

Chapter 28

THE OTTOMAN WINDOWS IN THE DOME OF THE ROCK AND THE AQSA MOSQUE

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1. Introduction

The fragile art of the stucco and glass window (known in Arabic as *qamariyya* or *shamsiyya*) is one which has in general received short shrift from historians of Islamic art and architecture.¹ This is true even of those buildings about whose decoration much ink has been spilled, buildings in which the interior aesthetics, and indeed our ability to view

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¹ The various articles published by H G Franz (1955, 1956, 1958) are an exception. More recently Ömür Bakirer has published a series of articles summarising the available information on the development of Turkish window-grilles (1985, 1990a, 1990b). See also Brosch 1990.

the decoration, is largely determined by the degree and quality of the illumination. The two structures to be considered here—the Qubbat al-Sakhra and the Masjid al-Aqsa—are good examples of the phenomenon. Despite the numerous studies which have dealt with the architecture and decoration of both monuments, their coloured glass windows have received little serious attention. While the reasons for this are probably several, the most obvious are the difficulties involved in dating window-grilles. In addition to their inherent conservatism of style, stucco grilles will be repaired, remade and replaced several times during the lifetime of a building.² Any study of the windows in the Aqsa and Dome of the Rock will invariably find itself hampered by these considerations. Nevertheless, this seems an appropriate place to try to assemble the available evidence in order to contribute not just to a more holistic understanding of the architectural history of these key monuments, but to the study of Ottoman architectural decoration in general.

Although it has occasionally been asserted that some of the window-grilles in the Dome of the Rock date from the Mamluk (Rosen-Ayalon 1975: 94) or even the Ayyubid period (Saladin 1907: 69), it should be stated at the outset that it is extremely unlikely that any of the window-grilles currently visible in the Dome of the Rock

² In the discussion which follows I use the term 'repaired' where part of a grille has been replaced while still *in situ*. The term 'replaced' indicates where a grille has been removed and one of a later date substituted. Where the substituted grille reproduces the form of the grille which it replaces it is referred to as a 'copy'.

pre-date the Ottoman occupation. It seems more probable that most, if not all, of these stucco and glass windows are creations of the present century. The extent to which they replicate the designs of earlier windows will be considered below. The same is true of the window-grilles in the Aqsa mosque. The latter window-grilles will be dealt with only briefly, for less documentation is available regarding them and any earlier grilles were destroyed in the fire of 1386-87/1967.

Before commencing the discussion, it will be useful to summarise the evidence for the fenestration of both the Qubbat al-Sakhra and the Aqsa Mosque in the period immediately preceding the Ottoman conquest of Jerusalem. In the succeeding section an attempt will be made to determine the forms of the window-grilles installed during the restoration of both buildings in the reign of Sultan Sulaiman I (al-Qanuni). The evidence for changes to the window-grilles since the 10th/16th century is more fragmented, but will be presented in the relevant sections.

2. The Fenestration of the Monuments of the Haram in the Pre-Ottoman Period

The earliest indication that the windows of the Dome of the Rock were filled with coloured glass is given by Ibn al-Faqih (291/903), who mentions fifty-six windows 'glazed with glass of various hues' (Ibn al-Faqih 1885: 101; le Strange 1890: 120-21). The figure given corresponds to the sixteen windows in the drum of the dome and the five (including the lunettes above the doorways) pierced in each of the walls of the octagon. It is possible that some of these glass windows were contemporary with the construction of the monument, for almost all the major secular buildings of the Umayyad period have produced the remains of window-grilles composed of stucco and coloured glass.³ Richmond's investigations suggested that the original window-fillings were set back at an appreciable distance from both the internal and external faces of the window-openings (1924: 85-6; 1926: 39). One may assume that the windows were closed on the exterior with grilles of metal or marble, such as those which survive in the Great Mosque of Damascus (Creswell 1969: 202-4, pl. 59).

There is an unfortunate hiatus in the information pertaining to any subsequent changes to the windows of the Dome of the Rock before the Mamluk period. 6th/12th-century writers such as John of Würzburg do no more than mention the windows in passing (Tobler 1974:

125-6; de Sandoli 1980: 241). No information is given regarding the grilles which filled them, but there is no reason to suppose that any stucco and glass windows *in situ* would have proved unpalatable to Crusader tastes: elsewhere in the Levant stucco and glass window-grilles of traditional Islamic type were installed in Crusader castles and palaces.⁴

The information to be gleaned from the sources is more plentiful for the Mamluk period. Al-'Umari, writing before 755/1354, mentions the presence of glass lunette-grilles in the Qubbat al-Mi'raj (al-'Umari 1924: 149; Mayer 1931-2: 74). Of the windows in the Dome of the Rock—some of which may have been replaced during the restorations carried out in the reign of Sultan al-Nasir Muhammad in 718-9/1317-20 (Creswell 1969: 92 n. 4)—he states:

The drum wall is pierced with sixteen gilded glass (*zujaj mudhabar*) windows, covered externally with gratings ... each side of the octagon has seven windows, two blind lateral ones and five of glass, provided on the outer side with iron gratings (*al-shababik al-hadid*) (al-'Umari 1924: 140; Mayer 1932: 44-5).

In the mid-8th/14th century, Nicolo da Poggibonsi mentions that the Dome of the Rock has '*finestre bellissime*' (1945: 54). Subsequently Felix Fabri, observing the building from the adjacent Madrasa al-Ashrafiyya, mentions the presence of glass windows in passing (Clermont-Ganneau 1899: 191 n. 2; Creswell 1969: 79 n. 6). From this one may conclude that in the 8th/14th century the windows of the drum and octagon were filled with coloured glass, protected on the exterior by metal gratings.

One final point to be made in connection with the Dome of the Rock concerns the grilles which fill the lunettes above each of the four entrances to the Dome of the Rock. These consist of pierced marble grilles in the

³ Many of these finds are unpublished, but see Lafond 1966: 13-4; Bisheh 1990: 73, pl. LVI; Brosch 1990; Flood 1993: 17-23.

⁴ For a mention of glass windows in Crusader dwellings see Rey 1883: 6). In the windows of a Crusader castle at Montfort and in a Crusader church at Atlit, pieces of coloured glass cut from circular panes of crown glass were set in lead comes (Lafond 1966: 237; Johns 1935: 133, fig. 8). The manufacture of crown glass was unknown in Europe at this date (Harden 1961: 41), but was common in the Levant from the Justinianic period (Meyer 1989). It has even been suggested that crown glass was introduced to Europe by returning Crusaders (Chambon 1963: 167). It had been common practice in the Levant from the Umayyad period onwards to cut pieces of coloured glass from such panes for use in stucco windows. The use of lead rather than stucco for the tracery of the windows at Atlit and Montfort is therefore anomalous. The windows thus appear to combine the techniques and materials of stained glass and *qamariyyat*.

form of simple geometric patterns' (Creswell 1969: 99). Several scholars have suggested that at least one of these grilles—an imbricated lattice above the western entrance—is Umayyad (Creswell 1969: 99 and pl. 4b; Sourdell-Thomine 1973: 143 and pl. 18). In view of the similarities between this grille and those surviving in the western *riwaq* of the Great Mosque of Damascus (Creswell 1969: 202-4 pl. 59 a-b), this would seem a reasonable assumption. There is however a problem, for Ibn al-Faqih mentions fifty-six windows filled with glass (Ibn al-Faqih 1885: 101). This figure would appear to include the sixteen windows of the drum, the five windows pierced in four walls of the building and the four windows and a lunette pierced in each of the walls in which entrances occur. Clermont-Ganneau (1899: 196) suggested that when Ibn al-Faqih visited the Sakhra the lunettes may have contained glass, although that is not the case with those presently in place. One must also consider the possibility that either Ibn al-Faqih was mistaken, or that none of the lunette grilles is original. If the latter is the case then one must at least consider the possibility that the lunette-grilles may have been replaced during one of the Ottoman restorations.

Perhaps the most remarkable testimony for the pre-Ottoman period is one which concerns the decoration not of the Dome of the Rock, but of the Aqsa Mosque. The description is given in the writings of Antonio da Crema who, along with two companions, was briefly permitted to see the interior of the mosque during a visit to Jerusalem in 891/1486. Amidst a long description, which is rich in detail but which has largely been ignored by architectural historians, da Crema notes two facts about the windows of the mosque. The first is that the lateral walls of the building were provided in their lower parts with large windows which were closed by means of bronze grilles in which the intersections of the vertical and horizontal bars were secured by metal ligatures (Nori 1981: 69). A second type of window, perhaps those along the *qibla* wall, were filled with coloured glass:

And at the end of this entrance one enters into a hall which is as long and as wide as the White Hall of your Lordship. The other side of it has windows which are much larger than the aforementioned, which come down almost as low as the floor of the room and which are furnished with shining glass (*lucido vetro*). Then above these is another order of small ones of which the window-glass is of various colours arranged individually (*singolarmente composite*) ... (after Nori 1981: 69).

No other descriptions of the Aqsa windows are known to me, but it is clear that at least some of the

windows in both the Dome of the Rock and the Aqsa mosque were filled with tracery containing polychrome glass in the period preceding the Ottoman conquest. Another building in the Haram, the Ashrafiyya Madrasa (847/1482) was also provided with windows of coloured glass, for they are mentioned in its *waqfiyya* and in several contemporary descriptions (van Berchem 1923: 369; Ibrahim 1961: 437).

3. The 10th/16th-century windows

(i) Introduction

In the renovations to the Dome of the Rock and al-Aqsa ordered by Sultan Sulaiman Qanuni (926-74/1520-66) following the Ottoman conquest of Jerusalem in 923-4/1517, the windows were among the first elements of the decoration to be replaced, presumably in order to protect the interior of the monument (van Berchem 1927: 329-32, no. 238; Meinecke 1988: 259). The continuous inscription which once ran from window to window gave a date of 935/1528-9 (van Berchem 1927: 331, n. 2). Since this date there have been numerous large- and small-scale restorations of both monuments which have entailed changes to their windows. The available information regarding such alterations will be summarised in sections 4 and 7. The frequency and scale of the recorded instances in which the window-grilles in both monuments have been replaced suggests that few, if any, of the windows now *in situ* date from the 10th/16th century. In addition to this, none of the windows which have been removed from the Qubbat al-Sakhra and the Masjid al-Aqsa and which are today preserved in the Haram Museum seem to pre-date the restorations of 'Abd al-'Aziz in 1291/1874 (Walls and Abu'l-Hajj 1980: no. 238).⁵ One is therefore left with the task of attempting to glean what information one can regarding the earlier windows from various sources.

Fortunately there are two excellent, if only partial, records of the windows installed by Sulaiman I in the octagon of the Dome of the Rock. The first—the *Temple de Jérusalem* of Count Melchior de Vogüé, published in 1281/1864—includes colour drawings of three windows and a partial record of the inscriptions which they bore. De

⁵ Of three grilles presently housed in the Haram Museum and examined in the course of this study, one (pl. 28.6), which follows the form of what appears to be a 13th/19th-century type, dates from 1342-6/1923-7 (see Appendix II, comments for window 19). Another bears the name of 'Abd al-'Aziz and the date 1291/1874 (pls. 28.9-11), while a third (pl. 28.7), which does appear to copy a 10th/16th-century form, seems likely to date from restorations of the 1340s/1920s, and to have been replaced subsequently.

Vogüé's account may be supplemented by that of Henri Sauvaire, whose more complete record of the inscriptions in the windows was compiled in 1311/1893 and checked again by Max van Berchem in 1333/1914 (van Berchem 1927: 329-30). Using the information contained in both these sources it is possible to suggest how the window-grilles installed by order of Sultan Sulaiman compared to both the types of contemporary grilles being produced in Istanbul and to those which fill the windows of the Dome of the Rock and the Aqsa Mosque today.

It should be stated at the outset that the window-grilles in the drum of the dome of the Qubbat al-Sakhra are of a different form from those of the octagon, both in their dimensions and in the lack of the epigraphic band which is included in all the stucco and glass window-grilles of the octagon. There is a noticeable dearth of evidence regarding the windows of the drum in the 10th/16th century and I will return to this issue in section 6.

(ii) *The outer grilles*

The system of fenestration employed in the windows of both the octagon and the dome was somewhat idiosyncratic. The original windows had been set in the centre of the embrasures (Richmond 1924: 86). In Mamluk buildings grilles of stucco and glass were usually set in the interior of window-openings, protected on the exterior by nets of brass or copper or by open grilles of wood or metal (Amin and Ibrahim 1990: 90-1). As we have just seen, during the Mamluk period the stucco and glass windows which filled the interior of the window-openings in the Dome of the Rock were protected on the exterior by metal grilles.

It was common practice in Ottoman buildings to protect fragile grilles of coloured glass with more robust exterior grilles of stucco or lead in which were set circular discs of clear, usually crown, glass (Arseven n.d.: 183 fig. 453; Goodwin 1971: 237). According to Richmond, in the Ottoman windows of the Dome of the Rock an unusual combination of these methods was used. The inner window-grilles were of stucco and coloured glass. In the centre of each window-opening was a closed grille consisting of plain glass roundels of about 20cm in diameter set in stucco. There are indications that in some cases the middle grilles containing large panes of clear glass were of wood rather than stucco (Shafi'i 1970: 65). The date of any such wooden intermediary grilles is not clear, and they may have been introduced at some point after the 10th/16th century. Finally, the exterior of each window was filled with a grille consisting of pierced glazed tiles backed with wire netting (Richmond 1924: 78; Wilson 1881: 60). At certain times in the past the inner grilles of glass roundels set in stucco have been visible externally in

windows where the outer tile grilles were damaged (Schoberl 1835: 102).

Despite the introduction of the new system of fenestration, there is evidence that in some of the windows of both the octagon and the drum of the dome the metal gratings seen in the Mamluk period were not replaced, but continued to survive between the outer grilles of pierced tiles and the inner windows of coloured glass, possibly as late as the present century.⁶ This fact may explain a somewhat puzzling description of the external appearance of the windows by Elzear Horn, writing in the second quarter of the 12th/18th century:

In the four sides, where there are no doors, there are seven windows, and in the remaining four there are six windows, made of copper divided crosswise like a cage, and of encrusted glass, of which, however, some seem to be closed (Horn 1962: 202-3).

The error in the number of open windows in the sides of the octagon leaves open the possibility that this account is mistaken. It may be however that when Horn saw the monument the outer panels were missing, revealing the metal grilles and the glass windows beneath.

The major disadvantages of this unusually elaborate system are that it both hastened the demise of the coloured glass windows—permitting the build-up of rain-water, dampness and dirt between the two layers of stucco grilles—and severely curtailed the amount of light entering the building (Richmond 1924: 80). The latter disadvantage may have been mitigated to some extent by the amount of light entering through the doors,⁷ but at least by the time Evliya Çelebi visited Jerusalem, the entrances to the Dome of the Rock were covered with thick embroidered curtains, even when the doors were open (St Stephan 1942: 88). In terms of its effect on the light penetrating the interior, the triple-grille system acted to filter and subdue the light passing through windows, producing superimposed layers of pattern dimly visible behind the coloured glass of the interior grilles. The contrast between the subdued tones of the coloured light passing through the windows of the Dome of the Rock and the harsher hues of the coloured

⁶ The continued existence of such metal gratings is mentioned in the reports of Megaw 1952: 88 and Shafi'i 1970: 65. An unpublished photograph in the photographic archive of the Palestine Exploration Fund (P.1529-31), taken in 1291/1874, shows a metal grille appearing in a window in which parts of the outer tile panel are missing.

⁷ Nasir-i Khusrau informs us that, in the 5th/11th century, the main light entering the Aqsa came not from its windows, but from its doors (le Strange 1890: 107). It is reported that in the 10th/16th century the doors of the Sakhra were kept open day and night (Suriano 1949: 109).

glass windows in the Aqsa—which were not provided with exterior tile grilles—is noted by later observers (de Vogüé 1864: 103).

(iii) *The inner grilles of stucco and coloured glass*

The three drawings published by de Vogüé (pls. 1-3) show windows which are similar in their internal divisions. The windows measure about 3.25m by 1.09m (3.45m by 1.28m set in their wooden frames) and are divided into three distinct zones, each delineated by a thick border of stucco tracery about 2.5cm wide.⁸ The lower zone consists of a rectangular field measuring 30cm by 27cm. This is separated from the lunette of the grille by an epigraphic panel which measures 70cm by 37cm. An outer border 20cm wide, consisting of ovoid cartouches separated by medallions or rhomboids, surrounds the central fields. The central field is composed of a large rectangular panel separated from a round-headed lunette by a band of epigraphy. Details to be discussed shortly—such as border motifs and inscriptions—suggest that the grilles recorded by de Vogüé were indeed those set in place during the restorations of Sulaiman I. While the drawings are masterpieces of detailed architectural drawing, two points must be borne in mind in using them. Firstly—with the exception of thick outer borders—no attempt is made to distinguish the fine white lines of the inner stucco tracery from the glass which fills it. Secondly, the absence of a section through any of the windows means that, from the drawings alone, one cannot determine that the stucco tracery was executed to different depths, producing two different planes of tracery across the surface of the windows (Richmond 1924: 40).

The borders all consist of elongated cartouches separated by smaller geometric units. In the case of two of the published windows the cartouches are filled with a dense grid of floral elements similar to those which can be found in some of the window-grilles in place today. In the third window the cartouches are filled with a more complex arrangement of floral motifs. While the alternation of cartouches with medallions or rhomboids is undiagnostic, the border motif of the third window on the east side (pl. 28.2) is characteristically Ottoman. Here the cartouches are separated by a series of quadrilobed medallions which also appear in some of the modern windows (pl. 28.4). The same border motif appears in the tile ornament surrounding the exterior of the window-

openings (pl. 28.5). This suggests both that the design of the *qamariyya* is contemporary with the 10th/16th-century tile ornament, and that the fine stucco and glass grilles which filled the interior of the windows made reference to the more robust pierced tile grilles on the exterior.⁹ Further evidence to support a 10th/16th-century date for this design may be found in Istanbul and elsewhere, for similar quadrilobed medallions appear between larger cartouches as a border motif in stucco and glass windows in a series of buildings constructed by order of Sulaiman I or by members of his court.¹⁰

A 10th/16th-century date for the windows published by de Vogüé is confirmed by the inscriptions which they bear. In the original scheme, for which a reconstruction is proposed in Appendix 28.1, the epigraphic bands in the windows of the octagon formed a continuous inscription which started with the first window on the eastern side (window 1). The inscriptions in two of the windows published by de Vogüé are ahistorical. The first window on the eastern side (pl. 28.1) bore the *bismillah*, the third (pl. 28.2) an excerpt from Sura II:163. This is not the case with window 26, the last window on the south-western side (pl. 28.3), which, according to both de Vogüé and van Berchem, bore the inscription *Sulaiman ibn al-sultan Salim Khan ibn Bayazid*. If this window-grille was not an original work of the 10th/16th century it seems unlikely that it would bear the name and titles of Sulaiman; when many of the windows were removed during the restorations carried out in 1291/1874, the replacement windows bore the name of 'Abd al-'Aziz.

