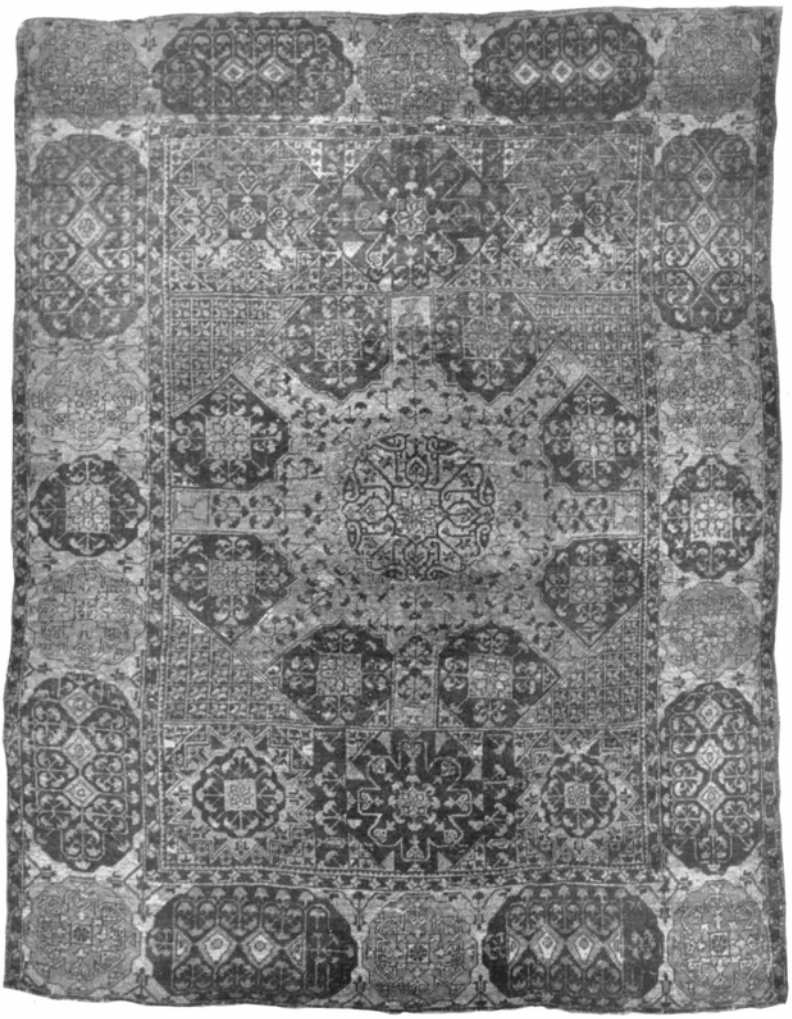

# Illumination Underfoot
## The Design Origins of Mamluk Carpets

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Mamluk carpets, woven in Cairo during the period of Mamluk rule, are widely considered to be the most exquisitely beautiful carpets ever created; they are also perhaps the most enigmatic and mysterious. Characterized by an intricate play of geometrical forms, woven from a limited but shimmering palette of colors, they are utterly unique in design and near perfect in execution.[1] The question of the origin of their design and occasion of their manufacture has been a source of considerable, if inconclusive, speculation among carpet scholars;[2] in what follows, we explore the outstanding issues surrounding these carpets, as well as possible sources of inspiration for their design aesthetic.

### Character and Materials

The lustrous wool used in Mamluk carpets is of remarkably high quality, and is distinct from that of other known Egyptian textiles, whether earlier Coptic textiles or garments woven of wool from the Fayyum.[3] The manner in which the wool is spun, however – "S" spun, rather than "Z" spun – is unique to Egypt and certain parts of North Africa.[4,5] The carpets are knotted using the asymmetrical Persian knot, rather than the symmetrical Turkish knot or the Spanish single warp knot.[6,7,8] The technical consistency and quality of weaving is exceptionally high, more so perhaps than any carpet group prior to mechanized carpet production. In particular, the knot counts

in the warp and weft directions maintain a 1:1 proportion with a high degree of regularity, enabling the formation of polygonal shapes that are the most characteristic basis of Mamluk carpet design.[9] The red dye used in Mamluk carpets is also unusual: lac, an insect dye most likely imported from India, is employed, rather than the madder dye used in most other carpet groups.[10,11]

Despite the high degree of technical sophistication, most Mamluks are woven from just three colors: crimson, medium blue and emerald green. Although some Mamluks have as many as eight colors, even in these instances, the same three colors dominate. Curiously, although it is technically easier to create intricate patterns using a wider palette of colors, in fact the most sophisticated patterns are to be found in three color carpets.[12] The textile scholar Louise Mackie has suggested that the minimum color patterning of Mamluk carpets may be an outgrowth of the Mamluk silk industry, although the color palette and design elements are quite distinct.[13] Another textile scholar, Carol Bier, has proposed that the jewel-like palette, suggestive of rubies, sapphires and emeralds, may have been selected for its distinctively imperial connotations,[14] while the Islamic art scholar Esin Atil has suggested that the colors reflect the brilliant tones of stained glass found in Mamluk architecture.[15]

## History and Origins

There is some uncertainty with respect to the dates of Mamluk carpet production. Some scholars suggest that the first Mamluks may have been produced as early as the middle of the 15$^{th}$ century,[16,17] while others propose a date closer to the last quarter of the 15$^{th}$ century.[18,19] The extensive, and perhaps most definitive, research by the art scholar Kurt Erdmann also suggests this latter date.[20] Mamluks were likely produced until the middle of the sixteenth century, at which time Ottoman designs began to displace them, no doubt driven by the change in ruling tastes following the Ottoman conquest of Egypt in

1517. A transition from Mamluk to Ottoman patterns can be readily discerned both in the continuity of technical details and well as in the existence of carpets with combined design elements.[21] Although there is no mention of Mamluk carpet production by Mamluk authors of the 15th and 16th centuries,[22] in 1474, the Venetian diplomat Barbaro made passing reference to Cairene carpets,[23] while the Medici Mamluk in the Pitti Palace, one of the largest and best preserved of all Mamluks and presumably a later development in the tradition, is known from archival records to have arrived between 1557 and 1571.[24,25] Many European references cite Cairene carpets, the earliest known dating from 1510.[26] In general, these dates suggest that Mamluk carpet production was most likely begun under the reign (1468-95) of Sultan Qa'it Bay, who was particularly known for his patronage of the arts.

Most surprisingly, there is no known Egyptian pile weaving antecedent for Mamluk carpets, nor any evidence of a prior Egyptian carpet industry;[27,28] rather, they appear suddenly as a fully developed tradition.[29] As Esin Atil describes, "The Mamluk rug appears in all its glory from the day it was born, contradicting all other artistic traditions, which evolve from archaic origins and evolve through experimental stages before reaching maturity."[30] That these carpets should also be at once remarkably distinct in design and technically superior in execution to other known carpets is nothing short of astonishing. Despite a wealth of scholarly speculation, many questions remain regarding the origin and development of Mamluks.

