-39 so this can indicate that both Ottoman and Mamluk binders were drawing on a common repertoire of ornament derived from an Iranian

¹³⁶ See for example Raby and Tanındı, *op.cit.*, 1993, fig. 23, 25, and 27.

¹³⁷ See fig. 6.20 and 6.27 for examples of this type of pendant found on Ilkhanid, Injuid and Mamluk bindings.

¹³⁸ See fig. 4.91 for this binding.

tradition.¹³⁹ As Raby notes, the defeat of the Ottomans at the battle of Ankara by Timur in 804/1402 brought the Ottomans into 'intensive contact with the Timurid east' and Ottoman bindings with cloud collar-profiles and arabesque ornament produced in Amasya and Edirne in the 1450s reflect these influences and can be compared to those produced in Shiraz in the 1430s.¹⁴⁰ As arabesque ornament is not commonly found on Mamluk bindings until the second half of the 15th century, this does suggest that this binding may reflect influences derived from the Timurid repertoire as well. As there are so few examples with this type of ornament in this particular period, it is difficult to draw any firm conclusions other than to note the common elements found on both bindings.

The doublures of the binding for Murad II binding also have distinctive filigree trellis patterns which lie on a textile background, representing a filigree tradition which is quite different from that found on either Persian or Mamluk examples. (Fig. 6.50) Doublures with the same trellis pattern have already been noted on a binding made *waqf* for Sultan Barsbay in 831/1428 and it was suggested that this was either presented to him or made for him by an Ottoman binder working in Cairo.¹⁴¹ The borders of the doublures of the Barsbay volume are also tooled with the same knot meander tool that occurs on the borders of the flap of this volume made for Sultan Murad. (Fig. 6.50)

¹³⁹ See fig. 5.33, 5.44 for this binding.

¹⁴⁰ Raby and Tanındı, op.cit., 1993, p.22 and fig.40 and 41.

¹⁴¹ See fig. 5.44.



Fig. 6.50 *left* Doublures of binding for Sultan Murad dated 838/1435, TSK. R.1726, 31.3 x 21.8cm after Raby and Tanındı, op.cit., 1993, Cat.2. *right* Doublure of binding for Sultan Barsbay dated 831/1428, BL. Or.12386, 39.5 x 28.8cm. Image British Library.

The decagon/ten pointed star combination is also noted on one of the bindings produced in Bursa for the library of Umur Bay dated by manuscript to 838/1434.¹⁴² (Fig. 6.51) This combination has already been noted on the Hamadan Qu'ran of Uljaytu, the Maragha Qur'an of 738/1338 and the covers of four Qur'ans in Cairo probably bound around 756/1356.¹⁴³ However, in this example the ten-pointed star extends beyond the decagon and is not enclosed in a circle. The doublures, although of block-printed leather, are in a completely different style to those found on either Mamluk or Ilkhanid bindings.¹⁴⁴ They are

¹⁴² Bursa, İnebay Library, Ms.Ulu Cami, 435, 20.7 x 17.5cm; Tanındı, op.cit., 1990-1, p.155 and fig.2; Raby and Tanındı, op.cit., 1993, Cat.3; see fig. 6.47.

¹⁴³ See fig. 6.13 for the Hamadan Qu'ran, fig. 6.20 for the Maragha Qur'an and fig.4.26 for Rasid 60, 4.28 for DAK Rasid 61, 4.21 for Rasid 70 and 4.22 for DAK Rasid 71.

¹⁴⁴ See Ch. 4 for Mamluk doublures and fig. 6.15 for example of an Ilkhanid doublure.

composed of an interlace pattern based on eight-pointed stars with small rosettes at their centres and the patterns appear to be derived from a very difference source.¹⁴⁵ (Fig. 6.51) Other doublures have similar interlace designs and one has a pattern of large lobed rosettes with pendants.¹⁴⁶



Fig. 6.51 Back cover and doublure of Ottoman binding dated 838/1434, Bursa İnebay Library, Ulu Cami 435, 20.7 x 17.5cm. After Raby and Tanındı, op.cit., 1993, Cat.3.

A further comparison can be made between another cover from the library of Umur Bey and Mamluk bindings of the 14th century.¹⁴⁷ (Fig. 6.52) The back cover has a large lobed rosette profile filled with geometrical interlace which can be compared to the ornament found decorating the the bindings of *Juz' 1* and *Juz' 30*

¹⁴⁵ Raby and Tanındı, op.cit.,1993,p. 118 trace this pattern back to those found on 13th century tile work at Kabadabad.

¹⁴⁶ See Tanındı,op.cit.,1990-1, p.161,167,168.

¹⁴⁷ Bursa, İnebay Library, Ms.Hüseyin Çelebi, 481, dated c.845/1441, 28 x 18.5cm.

of Rasid 60 which has been argued were most probably bound in Tabriz or Baghdad and on a series of *juz'* with a note saying the volumes were accessioned from the Mosque of Sultan Barquq.¹⁴⁸



Fig. 6.52 *left* Back cover of Ottoman binding dated c. 844/1441 Bursa, İnebay Library, Ms. Hüseyin Çelebi, 481, 28 x 18.5cm. After Raby and Tanındı, op.cit., 1993, Fig.35. *right* Front cover of *Juz'* 28 of a Qur'an with *waqf* for Sultan Barquq, DAK Rasid 123, 33 x 24cm.

The compartments of interlace of both covers are decorated with the same five-fold knots although the Umur Bey volume also includes rosettes and small swirling swastikas in the same manner as was noted on the rosettes of *Juz'* 1 and 30 of Rasid 60.¹⁴⁹ Raby and Tanındı compared the corner-pieces of the Umur Bey

¹⁴⁸ See fig. 6.22 for DAK Rasid 60, *Juz'* 1 and fig. 4.100 for Rasid 123 also illustrated below in fig. 6.53.

¹⁴⁹ See fig.6.22 for ornament of *Juz'*1 DAK Rasid 60.

volume to the cover of a Qur'an dated 788/1387 (Philadelphia Museum, Ms.P.80) copied by Ahmad bin Ali al-Isfahani which has already been mentioned in relation to the decoration of *Juz'*1, Rasid 60.¹⁵⁰ However, similar comparisons may be made with the corner-pieces of the Barquq volumes.¹⁵¹ (Fig. 6.53 and 6.54) It is difficult to assess the significance of these other than to say that the bindings produced in Bursa, Cairo and Iran appear to be drawing on the same repertoire of ornament so the fundamental elements of the pattern are comparable but with small changes in the details of the design.



Fig 6.53 *left* Detail of central rosette of *Juz'* 28 of a Qur'an for Sultan Barquq, DAK, Rasid 123. *right* Detail of central rosette of Ottoman binding, dated 844-5/1441-2, Bursa, Inebay Library, Ulu Cami, 435.

¹⁵⁰ See n.67 in this chapter.

¹⁵¹ The earliest example of overlapping segmented corner-pieces in this study in the Mamluk context is found on the Mubarak Shah al-Suyufi Qur'an, see fig. 4.93, and see fig 4.99 for the Barquq example.



Fig. 6.54 Detail of corner-piece of *Juz'* 28 of a Qur'an with *waqf* for Sultan Barquq, DAK Rasid 123.

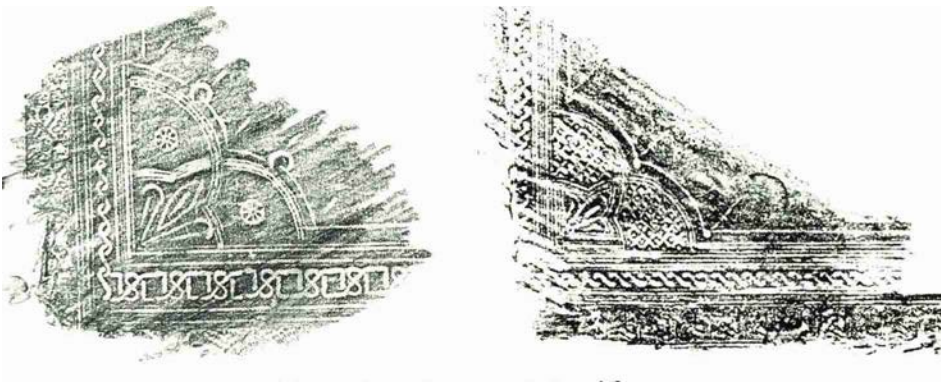


Fig. 6.55 *left* Rubbing of corner-piece of Ottoman binding dated 845-6 /1441-2, Bursa İnebay Library, Ulu Cami, 435. *right* Rubbing of corner-piece of Persian binding dated 789/1387, Philadelphia University Museum Ms.P.80. After Raby and Tanındı, op.cit., Fig. 37a.

However, influences from the Persian binding tradition appears earlier on Ottoman bindings than those of Mamluk Egypt. Bindings with cloud-collar profiles are produced in Amasya and Edirne in the 1450s and resemble Shirazi examples of the 1430s.¹⁵² There are no such early examples among Mamluk bindings with the exception of the flap of the binding with a *waqf* for Sultan Jaqmaq dated 848/1444 which we have already noted may be a rebinding.¹⁵³

¹⁵² Raby and Tanındı, op.cit., 1993, pp.40-1, fig. 40; The earliest example was produced in Amasya and dated 842/1439.

¹⁵³ See fig. 4.107.

However, among the Mamluk examples of full cloud-collar profiles, two volumes bound for the Dawadar Yashbak min Mahdi in 879/1474 and 880/1475 bear a very close resemblance to a cloud-collar binding produced in Bursa in 855/1452.¹⁵⁴ (Fig. 6.56) Both profiles employ double-edges and the interior is tooled in the blind. This would suggest that this style was derived from Ottoman examples as it can be directly compared to an Ottoman binding dated 855/1452. The full cloud-collar profile was not popular in Cairo so this may have been the attraction for the bibliophile, Dawadar Yashbak min Mahdi who sought an unusual style.¹⁵⁵



Fig. 6.56 *left* Front cover of Mamluk binding for the Dawadar Yashbak min Mahdi, dated 880/1475, TSK. K.1008, 30.5 x 21cm. *right* Back cover of Ottoman binding dated 855/1452, Bursa İnebay Library, Ms. Haraçcioğlu 1324, 27 x 16.5cm. After Raby and Tanındı, op.cit., Fig.41.

¹⁵⁴ See fig. 4.137 for these bindings.

¹⁵⁵ Yashbak min Mahdi was a noted patron of the book; see fig. 4.132 for another manuscript produced for him.

Changes began to occur in both Mamluk and Ottoman binding decoration in the second half of the 15th century. In Mamluk Cairo, bindings were decorated with lobed almond and cloud-collar profiles and floral and arabesque ornament along with a new style of filigree work found on the doublures and covers.

On Ottoman bindings in what is termed the 'Fatih' style of the 1450s and 1460s, the mode is predominantly floral but the specific characteristic is that the covers were hand-tooled in the blind without gilding, opening up to burgundy red filigree leather doublures.¹⁵⁶ Raby notes that this style owes its origins to the Timurid repertoire in the first half of the 15th century but 'despite influences in vocabulary and syntax, the expression is distinctly Ottoman'.¹⁵⁷ (Fig.6.57) The floral ornament was distinguished by lobed leaves, rosettes and lotus blossoms and small snail-like cloud bands. The compositions were marked by their asymmetry and the impression of three-dimensionality was given by making the stems cross over one another. Also, purely arabesque compositions were rare on the outer covers and segmented tooled borders were discarded.

Similarities may be discerned with Mamluk examples in the use of lobed leaves, lotus blossoms and snail-like cloud bands but the ornament on Mamluk examples is always gilded. Also, arabesque compositions dominate Mamluk covers for this period and the use of purely floral ornament is rare.¹⁵⁸ This suggests that the Mamluk and Ottoman binders were drawing on the same

¹⁵⁶ Raby and Tanındı, *op.cit.*, 1993, pp. 49-54.

¹⁵⁷ *Ibid*, p.49; Wright, *op.cit.*, forthcoming 2012, Chapter 5 discusses the difference between the Ottoman and Timurid styles.

¹⁵⁸ See TSK A.643, fig. 4.117 for an example of floral ornament.

repertoire of ornament derived from Timurid models but in each case providing their own interpretation in the use of the motifs.



Fig. 6.57 : *left* Rubbing from the back cover of Ottoman binding in the 'Fatih' style TSK.A.2177 dated Rajab 871/ March 1467 after Raby and Tanındı, op.cit., Fig.51. *right* Detail of Mamluk flap on binding for Qansuh Khamsmiyya, TIEM 508, 50 x 38cm.

The use of burgundy red leather is also noted on three bindings produced during the reign of Qaytbay marking a change from the use of dark brown or tan leather which may be the result of Ottoman influences.¹⁵⁹

Raby compares the design of a doublure made for Mehmed II (c. 879- 884/1475-80) with that of a filigree cover for Sultan Qaytbay dated 889/1484 suggesting that this may be an indication of Ottoman influence on Mamluk bindings.¹⁶⁰ (Fig. 6.58) Although a resemblance can be discerned, the Qaytbay binding is

¹⁵⁹ See for example, TSK. A.2829, fig. 4.150 and TSK. 2048, fig. 4.30, TSK. A.244, fig.4.31.