Quotations from three Qur'anic *suras* appeared in the windows. Sura II: 163-64 ran from window 2 to 3, while Aya 255 of the same *sura* was continued from window 4 to window 9. An extract from Sura IX: 18, rather than the complete *aya*, ran from window 15 to 18. The

⁹ Similar borders occur on the Ottoman tiled panels in the *qibla* wall of the Qubbat al-Silsila (Aslanapa 1989: fig. 2). Related polylobed medallions separating elongated cartouches may be found in the borders of some of the windows which appear in contemporary Ottoman miniatures (Bakirer 1990: fig. 91).

¹⁰ For example in the mosque of Shazadeh in Istanbul (950/1543), visible in an unpublished photograph in the Creswell Archive, no. 7124. A similar border motif is used in the stucco and glass windows flanking the *mihrab* in the Mosque of Sokollu Mehmet Pasha (979/1571). These windows are not original, but date from 1299/1881. According to contemporary sources, however, the 13th/19th-century windows 'are in keeping with the original design' and incorporate some fragments of the 10th/16th-century glass (see Kuban 1968: 36; Goodwin 1992: 272). The same border motif appears in the stucco and glass windows in the Tekkiye in Damascus (968-74/1560-6) (Creswell Archive no. 5602). These may be later copies, but they bear a sufficiently striking resemblance to some of the window-grilles in the Süleymaniye Mosque in Istanbul (discussed in section 4 below) to suggest that even if this is so, they preserve the form of the 10th/16th-century windows.

⁸ The measurements which follow are based on an examination of a window now in the Haram Museum (pl. 28.7). The style of this window suggests that it reproduces one of the 10th/16th-century windows, but it may be a copy produced during one of the restoration campaigns of the present century.

longest extracts are from Sura XLVIII (*al-Fath* or 'Victory')—verses 1 to 5 appeared in continuous sections in windows 28 to 36. Van Berchem drew attention to the probability that the historical inscription in windows 10 to 13, with its mention of the victories of the Muslim armies, was intended as a reference to the campaign which Sulaiman began in 935/1529 (the date given in the windows) and ended at the walls of Vienna (1927: 332):

O God, aid and sustain the armies of the Muslims. Prolong the days of our Lord, the Sultan, Lord of the necks of nations, the Sultan Sulaiman, son of the Sultan Selim Khan, son of Bayazid.

One might add that the use of extensive quotations from the Sura of Victory should probably be interpreted in a similar vein. Similarly the presence of the Throne Verse—a verse which appeared frequently in funerary monuments—and of descriptions of Paradise (XLVIII: 5) may relate to the destiny of those who fell in the military campaigns by which such victories were won. They are also appropriate to the decoration of a monument which, whatever its original meaning, has often been interpreted as a depiction of the Garden of Delight (Rosen-Ayalon 1989: 46-73). There are however reasons for thinking that the epigraphic programme of the windows—including the choice and placing of the Qur'anic quotations—was influenced by the specific context in which it appears, revealing something of how the Dome of the Rock was perceived in the 10th/16th century.¹¹

Evliya Çelebi, visiting the Dome of the Rock in 1082/1672, gives the following description of the windows in the octagon and their inscriptions:

Windows in the first concentric wall overlook the Sanctuary. On their wonderful iridescent stained glass one reads either the words *la ilaha illallah* (There is no God but Allah) or the verse, 'God is the light of heavens (*sic*) and earth' (Sura XXIV: 35), or the names of the first four caliphs. It is a bewilderingly beautiful stained glass (St Stephan 1942: 89).

As may be seen from Appendix I, while the first part of the *shahada* did indeed appear in several windows, there is no evidence for the presence of either caliphal names or excerpts from the Light Verse. One must assume therefore that Evliya Çelebi's account is inaccurate on this

point. His perception may have been influenced by his familiarity with the coloured glass windows in the mosques of Istanbul, which did on occasion bear excerpts from the Light Verse (Necipoglu 1985: 100; see section 4 below).

The letters of the inscriptions themselves were executed in colourless glass against a dark blue ground, which had the effect of rendering the inscriptions more legible than other aspects of the window tracery. Vegetal tracery filled with red glass appeared in the interstices between the letters of the inscription.

In two of the three window-types which are documented, the design of the tracery filling the large central field below the epigraphic band is continued in the lunette above (pls. 28.2-3, figs. 28.2-3). The two are linked conceptually, since the design is regular and repetitious, covering the whole internal field apart from where it is interrupted by the inscribed band. In the third case the pattern does not appear to be continuous, although a similar arabesque motif occurs in both the lower field and the lunette of the window. The tracery designs are all based on symmetrical arrangements of floral or vegetal ornaments, sometimes in combination with geometrical grids.

That the three windows for which published drawings exist are all of different form is indicative of a variety which would originally have almost certainly included several other window types. At least one of the 10th/16th-century windows recorded by de Vogüé (pl. 28.1) is no longer represented among the types now *in situ*. That the type of border motif associated with this form of grille—a series of cartouches with intermediate rhomboids—no longer appears among the windows of the Qubbat al-Sakhra suggests that the border motifs may have been specific to particular types of windows. The vanished type has been replaced by a type of grille (type 1, pl. 28.6) which may have been introduced in the 13th/19th century and which appears today in windows 1, 4, 10, 13, 19, 22, 28 and 31.¹²

Some clue as to how *qamariyyat* of different forms were arranged in the windows of the octagon is provided by the fact that windows 1 and 3, the first and third window-grilles in the eastern side, are of different types. This was also the case when de Vogüé recorded the grilles in these windows (Appendix II, windows 1 and 3). The reasons for believing the latter grilles to be 10th/16th-century creations, or accurate copies, are cited in Appendix II. One must either assume that all four window-grilles on this side were of differing types, or that the grilles were arranged symmetrically, with grilles of one type filling the two windows furthest from the entrance and two of another type in the windows nearest it. Since coloured glass

¹¹ This aspect of the inscriptions will be discussed in a forthcoming study of the meaning of the monument by Julian Raby.

¹² See note 42; Appendix II, comments on windows 19 and 28.

windows were usually arranged symmetrically in both Mamluk and Ottoman buildings, this seems the most likely possibility.¹³ Thus one may conclude that on the eastern and western sides of the octagon a pair of grilles of one of the types published by de Vogüé (pl. 28.2) was flanked in the outer windows on these sides by windows of the second type which he recorded (pl. 28.1). It may be that on the northern and southern sides the same arrangement was followed, but using two different types of windows.¹⁴

In those sides in which no entrance exists one can assume that, for reasons of symmetry, the grille filling the central window was of the same type as that which appeared in the two windows at either end of the side. With the exception of the south-western side of the octagon (windows 23-7), where the arrangement is disturbed, the arrangement of the 10th/16th-century windows thus appears to have been similar to that used for the coloured glass windows in place today, with the window-grilles in opposite sides identical apart from their inscriptions.¹⁵

Despite the similar arrangement, it is clear that the modern stucco and glass windows in the outer windows on the sides of the octagon aligned to the cardinal points (windows 1, 4, 10, 13, 19, 22, 28 and 31), and of which an example is on display in the Haram Museum (pl. 28.6), bear little relation to those of the 10th/16th century. These grilles, in which the interior space is subdivided into a series of panels, seem to have replaced the arabesque type of grille recorded by de Vogüé in window 1 (pl. 28.1).¹⁶ The inscriptions of the windows on the eastern side (windows 1 and 3) are, however, similar to those recorded by de Vogüé and Sauvaire. It thus appears that elements of the 10th/16th-century design survive in the modern window-grilles, but incorporated into grilles of quite different type.

Of the remaining four types in place today, the

type of grille in windows 2, 3, 20, 21, 23, 25 and 27 (type 2, pl. 28.2 and fig. 28.4) is recorded by de Vogüé and, as has been demonstrated, seems to follow the form of a 10th/16th-century type. A further type (type 5, fig. 28.5), based on a hexagonal grid and now to be seen in windows 11-12, 24, 26, and 29-30, is similar, but not identical, to another 10th/16th-century type recorded by de Vogüé (pl. 28.3).¹⁷ A third type (type 3, fig. 28.4), now in windows 5, 7, 9, 14, 16, 18, 32, 34 and 36, may also reproduce another form of this date, for in more than three windows there is no evidence for the form of the grille having been altered substantially (Appendix 28.2, comments for windows 5, 7, 9, 32 and 34). The lack of small interstitial medallions between the larger cartouches of the border may indicate that the grilles now in place are modern copies of the 10th/16th-century windows in which the form of the original border has not been preserved. The final type of window-grille (type 4), now in windows 6, 8, 15, 17, 33 and 35, may also preserve the form of one of the grilles installed by Sultan Sulaiman, for its central motif—a medallion with terminal trefoils—appears in one of the windows of the dome (pl. 28.18, fig. 28.7) which, there are reasons for thinking, dates from this period (Appendix 28.3, comments for window 6). Similar windows appear in Persian miniatures from the late 9th/15th century onwards (fig. 28.6), and in Ottoman miniatures of the 10th/16th and 11th/17th centuries.¹⁸

From this survey, and from the evidence assembled in Appendix 28.2, one must conclude that, apart from one intrusive later type, the stucco and glass windows in the octagon today preserve the general forms of the 10th/16th-century windows. In many cases however the borders and inscriptions which appeared on the earlier windows have been altered. The modern arrangement conforms to the spirit, if not the letter, of the arrangement introduced at the time of Sultan Sulaiman.

If the forms and arrangement of the grilles indicate a certain fidelity to 10th/16th-century prototypes, this is not so with the glass used in the windows. Just as some of the earlier inscriptions have been copied but without reference to the grille type in which they appeared in the 10th/16th-century arrangement, so too the treatment of

¹³ Numerous examples may be found in the Burji Mamluk buildings of Cairo, for example, in the *madrasas* of Sultan Barquq (786-8/1384-6) and Inal al-Yusufi (795/1392). In Istanbul, symmetrical arrangements of coloured glass windows are found in the Süleymaniyye (965-6/1557-8) and in the Mosque of Sokollu Mehmet Pasha (979/1571).

¹⁴ The outer grilles on both these sides today copy late forms (see Appendix 28.2, comments for window 19). Before the major restorations of this century a window-grille of the type now in windows 6, 8, 15, 17, 33 and 35—a type likely to reproduce the form of a 10th/16th-century grille, but for which there is no evidence of use in the windows of the eastern or western sides—appeared on the north side of the octagon, in window 30 (see Appendix 28.2, comments for window 30).

¹⁵ This is confirmed by the fact that there is no evidence for the grille now in window 20 ever having been substantially altered (Appendix 28.2). Apart from its inscription, the form of the grille is identical to that recorded by de Vogüé 1864: 96, pl. XXV in the window opposite (window 3). The same type appears in window 3 today.

¹⁶ For a discussion of this type see note 42 and Appendix 28.2, comments on windows 19 and 28.

¹⁷ Similar hexagonal grids appear in the windows depicted in 10th/16th-century Ottoman paintings (Bakirer 1990a: fig. 95).

¹⁸ The window in the accompanying drawing (fig. 28.6) appears in an illustrated version of the *Khamseh* of Nizami produced in Herat in 900/1494 (Stchoukine 1954: pl. LXXI). For similar window grilles in Ottoman paintings see Anon (n.d.: pls. XLII, XLIV, LII, LXXXI). Although the precise nature of the relationships between the windows depicted in Ottoman miniatures and their Persian counterparts, and the relation of both to window grilles in actual buildings, remains to be determined, it seems clear that a relationship exists (Rogers 1983: 230 n. 38; Bakirer 1985: 151). See also the discussion in Section 6.

the inscriptions in the earlier windows has not been preserved with strict accuracy. The use of colourless glass for the letters of the inscriptions is respected, but these are set against a blue ground in place of the original red. Indeed one suspects that little of the 10th/16th-century colour scheme is preserved in the coloured glass windows now in place. The predominant tones of the glass in the modern windows of the Dome of the Rock are blue and yellow. The painting executed by Harvey in 1327/1909 shows a wide range of colours—including colourless, red, yellow, green, turquoise, royal blue and purple—among the glass filling the windows (Creswell 1969 frontispiece). To judge from the painting, however, the predominant tone of the glass in the 10th/16th-century windows of the Dome of the Rock was not blue and yellow, but red, with blue and purple being the main subsidiary colours. This hypothesis finds some support in the reports of 10th/19th-century visitors to Jerusalem, who mention the purple hue of the windows in the Dome of the Rock (Conder 1879: 317). If the colours of the glass in the windows of the Süleymaniye in Istanbul can be trusted,¹⁹ then red and blue were also the predominant colours of the glass used at this period in the windows of religious buildings in Istanbul.²⁰ If this is accepted, then it follows that the colours of the light which penetrates the interior of the Dome of the Rock today bear little resemblance to the colours which filled the interior after the restorations of Sultan Sulaiman.

In addition to information regarding the form of the coloured glass window-grilles installed by Sulaiman the Magnificent, some details of the techniques used in their manufacture are available. Clermont-Ganneau, in an account dating from 1291/1874, mentions handling a fragment of one of the windows. It seems likely that this was from one of the windows installed by Sultan Sulaiman, some of which were replaced at this time. He describes the method of manufacture as follows:

Every one knows that these windows consist of a simple slab of plaster, rather thick, cut

into holes in various pretty patterns; at the end of these holes are fixed little pieces of transparent coloured glass, combined with exquisite taste (Clermont-Ganneau 1899: 218-9; Richmond 1924: 40).

This is clearly visible from the reverse of one of the windows removed from the Dome of the Rock and now in the Haram Museum (pl. 28.7). The stucco windows were strengthened by the use of rods of cane or iron and were mounted in thick wooden frames set into the window-openings (Richmond 1924: 79; 1926: 40).²¹

Most of the windows in the Haram Museum seem to date from the 1340s/1920s and were probably removed during the restorations of 1378-84/1958-64. It is probable however that some of the 10th/16th-century glass was reused in the later windows.²² The modern copies of window-types of the latter date preserved in the Haram Museum contain glass which does not appear to be modern.²³ This glass is cut from circular panes of window-glass of the type known as crown glass. The practice of cutting small pieces of coloured glass for use in *qamariyyat* from such circular plates was pioneered in Umayyad Syria and had continued subsequently in various parts of the Muslim world.²⁴ Despite the tendency for later visitors to describe the glass used in the windows of both the Dome of the Rock and the Aqsa as 'painted', de Vogüé rightly emphasises the point that the effect of the windows is not achieved by the use of painted glass—as in medieval European cathedrals for example—but by the juxtaposition within the lines of a pattern formed by stucco tracery of pieces of coloured glass, '*de la vitrerie pure et simple*' (1864: 96).

Replacing the windows in both the Dome of the Rock and the Aqsa must have required vast quantities of good quality glass. A single window-grille of the simple type pierced with large circular apertures which were used between the outer tiles and the inner *qamariyyat* could have used as many as fifty-five circular panes of clear glass, the diameter of each being about 20cm.²⁵ With fifty-two windows in the Dome of the Rock alone provided with such grilles, almost 3,000 panes may have been required. Additional clear glass would have been required for the protective grilles of the Aqsa, even without taking into account the coloured glass needed for the windows in both

¹⁹ The windows have evidently been either repaired or replaced with copies, for Arseven publishes a photograph of a fragment from one: (n.d. fig. 456). Goodwin (1971: 237) concludes that the window-grilles of the Süleymaniye 'follow the original design but have been restored.' Bakirer (1985: 150) suggests that the windows are either original 'or else remade according to their original designs.'

²⁰ The construction notebooks of the mosque mention the purchase of white, red, yellow, deep blue, ruby and purple glass, much of which would have been used in the windows (Barkan 1972-9, vol. 1: 17; vol. 2: 175-6; Rogers 1982: 292). Red, purplish-red and turquoise were the predominant colours of the glass used in the windows of the Yeni Cami in Istanbul (finished 1074/1663) (Anon 1975: 69, colour plate on page 167). It is not known whether these are original; Bakirer (1985: 150) concludes that either they are, or that they copy the original windows.

²¹ For the use of metal rods in the manufacture of Turkish windows, see Lecompte (1902: 79).

²² See note 50.

²³ It is clearly distinct from that used in the window bearing the name of 'Abd al-'Aziz (pl. 28.11), which is flat glass with a high gloss, cut into large pieces.

²⁴ See notes 3 and 4.

²⁵ Based on Arseven (n.d. fig. 453, 3). The diameter of the panes is given by Richmond (1924: 78).

buildings. Although the glass industry at nearby Hebron could conceivably have provided at least some of the glass for both Mamluk and Ottoman windows,²⁶ it seems likely that much was imported from Istanbul. Since substantial quantities of both coloured and clear window-glass were imported to Mamluk Egypt and Ottoman Turkey—usually from Venice²⁷—it also seems probable that some of the glass used in the windows of the Dome of the Rock was imported. A *firman* dated 984/1576, however, which lists materials assembled during the reign of Sultan Sulaiman for repairs to the buildings of the Haram, makes no mention of glass (Heyd 1960: 101).

The fact that the pieces of coloured glass were attached to the rear of the stucco tracery rather than being sandwiched between two thick layers of tracery makes it clear that, technically at least, these windows were produced under the influence of local traditions. In Egypt and Syria the technique of attaching pieces of coloured glass to the rear of one layer of stucco tracery appears to have replaced the earlier technique of 'sandwiching' the glass between two layers of stucco tracery in the mid-8th/14th century (Herz Bey 1896: 3-4; Flood 1993: 146-8).²⁸ The latter technique continued in use in Ottoman Turkey; the windows of the Süleymaniye in Istanbul were produced in this way (Arseven n.d.: 182-3, figs. 455-6). This technique was later transmitted to the Yemen, where it continues to be used in the manufacture of stucco and glass windows (Bonnenfant 1977: 256-8). That a technique pioneered in Mamluk *qamariyyat* should be used in the manufacture of the windows of the Dome of the Rock in preference to a technique in use in the Ottoman capital suggests that these windows were manufactured by craftsmen of local origin.