## Design Antecedents

The design layout of Mamluks bears occasional similarities to earlier artistic forms – including late Roman mosaics, Egyptian Coptic textiles and papyrus motifs in ancient Egyptian art – which scholars have suggested as possible prototypes.[31,32] The noted carpet scholar Charles Grant Ellis has even speculated that Buddhist mandalas serve as the primary design

inspirations for Mamluks.[33] Further, there are a number of design similarities shared with other Mamluk artistic media, including stained glass windows, inlaid metalwork, carved and inlaid stonework, inset wood and ivory, and painted wood ceilings.[34,35,36] However, Mamluk carpet design elements such as the "umbrella leaf" and "lancet leaf" appear to be without parallel in other artistic forms,[37] as are combinations of design elements, such as cypresses, palm trees and papyrus sprays.[38]

Mamluk carpets also exhibit numerous design parallels to the illuminated endpages of Mamluk Qurans. Although this similarity has been noted in passing, particularly by Esin Atil[39] and Louise Mackie,[40] to our knowledge, the interrelationship between Mamluk carpet and Mamluk Quran illumination design has not been deeply explored. It is our specific contention, which we present in detail below, that Mamluk carpet design finds its direct inspirational antecedent in the illumination design of a particular class of Mamluk Qurans. Such a claim should hardly be surprising, as parallel lines of influence have been observed by scholars in the case of Mongol Quran illuminations and 14th century Persian rugs, as well as Timurid illuminations and 16th century Savafid rugs.[41]

## Carpets and Illumination

Mamluk Qurans, with their exquisite bindings, calligraphy and illumination, are perhaps the finest examples of any Islamic tradition of bookmaking.[42] The greatest era of Mamluk Quran production was during the period (1363-76) of Sultan Sha'bân.[43] Although Mamluk illuminations in general display a variety of design schema, those created during his reign are consistently distinguished by the deployment of star polygons as central geometric medallions; collectively, they are termed the Star Polygon Group by scholars. Certain illuminations that may have served as antecedents to this design aesthetic appear in Qurans from the 1330s (Figs. 2, 5). The illuminators responsible for their creation appear to have worked together in

the same atelier in the capital, partially, but not exclusively, under the royal patronage of the Sultan and his mother.[44] Their production precedes that of Mamluk carpets by more than a century, rendering any line of design influence as strictly from illumination to carpets, rather than the reverse. In what follows, we present a detailed comparative analysis of layout and design features between the two artistic media.

## *The Overall Layout*

In both artistic forms – the Mamluk carpets of the era of Sultan Qa'it Bay and the Mamluk Qur'an illuminations of the era of Sultan Sha'bân – the overall design layout consistently follows a common scheme. Typical examples may be seen in a number of included illustrations (Figs. 1, 2, 3, 4, found at the end of this article). A square or nearly square region is occupied by a dominant central geometric medallion, most often a star polygon, from which smaller geometric forms radiate and fill the region. In illumination, this square region will often be immediately surrounded by a square border, while this interior border is typically absent in carpets. Adjacent to this square region above and below are oblong horizontal bands, where the central square and oblong bands stack to form an elongated rectangular region. This is in turn surrounded by multiple borders. In illumination, there is typically a thin inner border and two wide outer borders, with the outermost border truncated to a three-sided border at the interior page margin; in carpets, there is most often a very thin inner border and a single wide outer border around all four sides. The thin inner border in illumination often also borders between as well as around the central square and adjacent oblong bands, a pattern not found in carpets. This broad design layout of a self-contained configuration consisting of a central medallion region, horizontal bands above and below, and surrounding borders does not appear in any other Mamluk decorative art, and is itself

a significant indication of a possible relationship between the two artistic forms.

In addition to the parallels in design layout, there are also close parallels in stylistic elements between the two artistic forms. In particular, the central medallion often evinces a similar internal structure in both cases, while the attendant, symmetrically arranged geometric shapes are characterized both by common placements and similar structure of their own. Additionally, the pattern of repeating rosettes and cartouches is also typical of both forms, although it is deployed somewhat differently in each. Another close parallel is what might be termed a characteristic pattern of geometric structure with arabesque content. Thus, in both forms, there is a "rigid" defining structure that determines the shape and placement of the various geometric elements, but within and surrounding each of these elements, there is found a profusion of arabesque patterning.

Another point of comparison is the limited color palette characteristic of both forms, although the palettes are somewhat different in each case. Carpets are dominated by red, green and blue, while Quran illuminations are dominated by gold and blue, with some limited use of red, green, white and black. As has been discussed above, the typical use in Mamluk carpets of just three colors is distinct from the larger color palette characteristic of most other court carpets.

A final point that might be made is that even in rare instances of very elongated Mamluk court carpets, such as the Simonetti Mamluk in the Metropolitan Museum of Art,[45] the elongation is not reflective of an integrated design, but rather resembles a stacked series of geometric "compartments" in which each rectangular or square compartment is essentially isolated in design from the next. This resembles nothing so much as the application of Quranic illumination design, necessarily square or nearly square in overall geometry, to carpet design through a stacking of discrete square or nearly

square design units. One carpet example,[46] which possesses a central medallion region bordered by thick banded regions, each with its own additional medallion, appears to be an intermediate form between the more typical early Mamluk carpets and the later "stacked compartment" elongated court carpets – such as the Simonetti in the Metropolitan Museum or the silk-pile Mamluk in Vienna's Österreichisches Museum für angewandte Kunst – in which the bordering banded regions are effectively replaced by additional minor medallion regions. Such minor medallions might actually be considered as stylistically modified reintroductions of Quran endpage cartouches; certainly in the case of the Vienna silk carpet, the central medallion flanked by two smaller medallions in each banded region is highly reminiscent of the cartouche flanked by two roundels in Quran endpage banded regions. Such a straightforward extension of thickening the banded region and introducing minor medallion elements may indicate how the later elongated court carpets grew in design out of the earlier, endpage inspired, carpets possessing banded regions, and may also indicate why no integrated designs appear in these elongated court carpets.

## *The Central Medallion*

Having touched on broad similarities of layout and design, we next work from the center outwards in a detailed examination of the design similarities between the two artistic forms. First, in considering the central medallion region, the Quran endpages consistently favor careful geometric constructions, most typically with a twelve-pointed central star medallion, but also with occasional eight-pointed (Fig. 2) and sixteen-pointed central star medallions (Figs. 4, 10). Mamluk carpets, in comparison, consistently display medallions with eightfold symmetry, although some of the later, more ornate examples, although still strictly eightfold in symmetry, take on a quasi-sixteenfold symmetric character (Fig. 13). The twelvefold

symmetry, so common in endpage medallions, is entirely absent, having been displaced by a preference for eightfold symmetry.

Consideration of the very different character of artistic construction in the two media clarifies this difference in symmetry. In Quran illumination, the artisan constructs geometric patterns by means of compass and straightedge, in which a sixfold hexagonal symmetry arises naturally from the overlapping of circles. In carpet weaving, the artisan constructs patterns by means of knotting on a grid of warp and weft threads, in which a fourfold square symmetry is rigorously imposed. In each case, the most common aesthetic choice is that of a "doubling" of the basic symmetry of the construction: thus, in illumination, the typical twelvefold symmetry is a doubling of the inherent sixfold symmetry; similarly, in carpets, the eightfold symmetry is a doubling of the inherent fourfold symmetry. This was almost certainly chosen by the artisans in each medium as a balance of aesthetic and technical concerns.