¹⁶⁰ Raby and Tanındı, op.cit., 1993, p. 62 and fig. 66.

distinguished by the defined segmentation of the field into cartouches contained within the profile and the use of different colours of blue and silver to highlight different parts of the pattern which is not noted on any comparable Ottoman examples.¹⁶¹



Fig 6.58 Doublure of Ottoman binding for Mehmed II dated c.879-884/1475-80 TSK A.1966, 22.7 x 13.8cm. After Raby and Tanındı, op.cit.,1993, Fig. 66. *right* Front cover of Mamluk binding for Sultan Qaytbay, dated 889/1484, TSK A.2829, 32 x 21.5cm.

Some comparison can be made, however, with the doublures of the binding made most probably for Amir Qansuh Khamsmiyya and those of an Ottoman binding copied for Mehmed II dated Rabi' I 881/July 1476.¹⁶² (Fig. 6.59) Both have doublures of burgundy filigree leather arabesques lying on a golden ground and in both instances small punches are placed in the pasteboard; in groups of three on the Mamluk example and four on the Ottoman.

¹⁶¹ Ibid., p. 62 seem to have mistaken this binding as they say 'On both bindings the silhouette effect of the filigree is achieved by the use of small scale arabesques on a gold ground'; see fig. 4.150 for this binding.

¹⁶² Robinson and Skelton et al, *Islamic Art in the Keir Collection*, London, 1988, p.22 and Raby and Tanındı, op.cit., 1993, Cat.22.



Fig. 6.59 *left* Doublure of Ottoman binding made for Mehmed II, Keir Collection, PT1, 31 x 20cm dated Rabi' I, 881/July, 1476. After Raby and Tanındı, op.cit., p.165. *right* Doublure of TIEM 508 made for Qansuh Khamsmiyya.

Corner-pieces containing large cup-like palmettes are found on both Mamluk and Ottoman bindings and illumination. On Mamluk binding examples they occur earlier on the binding of the quatre- lobe palmette group for Sultan Khushqadam dated 867/1462, the covers of a *Ṣaḥīḥ* of Bukhari for Qaytbay made *waqf* in 895/1490 (Fig. 6.60), and the cover of the binding for Amir Qansuh Khamsmiyya.¹⁶³ They occur on an Ottoman binding dated 15 Dhu'l Qa'dah 878/3rd April 1474 dedicated to Mehmed II.¹⁶⁴ (Fig.6.61) In Mamluk illumination they are noted in the corner-pieces of the frontispiece of the manuscript of the binding for Qaytbay illustrated below dated 889/1484.¹⁶⁵ (Fig.6.62) In Ottoman illumination, they are found in the frontispiece of a manuscript produced for

¹⁶³ See fig. 4.111 for TSK. A.247/2, TSK.A.649 , fig.4.112 and TIEM 508, fig.4.120.

¹⁶⁴ Raby and Tanındı, op.cit., 1993, Cat. 20 note this is rather anachronistic binding and suggest it may have been produced in Bursa.

¹⁶⁵ TSK A.2829, see fig. 4.150.

Mehmed II which is undated but thought to be c. 869/1465.¹⁶⁶ (Fig.6.62)

However, the only real comparison that can be drawn between the bindings and their ornament is the presence of the same motif. Given the earlier occurrence of these examples in Cairo, this would suggest that these influenced binders at the Ottoman court or at least they were drawn from a common source.



Fig. 6.60 : *left* Corner-piece with large cupped palmette on Mamluk bindings, TSK. A.649 for Sultan Qaytbay *right* TIEM 508 for Qansuh Khamsmiyya.



Fig. 6.61 : Corner-piece with large cupped palmette on Ottoman binding produced for Mehmed II, dated 878/1474. After Raby and Tanındı, op.cit., 1993, Cat.20.

¹⁶⁶ Süleymaniye Library, Süleymaniye 1025, 35.4 x 25.2cm; Raby and Tanındı, op.cit., 1993, Cat.12.



Fig. 6.62 : *left* Frontispiece of a manuscript for Qaytbay dated 888/1484, TSK.2829. *right* Frontispiece of manuscript produced for Mehmed II c. 870/1465, Süleymaniye Library, Süleymaniye 1025. After Raby and Tanındı, op.cit.,1993, Cat.12.

In the 1470s a new type of binding style is introduced to Ottoman binding which can be directly associated with Turcoman Shiraz and Isfahan. This has been associated with the defeat of the Akkoyunlu after the battle of Başkent in 877/1473 and the movement of craftsmen to Istanbul from the Akkoyunlu domains although Raby and Tanındı notes that this change occurs a little earlier.¹⁶⁷ This is manifested in the harder sizing of paper, greater use of gold and the use of pressure-moulding which is used extensively on the bindings of Bayezid II (885-917/1481-1512). As we have already noted, the technique of pressure- moulding was not commonly used in Cairo, at least, that is the impression given by the few examples that exist. The pressure - moulded

¹⁶⁷ Raby and Tanındı, op.cit., 1993, p.69.

bindings bear little resemblance to Mamluk examples other than the use of gilded grounds and floral ornament.

The use of the quatrelobe split palmette motif is also to be noted on several Ottoman bindings during the 1470s and, as with the Mamluk examples, must have been drawn from the Turcoman repertoire. (Fig. 6.63) A particularly fine example is a pressure-moulded volume which was made for Prince Cem, the brother of Bayezid.¹⁶⁸ The large centrally placed quatrelobe palmette motif extends into spiralling stems which carries a distinct resonance with the inlaid stucco decoration of the mosques of Abu Bakr ibn Muzhir and Qijmas al-Ishaqi as well as that of the gilded pressure-moulded binding for Sultan Muhammad.¹⁶⁹



Fig. 6.63: Back cover of pressure-moulded Ottoman binding, TIEM 2301, 18.4 x 11.7cm. After Raby and Tanındı, 1993, op.cit., Cat.33.

¹⁶⁸ TIEM, 2301, 18.4 x 11.7cm; Prince Cem, the brother of Bayezid, challenged the accession of Bayezid after the death of Mehmed II. In 885/1481 he sought refuge at Qaytbay's court in Cairo where he stayed for a year. He finally died in Capua in 900/1495 after spending his life in exile in Europe. See Vatin, *Sultan Djem*, Ankara, 1997; Freely, *Jem Sultan*, London, 2004 for an account of his life. See fig. 6.79 for comparison with the decoration of a Venetian binding.

¹⁶⁹ See fig. 5.39 for the mosque of Abu Bakr ibn Muzhir and fig.5.66 for the mosque of Qijmas al-Ishaqi; see fig. 4.60 for this binding.

However, the filigree doublures of a binding made for Bayezid which is not pressure-moulded does have a direct relationship with two bindings produced for Qaytbay.¹⁷⁰ (Fig. 6.64 and 6.65) The bindings, one in the Chester Beatty and the other in the V & A are decorated with a lobed almond profile whose interiors are decorated with a trellis pattern forming small squares painted in blue for the interior of the central lobed almond profile.¹⁷¹ (Fig. 6.64) The doublures of the Bayezid binding, dated 881/1477, use the same pattern which was first noted on the doublures of a binding made for Murad II and also on a *Şaḥīḥ* of Bukhari produced for Barsbay.¹⁷² As Raby and Tanındı note this type of filigree harks back to an Ottoman tradition thirty years earlier.¹⁷³ These must be derived from Ottoman examples but given a Mamluk twist as the designs are tooled and placed on the front cover.

¹⁷⁰ TIEM 1820; Sakisian, op.cit., 1934b, p.150; Raby and Tanındı, op.cit., 1993, Cat.32.

¹⁷¹ CBL, 4168, 43 x 29.8cm, see fig.4.125 and V & A, 7219-1869, 36.3 x 27.5cm, see Haldane, op.cit., Cat.24. The manuscript in the V & A was copied by Umar al-Danjawi and is dated 883/1478 who also copied a Qur'an for Sultan Qaytbay in 889/1484, DAK Rasid 126.

¹⁷² See fig. 5.44.

¹⁷³ Raby and Tanındı, op.cit., 1993, p.184.



Fig. 6.64: Back cover of binding with manuscript dedicated to Qaytbay, CBL 4168, 43 x 29.8cm. Photo courtesy of the Chester Beatty Library.



Fig.6.65: Back doublure of binding for Bayazid II dated 881/1477, TIEM Ms.1820. After Raby and Tanındı, op.cit., 1993, Cat.32.

The bindings in Cairo were produced shortly after the Ottoman example which suggests that there was an active exchange of models between the Mamluk and Ottoman realms.

Raby and Tanındı suggest that during the reign of Mehmed II an imperial design studio was set up, arranged in the same manner as the Timurid *kitabkhana* of Baysunghur.¹⁷⁴ The drawings in the Baba Nakkaş album, thought to have been compiled after Mehmed II's death, include designs associated with illumination and bookbindings.¹⁷⁵ Raby and Tanındı state 'That there was a commonwealth of designs is proved by the close relationships between metalwork (especially silverware), ceramics, woodwork, illumination and bindings of the late 15th century' and thereby suggests the organization of a design studio providing designs for items made for the court.¹⁷⁶

Among these drawings is one for a binding with a lobed almond profile which contains arabesque decoration and bears a striking resemblance to those of the Mamluk quatrelobe split palmette group produced during the reigns of Qatytbay and al-Ghuri.¹⁷⁷ (Fig. 6.61) Raby and Tanındı point out that none of Mehmed II's bindings have precisely the same design.¹⁷⁸ The arrangement of the arabesques is different and there are no borders to the profile in the drawing but the central

¹⁷⁴ Raby and Tanındı op.cit., 1993, pp.54-59; Documents such as the *Ehl-i-Hiref* register gives accounts of the wages paid to artists on the court payroll suggesting that such an atelier may have been in existence. See, Tanındı, 'Manuscript Production in the Ottoman Palace Workshop', *Manuscripts of the Middle East*, Vol.5, 1990-1a, pp. 67-98.

¹⁷⁵ Baba Nakkaş, Ms. F.1423, Istanbul University Library; Raby and Tanındı, op.cit.,1993, pp. 59-60.

¹⁷⁶ Raby and Tanındı, op.cit.,1993, p. 54.

¹⁷⁷ See, for example, fig. 4.112-3.

¹⁷⁸ Raby and Tanındı, op.cit.,1993, p. 62.

arrangement of the four split palmettes is very similar. These drawings could easily be disseminated and no doubt, given the busy interchange between Constantinople and Cairo, such drawings may have accompanied binders moving from one city to the other. In spite of hostilities, most notably between 890-97/1485 -1491, the period of the Ottoman-Mamluk war, a close relationship existed between the two sultanates characterised by the exchange of frequent embassies, commercial and cultural ties.¹⁷⁹ They shared a common language as Turkish was spoken at the Mamluk court although Arabic was used for official documents.

¹⁷⁹ See Muslu, *Ottoman-Mamluk Relations: Diplomacy and Perceptions*, Ph.D dissertation, Harvard, 2007, p. 204; Muslu records the cultural interchange between the Mamluks and Ottomans including scholars, embassies and gifts. Interestingly, on only one occasion is a book mentioned as a diplomatic gift 'The Qur'an of Uthman', presented by Sultan Jaqmaq to Sultan Murad in Dhu 'l-Hijja 843/May1440. See, Har-El, op.cit., for an account of the Ottoman-Mamluk War.



Fig. 6.66 *left* Drawing for a filigree centre-piece from the Baba Nakkaş album, Istanbul University Library, Ms.1423, F.61b. After Raby and Tanındı, op.cit., 1993, Fig. 53. *right* Detail of lobed almond profile on a binding for Qaytbay, dated 877/1473 TSK A.649, 36.5 x 26cm.

The relationship between Ottoman and Mamluk bindings is complex and as little is known of Ottoman bindings before the 1440s it is difficult to assess if Mamluk bindings. Also, Raby and Tanındı's study is confined in the main to bookbindings that were produced for the Ottoman sultans and as such represent their particular tastes and styles reinforced by the presence of an Imperial design studio from the period of Mehmed II. However, comparisons can be made

with Mamluk styles of the 14th century and the bindings contained in the Umur Bey library in the use of geometrical ornament and the rosette profile with pendants.

By the 1440s Ottoman binders were using the cloud-collar and almond profiles for their bindings, derived from Shirazi models. The earliest occurrence that can be noted of the use of similar profiles in the Mamluk realm is during the reign of Khushqadam. However, as very few examples of Mamluk binding exist from the period between the 1440s and 1460s, this does not allow us to clearly ascertain if similar developments were also taking place within the Mamluk binding tradition. For the period of the 1460s a more direct relationship can be discerned with the introduction of similar techniques in filigree and pressure-moulding. The bindings of Mamluk Cairo, however, are very diverse during this period, consisting of a *mélange* of styles while Ottoman examples, as Rogers puts it, are 'austerely unified'.¹⁸⁰ The Mamluk binders drew on a variety of binding styles creating new arrangements and thereby exuding the vitality of creativity.

We turn now to the dissemination of these techniques and patterns in the bindings of the Italian Renaissance.

¹⁸⁰ Rogers, *op.cit.*, 1999, p.139.