By the time of the Ottoman conquest, coloured glass windows had been an integral part of the decorative repertoire of Mamluk architecture for almost two hundred and fifty years. The coloured glass windows of the

Ashrafiyya Madrasa (887/1482) in the Jerusalem Haram are mentioned by both Felix Fabri and Mujir al-Din (van Berchem 1923: 369, n. 2 and n. 5), and are described in its *waqfiyya* (Ibrahim 1961: 437). This was an imperial foundation which reflected the influence of Cairene architectural models, and for which materials were brought from Syria (Burgoyne 1987: 601). Van Berchem (1927: 333) suggests that the presence of coloured glass windows in the Ashrafiyya is evidence that the craft of *qamariyyat* manufacture was flourishing at this period. As an imperial *madrasa* the Ashrafiyya is, however, a special case and cannot be taken as the norm. There is no evidence for the existence of a local Jerusalemite tradition of coloured glass windows in the late 9th/15th century, and during the following century the lack of skilled craftsmen in Jerusalem is bemoaned in several documents (Heyd 1960: 156 n. 2). This is in contrast to Cairo, where coloured glass windows continued to be produced in the Ottoman period, the glass used in their manufacture being known as *zujaj qala'uni*, after the sultan during whose reign it was believed that such windows were introduced (Hanna 1984: 41). Although little is known of the *qamariyyat* industry in Damascus after the 8th/14th century, craftsmen were brought from Damascus to Jerusalem to work on various building projects in the 970s/1560s (Heyd 1960: 156, n. 2). It seems likely therefore that the 10th/16th-century windows in the Dome of the Rock and the Aqsa Mosque were the work of either Egyptian or Syrian craftsmen.

In spite of the use of local techniques in their production, one aspect of the windows is redolent of the stucco and glass windows of Ottoman Turkey: the fact that the pieces of glass used in the windows

are inserted obliquely, and not vertically, so as to overhang and meet the eye of the visitor at right angles ... (Clermont-Ganneau 1874: 138; 1899: 219; de Vogüé 1864: 96).²⁹

The resulting effect is to counteract the distortion caused by viewing the windows at an angle and to render the details of the design more legible. This also seems to have been facilitated by the use of tracery in two different planes, the main lines of the composition projecting further from the surface of the plaster panel than those of the subsidiary ornament filling the border cartouches (Richmond 1926: 40).

Although some still remained in the 13th/19th century (de Vogüé 1864: 103), any 10th/16th-century windows in the Aqsa have long since disappeared. Like those in the Dome of the Rock, the windows appear to have

²⁶ The flourishing state of the Hebron glass ateliers is noted by 8th/14th-century Western travellers (Bellorini and Hoade 1948: 68). There is some suggestion that the glass used in the *qamariyyat* which Qa'itbai sent to the Mosque of the Prophet in Medina may have come from Hebron (see Newhall 1988: 241).

²⁷ For the Mamluk period, we have evidence that 'Frankish' glass (*al-zujaj al-afraqi*) was used in the windows of the Ashrafiyya Madrasa (see van Berchem 1922: 369, n. 5; Ibrahim 1961: 427). Al-'Umari mentions 'Cypriot' glass (*al-zujaj al-qibristi*) in the windows of a palace in the Cairo citadel, possibly the Qasr al-Ablaq (see Casanova 1897: 643). For Ottoman imports of Venetian window-glass, see Goodwin (1971: 347); Petricoli (1973: 91, fig. 22); Bakirer (1985: 148); and Rogers (1983: 245, 250).

²⁸ Any finds of window fragments manufactured according to the new technique from contexts which might pre-date the Bahri Mamluk period are either unstratified or described with so little precision that no conclusions can be drawn.

²⁹ For the same phenomenon in Turkish windows see Arseven (n.d.: fig. 457; 1939: fig. 404). The angle of downward slope in the tracery of the grilles in the Haram Museum is about 30°.

borne a continuous inscription in which the names of Sultan Sulaiman were given (van Berchem 1927: 439, no. 294). Sauvaire recorded the date of 996/1587 in this inscription. The date cannot be accurate, since Sulaiman died in 974/1566: it may have been a misreading for 936/1529-30, one year later than the date formerly visible in the windows of the Dome of the Rock (Meinecke 1988: 260-1). Nothing is known about the style of the Aqsa windows, but there are suggestions that they were of inferior quality to those in the Dome of the Rock. De Vogüé (1864: 103) suggests that this impression may be due to the absence of the exterior tile grilles which one finds in the Sakhra, so that the light entering the Aqsa had a harsher quality. The form of the outer grilles now in the windows of the mosque suggests that slabs of stucco filled with circular discs of crown glass—similar to the intermediate grilles in the windows of the Dome of the Rock—were installed at this time.

4. The Jerusalem windows in the context of imperial Ottoman architectural decoration

The coloured glass windows in the Aqsa and the Dome of the Rock have occasionally been described as 'carpets' of light (Schick 1887: 20). Although used as a poetic simile, this description may be more apt than those who coined it imagined. It is a notable aspect of Mamluk *qamariyyat* that many of the designs employed in their tracery are not exclusive to them, but reflect certain aesthetic trends which make themselves felt in the decoration of contemporary metalwork and textiles (Flood 1993: 148-52). The same seems to be true of Ottoman glass windows. As noted previously, the border motifs in some of the 10th/16th-century windows in the Dome of the Rock reproduced those on the tiles surrounding the exterior of the windows (pls. 28.4-28.5).

A further manifestation of this phenomenon is the fact that the colours and patterns of Burji Mamluk *qamariyyat* show marked parallels with those found in late Mamluk and early Ottoman carpets. Like the original 10th/16th-century windows in the Dome of the Rock, these were predominantly blues, red and purples. This may be part of the same shared aesthetic, or of a generalised 'textile mentality' (Golombek 1988), but there are indications of a more specific utilitarian dimension to the relationship between textile or carpet designs and certain types of architectural decoration. A good example of this is Semra

Ögel's suggestion that the painted ornament on the interior of Ottoman domes reproduces the embroidered decoration of tents (Ögel 1973-6: 221-2). The ornament of the walls of such tents frequently suggest openings, and textiles were often hung on solid wall surfaces to similar effect (Denny 1990: 97-8). The textiles which hung in front of doors and window-openings were sometimes decorated with single-arch motifs which recall the form of the doors and windows which they covered.³⁰ A similar impulse is at work in the use on the leather covers of books of single sun designs (*shamsas*) which anticipate the illuminated *shamsa* of the frontispiece. It is not surprising therefore that the stucco tracery of Mamluk and Ottoman windows often appears to reproduce forms familiar from carpets or book covers (Bakirer 1985: 150-1). At both the Timurid and the Ottoman courts the use of cartoons which originated in imperial scriptoria for decorative enterprises executed in different media and on different scales is well documented (Raby and Tanindi 1993: 17, 22-3, 54-9). Such a scenario would go a long way towards explaining the overlapping styles of Ottoman window-grilles, tilework, frescoes, tent decoration, book-covers and carpets.

The large rectangular fields of at least two of the 10th/16th-century window-types in the Dome of the Rock (pl. 28.18, figs. 28.3 and 28.7) recall the design of contemporary carpets or book-covers. No precise parallels can be cited, but the concept of a rectangular field in which a central medallion is framed by four partially visible medallions is similar (Raby and Tanindi 1993: figs. 18-9, 62-3). Analogous motifs appear in the painted decoration of 10th/16th-century mosques in Istanbul (Otto-Dorn 1950: 52 fig. 8). Even if they were executed locally, one suspects—since the windows were installed at the behest of the sultan himself—that their designs may have originated in an imperial scriptorium. The transfer of designs from paper to ceramics, and subsequently to wall-painting and carpets, is a marked characteristic of the imperially-sponsored art of Istanbul in the 10th/16th century (Denny 1979: 9). The same phenomenon is apparent in the stucco and glass windows of the same period. For example, the four corner panels of the window above the *mihrab* in the Süleymaniyye Mosque in Istanbul, on which a flowering prunus appears (pl. 28.8 and fig. 28.8), reproduces a design which is found on tile panels appearing in a series of buildings with imperial associations in the capital.³¹

In the light of the available information one may

³⁰ See for example that depicted in a miniature in the 10th/16th-century *Hadiqat al-Su'ada* in the Türk-ve Islam Museum, Istanbul (Milstein 1990: 83, pl. VI).

³¹ The earliest appears to be a tile panel on the façade of the Sünnet Odası in Topkapı palace which was originally placed on one of a number of structures constructed by order of Sultan Sulaiman in 934-6/1527-8 (Atasoy and Raby 1989: 102). Tile panels with similar decoration appear in the following locations: the Tomb of Hürrem Sultan (967/1559), the Baths of Selim II, a *minbar* in the Mosque of Rüstem Pasha (969/1561) (see Denny 1977: figs. 136, 219-20, 251).

conclude that the designs of the 10th/16th-century coloured glass windows in the Dome of the Rock may have been determined in the Ottoman capital. Whether this is so or not, the technical considerations just cited indicate that they were not produced by craftsmen from Istanbul. The absence of skilled artisans such as carpenters and stone-cutters in Jerusalem at this period is recorded in several contemporary documents (Heyd 1960: 156 n. 2), which renders it likely that the craftsmen who produced the windows were brought from Egypt or Syria.

Not only the techniques used in the manufacture of the windows, but also the treatment of the inscriptions which they bear find their closest parallels in the *qamariyyat* which filled the windows of Mamluk mosques, *madrasas*, *khanqahs*, tombs and palaces. In Cairene tombs and *madrasas* of the 8th/14th century there are several instances of an inscription—usually a Qur'anic quotation—continuing from *qamariyya* to *qamariyya*.³² This is in contrast to the fenestration of Ottoman mosques, where one often finds the use of windows containing coloured glass restricted to the *qibla* wall, with a single elaborate epigraphic window-grille being reserved for the window above the *mihrab*.³³ It may be that this distinction merely reflects the predominance of different architectural forms and their associated systems of fenestration in different areas of the Islamic world. Nonetheless, taken in conjunction with the technical features mentioned previously, the treatment of the inscriptions which appeared on the windows installed by order of Sultan Sulaiman is one more pointer to the hybrid nature of the Jerusalem *qamariyyat*.

Not only were large quantities of glass imported to fill the windows of the new mosques erected in Istanbul,³⁴ but these very windows are sometimes mentioned in *wagf* documents along with the other 'culturally significant architectonic elements of the mosque's interior' (Necipoğlu 1985: 99). As the case of the 10th/16th-century windows in the Dome of the Rock shows, the cultural significance of such windows might be enhanced by the inscriptions which they bore. The appearance of the names and titles of Sultan Sulaiman Qanuni in the windows of a building on the third holiest site in the Muslim world should be seen in the context of the latter's building activities in Jerusalem as a whole, and within the Haram al-Sharif in particular

(Meinecke 1988). The inclusion of the sultan's name in the inscriptions of the windows, with their blend of universal Qur'anic affirmations and specific historical aspirations, establishes an immediate connection between the holy places and the newly triumphant Ottoman dynasty. The replacement of the exterior mosaics with a covering of glazed tiles may be seen as part of a similar attempt to stamp an Ottoman identity on the Dome of the Rock (Necipoğlu 1990: 154). There were well-established precedents for such endeavours for, more often than not, the numerous campaigns of repair and restoration undertaken by the Mamluk sultans in the Haram al-Sharif were not merely the product of utilitarian sensibilities but of a desire to establish visual links between the Umayyad monuments and their own dynastic architecture (Flood 1997: 72).

While Sulaiman's bequest of coloured glass windows to the Dome of the Rock and the Aqsa was an inherent part of the overall restoration of the Jerusalem monuments, it also follows a precedent set by earlier custodians of the holy places. In section 6 it will be argued that at least some of the coloured glass windows in the Dome of the Rock were replaced as part of the work undertaken in 718-19/1318-19 by order of the Mamluk Sultan al-Nasir Muhammad. In the following century, a series of coloured glass windows—a novelty in the Hijaz—were set in place along the *qibla* wall of the Mosque of the Prophet at Medina by order of Sultan Qa'itbai (Samhudi 1891: 170; Newhall 1987: 241). The installation of coloured glass windows as part of a major programme of restoration in the Haram is indicative both of the important role which such elements played in the repertoire of Ottoman architectural decoration in general, and of their ability to act as bearers of religious and political meaning in specific circumstances.

The functional association between the window and light rendered it a natural vehicle for iconographic allusions to the theme of divine light. This association appears to have been particularly exploited in Ottoman architecture. In the *wagfiyya* of the Süleymaniyye Mosque (965-6/1557-8) in Istanbul, the Light Verse (Sura XXIV:35) is invoked, 'to show that the mosque is illuminated by divine light' (Kürkçüoğlu 1962: 22; Necipoğlu 1985: 100). To the same end the use of coloured glass is restricted to the windows of the *qibla*, while the Light Verse itself appears in the most elaborate window, directly above the *mihrab*. The same verse appears in a series of domes erected in the city in the 10th/16th and 11th/17th centuries (Von Hammer 1834: 76; Goodwin 1971: 235; Ögel 1973-6: 225-6). Contemporary descriptions of the coloured windows compare their colours to the ever-changing colours of the wings of the Prophet or the Archangel Gabriel (Sözen 1989: 90; Pasha 1983: 216). Since Evliya Çelebi's is the earliest description of the 10th/16th-century Jerusalem windows available, it is worth

³² In the windows of the mausoleum adjoining the Madrasa of Aslam al-Silahdar (746/1345) and in the prayer-hall of the Barquqiyya (786/1384-6).

³³ As in the Süleymaniyye (Necipoğlu 1985: 100; see also Kuban 1968: 27; von Hammer 1834: 71). This is also the case in the Jami' al-Taurizi in Damascus, which was restored in the late 9th/15th century.

³⁴ See note 27. Imports of window-glass for the mosques of Istanbul are also mentioned by Evliya Çelebi (see von Hammer 1834: 113).

comparing his description of the Süleymaniyye windows to that which he gives of the windows in the Dome of the Rock and Aqsa Mosque. Of the Süleymaniyye he says:

Sinan opened windows on every side to give light to the mosque. Those over the Mihrab and Minber are filled with coloured glass, the brilliance of whose colours within, and the splendour of the light reflected from them at noon, dazzle the eyes of the beholders, and fill them with astonishment. Each window is adorned with some hundreds of thousands of small pieces of glass, which represent either flowers, or the letters forming the excellent names (i.e. the Divine attributes); they are, therefore, celebrated by travellers all over the world (von Hammer 1834: 75).

In this same traveller's account of the windows installed in the Dome of the Rock and Aqsa by Sultan Sulaiman, there are implicit connections with those of the Süleymaniyye. Although Evliya Çelebi omits to mention that the Light Verse appears in the Süleymaniyye windows, he asserts that it is present in the windows of the Dome of the Rock—an assertion for which there is no corroborating evidence.³⁵ It seems unlikely that Evliya Çelebi took the time to decipher the inscriptions in the windows and more probable that, the connection between natural and divine illumination being well-established, he assumed that the Light Verse would appear in the windows of the Dome of the Rock, even as it did in the windows of the Süleymaniyye. In fact, although no details are given of the coloured glass grilles in the sixteen windows of the dome, we are told that it is 'full of divine lights' (St Stephan 1942: 90). We are also told that, on seeing the Rock, it was customary for pilgrims to offer a prayer which began, 'O God, let there be light in my heart ...' (St Stephan 1942: 86).

Using language reminiscent of his somewhat clichéd description of the Süleymaniyye windows, Evliya Çelebi gives an idea of how the windows in the Dome of the Rock appeared in the early 11th/17th century:

The master builder lavishly adorned [the piers] with richly gilt ornamentations, as well as variegated paintings so that, when the sun rays fall through the stained window glass on these piers, a stranger, not accustomed to the sight, would be bewildered (St Stephan 1942: 89).

³⁵ As mentioned in Section 3 (iii). It is noteworthy that two of the inscriptions attributed to the Jerusalem windows—the Light Verse and the names of the first four caliphs—do appear in the epigraphic ornament of the Süleymaniyye (Goodwin 1971: 235).

The clearest suggestion that there is a direct connection between the windows of the Süleymaniyye and those installed by Sulaiman in the buildings of the Haram comes in the description of al-Aqsa. We are given the following description of the dome in front of the *qibla* and the *mihrab*:

It is a rotunda of 'light above light' (Sura XXIV: 35). Round it the verse is inscribed: 'Allah is the Light of Heaven and Earth' (Sura XXIV: 35). It was restored by Sulaiman Khan ... Sulaiman Khan selected from personal acquaintance the gifted master, the glass-mosaicist, the Drunkard 'Abdullah (Serkhosh 'Abdo), who has performed marvels in this prayer-niche of the Noble Mosque, by using twelve kinds of different fine and iridescent colours, so much so that the reflected rays, falling on the ground, lighten the entire mosque and fill the whole large congregation with light and meditation, inspiring them to reverent and submissive prayers. Besides the glass panes of twelve colours already mentioned there are one hundred and five glass panes in all, crystals, rock-crystals, and violet-coloured glass included (St Stephan 1942: 82-3).

Further on in the same passage the Light Verse is invoked in a description of the artificial illumination of the mosque. Apart from the explicit connection made between the Light Verse and the coloured light radiated through the windows and reflected from the mosaics of the dome, Evliya Çelebi ascribes the vitreous ornament of the Aqsa to Abdullah the Drunkard. The coloured glass windows of the Süleymaniyye are attributed to Ibrahim the Drunkard (Mayer 1954: 265; Goodwin 1971: 235-7).³⁶ While it is possible that the same skilled imbiber was responsible for the windows in both Istanbul and Jerusalem (Meinecke 1988: 261), given the fact that the buildings stand at a remove of almost thirty years—not to mention the unhealthy lifestyle of the individual—this seems unlikely. Instead it may be that Evliya Çelebi is attempting, or reporting an attempt, to acknowledge a connection between the celebrated glass ornament in two buildings which stand at the centre of the metropolitan and provincial architectural programmes undertaken by Sulaiman.

³⁶ Since the name of this individual does not appear among the lists of craftsmen recorded as having worked on the mosque, Rogers (1983: 243) suggests that either he was permanently absent with a hangover, or that he may have been a mythical figure.