There are also distinctions in design flexibility between each medium. Thus, in illumination, while a sixfold symmetry is most natural, other constructions are possible, such as those based on a fourfold symmetry; in contrast, in carpet weaving, constructions based on other than a fourfold basic symmetry are inelegant in execution and largely avoided. Further, each type of construction lends itself to different degrees of precision in geometric expression. Thus, the careful geometric construction exhibited in Quran endpages, where attendant shapes are rigidly defined by the construction itself, is considerably relaxed in carpets, where the attendant shapes, woven rather than drawn, are typically rounded to rosettes with adjacent arabesque "filler" and the corners are typically simplified to "circle in square" rosettes or isosceles triangles (Figs. 9 & 1, respectively). The central medallions, similarly, are not always star medallions, as is the case in illumination, but may be approximate star medallions, roundels or truncated star medallions (Figs. 7, 1 & 14, respectively). In this regard, the approximate star

medallions that appear in Mamluk carpets are often accompanied by overlapping radial lines within the medallion itself (Figs. 9, 7, 8, 13), which would seem to roughly mimic the interlacing and overlapping lines of the illumination star medallion constructions (Figs. 2, 4, 6, for example). A comparison of details between star medallions in each media (Fig. 15) reveals both the essential similarity between the overlapping radial lines (highlighted in the white boxes in the figure) as well as the close correspondence of the central roundel and star compositions found at the heart of the medallions.

In comparing the construction of the overall square medallion region in the two media, many carpets, in sharp contrast to endpages, appear to have designs that were built up, not as a complex set of interlocking forms defined with compass and straightedge, but rather as a series of design layers successively added – like the layers of an onion – to the central medallion. In some later examples (Figs. 13, 14), this appears to have been taken to an extreme, where the attendant rosettes appear to have been largely absorbed as "filler" for a given design layer. Other earlier carpets, in contrast (Figs. 3, 7, 8), appear to be more faithful to a geometric construction. One early carpet, in particular (Fig. 3), includes four cornered wedge shaped design elements between the central octagonal star medallion and the surrounding rosettes which are a quite common outcome of compass and straightedge construction and are quite typically found as elements in illumination. A comparison of the details of this wedge shaped construction as it appears in this early carpet and also in representative illuminations (Fig. 16) reveals these geometric similarities between the two media (highlighted in the white boxes in the figure); additionally, the adjacent elongated wedge hexagons found in illuminations are positioned identically to the adjacent simplified roundels found in carpets. Finally, in addition to

geometric forms, both endpages and carpets make considerable use of arabesque to fill out the overall designs.

In summary, in moving from consideration of the central medallion region in Mamluk endpages to that in carpets, the overall impression is one of relaxation and simplification of design, in the context of a broad stylistic similarly.

## *The Banding Regions*

Having considered the central medallion region, we next turn to the horizontal banded regions that border it above and below. In Mamluk illumination, there is some variation in the precise style of the endpage bands, from calligraphy surrounded by floral arabesque, to calligraphy in a cartouche, to calligraphy in a cartouche with rosette borders, which appears to have emerged as the stable style (Figs. 11, 2, 5, 6). In a few cases, this "cartouche and rosettes" motif was used to border the entire endpage medallion region (Figs. 4, 12). In distinction, the use of calligraphy in Mamluk carpets was avoided, as it is for carpets generally, no doubt for both technical and religious reasons. In the context of the contention that Mamluk carpet design was in part inspired by that of Mamluk Quran endpages, the carpet designers would presumably have needed to alter the endpage band designs in order to remove the calligraphic elements.

The need for such an alteration appears to have led to a bifurcation in terms of two main design solutions. In the first, the emphasis was given to the containing rosette and cartouche shapes found in endpage bands, which were stylistically compressed to a triple rosette pattern (Fig. 3), sometimes with an emphasis given to the central rosette (Fig. 1) which then has something of the character of a vestigial central cartouche. In the second, the emphasis was given to the content of the endpage bands, to the calligraphy and floral arabesque, where the calligraphy, often written in a Kufic style with elongated vertical *alif* strokes, in combination with its accompanying floral

arabesque, was replaced with a vertical “cypress and palm” tree motif, which stylistically captured something of both the rigidly vertical and relaxed floral nature of the endpage bands (Figs. 7, 8).

In endpages, the vertical strokes are always upward toward the top of the page, in keeping with calligraphic demands; in carpets, in contrast, the vertical “cypress and palm” motif is inverted in the top band for the sake of overall symmetry, so that there is typically “mirror symmetry” across the central short (horizontal) axis of the carpet. One important exception, however (Fig. 8), has the “cypress and palm” motif oriented upwards in both bands, thus violating mirror symmetry

A comparison of the details of this banding orientation in reference to both media (Fig. 17) clearly shows the similarity of this carpet exception to illumination (highlighted in the white boxes in the figure): this could be viewed as a simple design accident, or could point to an underlying inspiration in Quran endpage calligraphic bands – a design “slip”, as it were. It is interesting to note that this same carpet is a relatively early carpet (c. ~1500, following the dating of Ernst Kühnel),[47] and shows a high degree of geometric construction in its central medallion region, which, in combination with the band asymmetry, suggests a close design inspiration to Quran endpages. In at least one carpet (Fig. 9), these two design solutions would seem to be combined, with both a triple rosette pattern, with emphasized central rosette, and an interleaved “cypress and palm” motif between each rosette. A chalice motif, sometimes including a cypress (Figs. 13, 14), appears in later carpets, and is perhaps a modification of the “cypress and palm” motif.

In summary, in moving from consideration of banded regions in Mamluk endpages to those in carpets, the overall impression is one of design bifurcation – in order to solve the problem of removing calligraphy – into “triple rosette” and “cypress and palm” design motifs.

## *The Border Design*

The banding region design of a central cartouche with bordering rosettes common in Quran illumination is not found in the banding regions of carpets, but rather is very commonly deployed as a characteristic design in carpet borders, where the pattern is extended as an alternation of rosettes and cartouches around the entirety of the border. It is as if the carpet designers, having arrived at suitable modifications of the illumination banding designs, wished to employ the original design inspiration in a new context by translating it from the banding to the border region. In fact, there are examples of Quran endpages (Figs. 4, 12) where such an extension has also been made, although as applied to an interior border, rather than an exterior border. It is possible that these isolated examples served as the leading inspiration for the application of the rosette and cartouche pattern to carpet borders.

One possible motivation for such an adoption on the part of carpet designers was that it provided a simplified alternative to the detailed floral and interlace arabesque outer borders found on many Quran endpages (Figs. 4, 10, 11, for example), which are conspicuously absent from Mamluk rugs, quite possibly for reasons of difficulty of technical execution. Whatever the ultimate reason, the rosette and cartouche pattern seems to have been remarkably stable and appears in practically all Mamluk carpet examples (Figs. 1, 3, 7, 8, 9, 13, 14), the few exceptions being later carpets. Certain unique Mamluk carpet design elements – the "lancet leaf" and "umbrella leaf"[48] – appear ubiquitously in nearly all Mamluk carpets, most commonly in the borders as filler design within the cartouches and rosettes; these may well represent a geometric regularization of the more complicated arabesque interlace border patterns characteristic of illumination. A comparison of the details of the border regions in both media (Fig. 18) suggests the relation between larger roundels and smaller diamond forms in carpets to ornate floral

buds in illuminations; additionally the regular, intricate and space-filling “lancet leaf” patterns found in the carpet borders are suggestive of the delicate floral arabesque interlace found in illuminations (both highlighted in the white boxes in the figure).

The simplification of design elements in carpet borders would also seem to parallel a simplification of the carpet border layout more generally, where, as remarked previously, the double broad outer borders found in illumination design are abbreviated to a single broad outer border. In illumination, the broad outermost border is three-sided, being truncated at the inner page margin; in carpets, the three-sided border is dropped, yielding a single broad four-sided border symmetrically appropriate to carpets.