Dissemination in Italy

In the 15th century, new techniques and decorative elements were introduced into the Italian bookbinders' repertoire that were eventually to permeate throughout Europe. By the middle of the 15th century decorated bindings were being produced in Italy for manuscripts which celebrated the revival of classical literature and learning written in a new style of handwriting 'the humanistic script'. These bindings included the use of pasteboard,¹⁸¹ centre/corner-piece compositions with cloud collar and almond profiles and the techniques of filigree leather leather and pressure-moulding. Hobson also attributes the introduction of gold tooling into Europe from the Islamic world to the beginning of the 15th century, though the subject is a contentious one and will be discussed in greater detail below.¹⁸² Prior to this time, European bindings had been covered in plain leather or textiles over wooden boards with metal clasps or were decorated with horizontal and vertical rows of repeated small tools in the blind derived from the French Gothic style of binding practised in Paris from the 1370s.¹⁸³ (Fig. 6.67)

¹⁸¹ Pasteboard had been known in the west from the 14th century but was considered only suitable for cheap and unimportant books. Hobson, op.cit., 1989, n.1, p.37.

¹⁸² Powdered gold in suspension had been used prior to this on European bindings but it was painted on. Hobson, 1989, p. 33, records the earliest use of gold tooling in Europe on the binding of Guarino of Verona's translation of Strabo's *Geographia* presented by the Podestà of Padua, Jacopo Antonio Marcello to King René of Anjou dated 13th September, 1459, which was produced in Padua.

¹⁸³ Gothic bindings refer to those with wooden boards covered in leather of the 14th century and are decorated with a variety of small stamps arranged both vertically and horizontally; See Goldschmidt, op.cit., 1928; Diehl, *Bookbinding, Its Background and Technique*, Dover edn, London, 1980, pp.93-5; Szirmai, op.cit., Chapter 9 for structures and decoration.



Fig. 6.67 : Front cover of *Epistolae* copied in Padua dated 1410, Pierpont Morgan Library, M.859, dated 1410, 25.8 x 16.9cm. After Hobson, 1989, Fig.9.

However, influences are only to be found in terms of the styles and decorative techniques. The Italian binders did not include the flap, nor did they adopt the structure. Also, they did not use block-printed leather doublures or patterns of geometrical interlace, both common features of Mamluk bindings during the 14th and 15th centuries.¹⁸⁴

The issue of gold tooling and the arguments associated with its introduction into Europe is beyond the scope of this study, but needs to be briefly considered in the light of the discussion concerning the dissemination of techniques and decoration from the Islamic world.

¹⁸⁴ Hobson, op.cit., 1989, Pl.18; cites one binding with geometrical interlace but this is a poor example bearing little resemblance to Mamluk bindings. The binding contains a manuscript of St Augustine's *De Civitate Dei* dated 1433 and is on wooden boards now in the Stockholm Royal Library, Cod. Holm. A.223, 39 x 27cm.

According to Hobson, decorated bindings in the Islamic style with gold tooling began to be produced in Florence and Venice at the beginning of the 15th century, contrary to previous studies which suggested that it was introduced into Naples in the late 15th century from Spain.¹⁸⁵ He notes that the gilt ornament was styled in the inventories as *alla fiorentina* or *modo fiorentina* and dates the earliest example of gold tooling to 1400.¹⁸⁶ The cover, although divided into panels, bears little resemblance to Islamic examples.¹⁸⁷ He includes six other examples in this group dated by manuscript to between 1433 and 1462 which display designs based on eight-pointed stars and broad tooled borders with gilding at the centres which have resonances within the Islamic binding tradition though wooden boards are still used for the covers. (Fig. 6.68) Hobson then notes that this style died out as it lacked influential sponsors since it was opposed by the conservative attitudes of the Florentine stationers only to reappear towards the end of the 15th century.¹⁸⁸

¹⁸⁵ Gottlieb, op.cit. , 1910; Goldschmidt, op.cit. 1928, pp. 83-87.

¹⁸⁶ Hobson, op.cit., 1989, p.19.

¹⁸⁷ Bodleian Library, MS. Canon.Liturg. 392, 23.8 x 17cm; Hobson, op.cit. 1989, Fig.17; De Marinis, op.cit., 1960, Vol. III, No. 3017.

¹⁸⁸ Hobson, op.cit., 1989, p. 30.

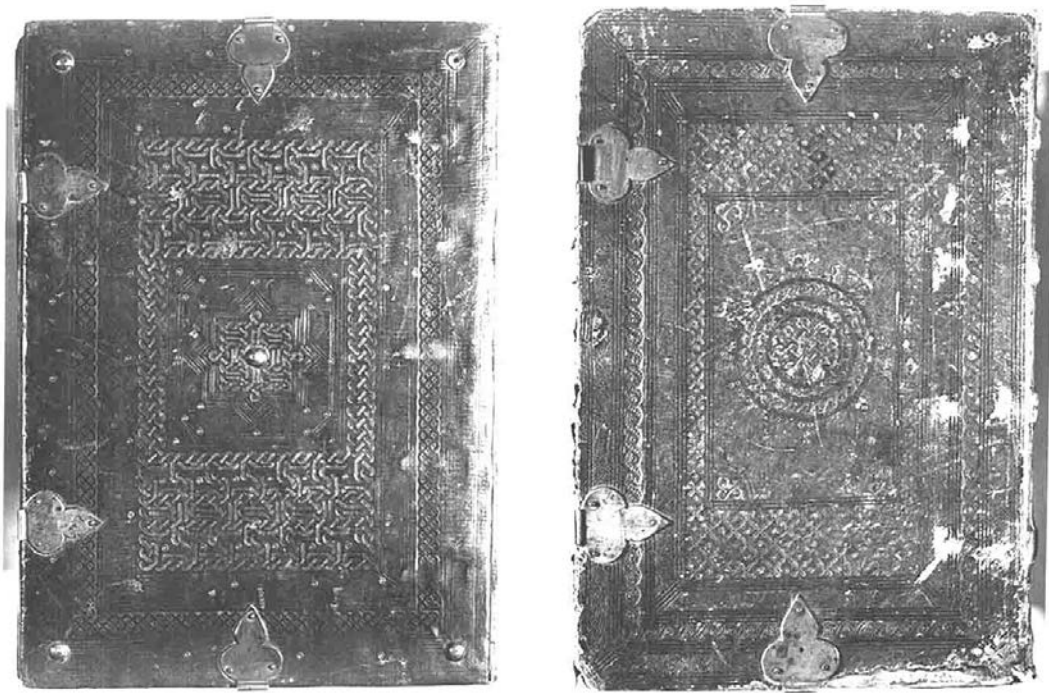


Fig. 6.68: *left* Front cover of *Historia Florentina*, copied in Florence, 1440-60, Bodleian, Ms.Buchanan, c.1, 36.5 x 25.5cm. *right* Front cover of *Vitae XII Caesarum* copied in Florence c.1450-1460, Bodleian, Ms.Canon. Class. Lat. 180, 27.5 x 18cm. After Hobson, op.cit.,1989, Fig. 11 and 12.

This view has been vigorously argued against by Szirmai, who states that many of the examples he chose to support his argument were 'ruthlessly restored' and cannot be considered evidence to support his assertion.¹⁸⁹ He points out that the term *alla fiorentina* refers to punch gilt roundels made of plaster or gesso, grounded with some reddish varnish which are inserted into the leather and then painted in gold is a technique characteristic of many bindings from Florence, Venice, Naples and Spain.¹⁹⁰ Hobson neglects to mention Thomas' study of early Spanish bindings, quoting from Spanish inventories of 1410 and 1458, which record the terms *oripel* (with gold leaf) and *con estampiones de oro*

¹⁸⁹ Szirmai, op.cit., 1999, p.247.

¹⁹⁰ Ibid., p.248; No study has been made of the material or structure of these roundels which brings to mind the small punches that were found on the Hamadan Qur'an of Uljaytu which appear to represent a similar technique. See fig. 6.14.

(with gold stamping) which seems to confirm that gold tooling was used in Spain and from there was transferred into the Italian binders' repertoire in the late 15th century.¹⁹¹ The subject remains one of debate and until further research is carried out no firm conclusions can be drawn.

The 15th century saw increased trade between the Levant and the Italian states of Venice, Florence, Genoa, Naples and Ancona and by 1450 Venice had become the leading power in the eastern Mediterranean. With this development came greater opportunities for exposure to contemporary binding developments in the Mamluk realm. From the end of the 14th century, Venetian consuls (*baili*) were present in Alexandria, Cairo, Damascus and Beirut and commercial treaties were agreed with the Mamluks. This period marks active interaction between Venice and the east and the imitation and the adoption of techniques from the Islamic world by Venetian craftsmen is to be noted in the production of glassware, textiles and leather.¹⁹² This interest extended to manuscripts for as Hobson notes, King René of Anjou (1409- 80) owned Arabic and Turkish manuscripts for which he employed a translator while the 1481 inventory of the Vatican lists twenty-two manuscripts in Arabic.¹⁹³

The earliest representation of gilt leather bindings is in Mantegna's (1431-1506) San Zeno altarpiece, painted in Padua, in 1456-1459. The covers of one the books held by Saint John the Baptist is decorated with a lobed rosette and must reflect

¹⁹¹ Thomas, op.cit., 1939, pp.27-29.

¹⁹² The Metropolitan Museum of Art, op.cit., 2007.

¹⁹³ Hobson, op.cit., 1989, p.22

contemporary Italian bindings.¹⁹⁴ Likewise, Carpaccio's (c.1465-1525) representation of Saint Augustine in his study in the Scuola di San Giorgio degli Schiavoni in Venice painted c.1502-1508 shows an Islamic-type binding featured prominently on his desk and several gilt bindings displayed on a shelf nearby.¹⁹⁵ (Fig. 6.69)



Fig. 6.69: Scuola di San Giorgio degli Schiavoni, Venice, *Saint Augustine in his study*, c.1502-1508. After Fortini-Brown, op.cit., 1988, Pl. XIV.

In addition to bindings in the Islamic style there are also examples of Italian manuscripts bound in Islamic bindings. The Marciana Library in Venice has a volume containing two manuscripts; one is dated 3rd December 1453 that belonged to Marin Sanudo the Younger (1466-1533) the diarist, entitled *De vita*

¹⁹⁴ Mack, op.cit., fig.132; see fig. 4.70, DAK Rasid 58.

¹⁹⁵ Fortini-Brown, *Venetian Narrative in the Age of Carpaccio*, Yale University Press, 1988, Pl.XIII and XIV.

et moribus philosophorum.¹⁹⁶ The binding with a flap is worn and has at its centre a tooled ten-pointed star in an interlace pattern with gold punches enlivening the dark background which can be compared to Mamluk examples of the 14th century.¹⁹⁷ (Fig. 6.70)



Fig. 6.70: Cover of Islamic binding with Latin manuscript *De vita et moribus philosophorum* copied in 1453, Biblioteca Marciana, Lat.VI 270 (=3671), 14 x 20cm.

A manuscript dated to between 1460-70 of Petrarch's *Canzoniere and Trionfi* in the Bodleian Library is Florentine but may have been bound by a Mamluk binder.¹⁹⁸ (Fig. 6.71) It has no flap but the Islamic sewing is still discernible although it has been rebacked.¹⁹⁹ The cover of this Florentine manuscript can be

¹⁹⁶ Biblioteca Marciana, Lat.VI 270 (=3671), 14 x 20cm; Metropolitan Museum of Art, op.cit., 2007, p.26 for Marin Sanudo, the Younger.

¹⁹⁷ See fig. 4.44, TSK. A.324.

¹⁹⁸ Bodleian Library, Ms.Canon.Ital.78, 21.8 x 13.8cm; Hobson, op.cit.,1989, p. 23, fig. 15 and 16.

¹⁹⁹ Ibid.,p. 23.

closely compared to the binding of another manuscript prepared for Sultan Qaytbay in two volumes dated 895/1490 of Dimyati's *Mashāri' al-ashwāq ilā maṣ āri' al-ushshāq*.²⁰⁰ The medallions are filled with fine arabesques repeated in the cusped corner-pieces which contain wide, cup-like palmettes that appear on several Mamluk covers.²⁰¹ The finely tooled knotwork border can also be compared to Mamluk examples.²⁰² Hobson has given the cover of the *Canzoniere* manuscript an Ottoman attribution and cites two examples of bindings for Mehmed II dated 867/1462-3.²⁰³ Segmented borders had, however, been generally abandoned by Ottoman binders by the middle of the 15th century suggesting that this manuscript was bound in the Mamluk realm.²⁰⁴

²⁰⁰ TSK.A. 649, see fig. 4.112.

²⁰¹ See fig. 6.60.

²⁰² For example, see TSK. A.2126, fig. 4.151.

²⁰³ Hobson, op.cit., 1989, p. 23, n. 50 cites Süleymaniye Library, Turhan Valide, 234 described in Raby and Tanındı, op.cit., 1993, Cat. 19 and TSK, A.1032 and Cat. 20; see fig. 6.61.

²⁰⁴ Raby and Tanındı, op.cit., 1993, p.11.