Some indication that the transcendental significance attributed to natural light in this description and those cited previously was not an idiosyncratic one is found in the Dome of the Rock itself. In addition to the lunettes and windows filled with coloured glass mentioned previously, a single low rectangular window closed with a metal grille and wooden shutters was pierced in two faces of the octagon, on its south-eastern and south-western sides. The openings were created at the same time, for each once bore an inscription which gave the date of 1006/1597-8 (van Berchem 1927: 340-2 nos. 243-4). The inscription accompanying the south-eastern window states that the work was undertaken as a result of a revelation in which the benefactor was told to open a window in the Qubbat al-Sakhra so that the morning sun might penetrate the building and give it the appearance of Paradise (*jannat al-ma'wa*).³⁷ Although it stands at a remove of sixty years from the installation of the coloured glass windows, read in conjunction with the evidence from Istanbul the inscription suggests the Ottoman approach to fenestration in the Dome of the Rock was not motivated solely by utilitarian or aesthetic considerations.

5. Changes to the windows in the octagon of the Dome of the Rock since the 10th/16th century

At least eight campaigns of restoration to the Dome of the Rock have been carried out since the time of Sulaiman Qanuni.³⁸ Many of these were extended to the Aqsa mosque also. The campaigns known to have involved alterations to the windows of one or both buildings are those of 1133-5/1720-1, 1233/1817-8, 1291-3/1873-5, 1342-6/1923-7 and 1378-84/1958-64. For convenience, a summary of those changes to the window-grilles of the Sakhra which can be documented is provided in Appendices II and III. Several windows in the octagon were replaced during the restorations of 1291/1874, while

more were replaced in the period between 1291/1874 and 1342/1923, some on the occasion of the Kaiser's visit in 1316/1898. It is clear however that the majority of the changes occurred during the two major restorations of the present century. Between 1342/1923 and 1346/1926 for example twenty windows were removed and replaced (Anon 1928: 13). A single window (e.g. window 19) may have had its *qamariyya* replaced on as many as three occasions in the past hundred years. In some cases the modern coloured glass window bears no relation to that previously in place. In others, copies of one type of 10th/16th-century window-grille occur in windows where another type would originally have appeared.

On the basis of the information summarised in Appendix II and discussed in Section 3 (iii) above, the following conclusions may be offered. Of the five different window-types now *in situ*, one appears to copy a design of the 13th/19th century.³⁹ The remaining four types preserve the form of the *qamariyyat* introduced during the restorations undertaken by Sulaiman the Magnificent, but in most cases the inscriptions have been altered. In addition, the colour of the glass in the present *qamariyyat* bears little relation to that used in the 10th/16th-century windows. At some time during the present century a type of 10th/16th-century window-grille (pl. 28.1) has been lost, and another (pl. 28.3) altered.⁴⁰

Because the windows have undergone so many changes, little can be said of any 11th/17th- or 12th/18th-century *qamariyyat* which may have been introduced in the period between the restoration of the monument by Sultan Sulaiman and the major campaigns of restoration undertaken in the present century.

An exception to this is the period of Sultan 'Abd al-'Aziz (1277-93/1861-76). The design of a fragmentary window-grille now in the Haram Museum which bears the names and titles of 'Abd al-'Aziz (pls. 28.9-11 and fig. 28.9) seems to have been based on a 10th/16th-century type, but did not copy it exactly.⁴¹ A second window in the Haram Museum which may also date from this period (pl. 28.7) is more faithful to the 10th/16th-century original. It appears that at least one new type—based on a pastiche of elements derived for the most part from 10th/16th-century window-grilles—was introduced at some point in the 12th/18th or

³⁷ Van Berchem 1927: 341 no. 243. The story of an architectural project undertaken as the result of a dream or vision is suspiciously reminiscent of the manner in which Sulaiman's programme of restoration in the Haram is said by Evliya Çelebi to have been inspired (St Stephan 1942: 87).

³⁸ Ibrahim I 1052/1642-3 (Walls and Abu'l-Hajj 1980: no. 245); Ahmad III 1133-5/1720-1 (Göyünç 1982: 328; St Laurent and Reidlmayer 1993: 77-9); Mahmud I 1155/1742 (Göyünç 1982: 329, n.8); 'Abd al-Hamid I 1194-5/1780-1 (Walls and Abu'l-Hajj, 1980: no. 246); Mahmud II 1233/1817-8 (Le Strange 1890: 135; Walls and Abu'l-Hajj 1980: nos 250-9); 'Abd al-'Aziz 1291-3/1873-5 (van Berchem 1927: 329-30; Creswell 1969: 91); 1342-6/1923-7 (Anon 1928); 1378-84/1958-64 (Walls and Abu'l-Hajj 1980: no. 238).

³⁹ See note 42.

⁴⁰ I am assuming that the tracery in the form of a hexagonal grid (now in windows 11-12, 24, 26 and 29-30) is based on the form depicted above (pl. 28.3).

⁴¹ The presence of the name of this sultan and the form in which it appears indicates that the grille could only have been removed from window 12, for van Berchem (1927: 329) recorded such an inscription in this position. Curiously, van Berchem makes no mention of the date, perhaps because it was barely legible when the grille was in place.

13th/19th century and copied subsequently (pl. 28.6).⁴²

While the window-grille with the name of 'Abd al-'Aziz is clearly intended to blend with the earlier *qamariyyat* in the Sakhra—and should not therefore be taken as typical of late Ottoman coloured glass windows—they do betray certain technical peculiarities. The glass which was used in their manufacture is quite different from that which Richmond describes in the earlier *qamariyyat* (1924: 79). In place of the small pieces of streaked and bubbled glass used earlier, large pieces of flat translucent glass with a high surface gloss were used in the window of 'Abd al-'Aziz (pl. 28.11). The fact that so many of the window-grilles installed during the restorations of 'Abd al-'Aziz were subsequently replaced is a testimony to the poor quality of the plaster of which their tracery was composed, a fact noted by Richmond (1924: 79).

The final detail which may be used to distinguish window-grilles of this period from earlier *qamariyyat* is the treatment of the inscriptions which they contain. Not only was the content of the inscriptions altered when the window-grilles were remade—with the name and titles of 'Abd al-'Aziz being frequently interpolated (Appendix 28.2, windows 12, 16 and 24)—but the manner in which the inscriptions were executed was also different. The letters of the inscriptions were executed in relief against a flat panel which was perforated with random drillings, a feature entirely absent from the 10th/16th-century windows. In the earlier windows, the letters of the inscription were filled with colourless glass set against a deep blue ground. In the dated window, however, the letters of the inscription were filled with yellow glass set against a green ground. Although such a use of colours is unattested for the 10th/16th-century windows in the Dome of the Rock, it is found in the windows of some 10th/16th- and 11th/17th-century mosques in Istanbul.⁴³

Major changes to the windows of the octagon were undertaken during the large-scale restoration campaigns of 1342-6/1923-7 and 1378-84/1958-64. Of the thirty-six

grilles in the windows of the octagon, twenty were replaced in the first period of restoration (Anon 1928: 13). All the grilles on the north, north-western and west walls were either repaired or replaced at this time (Megaw 1952: 55). The extent of the changes in the later restoration is not known, but at least two of the window-grilles in the octagon were subsequently removed and replaced with copies of those removed (Shafi'i 1970 65).⁴⁴ In view of these extensive changes, it seems probable that, even where they preserve the forms of earlier window-grilles, most, if not all, of the *qamariyyat* now in place are creations of the present century.

6. The windows in the dome

The difficulties which one encounters in trying to map the changes to the window-grilles in the octagon during the period of Ottoman suzerainty are redoubled when one comes to consider the windows in the dome itself. Owing to the difficulties of gaining access, it appears that these window-grilles were altered or replaced less frequently than those in the octagonal outer walls. This is witnessed by the fact that when the interior lighting was judged inadequate for the Kaiser's visit in 1316/1898—due at least in part to the poor state of the window-grilles in the drum of the dome and the accumulation of dirt on the glass which filled them—rather than undertaking the arduous task of cleaning or replacing the grilles, a solution was found in the simple expedient of piercing openings in the base of the dome itself (Richmond 1924: 81).

Common to all types of window-grilles in the drum of the dome, except one, is the division into an arched lunette and a rectangular field. The intervening epigraphic panel which one finds in the window-grilles of the octagon is absent. An assessment of individual grilles is complicated by several factors. Firstly, it is clear that until the major renovations which took place this century, it had been common practice to replace part of these window-grilles—possibly while they were still *in situ*—rather than replace them *in toto*. This was no doubt a consequence of their inaccessible location, and led to windows being filled with grilles which were composed of sections which dated from different periods (as noted by Megaw 1952: 56). Before the restorations which took place this century, it was often the case that the style and date of the lunette differed considerably from that of the tracery in the central field of the window associated with it (pls. 28.16-8). The resulting problems with the endeavour to deconstruct and date the

⁴² Although grilles of this type were manufactured and installed in the 1340s/1920s (they appear in some published photographs of the restoration, see Anon 1928), there is good reason to believe that these were merely copying an earlier type, for similar grilles appear in the earlier painting of Harvey (Creswell 1969: frontispiece). It was therefore at some point before the beginning of the present century that the type was introduced. Its similarity to the window above the *mihrab* in the Süleymaniyye (pl. 28.8, fig. 28.8) suggests that it may have been modelled on a generic 10th/16th-century type at the time of a later restoration. Today it replaces one of the 10th/16th-century types which has vanished altogether from the repertoire represented among the grilles in the Dome of the Rock (see comments for windows 19 and 28, Appendix II).

⁴³ For example, in the Mosque of Sokollu Mehmet Pasha and in the Yeni Cami. It may however be significant that the windows of the former mosque were replaced in the 13th/19th century (see Kuban 1968: 36).

⁴⁴ These were in the south-eastern and south-western sides, but the exact locations are not given. At least one of those replaced seems to have been a modern grille, installed in the 1340s/1920s: see comments for window 19 in Appendix 28.2.

various parts of such grilles is magnified by the fact that the Ottoman windows have all been replaced and one is obliged to work from photographic evidence.

A more serious difficulty is the divergence between textual evidence or archival records—where they exist—and the evidence of the windows themselves. The implications of the latter problem will become clear shortly. The accumulated evidence for the changes to the windows in the drum of the dome has been summarised in Appendix III. While this is not intended to be an exhaustive survey, it does provide some chronological *termini* for the discussion which follows.

When Richmond studied the building in 1338-9/1919, he concluded that some of the Mamluk window-grilles—or at least parts of them—still survived (1924: 78; Creswell 1969: 79 n. 6). The same conclusion was reached by Megaw when he surveyed the monument in 1367/1947 and again in 1372/1952 (1952: 56). These grilles were presumably from the extensive restorations to the building carried out by order of al-Nasir Muhammad in 718-9/1318-9 (Creswell 1969: 79 n. 6), but one cannot be certain that what appeared to be Mamluk grilles were not in fact later copies of 8th/14th-century windows. Some of the modern window-grilles set in place during the renovations of this century were clearly inspired by the design of the 'Mamluk' windows. Common to all but one of these types is the division into a lunette filled with a symmetrical vegetal motif and a rectangular field below. This is filled variously with a repetition of the axially-arranged vegetal motif (windows 9 and 10; pl. 28.12) or with a *shamsa* in the form of a twelve-pointed starburst (windows 1, 2, 13 and 14; pl. 28.20). There are at least two variants in the borders of the latter type. The third type is again filled with vegetal tracery and has a wide outer border, but lacks the differentiated lunette (pl. 28.13).

The modern window-grilles in which axial vegetal motifs predominate are clearly related to one of the windows published by Richmond (pls. 28.12-3). Some support for the suggestion that the window-grilles seen by Richmond dated from the 8th/14th century is found in the wooden ceilings of the outer ambulatory. At least part of these are thought to date from the restorations carried out by al-Nasir Muhammad (Creswell 1969: 91). Panels decorated with axial vegetation occur in the interstices between the larger rectangular panels of which the ceiling is composed (pl. 28.14). The similarities between the design of the small ceiling panels and some of the windows formerly in the dome suggest that both were set in place at the same date. Prominent among the designs used for the large square panels of the ceiling in the outer ambulatory are ten- and twelve-pointed starbursts (pls. 28.15-6) similar to the motif which appears in the lunette of a grille published by Richmond (pl. 28.12), and now appear in windows 1, 2, 13 and 14 (pls. 28.18-20). Before the

restorations of 1378-84/1958-64, Megaw counted nine windows with arabesque grilles or lunettes in the drum and concluded:

In the ceiling of the outer ambulatory is seen the same combination of rectilinear motifs with arabesques akin to those in the dome. Consequently it seems permissible to connect all those 9 window panels with a single scheme of re-decoration despite differences of form and detail, and to assign them to the repairs carried out under an Nasir Muhammad (1952: 56).⁴⁵

Window-grilles in which axial vegetal motifs appear are found in some of the Bahri Mamluk monuments of Cairo.⁴⁶ The type seems to disappear before the mid-8th/14th century for, among the surviving monuments, it is not found after this date.⁴⁷ Although vegetal or 'arabesque' motifs appear in the 10th/16th-century windows of the octagon (pl. 28.1), these are manufactured according to a technique different to that which Richmond observed in the arabesque windows of the dome. This then would lend further support to a date in the early 8th/14th century for the appearance of the type in the windows of the Dome of the Rock.

On the basis of the resemblance between the windows of the drum and the wooden panels in the ceiling of the ambulatory, one might suggest that a third type of grille—in which geometric rather than vegetal tracery predominated—was also set in place in the 8th/14th century. Richmond mentions that the six window-grilles in the drum of the dome, which he attributes to the pre-Ottoman period, consist of both vegetal designs and geometric patterns (1924: 78). Although he gives no details of the latter, it seems probable that the modern grilles in which a single twelve-pointed *shamsa* appears in the central field preserve these patterns (pls. 28.18-19).⁴⁸ *Qamariyyat* in which a central rectangular field is filled with such *shamsas* are still to be found in the contemporary Mamluk monuments of Cairo,⁴⁹ and the same type appears in photographs taken before the restorations of the 1340s/1920s (pl. 28.20).

⁴⁵ Richmond (1924: 78) assigns only six of the grilles to this date.

⁴⁶ For example in the mausoleum of Sultan Qala'un (683-4/1284-5).

⁴⁷ The last surviving examples are in the Maridani Mosque (741/1340) and in the mausoleum of Aslam al-Silahdar (746/1345). It is conceivable that the disappearance of the type is related to the introduction of a new and faster technique of manufacturing *qamariyyat*, which produced grilles in which geometric tracery predominated.

⁴⁸ These are to be seen in windows 1, 2, 13 and 14.

⁴⁹ For example in the Madrasa of Inal al-Yusufi (795/1392).

No technical details are available for the windows currently *in situ* in the dome, but the windows seen by Richmond were filled with red, blue, green, yellow and white glass. The following details are given:

The panes are large compared with those of the sixteenth-century windows, and the lines of plaster that take the place of the lead in our windows are narrow, barely more than one centimeter wide. The glass is set at a distance of from six to seven centimeters from the outer surface of the plaster. On the inside the glass is held in place by a fillet of plaster, beveled on each edge, and about one centimeter wide and one centimeter thick, covering the joints between the panes (1924: 79).

Richmond also notes that the glass used in the windows just described is 'streaked and filled with bubbles', but this is not on its own a reliable chronological indicator, for glass from earlier windows may be used in later replacements.⁵⁰ Despite this, the significance of this description cannot be overstated, for comparison with the description of the 10th/16th-century windows in the octagon given above clearly indicates that these were produced in a different manner. While the Ottoman window-grilles have small pieces of glass roughly attached to the exterior of the tracery, those formerly in the drum consisted of pieces of glass held between two layers of stucco. The change from the latter technique to the former cannot be dated with certainty, but it is thought that the simpler technique was in use in Egypt from the middle of the 8th/14th-century onwards (Herz Bey 1892: 3-4; Flood 1993: 146-8). The use of the earlier 'sandwich' technique would therefore support a date early in the 8th/14th century. It has already been noted that Ottoman Turkey was one of the few regions of the Muslim world to retain the 'sandwich' technique for the manufacture of stucco and glass windows, but that the Haram windows which date from the Ottoman occupation are made according to the contemporary local tradition, that is, with pieces of glass attached to the exterior of the grille using a thin application of stucco. The windows in the drum described by Richmond are exceptions to this.

One final piece of evidence which one might use to support the suggestion that some of the grilles seen by Richmond and Megaw had not been replaced since the Mamluk period is the presence of 'cross-bars of wrought iron' in the intervals between the stucco and glass grilles of

some of the windows and the Ottoman pierced tile panels which filled their exteriors (Megaw 1952: 88).⁵¹ The precise windows in which such grilles could be seen before the restoration of 1378-84/1958-64 were never recorded but, although they occasionally survived into the Ottoman period and beyond, metal grids were not part of the system of fenestration introduced to the windows of the octagon by Sulaiman Qanuni. Instead, it is in the Mamluk period that one finds ample evidence for the use of such metal grilles in the windows of both the Dome of the Rock and the Aqsa (see Section 2). In the case of some of the drum windows it may be therefore that the only change introduced in the 10th/16th century was the provision of an outer pierced tile panel.

Thus far the stylistic and technical evidence seems to concur in validating Richmond's attribution of some of the window-grilles which he saw in the drum to the renovations carried out at the behest of Nasir al-Din Muhammad in 718-9/1318-9. A major problem presents itself, however, in the form of an unpublished register (*defter*) which records the repairs to the monument carried out at the behest of Ahmad III in 1134-6/1721-2. This unpublished document apparently suggests that all of the coloured glass windows in the drum of the dome were replaced at this time:

Plain and colored glass is listed according to the number of panels needed for each window. Two kinds of window are specified: twelve ordinary windows using little glass, and fancier windows for the *qibla* wall using a large number of small pieces of the 'Persian' type, with more color (St Laurent and Riedlmayer 1993: 79).⁵²

The mention of 'Persian' windows is particularly interesting,⁵³ in view of the fact that the term commonly used for coloured glass windows in Ottoman Turkey, *rezvenî-menkûs* ['decorated windows'] (Essad 1926: 266), was itself a combination of Persian and Arabic terms (Arseven n.d: 182). While such nomenclature suggests a hybrid ancestry for Ottoman coloured glass windows, the dearth of surviving material evidence renders any evaluation of the connections between Persian and Ottoman stucco and glass windows hazardous. A mutual relationship in technical and stylistic matters does, however, seem likely.⁵⁴

Although these are not mentioned, it is hard to

⁵⁰ This is the case with the *qamariyyat* produced today in the Haram workshop. Owing to the high cost of the material, broken glass was apparently used in Turkish windows of the Ottoman period (see Rogers 1983: 250-1).