In summary, in moving from consideration of border regions in Mamluk endpages to those in carpets, the overall impression is one of design displacement, from the banded region of illuminations to the border region of carpets, in which the cartouche and rosettes pattern is employed, possibly as a simplification of the detailed floral arabesque found in endpage border.

## Interrelation and Development

To summarize, it appears reasonable to assert that Mamluk carpet design, despite its extremely high degree of technical sophistication, is actually a simplification and modification of earlier Mamluk Quran illuminated endpage design. The simplification appears primarily in the area of medallion region construction, where formal geometric construction is relaxed, as well as in the border regions, where a single primary border region is retained and its detailed arabesque design elements are replaced with a simpler rosette and cartouche motif. The modification appears primarily in the banded regions, where the calligraphy has been replaced with either a triple rosette pattern or a “cypress and palm” pattern; the former solution capturing something of the cartouche and rosette containing shapes, and

the latter something of the calligraphy and floral arabesque content. The overall design layout of a central medallion region with banded regions above and below, surrounded by an overall border region, is essentially unaltered between the two artistic forms, and would seem to appear only in these two forms, so far as Mamluk art in general is concerned.

In passing from earlier examples of Mamluk carpets (Figs. 1, 3, 7, 8, 9) to later examples (Figs. 13, 14), there is a discernable move away from simpler geometric medallion designs to more stylized and curvilinear designs.[49,50] Given this, in considering the design origins of Mamluk carpets, it is important to focus upon those earlier carpets which themselves form the immediate design antecedents to later Mamluk carpets. The most sustained treatment of Mamluk carpet design origins, by Charles Grant Ellis,[51] unfortunately focuses largely upon later Mamluk carpets, finding in them similarities to Asiatic mandalas and yurt cloud collars. Earlier carpet designs, however, are typified by octagonal star medallions, evincing a high degree of geometrical construction, and in character utterly unlike any of the Asian artistic forms that Ellis mentions, being rather instead highly similar to the geometric constructions to be found throughout Islamic art. Another scholar, Volkmar Gantzhorn,[52] proposes, as part of a larger thesis on the Armenian Christian origins of oriental carpets generally, that Mamluk carpets are clearly Armenian in origin as well as likely manufacture, given the apparent cruciform design found in certain central medallions. What this conclusion neglects is that the fourfold symmetry imposed on Mamluk carpet geometric design by their warp and weft threaded construction quite naturally favors medallions with four or eightfold symmetry on purely technical motivations, which will in turn appear "cruciform" to those prejudged to see them as such.

## Motivation and Manufacture

Having addressed the probable design origins of Mamluk carpets, several related questions remain, most notably the motivation for and method of their manufacture. The production of Mamluk carpets appears to have been driven by a fortunate confluence of patronage and talent. The revival of artistic and architectural patronage during the reign of Sultan Qa'it Bay, which led to a flowering of Egyptian arts generally, coincided with the immigration of Muslim refugees, among them skilled weavers, from northwestern Iran following the fall of the Karakoyunlu Turkmen state, as well as from the whole of Muslim Central Asia.[53,54] Certain technical and design features of Mamluk carpets support the notion that Turkmen weavers were involved in the production of Mamluk carpets in Cairo.[55]

If the Sultan and his court provided the necessary impetus and patronage, while refugee Turkmen weavers provided the necessary skilled production, there was still the need to select weaving designs suitable for the splendor of the Mamluk court. The Turkmen weaving tradition, while intensely creative, was largely tribal in nature, focusing on the production of small carpets, tent bands and bags on portable looms. Carpet designs were committed to memory, the fundamental design motif being a geometric repeat structure based upon a design unit called a *gul*.[56] Faced with the artistic magnificence of the capital, and enabled in the pursuit of increased technical sophistication and scale through the resources of court ateliers, it would have been natural for designers in the fledgling Mamluk carpet industry to seek inspiration in the artistic and architectural forms surrounding them. If Mamluk stained glass was easily in evidence to provide the inspiration for the color palette of the new carpets, Mamluk Quran illumination would also have been available to view to these designers, as many Qurans, including those produced during the reign of Sultan Sha'bân, were attached to various *madrasahs* in the capital as part of royal *waqf* endowments.[57] These Qurans would have predated the production of Mamluk carpets by more than a century, making it

unlikely that carpet designers could consult directly with illuminators working with star polygon motifs, yet the recognized excellence of the Qurans produced during this period would easily have led designers to consider them as possible sources of inspiration. Their general rectangular layout would have proven readily applicable to carpets, while their design features would likely have appealed to the geometric sensibility of Turkmen weavers. In fact, Mamluk carpets form the only court carpet tradition in which geometric considerations of design so predominate.

## Design Symbolism

As a final question, we may ask what both illuminators and weavers found so compelling in the geometric star medallion motif to lavish such exquisite attention upon it. Scholars have made various proposals in this regard. Thus, Esin Atil suggests that, in the case of Mamluk illumination, "the illuminations symbolize the universe" comparing the star medallions to radiating solar and astral bodies; she remarks that "no other Islamic artistic tradition approaches the refinement of design and depth of spirituality found in these illuminations."[58] With respect to Mamluk carpets, she notes that, "a similar centrifugal force is observed in the illuminations of the Quran and can be interpreted as having cosmic implications and symbolizing celestial light."[59] Another scholar, Robert Irwin, suggests, with respect to Mamluk carpets, that "This medallion might be seen as a stylized representation of a sunburst (and therefore an image of royalty); or a reminiscence of a Central Asian mandala; or the formalized representation of a fountain in a courtyard; or a mirror-like reflection of the coffered ceiling under which it would be placed."[60]

Martin Lings, in a penetrating analysis, relates the motif of the centrifugal geometric expansion of forms from a central medallion – characteristic of both artistic media – to the symbolic representation of metaphysical principles. This motif,

in its evocation of Divine "reverberation" and "radiation", denotes the balance and interpenetration of Majesty and Beauty, of Perfection and Infinitude. Here, Majesty and Perfection are symbolized by the "explosive", "centrifugal" and "central" character of the dominant medallion; Beauty and Infinitude are symbolized by the precipitation of surrounding geometric forms, themselves so many partial refractions of the primal, central form.[61]

This analysis might be extended to a consideration, in the case of Mamluk Qurans, of the entire illuminated page. In such a Quran, the illuminated frontispiece, which would literally "open" the book, would be immediately followed by the *Fatihah* (lit. "opening"), the essential summary of the Quranic message. Analogous to this, the frontispiece itself might be viewed as a symbolic summation of the nature of the Quran. Thus, as we have analyzed previously, there are three main regions comprising the illuminated page: the central geometric medallion region, the banding regions above and below, in which is inscribed Quranic text, and the region of floral arabesque borders bounding the whole. Symbolically, the geometric effulgence of refracted forms from the central medallion might be said to represent the "descent" or "bringing down" of the Quran from the archetypal world to the world of creation; similarly, the hieratic Kufic script in the banding regions might be said to represent the congealment or crystallization of the Divine guidance into the constrained particularization of human speech – the "Word become word"; finally, the floral arabesque of the borders might be said to represent the created world itself – the world of man – to which the Quranic Word mediates.

In this respect, the Quranic Kufic inscription that appears in the banding regions of the Star Polygon Group Qurans[62] is highly significant:

> Truly it is the revelation of the Lord of all Being, brought down by the Faithful Spirit upon thy heart, that thou mayest be one of the warners, in a clear, Arabic tongue. Truly it is in the Scriptures of the ancients. Was it not a sign for them, that it is known to the learned of the Children of Israel? (26:192-7, Arberry tr.)