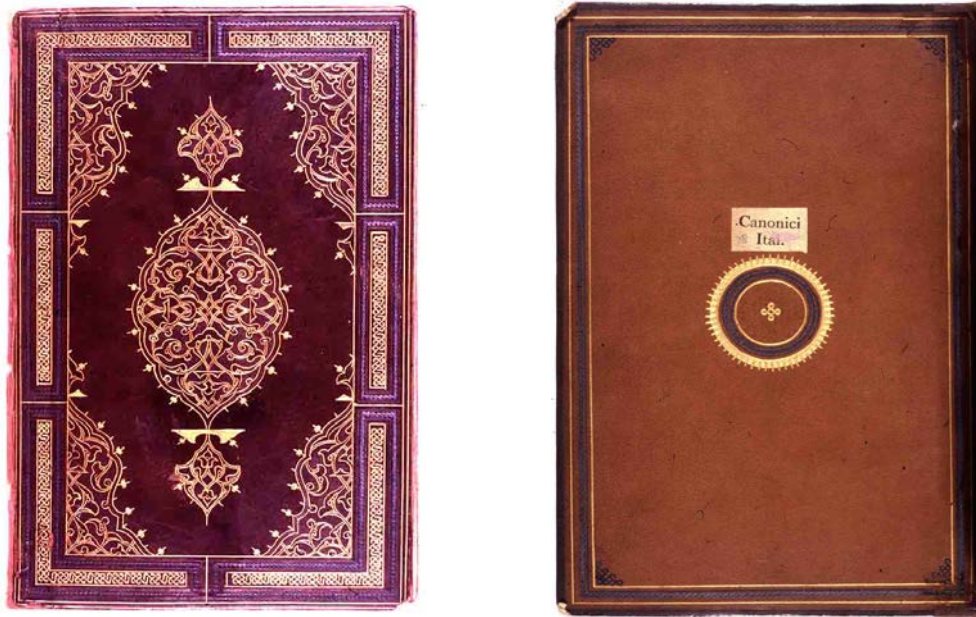


Fig. 6.71: Cover and doublure of Mamluk binding dateable to the end of the 15th century with a Florentine manuscript of Petrarch's *Canzoniere* and *Trionfi* copied between 1460-70, Bodleian Library, Ms.Canon.Ital.78, 21.8 x 13.8cm. Image Bodleian Library.

Likewise, Hobson compares the doublures to other Ottoman examples but the technique and roundels can equally be compared to those of two Mamluk bindings.²⁰⁵ (Fig. 6.72) The border of the profile is pressure-moulded and gilded which is noted on the doublures of a binding for Sultan Qaytbay while the roundel bears a close resemblance to the decoration of the doublure of a Mamluk binding dated 896/1491.

²⁰⁵ See fig. 4.196 for CBL 1486 and fig. 4.195 for TSK.A.2829.



Fig. 6.72 : *left* Doublure of Mamluk Qur'an dated 896/1491, CBL. 1486, 47.5 x 33.6cm. Image courtesy of the Chester Beatty Library. *right* Doublure of binding of *Al-Durrat al-muḍiyya wa-'l-arūs al-marḍiyya* copied for Sultan Qaytbay. TSK. A. 2829, 32 x 21.5cm.

By the 896/1490's, the innovations that had taken hold in the Mamluk and Ottoman realms of bookbinding began to appear in the Italian bookbinders' repertoire and develop into what Hobson terms the fully developed 'humanistic style' which he believes began in Padua sometime before 1460.²⁰⁶ Hobson has sought to attribute these developments to a group of antiquaries in Padua who included Andrea Mantegna, the artist, Giovanni Marcanova (c.1418-1467) the academic, Bartolomeo Sanvito (1435-1518), the renowned calligrapher and Felice Feliciano (1433-1479), a poet and bookbinder.²⁰⁷

This style first makes its appearance on a copy of Strabo's *Geography*, dated by the dedicatory letter of 1459 which had been commissioned by the Podestà of Padua as a gift for King René of Anjou, whose support he was hoping to enlist in

²⁰⁶ Hobson, op.cit.,1989, pp. 33-59.

²⁰⁷ Ibid.

the wars against Milan.²⁰⁸ The binding was unfortunately destroyed in 1958. However, Hobson had access to a photograph and a description and notes the Islamic elements of decoration which consisted of borders divided into square, rectangular and hexagonal compartments filled with knotwork ornament framing a centre/corner piece arrangement.²⁰⁹ This, Hobson hails as the first humanistic binding to be tooled in gold of which there is record. He makes the point that the two miniatures at the beginning of the volume, depicting the presentation of the volume by Marcello to René of Anjou, show the volume bound in gilt leather.²¹⁰

Hobson's argument for the specific association of the group of antiquaries with this particular manuscript and binding is not clear as the binder is unknown and, although the two miniatures at the beginning of the volume have been attributed to the studio of Mantegna, they have also been to many others.²¹¹

Hobson then turns to the manuscripts copied by of Bartolomeo Sanvito, one of the members of the group, and he designates a binding of a copy of Suetonius' *Vitae XII Caesarum* as the second surviving humanistic binding, dated to 1461, whose covers have a lobed profile filled with arabesque ornament.²¹² (Fig. 6.73) The model he says is Mamluk based on its similarity to a binding in the Chester Beatty Library which has floral decoration contained within a lobed almond

²⁰⁸Ibid., p.33;

²⁰⁹ Ibid., p. 34.

²¹⁰ Ibid. Fig.26.

²¹¹ Ibid., p.33; Hobson notes they have also been attributed to Marco Zoppo, Lauro Padovano, Giovanni Bellini and an anonymous artist.

²¹²Vatican Library, Barb.lat. 98, 25.9 x 16.7cm; Hobson, op.cit.,1998, fig.31.

profile but in essence bears little resemblance to the Italian binding.²¹³ Mamluk influences can, however, be discerned in the use of the quatrelobe split palmette motif, the s-shape and knot meander tooled borders.



Fig. 6.73: *left* Front cover of *Suetonius Vitae XII Caesarum* copied in Padua in 1461, Vatican Library, Barb. lat. 98, 25.9 x 16.7cm. After Hobson, op.cit.,1989, Fig.31. *right* Back cover of Quduri's *Tajrīd*, CBL 3571, 27.4 x 18.1. Image courtesy of the Chester Beatty Library.

Hobson's argument for Mamluk and Islamic influences on a group of bindings produced in Padua in 864/1459 is acceptable and also that it is a new Paduan style but what is less so is his assertion, that the impetus for these changes in Italian bindings of the late 15th century stemmed from this particular Paduan group of antiquaries. Certainly, the bindings of the manuscripts copied by Sanvito and those of Feliciano, both members of the Paduan group, display Islamic influences and several can be attributed to Padua but surely this 'movement' should be considered within the broader context of other media: Italian binders were following the fashion of the times, a predilection for Islamic

²¹³ CBL, 3571; Bosch, Carswell and Petherbridge, op.cit., Cat.67; See TSK. A. 643, fig. 4.117 for a similar binding with leafy finials.

style objects and patterns.²¹⁴ An assessment of the importance assigned by Hobson to the Paduan group in developing what he terms the new 'Humanistic' style is beyond the scope of this study and remains a subject for further research.

However, in returning to the dissemination of Mamluk and other contemporary Islamic binding styles, by the 1470s a number of bindings can be assigned to Venice which include the techniques and ornament that have been the subject of this study. Contadini has also drawn our attention to the importance of the gilded-leather trade in Venice from the 16th century where Islamic models served as inspiration for the leatherworkers. The trade was worth a 100,000 ducats a year and was an important commercial activity.²¹⁵

A copy of Cicero's *Epistolae ad familiares*, bound for Peter Ugelheimer (d.1489), the German owner of Deutches Haus Inn in Venice and printed by Nicolas Jenson (1420-1480) on parchment in Venice in 1475 exhibits many features found on Mamluk bindings of the 15th century.²¹⁶ (Fig. 6.74) Ugelheimer was a well-known bibliophile who commissioned several other bindings in this style which constituted fine or 'extra' bindings produced for the wealthy élite. The binding is decorated with a large almond profile with pendants and a segmented knotwork

²¹⁴ See, Contadini, 'Artistic Contacts: future Scholarship and Future tasks', *Islam and the Italian Renaissance*, ed. Burnett and Contadini, Warburg, 1999, pp.1-60.

²¹⁵ Contadini, 'Cuoridoro: tecnica e decorazione di cui dorati veneziani e italiani con influssi islamici', *Venezia e L'Oriente Vicino*, Venice, 1989, p. 232.

²¹⁶ BNF, Vélins 1149, 29.3 x 18.8cm; Hobson, op.cit., 1998, pp.40-41 and fig.34; Grube, 'Venetian Lacquer and Bookbindings of the 16th Century', in Metropolitan Museum of Art, New York, op.cit., 2007, pp. 231-243, Cat.131; Mack, op.cit., p.130; Nicolas Jenson was a French engraver who moved to Venice. See Lowry, *Nicholas Jenson and the rise of Venetian Publishing in Renaissance Europe*, Oxford, 1991.

border surrounds the central panel which has already been noted above.²¹⁷ The central almond medallion contains Ugelheimer's coat of arms. The use of the Y-shaped stamps which fill the central lozenge appear out of place as they are usually found on Islamic metalwork and not on bindings.

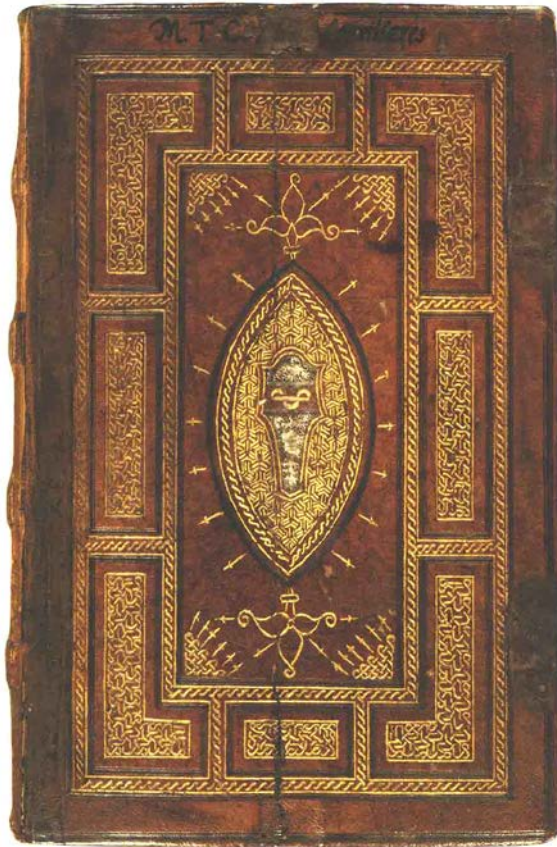


Fig. 6.74: Front cover of *Epistolae ad Familiares* bound for Ugelheimer in Venice 1475, BNF Vélins 1149, 29.3 x 18.8cm. After Hobson, op.cit.,1989, Pl.1.

We should also note that the Italian binders mainly restricted themselves to the use of small tools found on Mamluk bindings of the 13th and 14th century. (Fig. 6.75) For example, a copy of the *Orationes of Pietro Barozzi* copied in 1488 uses these tools to form a composite pattern of a lobed rosette with knotted pendants

²¹⁷ See fig. 4.71.

and quadrant corner-pieces.²¹⁸ The large four lobed rosette, however, bears little resemblance to the Mamluk examples.



Fig. 6.75: Front cover of *Orationes of Pietro Barozzi* bound in Venice, dated 1488, Biblioteca Marciana, Ms.Lat.90 (3819) 25.2 x 18cm.

Many of these bindings are commonly found on certificates of appointment by the Venetian doges. Although commissions for senior positions were sponsored by the state those for lower level posts such as captains or governors were left to the recipients who had their *Commissioni* manuscripts copied, illuminated and bound by artists working in Venice. On these bindings one sees the combination of both Islamic and classical elements. For example, a binding of a commission dated 1500 for three captains going to Beirut has a cloud-collar profile which is most probably derived from Ottoman or Persian examples.²¹⁹ (Fig. 6.76)

²¹⁸ Biblioteca Marciana, Ms.Lat.90 (3819) 25.2 x 18cm; see DAK Rasid 120, fig. 4.26 for quadrant corner-pieces and DAK Rasid 61, fig. 4.28 for knotted finials.

²¹⁹ Biblioteca Marciana, Ms.It.VII, 597 (=7820), 26 x 17.7cm.

However, the border decoration is in the classical style. On many of these bindings, classical elements of decoration such as Roman vases and cherubs are often contained in roundels which have their origins in Mamluk rosette profiles and have lobed corner pieces with split palmettes constituting variations and adaptations of what is found on Mamluk covers.²²⁰ As Rogers notes, 'The most striking feature of most Venetian orientalising designs in bookbindings, even when they are closest to their models, is their eclecticism'.²²¹



Fig. 6.76: *left* Front cover of Dogeal Comission dated 1500, Biblioteca Marciana Ms.It.VII, 597 (=7820), 26 x 17.7cm. *right* Back cover of Dogeal Commission. from Andrea Gritti, dated 1523, Biblioteca Marciana , Ms. Latin X, 129 (1536), 27 x 18cm. Image Biblioteca Marciana.

In addition to the incorporation of decorative elements to the binders' vocabulary, new techniques were introduced such as filigree leatherwork and pressure-moulding. The binding of *Commentarius rerum in Italia suo tempore* of Leonardo Bruni in the Biblioteca Marciana and the *Codex Marcanova* in Modena

²²⁰ Biblioteca Marciana, Latin X, 129 (1536), 27 x 18cm.

²²¹ Rogers, op.cit., 1999, p.139.