⁵¹ See also note 6.

⁵² A summary of the document (*Başbakanlık Arsivi, Maliyeden Müdevver Defterler* no. 7829) is given by Göyünç 1982: 328-9.

⁵³ Although from the published references to the *defter* it is unclear as to whether the epithet 'Persian' is being applied to the windows or to the glass.

⁵⁴ See note 18.

believe that the windows of the octagon were unaffected by this phase of restoration. The fact that 16,200 pieces of coloured and plain glass were ordered from Istanbul for the purpose gives some idea of the extent of the undertaking (Göyünç 1982: 328). The evidence for exports of window-glass to Istanbul in the 10th/16th and 11th/17th centuries has been given above. Since window-glass was among the most common exports to Istanbul during the late 11th/17th century (Mantran 1962: 617), it may be that some of the glass for the windows was imported from further afield than Istanbul.

In the light of the evidence which indicates that some of the windows still extant in the drum earlier this century preserved the forms of Mamluk and 10th/16th-century windows, the suggestion that all were replaced in the reign of Ahmad III raises a number of questions. One may rule out the possibility that some of the coloured glass in the grilles may have been changed without the entire grille being replaced, for many of the grilles seen by Richmond and Megaw had their glass sandwiched between two layers of stucco. There would therefore be no way to remove the glass without destroying the stucco tracery in which it was held.⁵⁵

A further possibility is that, although all the windows were replaced, the forms of the earlier windows were copied. This copying would have had to extend to the technical aspects of the windows, for as previously noted the windows formerly in the drum were produced using two different methods. The use of two different techniques in a single phase of restoration seems highly unlikely.

Another apparent anomaly is the purchase of brass wire for use in replacing the windows. It has been suggested that this reflects the influence of European stained glass in the manufacture of the 12th/18th-century windows (St Laurent and Riedlmayer 1993: 79). It seems more likely, however, that the wire was used to strengthen the border of the grilles, or for the provision of a mesh to cover the reverse of the grilles. The use of copper and brass wire for the latter purpose was common in Mamluk Cairo (Amin and Ibrahim 1990: 90-1), and Megaw mentions the presence of thin wire netting behind the windows of the drum (1952: 88). The use of metal rods for strengthening the outer borders of the stucco grilles and the wooden frames in which they were set has been mentioned above. One must conclude that none of the evidence produced so far supports the suggestion that any grille introduced at this period reflected the influence of European stained glass.

⁵⁵ Megaw (1952: 88) comments: 'However the drum window panels of the type attributed to the repairs under al-Malik an-Nasir Muhammad have their glass inserted from the inside and so, in their present form, access to the outside face would not enable missing glass to be replaced.'

The architectural evidence suggests that either the document in question is in error, or that it is only partly correct, and that the changes to the windows of the drum were not as extensive as it suggests.

When he studied the monument, Megaw suggested that six of the window-grilles in the dome (those in windows 3-5, 7-8 and 15) and part of another (in window 11) dated from the 8th/14th century. To these I would add the grilles which filled windows 6 and 16. In view of the evidence just cited it seems highly unlikely that all the window-grilles in the drum were replaced during the reign of Ahmad III—even if some were altered at this time, fewer than half can have been affected.

It is clear from the evidence summarised in Appendix 28.3 that there are only four windows (5, 6, 9 and 10) in which the grilles now in place may preserve the forms of the stucco and glass set in place in the 10th/16th century or earlier. It is striking that the types of grilles in these windows are exactly those published by Richmond (pls. 28.12-3). It may be therefore that these are the only window-grilles in the drum which have preserved the form of the earlier stucco and glass windows, if not the original grilles themselves. On the basis of these survivals, and the evidence summarised in Appendix 28.3, there are only two possible alternative scenarios for the arrangement of the windows. One possibility is that a pair of the type without lunette published by Richmond (pl. 28.13) appeared at the centre of each side of the drum, flanked by the type with lunette (pl. 28.12). An alternative arrangement would have pairs of one type alternating with pairs of the other. Neither solution is entirely satisfactory,⁵⁶ and if, as argued above, these types preserve the form of 8th/14th-century windows, it is not at all clear how the windows installed by Sultan Sulaiman fitted into this scheme.

Although evidence for alterations to the windows of the drum in subsequent campaigns of restoration is lacking, it seems likely that both parts of the grilles and entire grilles were subsequently replaced. There are four types of window-grilles which have now vanished but which may be seen in photographs and paintings of the Sakhra which predate 1342/1923. The style of these was crude compared to that of the window-grilles for which a Mamluk date, or a date early in the Ottoman occupation, has been proposed. The tracery in the lunette of the grille formerly in window 1 (visible in pl. 28.17) consisted of an axial vegetal motif similar to that of the windows published by Richmond (pls. 28.12-3). The rectangular field of the same window was filled with tracery which, to judge by its crudity and lack of resemblance to the lunette, clearly belonged to a later date (fig. 28.10). It appears to copy the

⁵⁶ The problems with both arrangements are discussed by Megaw (1952: 56-7).

type formerly in window 12, now in window 13 (pl. 28.18, fig. 28.7), for which a 10th/16th-century date has been proposed. Of all the grilles known to have filled the windows of the drum, it is the only example known to have borne an inscription.⁵⁷ It seems likely that this dated from the restoration ordered by Mahmud II in 1233/1817-8. As will be seen below, extensive changes were made to the windows of the Aqsa at this date. The erection of scaffolding around the exterior of the dome to enable the regilding of the dome would also have facilitated access to the windows.⁵⁸ A grille of less complex form which filled the adjacent window (window 2), and has now vanished, may also have dated from this period. This consisted of a network of hexagonal tracery (visible in pl. 28.17).

Of the two remaining windows (7 and 11) in which grilles of types now no longer present once appeared, that in window 11 (pl. 28.19) was the least complex of all four vanished types. While the lunette of the window was filled with the arabesque tracery for which a date in the 10th/16th century or earlier has been proposed, the lower part of the tracery consisted of a plaster panel pierced with a crude geometric pattern based on touching circles (Megaw 1952: 56). The crudeness of style and flat two-dimensional plane in which the tracery was executed distinguishes it from the grilles just discussed. For this reason one might propose a date in the second half of the 12th/19th century.⁵⁹

As regards the form of the grilles installed during the restoration of the monument ordered by Sulaiman Qanuni, it has already been suggested that the grille now in window 12 preserves the form of one of the 10th/16th-century grilles (pl. 28.18, fig. 28.7). It is possible that a grille which once appeared in window 7 was of this date. The grille was more complex than any of the three just discussed, consisting of tracery based on a pattern of eight-pointed stars (visible in pl. 28.20). The main lines of the tracery were raised above the background, a characteristic of the 10th/16th-century windows in the octagon.

A further problem with the windows of the dome is to determine which, if any, were replaced during the restoration carried out by Sultan Sulaiman. Since all the windows of the octagon were replaced during this major restoration, it seems reasonable to suppose that all the windows of the drum were also provided with new grilles.

Despite this, the evidence for the survival of 8th/14th-century windows just cited suggests that only some of the grilles in the windows of the drum were replaced at this stage. It might be thought that what have been described as 8th/14th-century window types are in fact those installed by Sultan Sulaiman. However, the fact that the technique used in their manufacture differs considerably from that used in the 10th/16th-century windows of the octagon argues against this. For this reason, and for the stylistic reasons adduced above, I have differed from Megaw in dating the forms of the grilles published by Richmond to the period of al-Nasir Muhammad rather than that of Sulaiman.⁶⁰ As has been shown above, the survival of metal grids in some of the window-openings may also indicate that not all the Mamluk grilles were replaced in the 10th/16th century.

The height of the dome and the accumulation of dirt on the exterior of the windows renders any assessment of the colours of the glass in the windows of the drum difficult.⁶¹ The colours of the glass in the modern windows cannot be taken as a guide to those of the Ottoman windows. A noteworthy feature of the painting by Harvey (1327/1909) (Creswell 1969: frontispiece) is that the grille formerly in window 13 (pl. 28.18, fig. 28.7), which the one now in window 12 copies, is distinguished by its colour scheme from the other windows in the drum. The predominance of blue and red glass in the grille is in harmony with the colours of the 10th/16th-century windows shown in the octagon (see section 3). This may be taken as further support for the suggestion that this represents an original 10th/16th-century type.

It is clear that the windows in the drum of the dome are more problematic than those of the octagon. The problems result from discrepancies between the documentary and material evidence and are exacerbated by the tendency of craftsmen involved in the various Ottoman restorations to copy the forms of earlier window-grilles when they replaced them with new ones. The process of replacing the windows has continued in the present century. When Megaw submitted his report in 1374/1952 he could identify nine of the window-grilles in the dome as preserving 8th/14th-century forms. It seems

⁵⁷ This could not be deciphered from the available photograph.

⁵⁸ The presence of the scaffolding is mentioned by Richardson (1822: 304).

⁵⁹ The cupola was restored in 1291/1874 (van Berchem 1927: 330), which might have provided an opportunity for replacing some of the grilles. The fact that at the time of the Kaiser's visit twenty-four years later the lack of light from the dome windows led to openings being pierced in the dome itself (Richmond 1924: 81) suggests that any alterations undertaken at this time cannot have been extensive.

⁶⁰ Megaw (1952: 56) concludes that the grilles which he saw in windows 6, 9, 10 and 13 'undoubtedly derive from Sulaiman's repairs, though some may in their present form be later reproductions of panels first installed during these repairs.' Three of these grilles were of the types published by Richmond (pls. 28.12-3). The fourth was similar to that now to be seen in window 12 (fig. 28.7) and does seem to be the only type among the windows of the drum which can be ascribed to the work of Sulaiman's craftsmen.

⁶¹ When the monument was visited in January 1415/1994, the dome was being regilded and the windows were obscured by exterior scaffolding.

that most of the grilles in the dome which he saw have been replaced subsequently. Where copies of earlier grilles have been produced these have not usually been re-installed in the correct position. Of the eight different types of grille now in place, only three (those in windows 1, 2, 5, 6, 9, 10, 13 and 14) are likely to preserve the forms of the grilles installed by al-Nasir Muhammad, while only one (that in window 15, fig. 28.7) may be tentatively attributed to Sulaiman's restoration. The remainder seem to copy the forms of window-grilles installed during the restorations of the 12th/18th and 13th/19th century.

The complexities of this accretional approach to fenestration become clear when one considers Megaw's recommendations for the restoration and replacement of the drum windows, made in 1374/1952. These include replacing the 'Mamluk'-type windows with copies, identical in all respects except their method of manufacture. Thus, the glass should no longer be held between two layers of tracery, but attached to the reverse of the grilles, as is the case in the 10th/16th-century windows of the octagon (1952: 88). Megaw also recommends that another feature of the Ottoman windows, the use of downward-sloping tracery, should be replicated in the modern copies. Many of the modern window-grilles produced subsequently for the windows of the drum were thus a mixture of Mamluk forms and Ottoman techniques.⁶² As such, they perpetuate a tradition of hybridisation which has characterised the approach to the stucco and glass windows taken by restorers over almost five centuries.

The constant replacement of the window-grilles in the Dome of the Rock has both practical and political dimensions. In view of the dearth of evidence for the fenestration of the building between the Umayyad and Mamluk periods, whether the replacement of such grilles was of necessity from the time of the building's completion or is a more recent phenomenon is not clear. What is clear is that from the 8th/14th century onwards the window-grilles were removed, replaced and repaired with surprising frequency. The political implications of this process have been considered in Section 4 and elsewhere (Flood 1997: 72) but there can be little doubt that at least some of these restorations were motivated by concerns for the fabric of the building. The complex system of fenestration introduced in the 10th/16th century seems to have accelerated the rate of decay of the coloured glass windows (see Section 3[iii]), contributing to the frequent need to replace them. The rate at which the window-grilles were

replaced in later centuries suggests that there may have been a subsequent decline in the quality of the window-grilles—for example, the grille filling window 19 in the octagon has been replaced three times since 1311/1893 (see Appendix II).

7. Changes to the windows of the Aqsa since the 10th/16th century

Unfortunately far less literary and visual material is available on the windows of the Aqsa than on those of the Qubbat al-Sakhra. The dearth of information about the windows installed in the reign of Sulaiman I has been noted in the preceding section. This hiatus may be because the windows of the mosque have been subject to more vicissitudes than those of the Sakhra. During the renovations of the 1360s/1940s, for example, it appears that all the window-grilles were removed,⁶³ while any of those which survived appear to have been destroyed in the conflagration of 1386-7/1967.

It is not clear whether the repairs to the Dome of the Rock in 1133-5/1721-2 also involved changes to the fenestration of the Aqsa. The first evidence for such changes comes with the restoration undertaken by Mahmud II in 1233-4/1817-8. In addition to the installation of new windows in the Dome of the Rock, the windows in the dome of the Aqsa were altered. A lithograph published in 1279/1862—and which therefore pre-dates the renovations of 'Abd al-'Aziz—shows a remarkable arrangement in the windows of the dome (Paris 1978: pl. 47). This arrangement may be seen in photographs of the dome taken before the restorations of 1342-6/1923-7 (pl. 28.21).⁶⁴ The large windows are blocked from their base to approximately one-third of their height. The lower part of each window is filled with a landscape scene executed in a European idiom. The grilles filling the upper parts of the windows are of at least two types: those in which the lunette is not distinguished, and those in which the lunette is separated from the rectangular field below. In the latter type, the rectangular field is further subdivided into two vertical arched panels. It appears that the two types alternated in the windows around the dome.

The date at which this idiosyncratic system of fenestration was introduced can be determined from travellers' accounts. 'Ali Bey al-'Abbassi, who visited the building between 1218/1803 and 1222/1807, makes no mention of the landscape scenes, stating only that the cupola has

⁶² No information is available on the changes made to the windows during the restoration of 1378-84/1958-64. At some later date two windows in the south-eastern and south-western sides of the octagon were replaced with copies of the types removed (Shafi'i 1970 65). Which two windows these were is not specified.

⁶³ This is clear from the published photographs of the restoration (see Hamilton 1949).

⁶⁴ Also in an unpublished photograph of the dome's interior (Creswell Archive no. 1476).

... two rows of windows, and is ornamented with arabesque paintings and gilding of exquisite beauty ('Ali Bey al-'Abbassi 1816: 217).

Wilson, who saw the mosque before 1299/1881, is less complimentary, telling us that

Some wretched paintings by an Italian artist were introduced when the mosque was repaired at the commencement of the present century (Wilson 1881: 66).

Since the only large-scale repairs at this date were undertaken during the reign of Mahmud II, the paintings in the windows were probably introduced at this period. 'Ali Bey's mention of two rows of windows in the cupola suggests that the division of the windows into two parts may have followed an earlier precedent. Richardson visited Jerusalem during the renovations of Mahmud II and mentions the windows in the Aqsa dome:

The dome is painted of different colours, and lighted by windows in the side. The glass in these windows is also painted blue, yellow, red, and green. The light admitted through such a medium is softened and delightful, and calculated to inspire sentiments suited to a place of worship (Richardson 1822: 306).

It is not clear whether Richardson is describing the window-grilles installed by Mahmud II or those which they replaced, although the absence of any reference to the landscape scenes suggests the latter.

The paintings and the window-grilles associated with them seem to have disappeared in the restorations of 1342-6/1923-7. It may be that some of the early 13th/19th-century windows in the dome bore the *shahada*, for Sepp (who visited in 1278/1861) mentions a window-grille with such an inscription, although without specifying where in the mosque (1873: 416). When van Berchem visited in 1333/1914, he recorded the *shahada* in three of the window-grilles in the dome. A similar inscription was to be found in a window in the chapel of the Forty Martyrs (van Berchem 1927: 450). Wilson (who saw the mosque before 1299/1881) mentions that the southern window of the dome was particularly fine, 'of a delicate blue colour' (1881: 65). The fact that this grille stood out from the others suggests that some of the window-grilles may have been replaced during the restorations of 1291/1874.

Of the remaining windows in the mosque, little can be said. Van Berchem mentions that the window above the *mihrab* bore a quotation from Sura III: 32-37 executed in yellow letters against a blue ground (1927: 450). This *aya*,

with its reference to the *mihrab*, is obviously appropriate to such a context and may be found in the *qamariyyat* above the *mihrab* in Mamluk *madrasas* and tombs.⁶⁵ Although yellow is sometimes used for the letters of inscriptions in 10th/16th-century windows in Istanbul,⁶⁶ in the context of the Haram this detail is more likely to indicate that the grille dated from the time of 'Abd al-'Aziz. Before the restorations of 1342-6/1923-7 the rose window in the chapel of Zachariah was filled with crude stucco tracery, possibly also of 13th/19th-century date, from large parts of which the coloured glass was missing (Enlart 1925-7: fig. 355). Wilson (1881: 65) mentions a fine window in the same location, in which 'the colours are not so effectively blended as in the windows of the Dome of the Rock'.

It thus appears that even before the two major restorations of this century and the fire which followed them, few of the stucco and glass windows installed as part of the restoration of the Haram buildings ordered by Sulaiman were still in place. This fact appears to be acknowledged by van Berchem, who concluded that most of the window-grilles were modern and mediocre in quality (1927: 450). The impression that the decoration of the Aqsa was not as well-preserved as that of the Qubbat al-Sakhra is conveyed by several 13th/19th-century visitors. Beaufort (1861: 158) for example, states that while the latter is 'lovely and beautiful', the former is 'grand but triste'.

Despite this, it may be that certain details of the 10th/16th-century windows are preserved in the modern grilles. For example, in some of the *qamariyyat* now in the windows at the western end of the *qibla* wall, the main elements of the design are set against an imbricated background. This detail was found in the window-grilles executed in 1342-6/1923-7,⁶⁷ which presumably replaced earlier grilles, and may be seen in the *qamariyyat* which survive in the Church of the Coenaculum. One of the latter grilles (pl. 28.22) bears the date 1344 (1925) and it seems likely that the *qamariyyat* were installed by the same team which worked on the Aqsa restorations, at the time when the Coenaculum was still a mosque.⁶⁸ This type of background ornament appears in

⁶⁵ In the mausoleum of Aslam al-Silahdar (746/1345). Other quotations from the same *sura* appear in the window above the *mihrab* in the mosque of al-Salih Tala'i (rebuilt in the early 8th/14th century) and the Madrasa of Gani Bek (830/1426-7).