Here, we have, in the Quranic verses chosen by the illuminators, what might be taken as a verbal description of the symbolic representation of the illuminated page: the "Lord of all Being" – the source of revelation – possibly corresponds to the central medallion; the bringing down "by the Faithful Spirit" upon the heart of the Prophet possibly corresponds to the effulgence of refracted geometric forms – the geometric equivalent of the Self-Disclosure of the One in the many – mediated through the archangelic dominion by the angel of revelation, Gabriel; the revelation "in a clear, Arabic tongue" possibly corresponds to the hieratic Kufic banding script itself; the "ancients" and "them" (the Meccan Arabs), for whom the concordance of prior revelation is a sign, possibly corresponds to the floral arabesque borders signifying the world of man.

In fact, the conclusion of the selected verses makes it clear that what may well be signified by the illumination is the not the Quranic revelation alone, but rather revelation as such: the revelation present in the Quran is also to be found "in the Scriptures of the ancients;" Muhammad is not the sole warner, but "one of the warners." The world that God addresses through the act of revelation is not simply the world comprised of speakers of Arabic, but rather the world of man.

Although not explicit, there may also be seen in the illuminated page a possible symbolic representation of creation, that other decisive act of God, where the revelation is not in words of any human tongue, but rather the Divine Names, the very words of ontological mediation, the sending down of which is by that other "Faithful Spirit", the "Breath of the All-

Merciful," following Ibn 'Arabi. The world so created is comprised of the "traces of the Names," the multiplicity of created forms "spoken" into existence by God: "and when He decrees a thing, He but says to it 'Be,' and it is." (2:117, Arberry tr.)

In the adaptation of the format and design of illumination to carpets, the calligraphic *ayats* would necessarily have been abandoned as inappropriate to the medium. In so doing, much of the symbolism inherent in illumination would have been lost or obscured in the new context. Given the above considerations, it would appear that the illuminators of the Qurans of Sultan Sha'bân quite possibly deliberately set out to embed an appropriate symbolism into their illuminations. Given the gap in time between production of these Qurans and the subsequent production of carpets under Sultan Qa'it Bay, it is quite possible that the carpet designers may well have appreciated the illuminations for their artistic inspiration without necessarily being aware of their associated symbolism. What symbolism may be inherent in carpets would have been carried over with the adopted format and design elements, and would of necessity have been somewhat muted. In keeping with much of Islamic art generally, to the extent that such symbolism may be sensed, whether consciously or intuitively, the appreciation of the artistic form may become an occasion for the remembrance of God.

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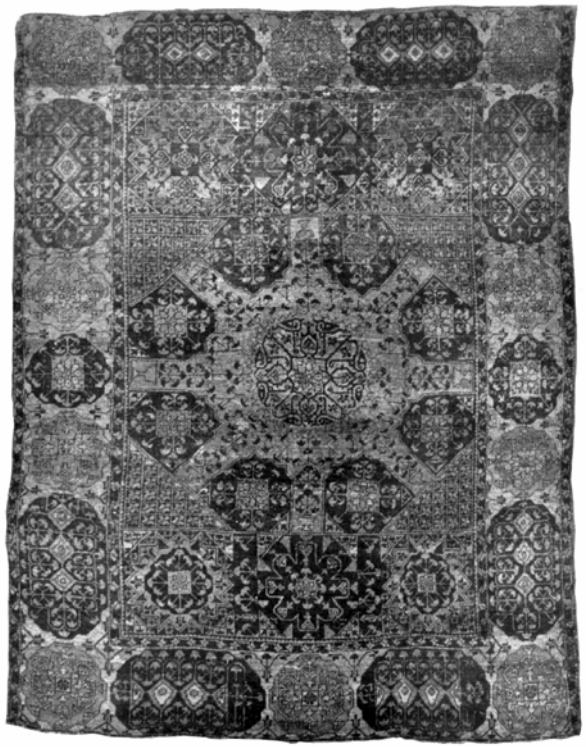