(wooden boards) are the earliest European bindings with filigree leather doublures.²²² (Fig.6.77) They are attributed to Felice Feliciano who copied the *Marcanova Codex* for Giovanni Marcanova in Bologna to provide a record of the antiquities he had seen and the inscriptions he had copied. Feliciano also copied the beginning of the Bruni manuscript while in Bologna between 1464-5 so it is supposed that both these bindings were completed there.²²³ Both doublures have similar cloud - collar profiles with cut-away filigree work on a red, blue and green painted ground which is sprinkled with tiny glass-like beads but they also differ slightly.²²⁴



Fig. 6.77: Cover and doublure of *Commentarius rerum in Italia suo tempore gestarum* of Leonardo Bruni dated 1464-5, Biblioteca Marciana, Lat.X 117 (=3844), 19.7 x 11.9cm. Image Biblioteca Marciana.

²²² Modena, Biblioteca Estense, Cod.L.5.15 and Venice, Biblioteca Marciana, Lat.X, 117 (=3844), 19.7x11.9cm; Hobson, op.cit.,1989, p.43; Granzotto, *Alcune Note su Felice Feliciano Legatore*, Padua, 1995; Mack, op.cit., p.129.

²²³ Hobson, op.cit., 1989, p.44.

²²⁴ The exact composition of these beads has not been established but they appear to made of type of resin.

The binding of the *Codex Lippomani* which contains a collection of Latin poems, *Carmina*, by Jacopo Tiraboschi and was written in Padua in or soon after 1471 has filigree leather cover.²²⁵ The binder must have been aware of Mamluk bindings which employ filigree work for their covers unlike their Ottoman and Persian counterparts. The corners of the cover of this binding are laid down on a green silk background and its central panel contains a large lobed lozenge. The cover has a filigree border for which there is no Mamluk exemplar. However, the centre contains a profile portrait of Antinous producing an odd combination of classical and Islamic styles. (Fig. 6.78) Hobson attributes this binding to Felice Feliciano, the Paduan scribe and antiquarian, who was the binder of the Marcanova codex and the volume of Leonardo Bruni.²²⁶



Fig. 6.78: Front cover of *Codex Lippomano*, c.1471, 17.3 x 11.8cm. After Hobson, op.cit., 1989, front page.

²²⁵ Private Collection, 17.3 x 11.8cm; Hobson, op.cit., 1989, p. 46, fig. 41.

²²⁶ *Codex Marcanova*, Modena, Biblioteca Estense, Cod.L.5.15; Bruni, *Commentarius rerum in Italia suo tempore gestarum*, Biblioteca Marciana, Lat.X, 117 (=3844), 19.7x11.9cm.

By the beginning of the 16th century, Venetian binders were producing pressure-moulded bindings that can be closely compared to Ottoman rather than Mamluk examples.

The cover of the binding of Fra Giocondo's *Sylloge* at Chatsworth bound in Venice between 1520-30 and copied by Bartolomeo Sanvito, another member of the Paduan antiquaries, is pressure-moulded.²²⁷ (Fig.6.74) The quatre-lobed split palmette of the central lobed profile on a gold ground can be directly compared with Turcoman examples bound in Istanbul of the late 15th century.²²⁸ The details of the central quatrelobe split palmette motif, the organisation of the design and floral ornament are so close that it suggests ready examples were available for binders to serve as a source of inspiration. The Chinese scrolls that appear on the cover are also found on contemporary Ottoman and Persian bindings. A lacquer binding of an Ottoman Qur'an with Chinese cloud scrolls decorating its cover dated 1536 in the Biblioteca Marciana.²²⁹

²²⁷ Fra Giocondo, *Sylloge*, Chatsworth, 25.1 x 15.9cm; Hobson, op.cit., p.151; Mack, op.cit., pp.132-3, fig.141; Grube, op.cit., Cat.132.

²²⁸ TIEM 2301, 18.4 x 11.7cm; 'Sakisian, op.cit., 1927, p.142, Raby and Tanındı, op.cit., 1993, Cat.33; see fig. 6.63 of this text.

²²⁹ *Qur'an*, Biblioteca Marciana, Orientali, 68.



Fig. 6.79 : *left* Pressure-moulded cover of Fra Giocondo's *Sylloge* bound in Venice dated 1520-30, Chatsworth Library, 25.1 x 15.9 cm. Image Trustees of the Chatsworth Settlement. *right* Back cover of pressure-moulded Turcoman binding bound in Istanbul, TIEM, 2301, 18.4 x 11.7cm. After Raby and Tanındı, op.cit., 1993, Cat.33.



Fig. 6.80 : *left* Detail of pressure-moulded cover of Fra Giocondo's *Sylloge*. *right* Detail of back cover of pressure-moulded Turcoman binding, TIEM 2301.

In conclusion, it has to be remembered that the binders of Renaissance Italy drew their inspiration from a variety of sources and those that include Mamluk, Ottoman and Persian decorative elements constituted very small number of those produced for the Venetian élite. However, the impact of these influences

was long-lasting and far-reaching. A group of bindings of dogeal commissions from the latter part of the 16th century still bear traces of their indebtedness to Mamluk bindings.²³⁰ The arabesques, groupings of three small dots are found on Ottoman and Mamluk doublures of filigree work and the large open palmette cup-like corner-pieces are a studied development of their Eastern forbears.²³¹ (Fig.6.81) All these elements, however, have been adapted and transformed into another style which was to spread throughout Europe decorating the bindings prepared for the library of François I at Fontainebleau and beyond.

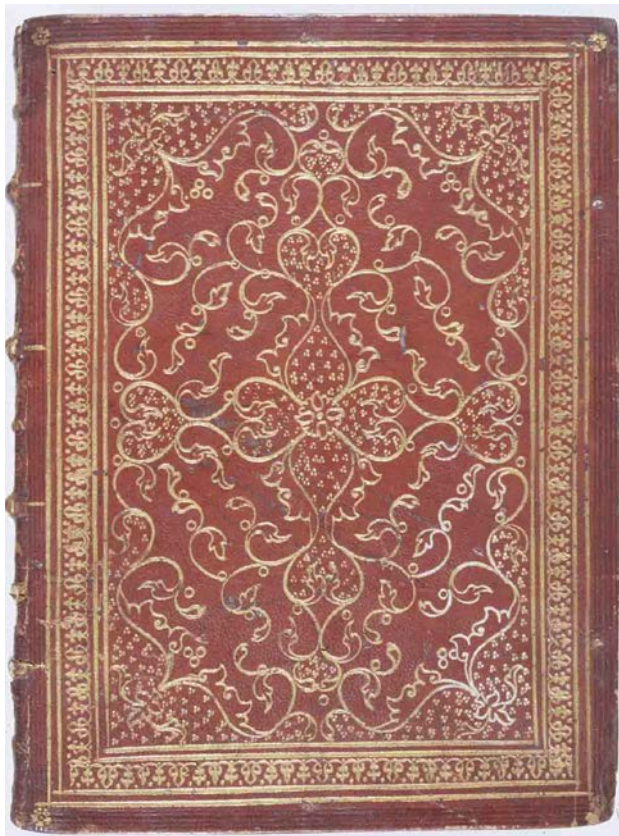


Fig. 6.81 : Front Cover, Commission, 1571, Biblioteca Marciana, Ms. It. VII, 1366 (=8092), 23.4 x 15.4cm. Image Biblioteca Marciana.

²³⁰ An identical cover is found in the British Library, Egerton Ms. 757 cm, 23.4 x 15.4cm also dated 1571. See L. Nuvoloni, Commissioni Dogali, 'Venetian Bindings in the British Library', *For the Love of Binding, Studies in Bookbinding History presented to Mirjam Foot*, ed. D. Pearson, The British Library, London, 2000, pp. 81-111. See also A. Hobson and P. Culot, *Italian and French 16th century bookbindings*, rev. edn, Bibliotheca Wittrockiana, 1991, p. 47.

Conclusion

This chapter has traced the relationships of Mamluk bindings with other contemporary traditions through the 14th and 15th centuries and the theme of the chapter relates to the transmission of ornament and how it is adopted and adapted in specific cultural contexts. In considering their relationship with Ilkhanid bindings of the 14th century it was established that both Ilkhanid and Mamluk drew on a common repertoire of geometrical ornament which was later noted on Ottoman bindings from the 1430s. This was developed and refined in the Mamluk realm whose binders continued to produce geometrical designs based on star patterns on bindings long after they were discarded by Persian and Ottoman binders. The use of the rosette profile appears on both Ilkhanid and Mamluk bindings in roughly the same the period which that earlier examples were available and represents again a shared repertoire of ornament. The differences between them are to be noted in the small details. The Ilkhanid example uses small five-fold knots and five-armed swastikas for the decoration of the polygonal compartments of the geometrical interlace. This is also noted on Ottoman bindings of the 1450s and appears on Mamluk examples with a waqf to the Sultan Barsbay. These bindings are also characterized by the presence of corner-pieces composed of overlapping segments of a circle, however the Iranian example is dated 1397 by which time they had already appeared as part of the Mamluk binding repertoire.²³² It is not possible to state categorically that the inclusion of this style of corner-piece is the result of Mamluk binding influences as all these bindings show the transmission of design elements over a long period of time.

²³² See fig. 4.91 for earliest example of corner-pieces composed of over-lapping segments.

However these geometrical and rosette binding styles were discarded by Persian binders at the end of the 14th century and by Ottoman binders in the 1450s in favour of lobed almond profiles filled with arabesque and floral ornament and filigree leather for the doublures. These techniques and styles were transferred into the Mamluk binders' repertoire in the 1460s. Similar changes are noted on Ottoman bindings which Raby has attributed to the presence of Akkoyunlu calligraphers and binders at the Ottoman court. Atil, as was noted in the previous chapter, attributes influences in Mamluk miniature painting to the presence of artists from Baghdad after the dispersal of Pir Budaq's atelier in 1466. However, on Mamluk examples the changes occur on bindings earlier than this during the reign of Sultan Khushqadam. There is no clear answer to this question. The Mamluk and Ottoman binders appear again to be drawing on a common repertoire of ornament stemming from the designs and techniques that are found on Timurid bindings of the beginning of the 15th century which is then interpreted in their own specific ways. Ottoman influence can be discerned in the use of the trellis style derived from Ottoman filigree doublures of the 1430s and revived under Bayezid and in the cloud-collar profiles used for the bindings of Yashbak min Mahdi. In turning the technique of pressure moulding which dominated Ottoman bindings of Bayazit there are only a few extant Mamluk examples and they are both dateable to the end of the 15th century. The Turcoman example present in the library of Qaytbay does not seem to have had any influence. However, there is no doubt that the active patronage of Qaytbay was a major impetus behind these innovations in binding design as almost all the bindings that exhibit these new styles are the result of his patronage which was continued during the reign of Qansuh al-Ghuri.

Chapter 7

Conclusion

This study has charted the developments in technique and ornament of Mamluk bindings from the 13th century to the end of the sultanate in 921/1516. It considered the bindings in terms of their structures and formats, their ornament and techniques, and finally, their relationship with ornament of other media as well as Persian and Ottoman bindings of the same period. From this study a picture has emerged of a tradition imbued with vitality, drawing initially on patterns of the pre-Mamluk period which were then elaborated during the 14th and 15th centuries. In the 1460s, new techniques of decoration were incorporated into the Mamluk binders' repertoire along with new styles, marking an eclecticism demonstrated by the variety and diversity of the ornament found on the bindings.

By the beginning of the Mamluk period, the changes in structures and formats of the Islamic book that had occurred between the 9th and 13th centuries were firmly established. The earliest Islamic bindings dating from the 9th century are box-bindings in the horizontal format bound in wooden boards with parchment text blocks. Between the 11th and 13th centuries the vertical format was gradually adopted, along with pasteboard covers and the pentagonal flap. It is probable that these developments were prompted by the adoption of cursive scripts and the greater availability of paper. This transition is recorded in the bookbinding manual of Bakr al-Ishbili writing in the early 13th century who describes both bindings with wooden boards and those with pasteboard covers

and a pentagonal flap.¹ This is supported by the later text of Yusuf al-Ghassani who, indeed, only refers to bindings in the vertical format with pasteboard covers and a pentagonal flap.²

The study has revealed a marked conservatism in the craft of bookbinding as the techniques, tools and binding methods described in the sources from Ibn Badis, writing in the 11th century, to Al-Sufyani, writing in the 16th century, do not vary greatly.³ There is some differentiation in their approaches to the various tasks but, on whole, they employ the same methods and structures in the preparation of the Islamic book.

Early covers from Damascus, Qayrawan and Sana'a were tooled and stamped to create patterns of braided and cable motifs in a central panel surrounded by a border.⁴ The use of certain stamps found on these bindings continued into the Mamluk period standing as testimony to the transfer of stamps from one generation of binders to another and their dissemination across geographical areas. By the 13th century, the centre and corner-piece arrangement of ornament for the decoration of the covers had also become established which was to continue throughout the Mamluk period.

Bakr al-Ishbili, who differentiates between tools for blind and gold tooling, confirms that gold tooling was being practised in the Islamic world in the 13th

¹ Gacek, op.cit, 1990–91, see Chapter 3.

² Gacek, op.cit., 1997; see Chapter 3.

³ Ibn Badis, *Umdat al-kuttāb*; Al-Sufyani, *Ṣinā'at tasfīr al-kutub wa-ḥall al-dhahab*,

⁴ Déroche, op.cit., 1986; Marçais and Poinssot op.cit., 1948, and Dreiholtz op.cit., 1997, see fig.3.5, and. 3.11

century.⁵ The origins of gold tooling are not clear but the evidence suggests that it may have originated in North Africa, as the earliest example of gold tooling is found on the covers of a Qur'an copied in Marrakesh 654/1256 and from there the technique appears to have spread eastwards to Egypt and Iran and ultimately to Italy in the 15th century.⁶

Thus, by the beginning of the Mamluk period, the structures, methods and formats and decorative layouts of the covers had become firmly established and continued to be used with little variation.