⁶⁶ For example in the windows of the Süleymaniyye and the Yeni Cami.

⁶⁷ Although they were created to replace *qamariyyat* destroyed in 1386-7/1967, one of these window-grilles bears the date 1347/1928.

⁶⁸ These do not appear to have replaced earlier coloured glass windows, for none are visible in photographs taken in 1340-1/1921-2 (Enlart 1925-7: fig. 340).

the windows depicted in Persian miniatures by the early 10th/16th century.⁶⁹ It is also found in the window-grilles of the Süleymaniyye and the later grilles in the Harem of the Topkapi.⁷⁰ It may be therefore that such a background was also used in the 10th/16th-century windows of al-Aqsa.⁷¹

8. Conclusion

The buildings of the Haram al-Sharif are architectural palimpsests on the surface of which successive generations, whether motivated by piety or by politics, attempted to make their mark. This phenomenon is nowhere more apparent than in the stucco and glass window-grilles of the Dome of the Rock and the Aqsa. Such grilles play at once a functional role—controlling the amount of light entering and ensuring the protection of the interior of the buildings—and an aesthetic one, transforming the quality of the light by which we perceive these interiors. The impact of such window-grilles on the interior space cannot be definitively quantified, for it too is part of a continuously evolving whole. The interior of the Dome of the Rock must have appeared quite differently when the colours of the light falling on its Umayyad mosaics and marbles were dictated by the aesthetics of 10th/16th-century Istanbul, than it did in the 12th/18th century when the same mosaics were whitewashed and many of the windows installed by Sulaiman replaced by cruder copies in which glass of harsher tones was set.⁷²

For this reason no attempt has been made to assess the qualitative aspect of changes to the windows over the past half-millennium. What has been attempted instead is a quantitative assessment based on stylistic and chronological considerations. Special emphasis has been placed on the restorations ordered by Sulaiman the Magnificent, for it was at this period that the most extensive changes to the windows of both the Aqsa and the Qubbat al-Sakhra were undertaken, with new window-

grilles being set in place in both. Although the designs of these window-grilles seem to have followed the fashions of contemporary Istanbul, there are technical and historical reasons for suggesting that they were manufactured by craftsmen brought from Syria or, more probably, Egypt.

The paucity of information about the Ottoman stucco and glass windows of the Aqsa precludes any firm conclusions. It is clear that new window-grilles were installed in the Aqsa as part of the campaign of restoration carried out at the behest of Sulaiman. At the end of the last century it appears that some of the grilles installed at this time may still have survived. In view of the numerous vicissitudes which the mosque has suffered subsequently, it seems unlikely that the modern system of fenestration preserves much of the 10th/16th-century arrangement.

Different problems arise in connection with the windows of the octagon in the Dome of the Rock and those in the drum of the dome. While most of the stucco and glass window-grilles found in the octagon today give some idea of the 10th/16th-century windows, they include at least one type which is likely to post-date this period (pl. 28.6; Appendix 28.2, windows 1, 4, 10, 13, 19, 22, 28, 31). Conversely, the form of at least one of the 10th/16th-century window-grilles is no longer represented among the modern windows (pl. 28.1). Some of the latter seem to be faithful reproductions of types introduced by Sultan Sulaiman (pl. 28.2; Appendix 28.2, windows 2, 3, 6). Others are based on the 10th/16th-century types, but with certain details altered. Sometimes an earlier inscription has been copied in the correct location and sequence, but on a grille of a different type to that on which it originally appeared (Appendix 28.2, window 1). There are also grilles which faithfully reproduce type and/or location, but on which the inscription has been altered (Appendix 28.2, windows 20, 23). While the arrangement of the window-grilles is in keeping with that introduced in the 10th/16th century, the colours of their glass do not adhere strictly to the 10th/16th-century scheme.⁷³

This is even more true of the grilles now in the windows of the drum, which seem to preserve the forms of window-grilles of several different periods. Even where the form of an earlier grille has been faithfully copied, the new grille has often been placed in a different window to that in which its prototype appeared (see Appendix 28.3, windows 12 and 13). Because no changes to the grille in a particular window have been documented, it does not mean that no changes have occurred. Conversely, in view of the discrepancies between documentary and material

⁶⁹ See, for example, a window depicted in an illustrated *Khamseh* manuscript, possibly produced in Sistan around 927/1520, in which an arabesque design is set against an imbricated ground (Soudavar 1992: 177, no. 67).

⁷⁰ For the Süleymaniyye windows see notes 19–20. For Topkapi see Anhegger-Eyüboğlu (1979–80: 59–60, figs 26a, 28); Bakirer (1985: 150, fig. 74). Of the Topkapi windows Rogers (1983: 250) concludes: 'Though the inherent fragility of the stucco panels makes it barely possible that any of these are original, they may well be faithful copies'.

⁷¹ Although it should be noted that, apart from what appears to be an intrusive late type (pl. 28.6), there is no evidence for the use of an imbricated background in the 10th/16th century windows of the Qubbat al-Sakhra.

⁷² The fact that the walls were whitewashed is mentioned by Horn 1962: 204. This was also the case in the early 13th/19th century; see Richardson 1822: 296.

⁷³ Creswell (1969: 221) comments on the windows installed in the 1340s/1920s, '... the colours of the glass are no longer what they were. This can be verified by the new stained-glass windows recently put into position, the tones of which are very crude.'

evidence, it seems unlikely that documentation of changes to, or replacements of, the windows should be taken as absolute proof that such changes were as far-reaching as claimed. It is to be hoped that the future publication of the documentation which concerns the restorations ordered by Ahmad III may resolve the issue, but for the moment one must conclude that it is highly unlikely that all the window-grilles in the drum were replaced at any point during the Ottoman period, for many Mamluk *qamariyyat* seem to have survived in this location until relatively recently. Even after the major restorations of the 1340s/1920s, Megaw (1952: 56) could identify as many as nine windows in the drum as likely to be wholly or partly, work of al-Nasir Muhammad's time. There are therefore reasons for thinking that, contrary to the practice employed in the windows of the octagon, not all the Mamluk window-grilles in the windows of the drum were replaced during the restorations ordered by Sultan Sulaiman.

Why this may be so, or what the relationship between the surviving Mamluk grilles in the dome and the new windows installed by Sulaiman was, is not clear, but perhaps the grilles installed in the dome in the 8th/14th century were in a better condition than those of the octagon. Even in the octagon, where the stylistic and epigraphic evidence leaves no doubt that all the stucco and glass windows were replaced by Sulaiman, the survival of metal gratings in some of the windows until the present century suggests that, in certain cases, the exterior grilles set in place during the Mamluk period may have been retained, hidden between the inner grilles and the outer grilles of pierced tiles (Megaw 1952: 88; Shafi'i 1970: 65; see note 6 above).

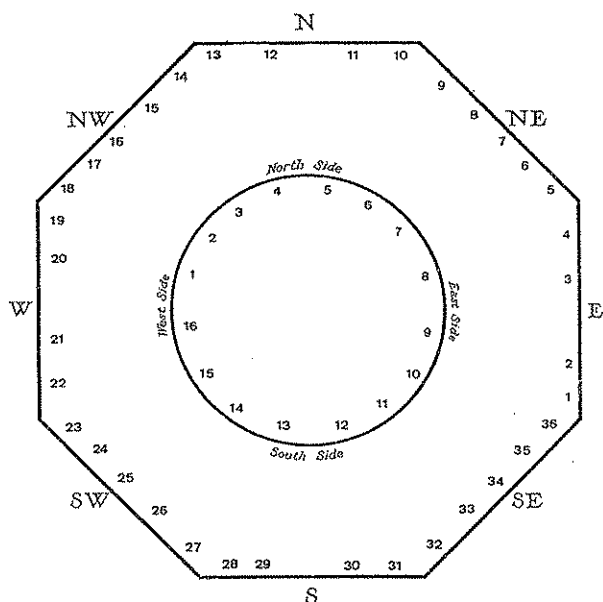


Fig. 28.1 The Dome of the Rock: key to the window numbers cited in the text and appendices.

The fact that any of the forms of the Mamluk or the 10th/16th-century grilles have survived serves to indicate that the process of copying early types continued in subsequent restorations. This was certainly the case with the post-Ottoman restorations, which entailed the replacement of some ruined window-grilles with copies of those removed (Appendix 28.2, windows 13-14). Over five centuries the process of copying earlier types, repairing damaged grilles *in situ* and replacing spoiled windows, often resulted in hybrid forms. The poor quality of some of the resulting 12th/18th- and 13th/19th-century pastiches—hard to appreciate from the window-grilles in place today—is witness to the lack of a vibrant, evolving tradition of *qamariyyat* manufacture in Jerusalem during the Ottoman occupation. Richmond (1924: 80) had suggested bringing craftsmen from Cairo to restore the windows. When major restorations of both the Qubbat al-Sakhra and the Aqsa were undertaken between 1342/1923 and 1346/1927, two master craftsmen had to be brought from Istanbul to teach the craft to local artisans (Anon 1928: 13). The present windows in the Dome of the Rock, which conform to the spirit—and sometimes to the letter—of the 10th/16th century, are largely products of the workshop established at this time. Its successor was responsible for replacing the *qamariyyat* in the Aqsa destroyed in the fire of 1386-7/1967 and continues to operate from a workshop adjoining the mosque (pl. 28.23).

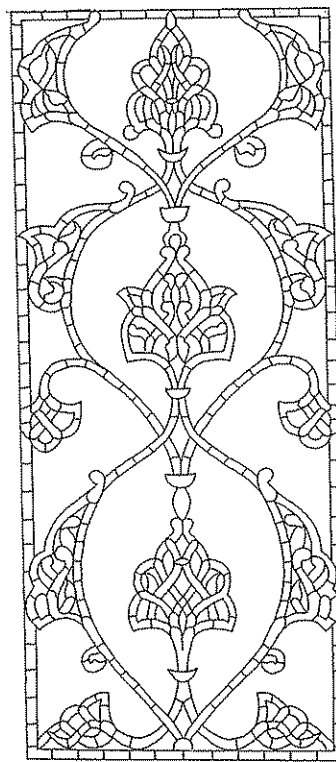


Fig. 28.2 Detail of the central field of the window type seen in pl. 28.1, based on a window-grille in the Aqsa Museum, Haram al-Sharif, Jerusalem.

APPENDIX 28.1

The Dome of the Rock: Inscriptions in the windows of Sultan Sulaiman

This reconstruction of the inscriptions in the 10th/16th-century windows is based on the evidence published by van Berchem (1927: 329-31), who drew heavily on the unpublished notes of Sauvaire, and the inscriptions recorded by de Vogüé (1864: 96-7). The translations of Qur'anic verses are largely based on those of Yusuf 'Ali. Sometimes van Berchem indicates precisely where in an *aya* the quotation in a particular window begins and ends. Where this is not indicated, I have used the average length of Qur'anic quotation in the windows as a guide in dividing an *aya*. This is the case with the Qur'anic inscriptions which are continued across windows 4-5, 16-8, 29-31, and 32-4.

I have departed from van Berchem's reconstruction in one respect only. According to van Berchem, verse 1 of Sura XLVIII appeared in the first window of the southern side of the octagon (window 28). Verse 2 appeared in the next three windows (29-31), and verses 4 to 5 in the windows of the following, south-eastern, side (32-36). It seems reasonable to conclude, however, that the lengthy quotation from Sura XLVIII originally included all five of the first verses. The missing verse 3 would therefore have appeared in window 31, which would produce a scheme in which quotations of approximately equal length appeared in each window.

East

1. In the name of God, the Compassionate, the Merciful.
2. And your God is One God ... (continued on window following)
3. there is no God but He, the Most Merciful, the Most Compassionate: Sura II 163-64.
4. God! There is no God but He, the Living, the Eternal ... (continued on window following)

North-East

5. No slumber can seize Him nor sleep. His are all things in the heavens ... (continued on window following)
6. and on earth. Who is there who can intercede in His presence ... (continued on window following)
7. except as He permits? He knows what is before them or after or behind them. Nor shall they encompass anything ... (continued on window following)
8. of His knowledge except as He wills. His Throne extends over the heavens and the earth ... (continued on window following)
9. and He feels no fatigue in guarding and preserving them for He is the Most High, the Supreme: Sura II 255/256.

North

10. O God, aid and sustain the armies of the Muslims ... (continued on window following)
11. Prolong the days of our lord, the sultan... (continued on window following)
12. lord of the necks of the nations, the sultan ... (continued on window following)
13. Sulaiman, son of the Sultan Selim Khan, son of Bayazid.

North-West

14. In the Name of God, the Compassionate, the Merciful
15. The mosques of God shall be visited and maintained ... (continued on window following)
16. by such as believe in God and the Last Day, ... (continued on window following)
17. observe regular prayers, and practise regular charity ... (continued on window following)
18. and fear None but God: Sura IX 18/18

West

19. And these things were accomplished in ... (continued in window following)
20. the year nine hundred and thirty-five
21. Inscription unknown.
22. Inscription unknown.

South-West

23. Our Lord, the sultan, the great ... (continued on window following)
24. king and the honoured *khaqan* ... (continued on window following)
25. lord of the necks of the nations, sultan ... (continued on window following)
26. of the Arabs and of the foreigners, Sultan Sulaiman ... (continued on window following)
27. son of the Sultan Selim Khan, son of Bayazid.

South

28. In the Name of God, the Compassionate, the Merciful. Verily We have granted thee a manifest Victory: Sura XLVIII 1/1.
28. That God may forgive thee thy faults of the past and those to follow ... (continued on window following)
30. Fulfil His favour to thee: and guide thee on the Star-right Way: Sura: XLVIII 2/2.
31. And that God may aid you with powerful help: Sura XLVIII 3/3.

South-East

32. It is He who sent down tranquillity into the hearts of the believers ... (continued in window following)
33. that they may add Faith to their Faith; for to God belong the forces of the heavens and the earth; ... (continued in window following)
34. and God is full of Knowledge and Wisdom: Sura XLVIII 4/4. That He may admit the believers ... (continued in window following)
35. to Gardens beneath which rivers flow, to dwell there for ever, ... (continued in window following)
36. and absolve their evils—that is, in the sight of God, the highest achievement (for man): Sura XLVIII 5/5.

APPENDIX 28.2

The Dome of the Rock: Windows in the Octagon

The window numbers refer to the windows indicated in fig. 28.1.

East

1. Apart from its inscription (the *bismillah*), which follows that of the earlier window, the window now in place bears no relation to the 10th/16th-century window recorded by de Vogüé (1864: 96, pl. XXIV). This was removed in the 1370s/1950s and may be among the windows in the Aqsa Museum.
2. See comments for window 3. The inscription of the grille now in place follows that of the 10th/16th-century window (See Appendix 1).
3. The form of the window now in place follows that of the 10th/16th-century window recorded by de Vogüé (1864: 96, pl. XXV, my plate 28.2). The colours of the glass are quite different, with blue and yellow now the predominant colours and the red glass of the earlier window absent. This suggests that the glass either has been replaced, or that the grille is an accurate copy in which modern glass has been used.
4. The window-grille now in place is similar to that in window 1. It therefore seems to have been set in place at some point during the present century.

North-East

5. Megaw (1952: 55) suggested that this was a 10th/16th-century window.
6. Megaw (1952: 55) suggested that this was a 10th/16th-century window. The design and border of this window is not unlike one of those published by de Vogüé (pl. 28.2 above). The type is clearly related to one of the window-grilles of the dome (fig. 28.7), which is likely to preserve the form of a 10th/16th-century grille. Even if this grille is modern, it seems likely therefore that it copies a type installed in the time of Sulaiman the Magnificent.
7. On inspection in 1333/1914, van Berchem (1927: 330 n. 4) suggested that the grille filling this window may have been remade in 1291/1874, while preserving the form of the original 10th/16th-century window. The inscription which the latter window bore (see Appendix 1) is preserved in the window-grille presently *in situ*.
8. See comments for window 6.
9. The same type as window 5. Megaw (1952: 55) suggested that this was a 10th/16th-century window.

North

10. The window-grille now in place is similar to that now found in window 1. It seems that this was installed during the restorations of the 1340s/1920s, when the earlier grille was removed to the Aqsa Museum (Megaw 1952: 55). This differs from the type in place earlier, visible in Creswell (1969: pls. 15-16). The latter seems to have been a 10th/16th-century type, for it is similar to that recorded by de Vogüé in window 1. There is some suggestion that the vanished grille may have been remade at some time before 1333/1914 (van Berchem 1927: 332, n. 4), but if this was the case the form of the window installed during the restoration undertaken by Sultan Sulaiman seems to have been preserved.

11. The grille seen by van Berchem in 1333/1914 appears to have dated from the 10th/16th century, or to have copied a window-grille of this date (1927: 332, n. 4). It is not certain that the form of the grille presently *in situ* follows that of the grille which it replaced.

12. The grille filling this window was replaced during the reign of 'Abd al-'Aziz, for the window seen by van Berchem in 1333/1914 bore the name of this sultan (1927: 329). This was replaced in the 1340s/1920s (Megaw 1952: 55) and the inscription on the grille presently filling this window makes no mention of 'Abd al-'Aziz.
13. The grille filling this window was replaced in 1291/1874 during the restoration undertaken by 'Abd al-'Aziz (van Berchem 1927: 329-30). The replacement window, visible in a photograph published by Creswell (1969: pl. 16), appears faithfully to have copied the form of a 10th/16th-century grille, for it is of a type recorded by de Vogüé in window 1. This was removed to the Aqsa Museum in the 1340s/1920s (Megaw 1952: 55) and replaced by a grille of an entirely different type.

North-West

14. The grille filling this window was replaced during the reign of 'Abd al-'Aziz (van Berchem 1927: 329). Apart from the inscription, it may be that the grille installed at this time faithfully copied one from the time of Sultan Sulaiman. This appears to have been the case with the grille installed in 1291/1874 in window 13, and the border of medallions and cartouches (visible in Creswell 1969: pl. 17a) was used in the 10th/16th-century grilles. During the restorations of 1342-6/1923-7 this was in turn replaced (Megaw 1952: 55). The present grille has a simple border of cartouches with no intervening medallions, which indicates that it does not follow the form of the 10th/16th-century window exactly, if at all.
15. The grille filling this window was installed between 1342/1923 and 1346/1927 (Megaw 1952: 55). It replaces an earlier grille of a different type (visible in Creswell 1969: pl. 5b), similar to that now found in windows 11 and 12.
16. The grille filling this window was replaced in 1291/1874, for that recorded by van Berchem (1927: 329) bore the name of 'Abd al-'Aziz. This grille appears to have had its central field subdivided into two vertical rectangular panels (visible in Creswell 1969: pl. 5b), and was perhaps similar to the type which now appears in windows 1, 4, 10, 13, 19, 22, 28 and 31. It was replaced in the restorations of 1342-6/1923-7 by a window-grille of a different type (Megaw 1952: 55), similar to that now in place in windows 5, 7, 9, and 14.
17. See comments for window 15.
18. See comments for window 14. The grille removed between 1342/1923 and 1346/1927 is visible in Creswell (1969: pl. 18a).