Fig. 1. Rug with Cup Motif

Fig. 2. Page w/ 8-Fold Medallion

Fig. 3. Rug with Central Star

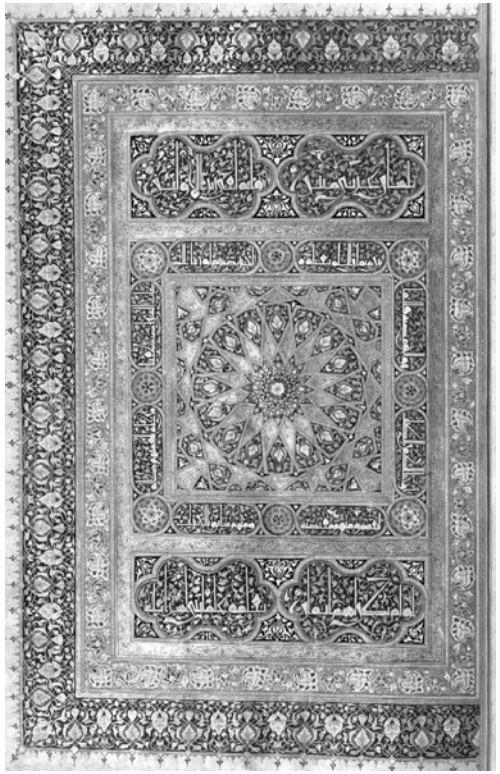

Fig. 4. Page w/ 16-Fold Medallion

Fig. 5. Pgae w/ 12-Fold Medallion

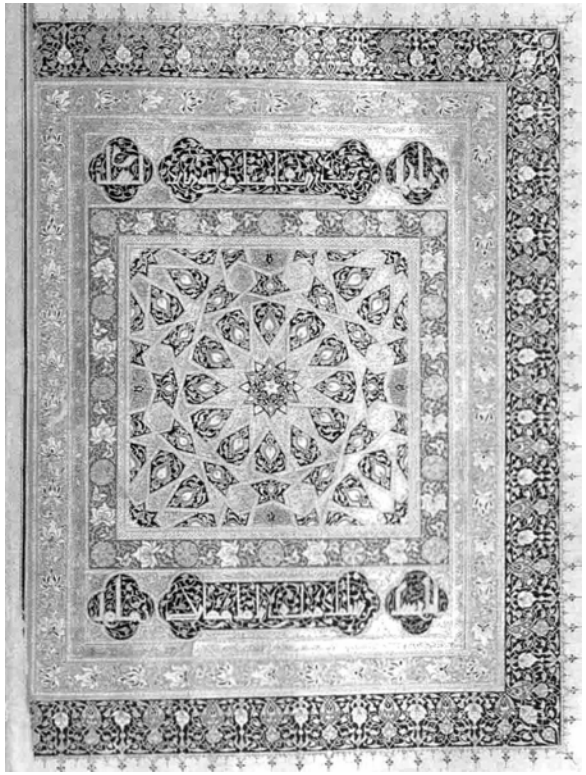

Fig. 6. Pgae w/ 12-Fold Medallion

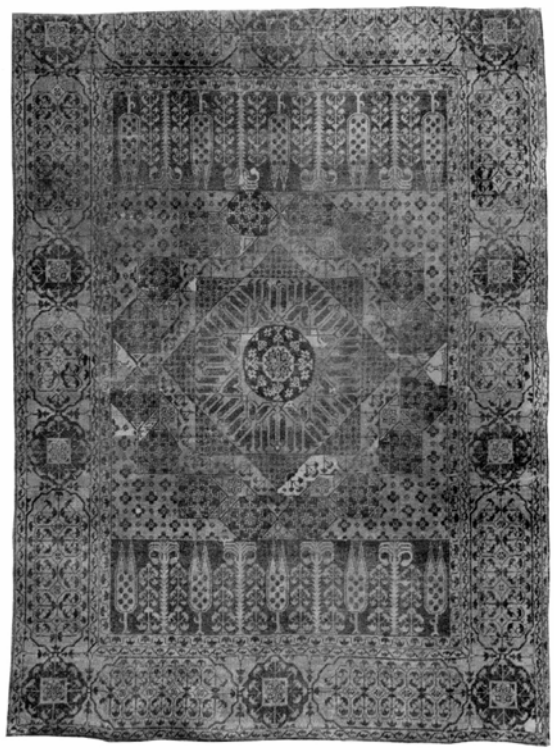

Fig. 7. Rug with Palm/Cypress Bands

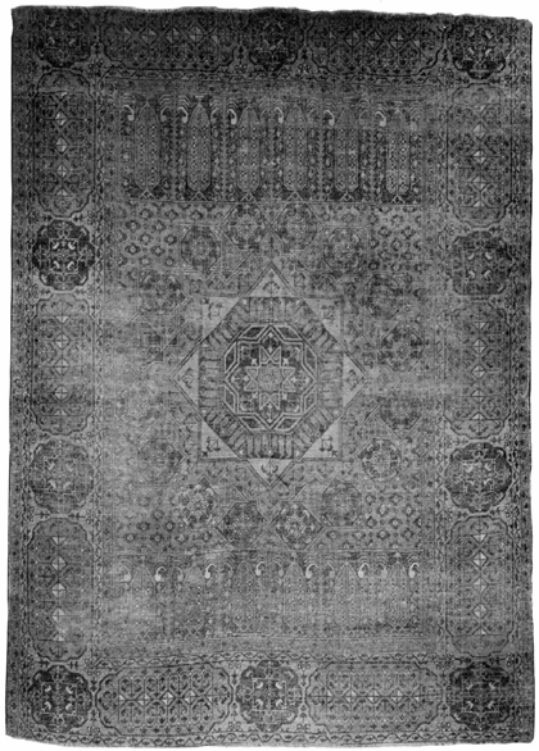

Fig. 8. Rug with Palm/Cypress Bands

Fig. 9. Rug with Palm Tree Motif

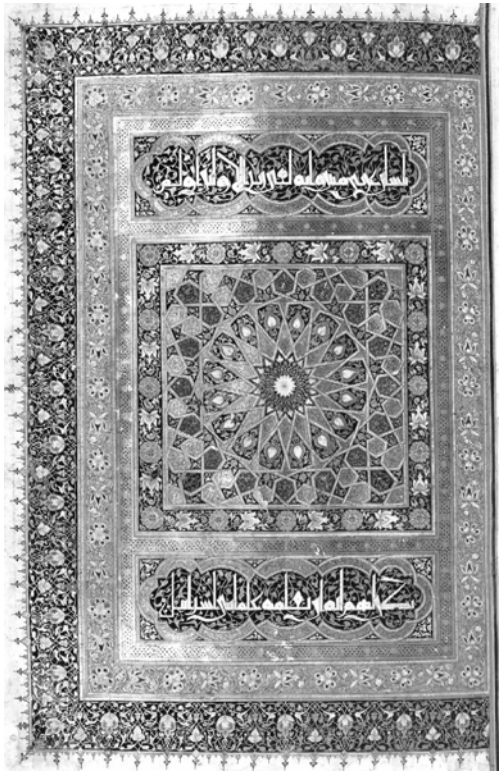

Fig. 10. Page w/ 16-Fold Medallion

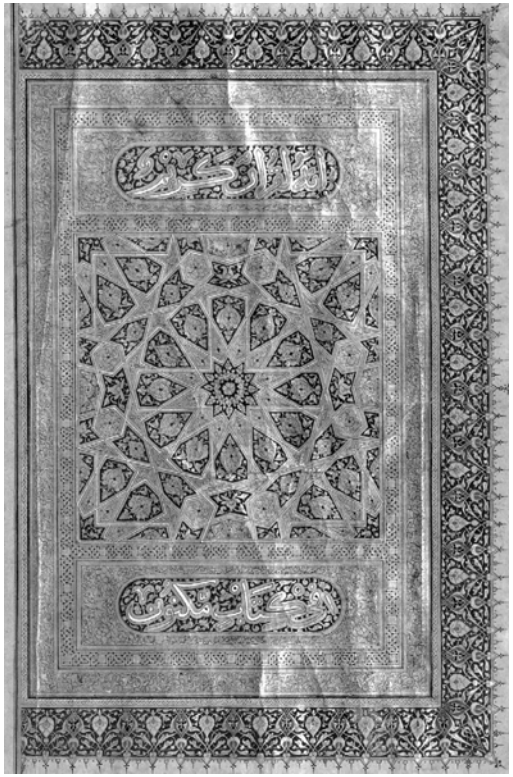

Fig. 11. Pgae w/ 12-Fold Medallion

Fig. 12. Page w/ Repeat Border

Fig. 13. Rug with Central Star

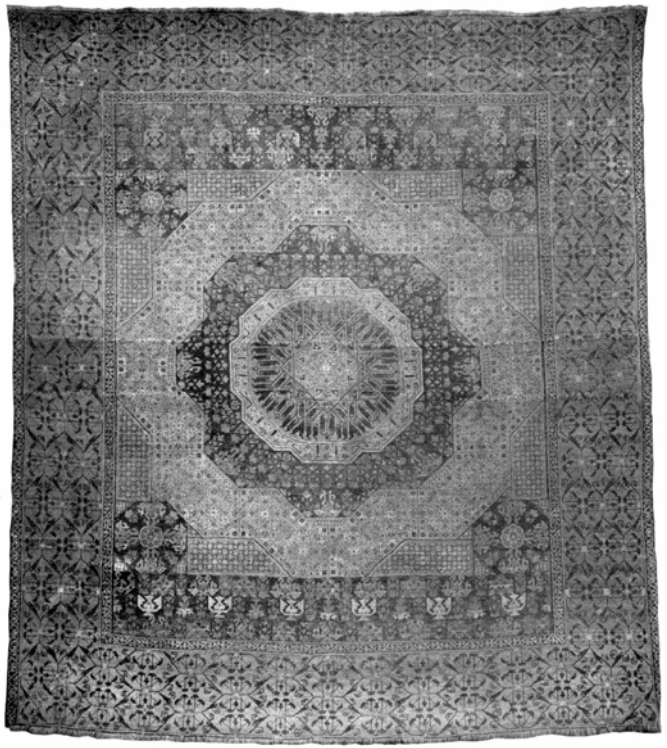

Fig. 14. Rug with Field-Covering Motif

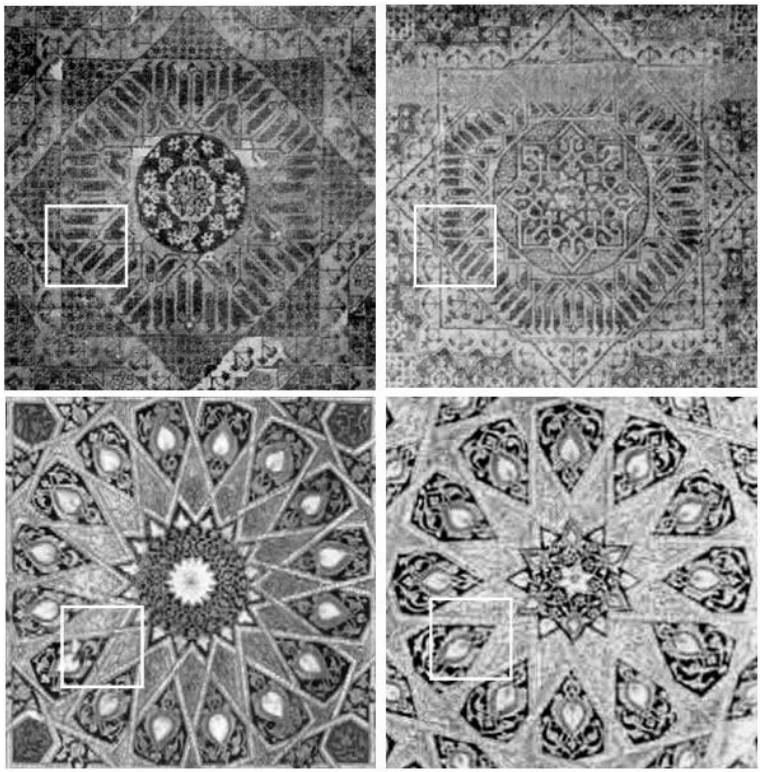

Fig. 15. Central Medallion Detail: Figs. 7, 9, 10, 6

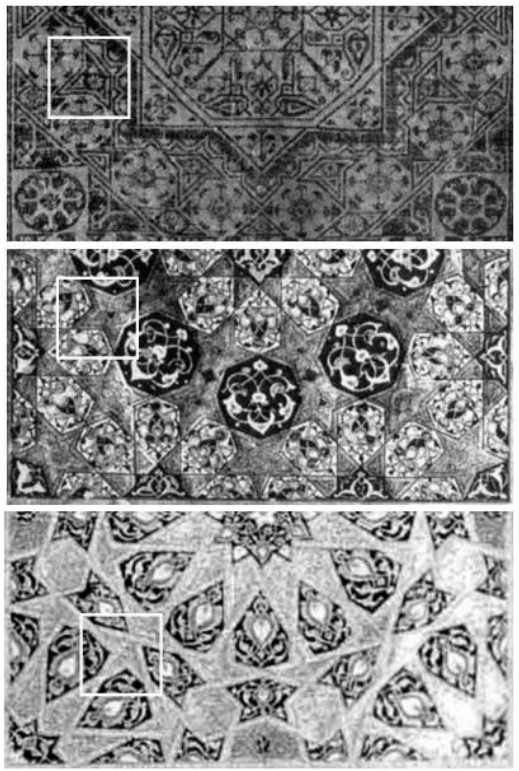

Fig. 16. Geom. Detail: Figs. 3, 2 ,6

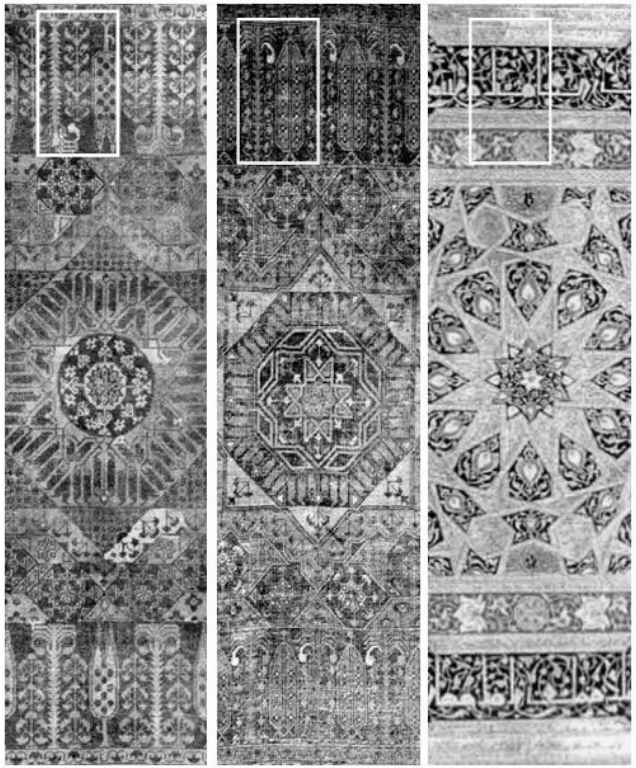