Dynamic changes did, however, take place in the realm of ornament in the Mamluk period, both in terms of technique and decoration. The earliest Mamluk bindings date from the end of the 13th century and are distinguished, in particular, by their use of geometrical ornament based on star patterns.⁷ Many of these are based on six and twelve-pointed stars on triangular or square grids, drawing on an established repertoire based on a long tradition. By the end of the 14th century, however, more complex designs appear that are based on ten-pointed stars creating patterns of measured geometric complexity which continued to be used until the end of the Mamluk period.⁸ They appear in illumination before they are used for bindings, for example in the illuminated frontispiece of the Qur'an of Baybars Jashnagir dated 703-05/1304-06 where a ten-pointed star extends in a pattern of geometric interlace with the suggestion

⁵ Gacek, *op.cit.*, 1990-1, p. 109.

⁶ BL. Or.13192; see fig. 3.17 and see Ricard, *op.cit.*, 1933, Pl.1.

⁷ See, fig. 4.38.

⁸ The earliest examples of repeat patterns based on ten-pointed stars are found on the bindings of Barquq, see DAK Rasid 120, fig. 4.53.

of the repeat in the corner-pieces.⁹ It is, however, possible that these patterns appeared earlier on bindings but there is no extant evidence to support this supposition.

These patterns can be associated with the *giri*h mode of geometry identified by Necipoğlu in her work on the Topkapı scroll.¹⁰ They are distinguished, as defined by Steinhardt and Lu, by the presence of five shapes: the decagon, pentagon, hexagon, rhombus and a 'bow tie' which are combined to form the grids necessary for the creation of repeat patterns based on ten-fold geometry.¹¹ As Necipoğlu demonstrates, these patterns appear as architectural decoration on monuments dated to the 10th century in Iran and she goes on to suggest that Baghdad, the capital of the 'Abbasid caliphate, was the source of these patterns that came to be used so widely throughout the Muslim world.¹²

The geometrical rosette makes its first appearance on the binding of the Qur'an of Mubarak Shah al-Suyufi dated 744/1344 and later on the covers of a Qur'an with a *waqf* for the *madrasa* of Khwand Baraka, the mother of Sultan Sha'ban.¹³ However, as geometrical rosettes are found much earlier in illumination and architecture – for example in the Qur'an illuminated by Ibn al-Mubadir c. 705-09/1306-10 and the decoration of the façade of the funerary complex of Sunqur

⁹ See fig. 6.10.

¹⁰ Necipoğlu, op.cit.,1995, pp.92-109.

¹¹ See fig. 4.52.

¹² Necipoğlu, op.cit.,1995, pp. 96-101.

¹³ See fig. 4.93 for the Mubarak Shah al-Suyufi Qur'an and fig. 4.65 for the Qur'an of Khwand Baraka.

al-Sa'di– it is probable that examples on bindings existed earlier than the evidence suggests.¹⁴

The appearance of filigree bindings at the end of the 14th century during the reign of Sultan Sha'ban also merits comment as this style, which includes floral, and vegetal decoration, makes a fleeting appearance and does not reappear until the second half of the 15th century.¹⁵ From the evidence that exists, this technique does not seem to have been used continuously as it is next found on bindings dated to after the 1460s, albeit in a different mode. A relationship can be discerned between the decoration of these filigree bindings and the openwork medallions and corner-pieces which are used to decorate doors during the reign of Barquq and continue to do so into the late 15th century.¹⁶ It seems likely that bookbinding designs may have provided the inspiration for such innovation, as corner-pieces with projections into the central field are found from the middle of the 14th century. In turn, the pierced metalwork of lamps may have served as the impetus for the development of filigree leatherwork on bindings.

It is, also, during the reign of Barquq that arabesque ornament is used for the decoration of the flaps of the bindings of several *juz'* made *waqf* for him. This ornament was compared with the flap of a Jalayirid binding for Shaykh Uways

¹⁴ See fig. 5.13 for the illumination of Ibn al-Mubadir and fig 5.25 for the funerary complex of Sunqur al-Sa'di.

¹⁵ See fig. 4.142-6.

¹⁶ See fig. 5.60.

and may point to Jalayirid influences but given the lack of examples this must await further research.¹⁷

In the 1460s changes are noted in the ornament of Mamluk bindings which can be directly attributed to developments in Persian bindings of the late 14th and early 15th centuries. The adoption of the lobed almond profile for bindings is first noted during the reign of Khushqadam and the half cloud-collar design is later used for the flaps of bindings from the reign of Qaytbay onwards. These profiles are filled with elegant arabesques and floral ornament in the Timurid style. Mamluk binders begin to use filigree leather on a pasteboard background for the doublures, replacing the older tradition of a textile backing where it was confined to the covers. The use of floral ornament combined with the arabesque is noted in the architectural decoration and metalwork of the reign of Qaytbay who sponsored the revival of the arts through his patronage and refurbishment programme. What is interesting, however, is that the lobed almond and cloud-collar profiles do not appear extensively in other media during this period, which seems to suggest that these profiles were derived directly from Persian bookbinding examples or pattern books. The presence of craftsmen trained in the Persian traditions should also be considered but, given that many of these bindings had a subtle Mamluk twist in their design, it suggests that these volumes were bound by Mamluk binders who adopted and adapted these patterns thereby creating their own style.

This poses the interesting question of what prompted these changes. Turcoman elements in miniature painting were noted by Atil in manuscripts produced in

¹⁷ See fig. 4.53 for a binding for Barquq and fig. 6.26 for the binding of Shaykh Uways.

Cairo in 870/1466 following the dispersal of Pir Budaq's atelier after his death and in the *Shāhnāma* produced for Qansuh al-Ghuri, indicating the presence of artists working at the Mamluk court who had been trained in the Qaraqoyunlu school of Baghdad and the Aqqoyunlu school of Shiraz.¹⁸ Changes can, however, be noted earlier than this. The fine binding produced for Sultan Khushqadam dated by manuscript to 866/1462 can be said to mark the beginning of the new styles.¹⁹ Also, Shirazi influences can be perceived in the illumination of a *Takhmīs* of the *Burda* copied for Khushqadam in the same year.²⁰ This date indicates that contacts existed earlier than 870/1466 and suggests that Turcoman artists and binders were present in Cairo facilitating the transmission of the new styles into the Mamluk binding repertoire.

In considering the relationship of Mamluk bindings with those of other binding traditions, no links can be discerned with Ilkhanid bindings of the 13th century which use the almond profile.²¹ Also, although the large-volume Ilkhanid Qur'ans copied in Mosul and Baghdad use similar geometrical ornament for their covers, the tooling methods are different from those noted on Mamluk examples. The case of the binding of the Qur'an copied in Hamadan for Uljaytu is problematic and the question of where these volumes were bound still remains.²² It does not use the same tooling pattern found on the other Ilkhanid large-volume Qur'ans but it could be argued that it may have been bound in Hamadan and

¹⁸ Atil, op.cit., 1984, pp. 161-171.

¹⁹ See fig. 4.111

²⁰ See fig. 5.51.

²¹ See fig. 6.5.

²² See fig. 6.13.

consequently exhibits a different style from that used in Baghdad and Mosul. The apparent additions and unfinished appearance of the illumination in the last *juz'* are also food for thought; these questions remain unanswered until further research is done.

In his study of Mamluk illumination, James discerned influences from Ilkhanid styles of illumination in the 'The Star Polygon' group of Qur'ans which are produced from the middle of the 14th century and first noted in the illumination of a Qur'an copied for Sultan Hasan.²³ The geometrical rosettes of the illumination with their overlapping arms and extensions into interlace patterns are also noted on bindings of the same period.²⁴ However, as there are no comparative Ilkhanid binding examples, it may be that this style of binding was directly inspired by the developments in illumination in Cairo and then transferred into bookbinding.

Problems also arise when considering the rosette profile with pendants which contain geometrical ornament or knotwork composed of small tools for their centres. The earliest dated example is found on the Qur'an copied by Mubarak Shah al-Suyufi dated 744/1344 and, given that he came from Iran, it could be assumed that the appearance of the rosette profile with the addition of pendants and geometric ornament was the result of influences from the Ilkhanid tradition as the binding of a Qur'an copied in Maragha dated 738/1338 has the same profile and its central rosette profile is based on a geometric pattern. It is impossible to reach any firm conclusions on whether this is the result of an

²³ See fig. 5.19 for DAK Rasid 9 for example of illumination of 'The Star Polygon' group and fig. 5.18 for an example of Ilkhanid illumination.

²⁴ See fig. 4.75.

Ilkhanid ornamental style which the Mamluks incorporated into their repertoire or whether it represents a well-established tradition in Egypt as roundels with pendants filled with geometrical ornament are found on the façade of the funerary complex of Sunqur al-Sa'di in Cairo and the profile is used extensively on Mamluk bindings from the second half of the 14th century through to the middle of the 15th century.

What can be said is that both Mamluk and Ilkhanid binders drew on a common repertoire of geometrical ornament that had probably been developed in Baghdad and continued to be refined in the Mamluk realm. By the end of the 14th century, geometric decoration was discarded by Persian binders who adopted new styles inspired by Chinese modes of ornament.²⁵

The lack of Ottoman bindings before the 1430s makes it impossible to draw any conclusions on their relationship with Mamluk bindings. For those of the 1430s, a relationship can be discerned with some of the bindings of volumes associated with Umur Bey's library but again it is difficult to analyse the nature of the relationship as the Mamluk, Ottoman and Persian examples all appear to be drawing on the same repertoire of ornament. For Mamluk bindings of the late 15th century, there are some indications of Ottoman influences but only on very specific examples. For example, the trellis filigree doublures found on Ottoman bindings of the 1430s are found again on the bindings for Bayezid and are then

²⁵ See fig. 6.28.

adopted by Mamluk binders of the late 15th century and adopted producing stamped and tooled decoration in as trellis pattern on the leather covers.²⁶

Elements from the Timurid tradition of binding decoration – the use of the full cloud-collar profiles for the covers and half profiles for the flaps – are found on Ottoman bindings of the 1440s and 1450s. However, the use of the half cloud-collar profile for the flaps only occurs on Mamluk bindings in the second half of the 15th century. There are only two examples of Mamluk bindings which are decorated with the full cloud-collar profile and neither of them resembles Persian examples of the first quarter of the 15th century.²⁷ One of them, produced for Dawadar Yashbak min Mahdi, closely follows the style of an Ottoman cloud-collar binding of the 1430s while the other, composed of four stamps commonly found on the corner-pieces of several bindings of this period, perhaps representative of a particular bindery, is a Mamluk configuration.

Changes in binding decoration noted in Cairo in the late 15th century are also noted on bindings in the Ottoman realm. Raby and Tanındı have been able to attribute these to the presence of Persian binders and calligraphers at the Ottoman court after the defeat of the Aqqoyunlu at the battle of Başkent in 876/1472.²⁸ Ottoman examples are decorated with abundant floral patterns incorporating Chinese clouds and the technique of pressure-moulding is used extensively, incorporating the quatrelobe split palmette motif. Mamluk binders, likewise, adopt these styles derived as noted above from the Turcoman binders' repertoire and comparisons can be made between the two styles of binding. Also

²⁶ See fig. 6.50 for trellis filigree doublures.

²⁷ See fig. 4.137-9.

²⁸ Raby and Tanındı, *op.cit.*, 1993.

the same border tools comprising the knot meander and the rhomb meander that are first noted on the binding for Ibrahim Sultan in Shiraz are found on both Ottoman and Mamluk bindings.²⁹ The technique of pressure moulding, which dominates Ottoman bindings of the late 15th century, is only found on a few Mamluk bindings of the period. It would seem that Mamluk binders still preferred to use the tooling method at which they excelled.³⁰

There is no evidence of a centralised binding workshop producing for the Mamluk court as the bindings appear to be specific commissions given to particular binders or workshops for a designated patron. This conclusion is supported by the stylistic diversity of the examples and the sources from which designs were drawn. Unlike the bindings of Ottoman Turkey, where a specific style is identifiable with a particular patron as in the case of Mehmed II and the Fatih style, no such case can be made for the bindings of Qaytbay or Qansuh al-Ghuri.

Reference should also be made to the continued production of bindings with geometrical ornament long after the style had disappeared from the Ottoman and Persian binders' repertoire. These stand as testimony to the binders' skill and to the long tradition of geometrical ornament in Egypt. The designs had to be conceived to fit the different sizes of the covers and then tooled by hand with each element drawn to fit the pattern – a time-consuming task requiring great skill. The Mamluk binders' repertoire remained the storehouse of geometric

²⁹ See fig. 6.37 and 38 and Appendix 2, no.26 and 39.