West

19. In the period 1308-18/1890-1900 this window was filled with a grille of a type similar to those now in place in windows 11 and 12. The colours of the glass were, however, quite different, with the main lines of the hexagonal grid filled with red rather than yellow glass (Israel Antiquities Authority, Photographic Archive, Finn Collection P2619). To judge from the inscription recorded by Sauvage in 1311/1893 (see Appendix 28.1), this was an original 10th/16th-century window-grille. At some time between 1311/1893 and 1333/1914 this grille was altered or removed, for van Berchem (1927: 329) recorded reading the *shahada* in this window. The grille in which this appeared is visible in Richmond (1924: fig. 7). Between 1342/1923 and 1346/1927 this was

replaced with a grille of a different form (Megaw 1952: 55), similar to those now in windows 1, 4, 10 and 13. During the restorations of the 1370s/1950s this was replaced with an exact copy of the latter grille, which is now on display in the Aqsa Museum.

20. In 1311/1893 Sauvaire recorded an inscription giving a date of 935/1528-9 in the grille filling this window (van Berchem 1927: 331). This suggests that the 10th/16th-century grille had survived until then. When van Berchem visited the Dome of the Rock in 1333/1914, this grille bore no inscription (1927: 329). A new grille was installed in the restorations of 1342-6/1923-7 (Megaw 1952: 55). The grille currently in place is similar to those in windows 2 and 3, which follow a 10th/16th-century design. Since no information is available regarding the form of the grille seen by Sauvaire, however, it is not possible to be certain that a grille of this type appeared originally in this position.

21. The grille in this position had been altered or replaced by 1311/1893, for Sauvaire indicated that it was anepigraphic (van Berchem 1927: 330). It was again replaced in 1342-6/1923-7 (Megaw 1952: 55) and presumably in the subsequent restoration, for Megaw (1952: 54) reports that it had disintegrated by 1372/1952.

22. The grille in this position had been altered or replaced by 1311/1893, for Sauvaire indicated that it was anepigraphic (van Berchem 1927: 331). The design of this grille (visible in Creswell 1969: pls. 19, 20a) appears to have been based on some of those in the dome. In the 1340s/1920s it was replaced by a window-grille similar to those which appear today in windows 1, 3, 13, 10 and 19.

South-West

23. Until van Berchem's visit in 1333/1914, the grille in this window bore its 10th/16th-century inscription and may have been original, or remade after the original (van Berchem 1927: 332, n. 4). For reasons of symmetry, one would expect here a grille of a similar type to that recorded by de Vogüé in window 27 (pl. 28.3). If so, the grille was subsequently removed; the window-grille now in place is based on that which de Vogüé recorded in window 3.

24. The grille filling this window was replaced in 1291/1874, for van Berchem recorded the name of 'Abd al-'Aziz in this window (van Berchem 1927: 330). Like the grille formerly in window 12, which bore the name of the same sultan, this was subsequently replaced with a grille in which the sultan's name does not appear. Both grilles are based on that found in window 19, which appears to date from the time of Sulaiman the Magnificent, and were presumably installed in the 1340s/1920s or later.

25. Until 1333/1914 the grille in this position appears to have been, or to have copied, a 10th/16th-century grille, for the inscription which it bore contained the titles of Sultan Sulaiman (van Berchem 1927: 331, n. 6; 332, n. 4). This appears to have been replaced subsequently, for the window-grille now in place bears a different inscription. No information is available concerning the form of the earlier grille.

26. Until 1333/1914 the titles of Sultan Sulaiman were continued from window 25 in the grille filling this window. No information is available concerning the form of this grille which was subsequently replaced by one now in place, which bears a different inscription.

27. The original 10th/16th-century grille was recorded by de Vogüé (pl. 28.3). Although this grille appears to have been repaired or replaced subsequently, the inscription was copied in the new grille (van Berchem 1927: 331, n. 7). At some time after 1333/1914 a new grille which follows neither the form nor the inscription of the earlier window was set in place.

South

28. The grille in this position was remade between 1312/1894 and 1333/1914, but its inscription followed that of the earlier window (van Berchem 1927: 331 n. 8). The later grille appears to have been of similar form to that of the grilles which appear today in windows 1, 4, 13, 10, 22, and 19 and may have been the model for these grilles. That a grille of this form was in place by 1327/1909 is apparent from William Harvey's painting of the interior of the Qubbat al-Sakhra (Creswell 1969: frontispiece). In a photograph published by Creswell (1969: pl. 21a) it can be seen that the inscription is executed against a background perforated by random drilling. Since drilling also appears in the background of an inscription on a fragmentary window now in the Aqsa Museum which bears the name of 'Abd al-'Aziz and the date 1291/1874 (pls. 28.9-10), it may be characteristic of windows of this date. It seems likely therefore that grilles which now fill windows 1, 3, 13, 10, 19, 22, 28 and 31 copy a type introduced in the last quarter of the 13th/19th century.

29. Van Berchem (1927: 331, n. 8) could find no evidence for this grille having been replaced. No details of its form are available.

30. Van Berchem (1927: 331, n. 8) gives no evidence for this grille having been replaced. The form of the grille was similar to that formerly found in window 6, for it appears both in Harvey's painting of 1327/1909 (Creswell 1969: frontispiece) and in a photograph taken by Richmond in 1338/1919 (1924: fig. 6). Since this type of grille appears to be contemporary with the 16th-century restorations, it seems likely that the example in window 30 was original. The grille was subsequently removed and replaced with a type which formerly appeared in window 19.

31. The grille in this window was re-made or replaced before 1311/1893, for it repeated the inscription found in window 28 (van Berchem 1927: 331, n. 8). A grille of the type discussed in connection with window 28 was in place by 1327/1909, for it appears in Harvey's painting (Creswell 1969: frontispiece). A similar window-grille is *in situ* today.

South-East

32. Van Berchem considered the inscription in this window as being faithful to that of the 10th/16th-century grille (van Berchem 1927: 331 n. 9). Megaw (1952: 55) suggested that the grille may have been one of the originals installed during the restorations undertaken by Sultan Sulaiman.

33. Megaw (1952: 55) suggested that this may have been a 10th/16th-century grille. No information on subsequent alterations has been found.

34. See comments on window 33.

35. The grille filling this window appears to have been replaced before 1311/1893, for it repeated part of the inscription in window 33 (van Berchem 1927: 331, n. 9). No information on subsequent alterations has been found.

36. Megaw (1952: 55) suggested that the grille in this window was an original 10th/16th-century window-grille. Either this was not the case, or the grille seen by Megaw was subsequently removed, for the grille seen in a photograph taken before the restorations of 1342-6/1923-7 (Creswell 1969: pl. 12a) has a border of cartouches alternating with medallions. The intermediary medallions do not appear in the border of the grille in place today.

APPENDIX 28.3

The Dome of the Rock: Windows in the Drum of the Dome

The window numbers refer to those indicated in fig. 28.1.

1. Before the restorations carried out in the present century, this window was unique among those in the dome in being filled with an epigraphic grille (pl. 28.17, fig. 28.10). The lunette and the rectangular field of this grille were executed in different styles and clearly belong to different periods. Megaw (1952: 56) suggested that the lower part of the grille containing the epigraphic panel may have dated from the restorations carried out under Sultan Mahmud II in 1233-4/1817-8. However, the design of this lower panel appears to be based on the type of grille now in window 12, which seems to date from, or to copy a grille of, the 10th/16th century.
2. The type of grille currently in place bears little relation to that which appears in a photograph taken before the restorations of the 1340s/1920s (Creswell: 1969, pl. 5b).
3. Megaw (1952: 56) suggested that the grille filling this window may have been an original 8th/14th-century *qamariyya*. The window in place today is similar to that now in window 16, a later replacement which bears no relation to the earlier type of grille which it replaced.
4. Megaw (1952: 56) suggested that this grille was an 8th/14th-century creation. The one now in place appears to be later; the presence of a polylobed arch in the central field suggests that it is—or that it copies—an Ottoman grille.
5. Megaw (1952: 56) suggested that the grille in this window was an original 8th/14th-century one. This same grille appears to have been damaged at some subsequent time (visible in Shafi'i 1970: plate on page 20). The grille now in place is similar to the example published by Richmond (1924: fig. 68) which would support Megaw's suggestion. Whether the grille now *in situ* is the same as that seen by Megaw, or is a later copy, is not clear.
6. Megaw (1952: 56) believed that the grille in this window was, or was based on, a 10th/16th-century type. For reasons discussed above, I would propose an earlier date for the type, which continues to appear in this window today.
7. Comments as for window no. 4. A type of grille now no longer represented among the windows of the drum appears in a photograph taken in the first quarter of this century (van Berchem: 1927, pl. XXV).
8. Megaw (1952: 56) suggested that the grille filling this window antedated the renovations of Sultan Sulaiman. In a photograph taken before the restorations of this century (van Berchem 1927: pl. XXV) a grille with a large central *shamsa* is in place. The presence of both a polylobed arch and a pair of symmetrical cypresses in the central field of the grille now in place suggests that this grille is considerably later and is presumably not the one seen by Megaw.

9. Megaw (1952: 56) suggested that this window-grille dated from the renovations of Sultan Sulaiman. The form of the window now in place is similar to that of one of the grilles published by Richmond (1924: fig. 67), which, for reasons discussed above, suggests that it follows the form of a Mamluk rather than an Ottoman grille.

10. Remarks as for window 9.

11. To judge from Harvey's painting of 1327/1909 (Creswell 1969: frontispiece), the grille formerly in place in this window was of a type no longer represented among the types of window-grilles which have survived. The same grille is visible in one of Creswell's unpublished photographs (Creswell Archive, no. 56) and more clearly in a photograph published by van Berchem (1927: pl. XX). Megaw (1952: 56) believed that the tympanum of this grille may have dated from before the Ottoman period, but thought that the geometric tracery of which the rectangular field below was composed was of more recent manufacture.

12. A photograph published by van Berchem (1927: pl. XX, my pl. 28.18), a photograph in the Creswell Archive (no. 56) and the painting executed by Harvey in 1327/1909 (Creswell 1969: frontispiece) all show a grille of different type in the same position. Megaw (1952: 56) suggested that this grille was, or was based upon, one of the grilles installed in the 10th/16th century. For reasons discussed above, this assumption seems reasonable. That now in place copies a type of grille with a central *shamsa* which may date from the period of al-Nasir Muhammad. It appears that in the course of one of the renovations of this century, probably after Megaw's report was written, both types were copied. The order in which they appear in the windows of the dome was reversed, however, with the 10th/16th-century type formerly in window 12 being placed in window 13 and the 8th/14th-century type formerly in window 13 being copied and placed in window 12.

13. See remarks for window 12.

14. The grille which fills this window in the painting executed by Harvey in 1327/1909 (Creswell 1969: frontispiece) is of a similar type to that now in place in window 16. This was subsequently replaced, for the grille now *in situ* is similar but not identical to one published by Richmond (1924: fig. 67), a type which seems to date from the renovations of al-Nasir Muhammad.

15. The grille which fills this window has been put in place this century, for a grille of a type similar to that published by Richmond (1924: fig. 68) and to those which now appear in windows 1 and 14 is seen in a photograph published by van Berchem (1927: pl. XXV). At present one of a different type, similar to that which now fills window 12, is in place. Megaw (1952: 56) believed the earlier grille to date from the Mamluk period, which is not unlikely.

16. The grille now in place bears no relation to that which appears in a photograph in the Creswell Archive (pl. 28.20), a grille which was similar to those now in windows 1, 13 and 14, with a central *shamsa*. The evidence for considering this type to be based on an 8th/14th-century form of window-grille has been discussed in section 6 above.

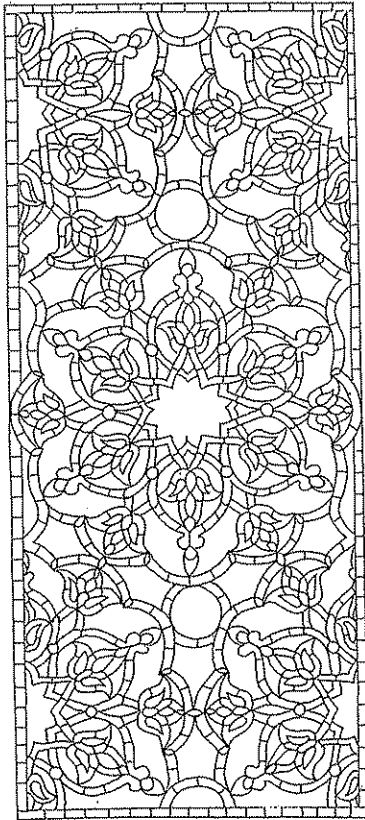


Fig. 28.3 Detail of the central field of the window type seen in pl 28.2, based on a window-grille in the Aqsa Museum, Haram al-Sharif, Jerusalem.

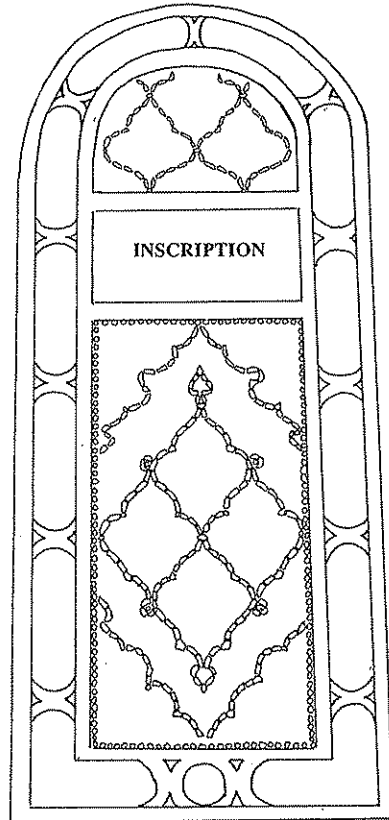


Fig. 28.4 Dome of the Rock, octagon window-grilles, type 3.

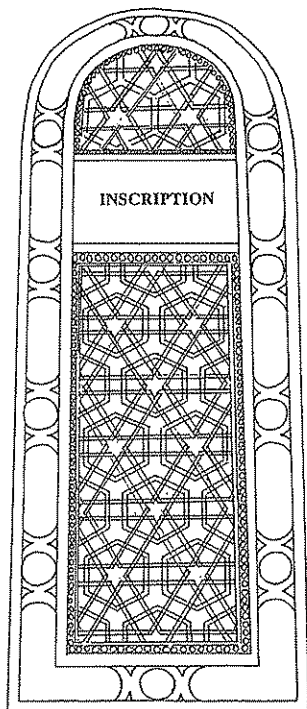


Fig. 28.5 Dome of the Rock, octagon window-grilles, type 5.

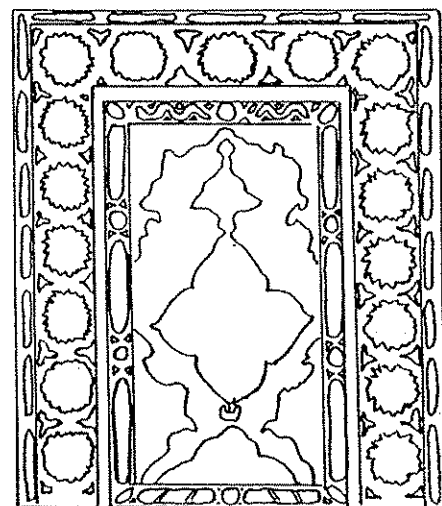


Fig. 28.6 Detail of a window depicted in an illustrated *Khamseh* of Nizami, Herat 900/1494.

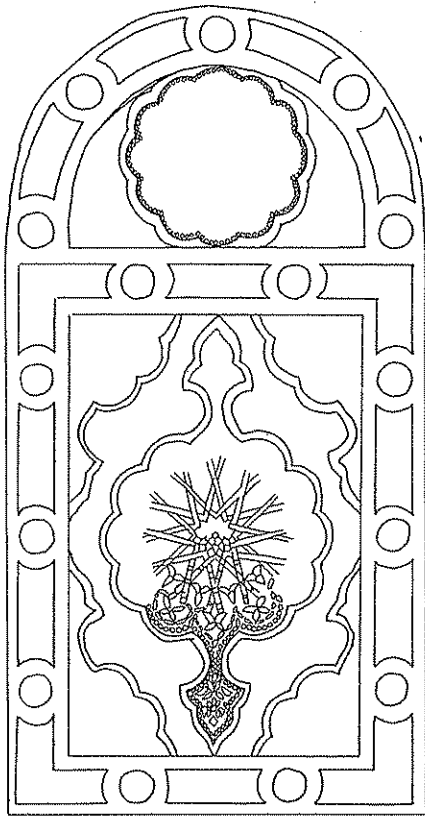


Fig. 28.7 Dome of the Rock, dome window-grilles, presumed 10th/16th-century type.

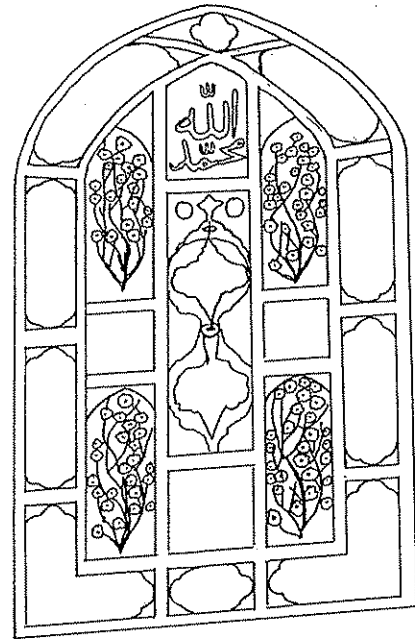


Fig. 28.8 Window-grille above the *mihrab*, Süleymaniyye Mosque, Istanbul.