Fig. 17. Banding Detail: Figs. 7, 8, 6

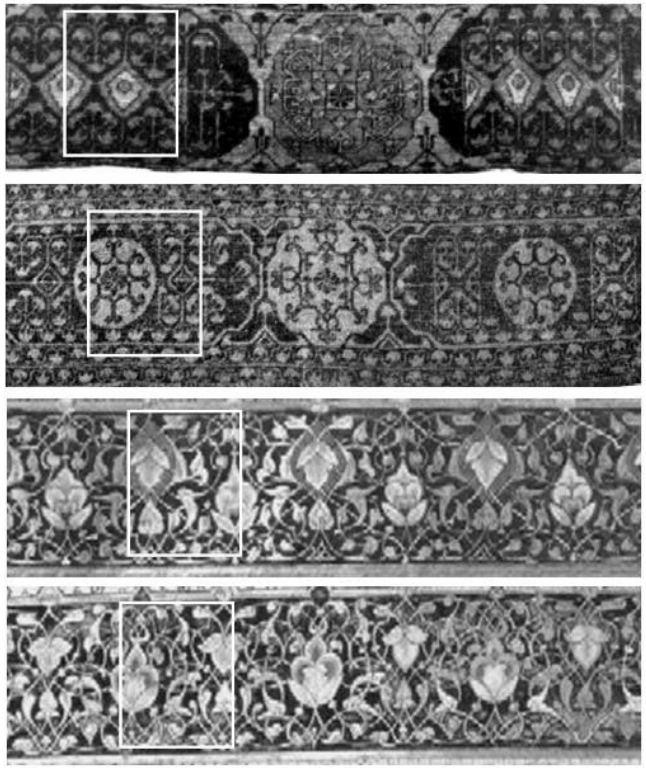

Fig. 18. Border Detail: Figs. 1, 3, 4, 10

## Figures

Figures have been taken from the following sources:

Ernst Kühnel & Louisa Bellinger, *Cairene Rugs and Others Technically Related (15th - 17th Century)* (Washington, D.C.: The Textile Museum, 1957).

David James, *Qur'ans of the Mamluks* (London: Alexandria Press, 1988).

Martin Lings, *The Qur'anic Art of Calligraphy and Illumination* (London: World of Islam Festival Trust, 1976).

Figure 1. Kuhnel, *Cairene Rugs*, pl. III.

Figure 2. James, *Qur'ans of the Mamluks*, p. 133 (right); also, Lings, *Qur'anic Art of Calligraphy*, pl. 78.

Figure 3. Kuhnel, *Cairene Rugs*, pl. V.

Figure 4. James, *Qur'ans of the Mamluks*, p. 190; also, Lings, *Qur'anic Art of Calligraphy*, pl. 67.

Figure 5. James, *Qur'ans of the Mamluks*, p. 133 (left).

Figure 6. James, *Qur'ans of the Mamluks*, p. 191 (lower); also, Lings, *Qur'anic Art of Calligraphy*, pl. 76.