³⁰ See fig. 4.157, 4.160, 4.162.

designs within the Islamic world and beyond, as is also reflected in the architectural decoration and woodwork of the period.³¹

The different binding styles present a vitality by drawing on a variety of sources for inspiration engendered by the patronage of the Sultan Qaytbay. Similar evidence is presented by the illumination, metalwork, architecture and carpet production of the period. However, it should also be stressed that continuity is also noted. Filigree bindings reappear again with a textile backing, block-printed doublures are also used and older patterns are found on bindings which did not have such illustrious patronage.³²

The sophistication of the ornament reached in Mamluk bindings had a significant impact on European binding tradition. Styles and techniques developed in the 15th century had a deep and enduring legacy as they were adopted and adapted by the Italian binders of the Renaissance. Pasteboards, knotwork tooling, centre and corner ornament, decorated leather doublures, filigree work and pressure-moulding were all transmitted into the European binders' repertoire, transforming the appearance of the European book. As a result, any study of European bindings of the Renaissance needs to include these developments in order to reach a deeper understanding of the radical changes that took place in terms of the ornament found on European bindings.

Mirjam Foot, the distinguished scholar of European bookbinding, commenting on Goldschmidt's description of the history of bookbinding that 'it was a humble

³¹ See fig. 4.60 and 4.61.

³² See fig. 4.142 and fig.4.147 for late 15th century filigree bindings with textile backing and fig. 4.176 for block-pressed leather doublures.

auxiliary discipline, rather childish to some, attractive to others, not entirely useless and undoubtedly innocuous' makes the point that the study of bookbinding has now progressed to encompass structural, chronological and geographical approaches to the subject, providing insights into the cultural contexts in which the bindings were produced.³³ This study has tried to include each of these aspects, giving an account of a tradition which existed for 250 years, a period that provides us with a large corpus of material, enhancing our understanding of Mamluk bindings not only in terms of their structures and ornament but also their place within the broader field of Mamluk art and other traditions.

³³ Goldschmidt, 'The Study of Early Bookbinding, The Bibliographical Society, 1892-1942', *Studies in Retrospect*, London, 1949, p.157; Foot, *The History of Bookbinding as a Mirror of Society*, British Library, 1998, p.1.

APPENDIX 1

GLOSSARY OF TERMS

blind tooling: a method of decorating leather bindings by using a metal tool either cool or heated and impressing it against slightly dampened leather which covers the book.

board: either the upper or lower cover of the book which protects the text-block. It may be made of wood or pasteboard.

cuir ciselé: refers to a method of decorating a bookbinding in which the design is cut into dampened leather instead of being tooled or blocked. The design is first outlined with a pointed tool and then dampened. It is then brought into relief by depressing the background, usually by stamping a succession of dots into the leather very close together by means of a pointed tool. Certain parts of the design are sometimes embossed from the flesh side of the leather, and in such cases the decorating must be done before covering.

doublure: an ornamental inside lining of a book cover, which takes the place of the regular pastedown and fly leaf. It is usually of leather or silk, generally with a leather hinge and is often very elaborately decorated.

endband or headband : This is a functional and/or ornamental band at the head and tail of a book between the sections and the spine covering, which projects slightly beyond the head and tail. Originally, the headband consisted of a thong core, similar to the bands on which the book was sewn, around which the ends of the threads were twisted and then laced into the boards of the book.

endband core: the support around which the headband or endband embroidery is worked. They can be made of cord, leather, vellum or rolled paper.

endleaves: leaves added at the beginning and end of a textblock.

extra binding: term used to denote a binding tooled by hand of high quality.

filigree leather: leather ornamental openwork of an intricate design, frequently of hair like arabesques, intricate backgrounds of flowering vines with delicate spiralling stems, cut from leather and laid over a contrasting background

finishing: the process of polishing and decorating the spine, covers and doublures.

fillet: 1) a wheel-shaped finishing tool having one or more raised bands on its circumference. It is used to impress a line or parallel lines on the covering material of a book, usually one bound in leather.

2) The plain line or lines impressed on a book cover.

fly-leaf: an endleaf which is not glued to the boards.

fore-edge: edge of a leaf or a board opposite from, and parallel to, its binding edge (i.e. opposite from its spine edge). Fore-edge is also used in a more general way to refer to any part of a volume opposite from and parallel to its spine

fore-edge flap: the flap extending usually from the back cover of an Islamic binding which protects the text-block.

format à la française and format à l'italienne: these terms are used extensively in bookbinding literature to describe the vertical and horizontal format respectively. The term *format à l'italienne* is used to refer formats that are longer than high as opposed to *format à la française*. These printing format terms originated in France after 1945 and the term *format à l'italienne* is thought to derive from the format of Italian comic books. Before this period the term oblong was used in French printing dictionaries.

forwarding: the processes or steps involved in binding a book. It has been variously defined as: 1) all of the binding processes following gathering, including covering; 2) the processes following sewing and up to covering; and 3) the processes following sewing and including covering.

gathering: 1) the process of collecting, and arranging in proper order for binding, the printed sheets or sections of a publication, which, in the case of sections, takes place after folding. 2) The group of leaves formed by folding and combining the one or more sheets or half sheets which make up a section (signature)

gilding: process of burnishing gold leaf on to a surface.

glair: a mixture of egg white and vinegar or water used to bond the gold leaf to the leather during gold tooling or in gilding.

gold tooling: process of decorating the spine and covers of a book with gold leaf into the covering material, usually leather, by means of a finishing tool.

gutter: channel formed by the two inner or back margins of facing pages of a volume.

headband: see endband.

panel stamps: A relatively large block of metal or wood, usually the former, engraved intaglio, and used to impress a design on the cover of a book.

pasteboard: a thin stiff board made from gluing pieces of paper together.

pastedown: part of the endleaf that is pasted to the boards.

pressure-moulding: method of decorating the binding with metal stamps with the design in intaglio which is pressed into the leather to produce decoration in relief. Depressions in the shape of each stamp were cut into the pasteboard that would form the core of the cover. Leather was pasted over the pasteboard sometimes after an extra layer of paste had been applied. The stamp was set in place and then hammered so the paste was pushed up into the intaglio areas of the stamp creating the pattern in relief.

quire: a group of folded sheets of paper or parchment. The number of folded sheets vary and these are sewn to form the text-block. Quires are also called sections, gatherings, or signatures.

rounding: process of hammering or manipulating the textblock spine into a convex shape before backing.

sewing station: the hole in the fold of the quire where the needle and thread enter the leaves of the quire.

spine: part of the book where the folded sheets are sewn together

stamp: A larger tool which comprises one unit of design for the cover ie. a corner-piece or the central profile. These can be made of metal or hardened leather.

supported sewing: a type of sewing in which the quires are connected by thread passing around a support, such as a cord or linen band.

tooling: method of decorating the covers using tools which are usually heated.

tools: usually small dies made of metal with a design cut at the end of a shank. They are used separately or in conjunction with each other, as well as with line tools to form patterns.

turn-in: The part of the leather, paper or cloth covering which is turned in over the edges of the boards at the head, tail and fore-edge onto the inside of the boards.

twist: direction in which the fibres of a thread are turned together. It can be either S-twist or Z-twist.

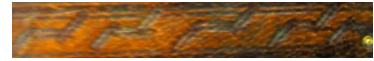
unsupported sewing: method of sewing in which the quires are directly connected to each other by thread alone, using a type of link-stitch

APPENDIX 2: BORDER PATTERNS

- 1 Hatched Bars and Arcs DAK: Rasid 58,62,64, Qawala 2
TKS: A.124, M5, A.1499, A.347



- 2 Angular S-shape DAK: 70, 71, loose binding
TSK: A.288



- 3 Petalled scroll BNF: arabe 4436,
TKS: R.211, A.288
Marrakesh



- 4 Circle /Cross DAK: Rasid 70, 71



- 5 Cross/annular punch DAK: Rasid 70



- 6 Segmented square knot DAK: Rasid 71



- 7 Cable border Deep S DAK: Rasid 60, 102
TIEM: 546



- 8 Segmented Square with square centre DAK: Rasid 61, Flap 76



- 9 Segmented square with gold annular dot DAK: Rasid 59











- 10 Knotted bud TSK: A.1240



- 11 Square composed of bar tools TSK: A.324, A.804, R.1582,
CBL: 1495, 1474



12	X-tool	DAK: Rasid 59, 102, 120 CBL: 1495 TSK: Y.2468, A.643	
13	Oval Segment	DAK: Rasid 120 BNF: 5846	
14	Palmette	DAK: Rasid 80 Marrakesh	
15	Palmette Meander	DAK: Rasid 74	
16	Twisted knot	DAK: Rasid 76, 123 TSK: A.317	
17	Broad s- cable	DAK: Qawala 2 TSK: A.804, A.317, A.347, Y.2468	
19	Cable with punches	TSK: A.271/1 BNF: 5846	
20	Palmette Scroll	DAK: Rasid 120 CBL: 1495	
21	Thick s-tool	DAK: Rasid 123	
22	S-tool	DAK: Rasid 123	
23	Cable with punches	TSH: A. 271/1	
24	Palmette	Marrakesh	

25	Rosette/Diamond	Chicago: A. 12057	
26	knot meander	TSK: A.2048, A.244, A.2425, A.2863, A.2984 DAK: Rasid 104 TIEM: 508 / CBL: 4168, 1486	
27	Alternate knot meander	DAK: Loose Binding	
28	Small s- stamp for cable pattern	TIEM: 546 TSK: R.1582	
29	Four-fold knots	TSK: 2909/1	
30	Large x-tool with gold dots	TSK: A.1769 DAK: Rasid 102, 107	
31	Large cable-stamp	DAK: Rasid 60	
32	Coloured Knot meander in alternate	TSK: A.1396	
33	Small x- stamp	DAK: Rasid 99, 102	
34	Square tool with gold punch	DAK: Rasid 102, 123	
35	Small cable	DAK: Rasid 102 TSK: A.107	
36	Complex knot	DAK: Rasid 99	
37	Oval Segment	DAK: Rasid 107	
38	Heart shaped palmette	DAK: Rasid 101	
39	Rhomb meander	TSK: A.643, A.247/2, A.649, A.2796 Staatsbibliothek Berlin Ms.Or.Quart. 4249	

40	Rhomb meander blind-tooled.	TSK: A.2796, A.360	
41.	Chain tool	TSK: A. 2471, A.2984 DAK: Rasid 104	
42	Interlace tool	TSK: A.137, A. 1952, A. 1767 Staatsbibliothek Berlin Ms.Or.Quart.1817	
43	Quatrefoil	Staatsbibliothek Berlin Or.Fol.(1624,marberg) TKS: A. 1608, A.1773, A.2798, A.3032,	
44		DAK: Rasid 71	
45	Bud Meander	TIEM: 508	
46.	Interlace Square	TSK. 2129	
47	Small chain	TIEM: 508 TSK: A.247/2, A.643, A.649, A.2984, A.1214 CBL: 1486, 4168, Loose Binding DAK: loose binding	
48	Calyx with cloud-collar	Staatsbibliothek Berlin Ms.Or.Fol.4249	
49	Floral Cartouche	TKS: B.80	
50	Cartouche	TSK: K. 905, 1008	
51	Quatrefoil with petalled cross	CBL: 1507, 4168 TSK: A.649	

52 8-pointed star
 pattern TSK: 247/1, A. 1214, A.2926
 CBL: 4168



53 Cloud collar DAK: Rasid 73



54 Turcoman binding TSK: K.783



APPENDIX 3

APPENDIX: 3a List of Mamluk Bindings examined			INSTITUTION: Dar al- Kutub Cairo		
No	Accession No	Size cm	Binding	Date	Notes
1	Rasid 4	58.5 x 55	Rebound	<i>Waqf</i> 730/1329	Single volume
2	Rasid 5	77 x 45	Rebound	<i>Waqf</i> for Sultan Hasan	Single volume
3	Rasid 6	50 x 71	Rebound	<i>Waqf</i> 769/1367	Single volume
4	Rasid 7	85 x 53	Rebound	770/1368	Single volume
5	Rasid 9	71 x 51	Rebound	770/1368	Single volume
6	Rasid 10	105 x 61	Rebound	778/1376	Single volume
7	Rasid 13	105 x 79	Rebound	<i>Waqf</i> for Barquq	Single volume
8	Rasid 14	54 x 37.5	Rebound	<i>Waqf</i> for Amir Uljay al-Yusufi	Single volume
9	Rasid 15	105 x 75	Rebound	<i>Waqf</i> for Amir Sarghitmish 776/1374	Single volume
10	Rasid 16	95 x 76	Rebound	<i>Waqf</i> for Barquq	Single volume
11	Rasid 19	112 x 94	Rebound	873/1468 Qaytbay	Single volume
12	Rasid 58	57 x 41	Mamluk	Accessioned from the Mosque of Sultan Hasan	<i>Juz'</i> 1-20
13	Rasid 59	46.5 x 36	Mamluk	<i>Waqf</i> for Sultan Hasan	<i>Juz'</i> 1-29
14	Rasid 60	38 x 27	Mamluk	<i>Waqf</i> for Amir Sarghitmish	<i>Juz'</i> 1-13, 15-18, 29-30 Copied in Baghdad or Tabriz in first quarter of the 14 th century
15	Rasid 61	38 x 30	Mamluk	<i>Waqf</i> for Amir Sarghitmish	<i>Juz'</i> 1-30
16	Rasid 62	53 x 37	Mamluk	<i>Waqf</i> for Uljay al-Yusufi	<i>Juz'</i> 1-30
17	Rasid 64	26 x 18	Mamluk	No date	Same style as Rasid 62
18	Rasid 70	37 x 28	Mamluk	Dated: 757/1356 <i>Waqf</i> for Qijmas al-Ishaqi	<i>Juz'</i> 2, 4, 7-13, 15-23, 27-30
19	Rasid 71	37 x 28	Mamluk	<i>Waqf</i> for Qijmas al-Ishaqi	<i>Juz'</i> 1, 5-6
20	Rasid 72	56 x 40	Ilkhanid	713/1313 Uljaytu	<i>Juz'</i> 1-30
21	Rasid 73	62 x 41	Mamluk	Qansuh al-Ghuri 908/1502	Single volume
22	Rasid 74	28 x 20	Mamluk	For Farag ibn Barquq	Single volume
23	Rasid 76	33 x 24	Mamluk	For Barquq	<i>Juz'</i> 2-3, 5-10, 13-27, 30
24	Rasid 79	30 x 32	Mamluk	For Barquq	<i>Juz'</i> 13
25	Rasid 80	25 x 17	Mamluk	<i>Waqf</i> in the name of Sultan Sha'ban for Khwand Baraka dated 770/1368	<i>Juz'</i> 1, 9, 10, 13-14, 16, 20-21, 23-26, 28
26	Rasid 88	52 x 38	Mamluk	Qaytbay	<i>Juz'</i> 18
27	Rasid 99	35 x 27	Mamluk	<i>Waqf</i> for Barsbay Dated 831/1427	<i>Juz'</i> 1-30
28	Rasid 100	27 x 18	Mamluk	No date	<i>Juz'</i> 1, 6, 8, 12, 15, 20-21, 25, 27, 29
29	Rasid 101	28 x 19	Mamluk	<i>Waqf</i> for Qanibay al-Jarkasi dated	<i>Juz'</i> 2-3, 5-6, 9-11, 13-15, 17, 19-20, 25-26, 28-29