Figure 7. Kuhnel, *Cairene Rugs*, pl. VII.

Figure 8. Kuhnel, *Cairene Rugs*, pl. VIII.

Figure 9. Kuhnel, *Cairene Rugs*, pl. VI.

Figure 10. James, *Qur'ans of the Mamluks*, p. 192; also, Lings, *Qur'anic Art of Calligraphy*, pl. 64.

Figure 11. James, *Qur'ans of the Mamluks*, p. 189.

Figure 12. James, *Qur'ans of the Mamluks*, p. 165.

Figure 13. Kuhnel, *Cairene Rugs*, pl. XVII.

Figure 14. Kuhnel, *Cairene Rugs*, pl. XVIII.

Figure 15. Central medallion detail; Figs. 7, 9, 10, 6.

Figure 16. Medallion region geometric detail; Figs. 3, 2, 6.

Figure 17. Banding region detail; Figs. 7, 8, 6.

Figure 18. Border region detail; Figs. 1, 3, 4, 10.

## Notes

1. Recently, high quality hand woven and naturally dyed reproductions of a small number of historical Mamluk carpets have been produced by the company *Woven Legends*; see their *Sardis* line of carpets at: http://www.wovenlegends.com/sardis.html. For a set of very useful general bibliographies on Mamluk carpets compiled by Carol Bier, see http://www.lib.umich.edu/area/Near.East/Textiles/RC15A.html, http://www.lib.umich.edu/area/Near.East/Textiles/RC15B.html.

2. As the reviewer of a recent Mamluk exhibition by the Textile Museum put the matter, "We are no further forward [in our insight into the origins, manufacture or aesthetic of Mamluk carpets], in either practical or theoretical terms, than in 1957 when Ernst Kühnel & Louisa M. Bellinger published their *catalogue raisonné*." See Daniel Shaffer, "Mr. Myers' Mamluks," *Hali* 129 (2003), p. 65.

3. Carol Bier, *Mamluk Rugs from Egypt: Jewels of the Textile Museum's Collection (Exhibition Brochure)* (Washington, D.C.: The Textile Museum, March 28, 2003 – September 7, 2003), p. 2.

4. Louise W. Mackie, "Woven Status: Mamluk Silks and Carpets," *The Muslim World* 73:3/4 (1983), p. 257.

5. For a general overview of spinning, see Murray L. Eiland Jr. & Murray Eiland III, *Oriental Carpets: A Complete Guide, 4th Ed.* (Boston: Bulfinch Press, 1998), pp. 34-5.

6. Donald King & David Sylvester, *The Eastern Carpet in the Western World from the 15th to the 17th Century* (London: Arts Council of Great Britain, 1983), p. 59.

7. For a general overview of knotting, see Eiland, op. cit., pp. 35-7.

8. We note, however, that Bier remarks that knot identification in textiles with depressed warps, such as Mamluks, is problematic; see Bier, *Mamluk Rugs from Egypt,* p. 1.
9. Ibid., p. 1.
10. King, op. cit., p. 59.
11. Bier, *Mamluk Rugs from Egypt*, p. 2.
12. Mackie, op. cit., p. 259.
13. Ibid., pp. 259-60.
14. Carol Bier, *Beyond the Pyramids: Geometry and Design in the Carpets of Egypt, 1450-1750 (Exhibition Brochure)* (Washington, D.C.: The Textile Museum, June 1, 1991 – February 16, 1992), p. 1.
15. Esin Atil, *Renaissance of Islam: Art of the Mamluks* (Washington, D.C.: Smithsonian Institution Press, 1981), p. 227.
16. King, op. cit., p. 59.
17. Robert Irwin, *Islamic Art in Context: Art, Architecture and the Literary World* (New York: Abrams, 1997), p. 164.
18. Mackie, op. cit., p. 257.
19. Atil, op. cit., p. 226.
20. Ibid.
21. Mackie, op. cit., p. 257.
22. Irwin, op. cit., p. 164.
23. King, op. cit., p. 59.
24. Ibid., p. 61.
25. Bier, *Beyond the Pyramids,* p. 2.
26. Mackie, op. cit., p. 256.
27. Irwin, op. cit., p. 164.
28. Atil, op. cit., p. 226.

29. Bier, *Beyond the Pyramids*, p. 1.
30. Atil, op. cit., p. 226.
31. Mackie, op. cit., p. 258.
32. Metropolitan Museum of Art, *Islamische Kunst: Meisterwerke aus dem Metropolitan Museum of Art* (Berlin: Rembrandt Verlag, 1982), p. 162.
33. Charles Grant Ellis, "Is the Mamluk Carpet a Mandala? A Speculation," *Textile Museum Journal* 4:1 (1974), pp. 30-50.
34. Mackie, op. cit., p. 258.
35. Bier, *Beyond the Pyramids*, p. 2.
36. Atil, op. cit., p. 226.
37. Mackie, op. cit., p. 258.
38. Atil, op. cit., p. 224.
39. Ibid, pp. 242,6,8: "The compositional layout of the rug is reminiscent of the illuminated frontispieces, which reveal similar proportions and internal divisions." "The overall effect of a centrifugal design radiating from the core, its outermost elements cut off by the frame, is strikingly similar to the compositions of manuscript illuminations." "The elements evolve from an almost microscopic core and increase in size as they move outward. A similar centrifugal force is observed in illuminations of the Koran…"
40. Mackie, op. cit., p. 258: "Parallels for the layouts occur in some Mamluk art, such as cartouche borders in architectural decoration and Qur'anic illumination."
41. M.S. Dimand & Jean Mailey, *Oriental Rugs in The Metropolitan Museum of Art* (New York: The Metropolitan Museum of Art, 1973), pp. 29,32.
42. Atil, op. cit., p. 24.
43. David James, *Qur'ans of the Mamluks* (London: Alexandria Press, 1988), pp. 178,185.

44. James, op. cit., pp. 197.
45. See http://www.metmuseum.org/works_of_art/viewone.asp?dep=14&viewmode=0&item=1970.105.
46. See Ernst Kühnel & Louisa Bellinger, *Cairene Rugs and Others Technically Related (15th - 17th Century)* (Washington, D.C.: The Textile Museum, 1957), pl. XIII; similar extant examples are listed on p. 23 of the same work.
47. Ibid., p. 17.
48. Mackie, op. cit., p. 258.
49. King, op. cit., p. 59.
50. Atil, op. cit., p. 227.
51. Ellis, op. cit.
52. Volkmar Gantzhorn, *The Christian Oriental Carpet* (Köln, Germany: Taschen, 1991), pp. 369-75.
53. Atil, op. cit., p. 227.
54. Oleg Grabar, "Reflections on Mamluk Art" in Oleg Grabar, ed., *Muqarnas: An Annual on Islamic Art and Architecture (Vol. 2: The Art of the Mamluks)* (New Haven: Yale University Press, 1984), p. 1.
55. Mackie, op. cit., p. 261.
56. On Turkmen weaving traditions, see Louise W. Mackie & Jon Thomson, *Turkmen: Tribal Carpets and Traditions* (Washington, D.C.: The Textile Museum, 1980)
57. James, op. cit., pp. 178-9.
58. Atil, op. cit., p. 26.
59. Ibid., p. 248.
60. Irwin, op. cit., p. 165.
61. Martin Lings, *The Qur'anic Art of Calligraphy and Illumination* (London: World of Islam Festival Trust, 1976), pp. 115-8.
62. James, op. cit., pp. 187.