				857/1453	
30	Rasid 102	34 x 26	Mamluk	<i>Waqf</i> witnessed by Abd al-Basit bin Khalil dated 823/1421	<i>Juz'</i> 6, 7, 10, 12, 13-14, 18, 20, 23, 24-25, 28
31	Rasid 104	27 x 18	Mamluk	<i>Waqf</i> for Khushqadam	<i>Juz'</i> 4, 9-12, 20, 25-27
32	Rasid 107	32 x 22	Mamluk	<i>Waqf</i> for Sultan Barsbay dated 828/1424	<i>Juz'</i> 5, 7-13, 15-17, 24, 26, 29
33	Rasid 108	32 x 21	Mamluk	<i>Waqf</i> for Sultan Barsbay dated 826/1422	<i>Juz'</i> 3-4, 6-24, 26-28
34	Rasid 120	30 x 27	Mamluk	<i>Waqf</i> for Sultan Barquq	<i>Juz'</i> 1-3, 6-7, 11, 17, 21-24
35	Rasid 123	43 x 32	Mamluk	<i>Waqf</i> for Sultan Barquq	<i>Juz'</i> 3, 5, 8-9, 11, 19, 28
36	Rasid 124	33 x 24	Mamluk	No date	Single volume
37	Rasid 126	54 x 36	Ottoman cover	<i>Waqf</i> for Qaytbay, copied in 889/1484 by Umar al-Danjawi	Very badly damaged. Copied by Umar al-Danjawi.
38	Rasid 146	36 x 24	Mamluk		Single volume
39	Rasid 147	58 x 42	Mamluk		
40	Rasid 151	17 x 13	Mamluk	Qansuh al-Ghuri	<i>Juz'</i> 1-30
41	Rasid 249	27 x 19	Ottoman cover		<i>Juz'</i> 1, 4
42	Rasid 407	20 x 13	Ottoman		Single volume
43	Qawala 1	46.5 x 34.5	Ottoman		<i>Juz'</i> 1-30
	Qawala 2	31.7 x 22	Mamluk	<i>Waqf</i> for Arghun al-Kamali dated 747/1346	<i>Juz'</i> 1-30
44	Loose Binding	51 x 73	Mamluk	Late 15 th century	

APPENDIX: 3b List of Bindings examined			INSTITUTION: Topkapı Palace Library		
No.	Manuscript/	Binding Number	Binding	Date	Notes
1	A137	27.5 x 18.5	Mamluk	Qansuh al-Ghuri	
2	A244	38 x 25.2	Rebound in the Mamluk period.	685/1287	
3	A242	36 x 26	Mamluk ?	738/1347	
4	A247	43.4 x 30	Mamluk	For Khushqadam	
5	A285	25.4 x 17.5	Rebound in the Mamluk period.		
6	A317	26.5 x 17	Mamluk	793/1391	Filigree
7	A324	22.3 x 16	Mamluk	775/1374	
8	A271/1,	26.5 x 18	Mamluk	788/1386	
9	A360	30.5 x 21.5	Mamluk	900/1495	Scribe Ahmed bin Ali al-Fayyumi
10	A577	27.5 18.3	Mamluk?		

11	A643	27.3 x 18	Mamluk	888/1483	
12	A649	36.5 x 26	Mamluk		
13	A804	31.5 x 21.5	Mamluk	775/1373	
14	A980	26.5 x 16.8	Mamluk?	762/1361	
15	A1214	31.5 x 19	Mamluk	901/1496 For Sultan Muhammad son of Qaytbay	
16	A1240	26 x 18	Mamluk	697/1298	Copied in Damascus
17	A1377	17 x 13	Mamluk	Late 15 th century	
18	A1396	27 x 12.	Mamluk	896/1491 For Qansuh al-Ghuri	Copied in Aleppo while he was Grand Chamberlain there. Appointed in 894/1489
19	A1452	24.5 x 17	Mamluk	Qansuh al- Ghuri	
20	A1499	28.4 x 20	Mamluk	731/1331	
21	A1575	18 x 13.5	Ottoman	Qansuh al- Ghuri	
22	A1582	32 x 21	Mamluk	Copied for Sultan Jaqmaq	
23	A1608	27.5 x 18	Mamluk	Copied for Qansuh al- Ghuri	
24	A1621	27 x 18.5	Ottoman	Qansuh al- Ghuri	
25	A1767	26.5 x 17.5	Mamluk	Qansuh al- Ghuri	
26	A1769	27 x 18	Mamluk	856/1452	
27	A1773	27 x 18	Mamluk	897/1491 for Janbalat	
28	A1952	28 x 18.4	Mamluk	912/1506	
29	A1965	25 x 18	Mamluk	699/1299	
30	A1989/4		Ottoman	For Qansuh al-Ghuri	
31	A2341	26.5 x 18	Mamluk	879/1474	
32	A2048	15.3 x 21.3	Mamluk	Copied for Qaytbay dated 888/1483	
33	A2129	30 x 24	Rebound during the late 15 th century	778/1376-7 but can be dated to the reign of Abu Said Qansuh, 904- 905/1498- 1500.	
34	A2173	26 x 18	Mamluk Ottoman rebinding of the 16 th century	1388/790	
35	A2263	28 x 20	Bound in ebru covers	733/1332	

36	A2292	27.5 x 18.5	Mamluk ?	854/1450	
38	A2303	42.5 x 30	Mamluk	For Sultan Muhammad son of Qaytbay dated 903/1497	Pressure-moulded
39	A2305	27 x 18	Mamluk	Copied for Barquq	
40	A2425	26.5 x 17.5	Mamluk	For the library of Qaytbay	
41	A2471	18.5 x 13	Mamluk	736/1331	Filigree, probably binding of the 15 th century
42	A2680	27.3x 18	Mamluk	For Qansuh al-Ghuri	
43	A2790	27.6 x 18	Mamluk		
44	A2798	36.5 x 27	Mamluk	Copied for Qansuh al Ghuri dated 909/1503	
45	A2803	26.5 x 17.5	Mamluk	Late 15 th century	
46	A2823	17.8 x 13.3	Mamluk	Copied for the library of Qansuh al-Ghuri	
47	A2829	32 x 21.5	Mamluk	For Sultan Qaytbay dated 889/1484	Filigree
48	A2831	25 x 16	Mamluk/ Ottoman	Late 15 th century	
49	A2863/4	28 x 17.8	Mamluk	891/1486	4 vols present for the library of Qaytbay.
50	A2884	30.5 x 20.5	Rebound in the 15 th century	835/1432	
51	A2909/1	27 x 18	Mamluk	815/1412	
52	A2924	27 x 18	Ottoman rebinding	Late 15 th century	
53	A2926	27.5 x 18	Mamluk		Same patron as A643 and A2926
54	A2970		Mamluk	870/1465	Copied in Mecca by Muhammad bin Muhammad bin Salah. Very badly worn.
55	A2984	27.8 x 18.2	Mamluk	For Qansuh al-Ghuri dated 910/1504	
56	A2992	26.8 x 17.8	Mamluk	For Inal-Al Ashqar	
57	A3032	32 x 21	Mamluk	Copied for Qansuh al-Ghuri	

58	A3047	26 x 18	Mamluk		
59	B41	26 x 17.5	Mamluk	Qansuh al-Ghuri	
60	B70	31 x 21.5	Mamluk	Copied for Janbalat	
61	B80	17.7 x 13.3	Mamluk	Qansuh al-Ghuri	
62	B82	26.5 x 20	Mamluk	Qansuh al-Ghuri	
63	B84	27.6 x 18.4	Binding covered	Qansuh al-Ghuri	
64	B85	27 x 18.5	Binding covered	Qansuh al-Ghuri	
65	B94	27 x 18	Binding covered	Qansuh al-Ghuri	
66	B112	36 x 26.5	Mamluk	Qansuh al-Ghuri	
67	B127	26 x 17	Mamluk	890/1485	
68	B137	28 x 18.5	Mamluk	Qansuh al-Ghuri	
69	B138	27.5 x 18.5	Binding covered		
70	B177	26.5 x 18	Binding covered	Qansuh al-Ghuri	
71	B178	27 x 18.5	Binding covered	Qansuh al-Ghuri	
72	EH 90	36.7 x 25.5	Ottoman?	For Qansuh al-Ghuri	
73	K905	31.5 x 20.8	Mamluk		
74	K258	35 x 26	Mamluk?	15 th century	
75	K266		Mamluk	Waqf for Barquq	
76	K496	34.5 x 25	Mamluk	14 th century	
77	K883	27 x 18	Mamluk	For Qaytbay	
78	K950	27 x 18.4	Mamluk	For Yashbak min Mahdi dated 879/1475	
79	K989	27 x 18	Mamluk	For Qansuh al-Ghuri	
80	K1008	20.8 x 31.5	Mamluk	For Yashbak min Mahdi dated 880/1476	
81	M5	47 x 38	Mamluk	742/1341	
82	R211	25.5 x 17	Mamluk	Waqf for Sultan Barsbay	
83	R1561	27.3 x 18	New ebru covers	894/1489	Volume 3 of A2926 and A643
84	Y2468	37 x 24.6	Mamluk	744/1344	Cited in James, op.cit., Cat.,67,1988 as Y 365
85	Y507	26.5 x 17	Mamluk	Copied for Sultan Barquq	
86	Y359	32.5 x 23	Mamluk	Copied for Sultan Inal	

APPENDIX: 3c List of Bindings examined			INSTITUTION: Museum of Turkish and Islamic Arts Istanbul		
No	Accession No	Size cm	Binding	Date	Notes
1	24	40 x 31	Mamluk	872/1467	
2	79	43 x 30	Mamluk	<i>Waqf</i> for Qaytbay	
3	202	35 x 27			
4	436	42 x 30.5	Mamluk	No date	Copied by Abu Fadl Muhammad A ^c raj
5	533	62 x 38	Mamluk or Ottoman covers	For Qaytbay	This very fine binding has lacquered pressure moulded covers. It was not included in the study as it is most probably a later Ottoman rebinding.
6	508	50 x 38	Mamluk	Doublure with the name of Qansuh Khamsmiyya	
7	545	27.7 x 18.5	Mamluk	<i>Waqf</i> for Barquq	
8	546	28 x 18.5	Mamluk	<i>Waqf</i> for Barquq	
9	1673	37 x 27	Mamluk	For Khushqadam	
10	1678	26.4 x 17.3	Ottoman/Mamluk rebinding	788/1385	
11	2015	28.5 x 28.58	Ebru covers.	Qaytbay	

APPENDIX: 3d List of Bindings examined			INSTITUTION: Chester Beatty Library		
No	Accession No	Size cm	Binding	Date	
1	1474	36.5 x 26.6	Mamluk	Late 15 th century	Filigree
2	1486	47.5 x 33.6	Mamluk	897/1491	
3	1495	37 x 26	Mamluk	<i>Waqf</i> for Aytмыш al-Bajasi	
4	1507	58.5 x 42.5	Mamluk	Dated 847/1444	This is most probably a rebinding in the second half of the fifteenth century.
5	4168	43 x 29.8	Mamluk	Dedication to the library of Qaytbay	

APPENDIX: 3e List of Bindings examined			INSTITUTION: Staatsbibliothek Berlin		
No	Accession No	Size cm	Binding	Date	Notes
1	Or.Quart.1817	31.5 x 21	Mamluk	For Qansuh al-Ghuri	
2	Or.1624 Fol.(Marberg)	37 x 26.5	Mamluk	For Qaytbay dated 881/1476	
3	Or.Fol.4249 (Tub)	41.5 x 29.8	Mamluk	For Yashbak min Mahdi dated 881/1476	
4	Or.Fol.1623 (Marburg)	42.5 x 31.2	Mamluk	For Qaytbay dated 881/1479	Filigree

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