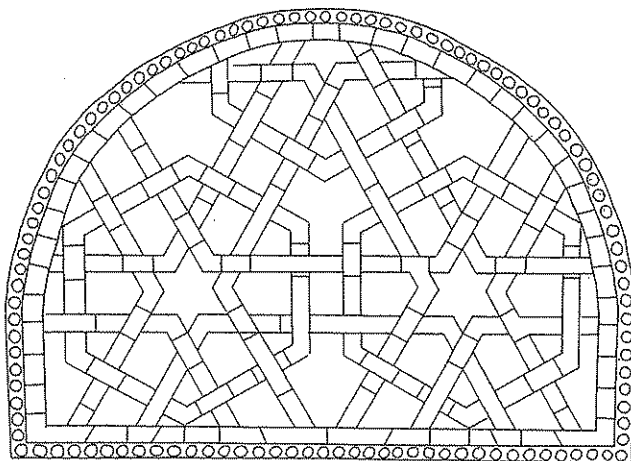


Fig. 28.9 Detail of a window-grille bearing the name of 'Abd al-'Aziz, now in the Aqsa Museum, Haram al-Sharif, Jerusalem.

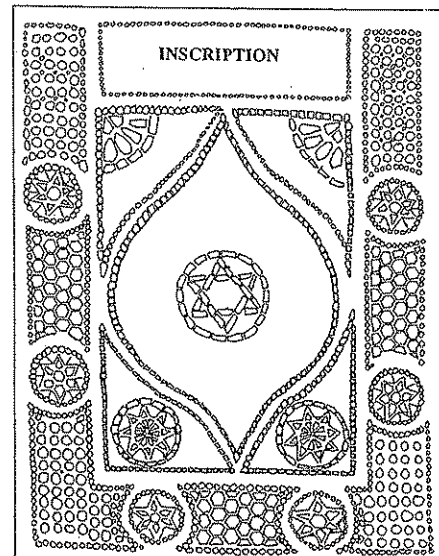
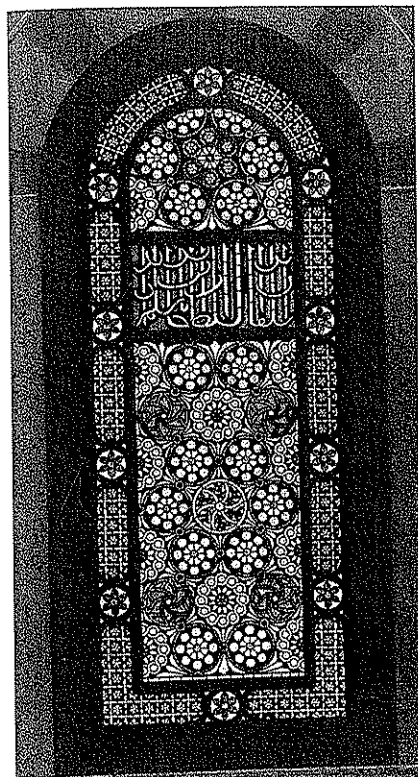
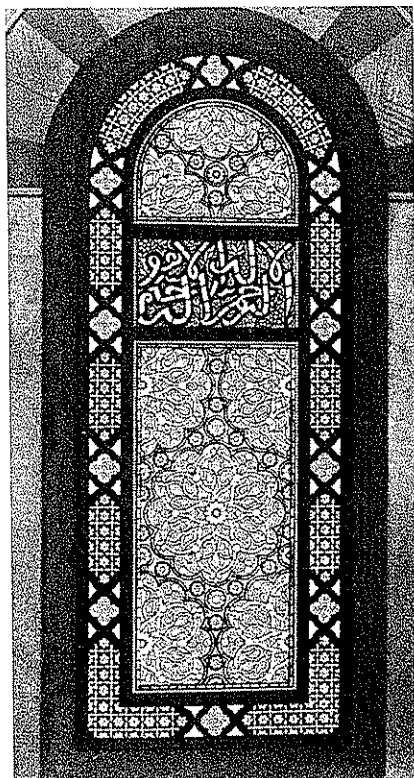


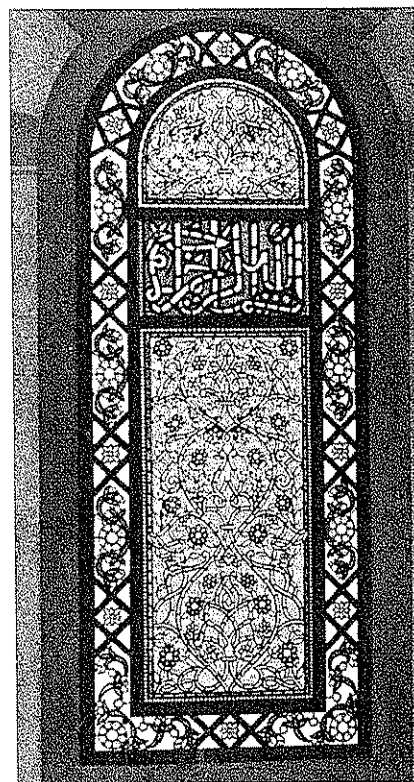
Fig. 28.10 Dome of the Rock, detail of an inscribed window-grille formerly in the dome.



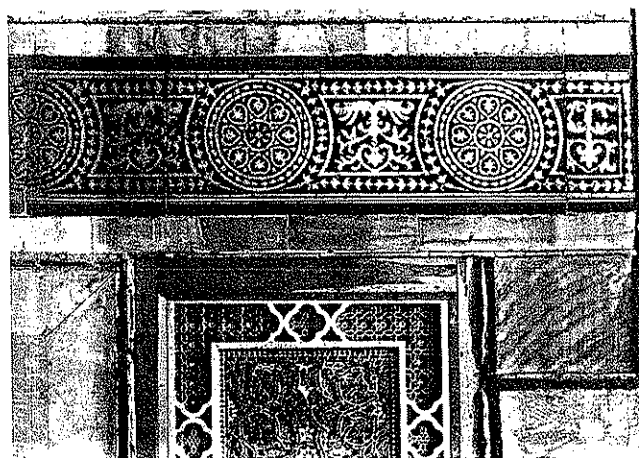
Pl. 28.1 Dome of the Rock, 10th/16th-century window-grille formerly in window 1 of the octagon (after de Vogüé 1864: pl XXIV).



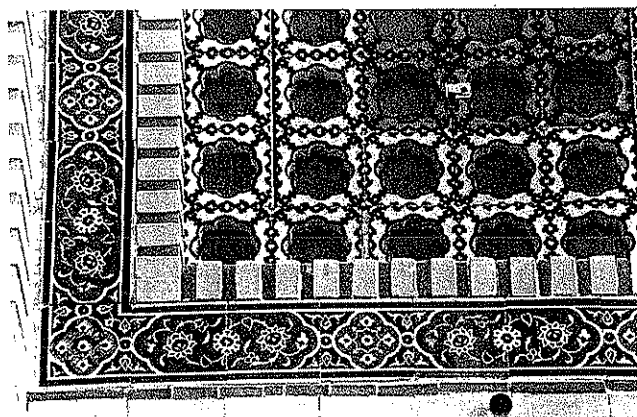
Pl. 28.2 Dome of the Rock, 10th/16th-century window-grille (type 2) formerly in window 3 of the octagon (after de Vogüé 1864: pl XXV).



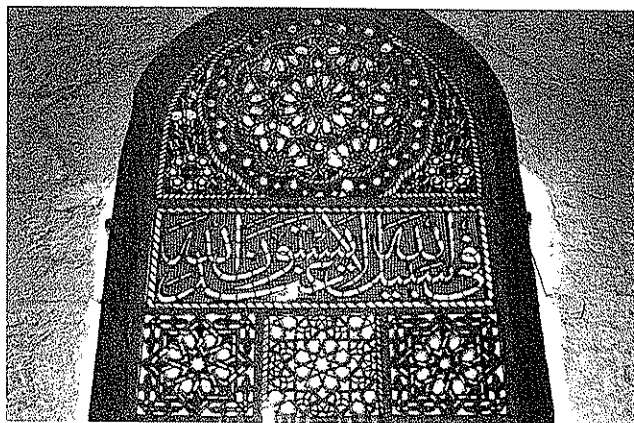
Pl. 28.3 Dome of the Rock, 10th/16th-century window-grille formerly in window 27 of the octagon (after de Vogüé 1864: pl XXVI).



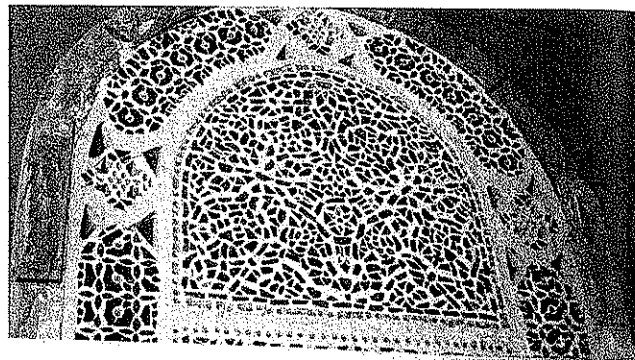
Pl. 28.4 Detail of border motif on a window-grille of the type seen in Pl. 28.2 (Creswell Archive, negative no 525).



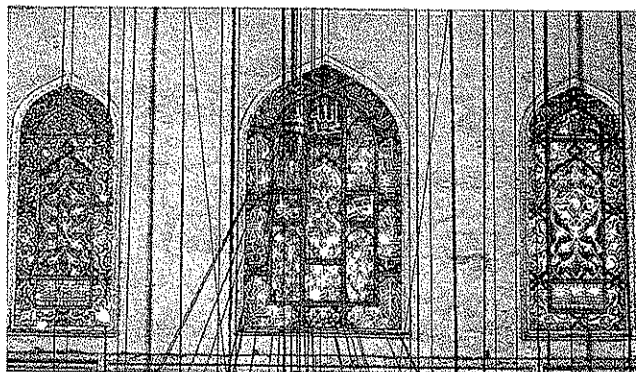
Pl. 28.5 Dome of the Rock, detail of a tile panel on the western façade.



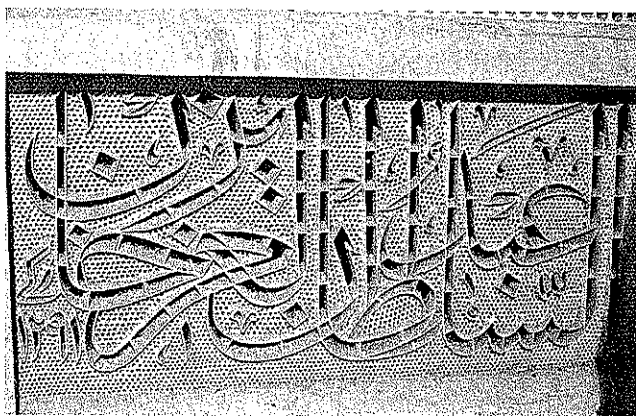
Pl. 28.6 Dome of the Rock, window-grilles of the octagon, detail of type 1 (Aqsa Museum, Haram al-Sharif, Jerusalem).



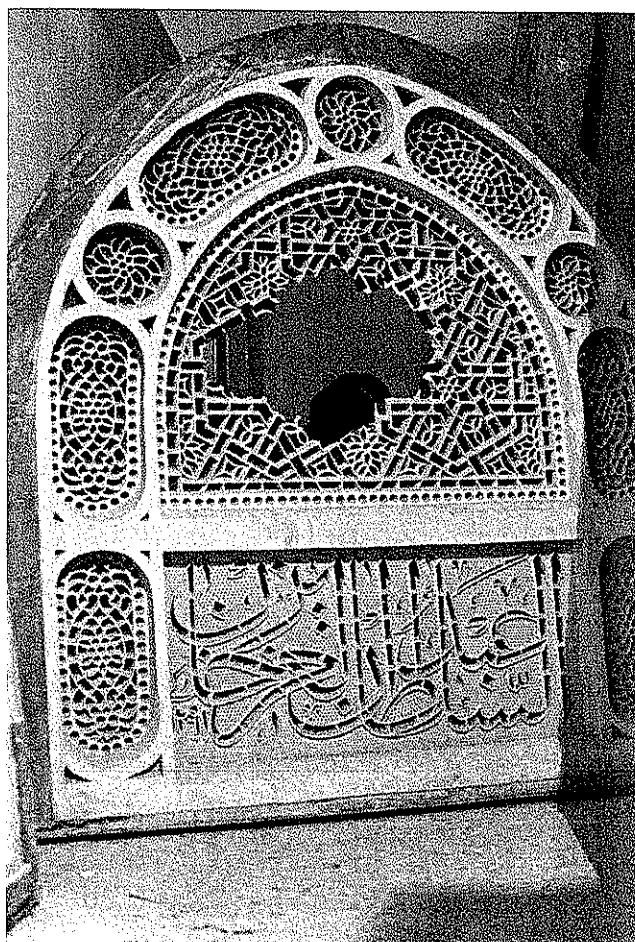
Pl. 28.7 Dome of the Rock, window-grilles of the octagon, detail of reverse of type 2 (Aqsa Museum, Haram al-Sharif, Jerusalem).



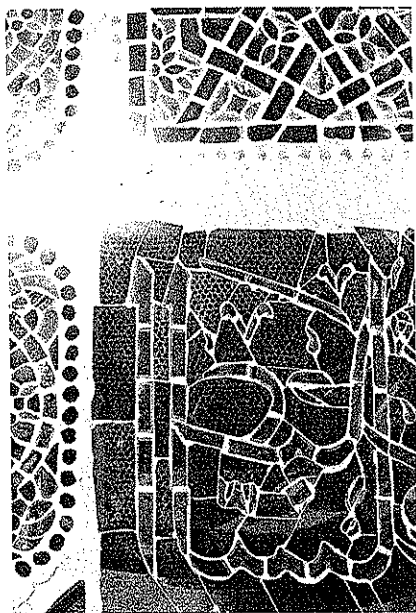
Pl. 28.8 Süleymaniyye Mosque, Istanbul, window-grilles above the *mihrab*.



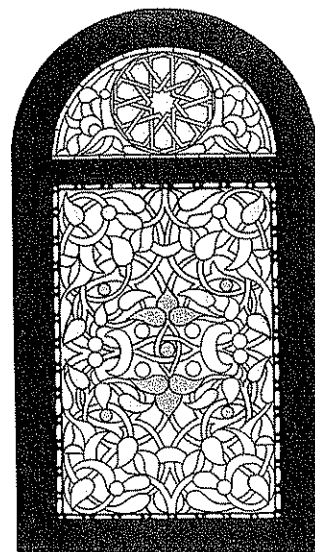
Pl. 28.10 Dome of the Rock, detail of the inscription visible in pl 28.9.



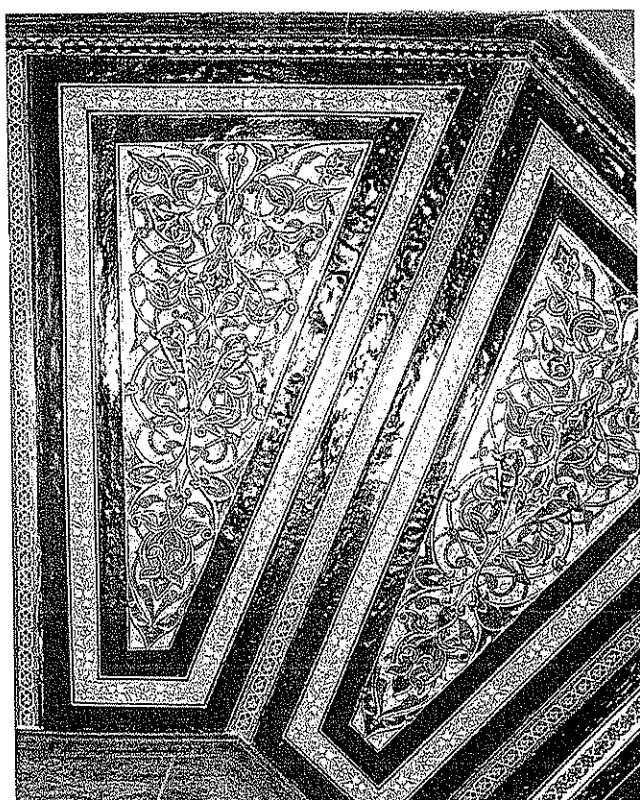
Pl. 28.9 Dome of the Rock, fragmentary window-grille bearing the name of Sultan 'Abd al-'Aziz and the date 1291 (Aqsa Museum, Haram al-Sharif, Jerusalem).



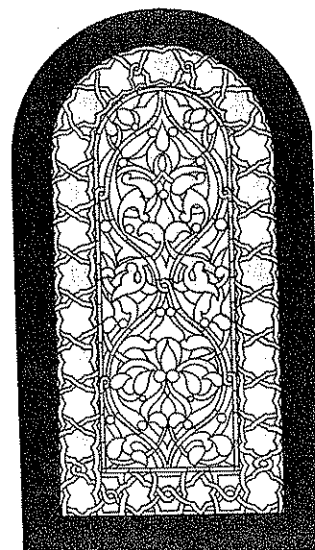
Pl. 28.11 Dome of the Rock, detail of the reverse of the window-grille shown in pl. 28.9



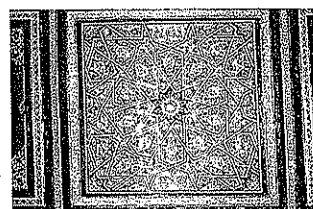
Pl. 28.12 Dome of the Rock, window-grille formerly in the dome (after Richmond 1924: fig. 67).



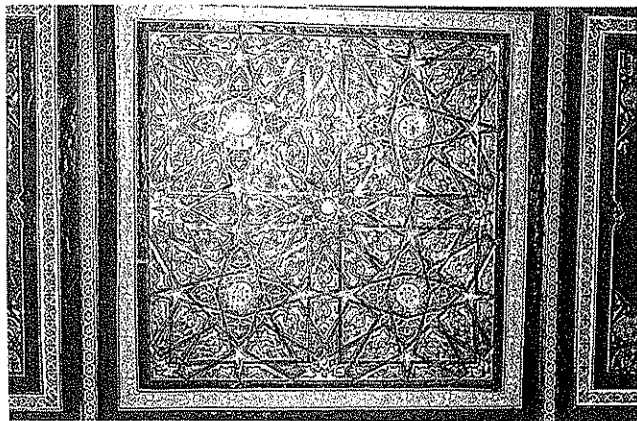
Pl. 28.14 Dome of the Rock, detail of the ceiling of the outer ambulatory (Photograph James Allan).



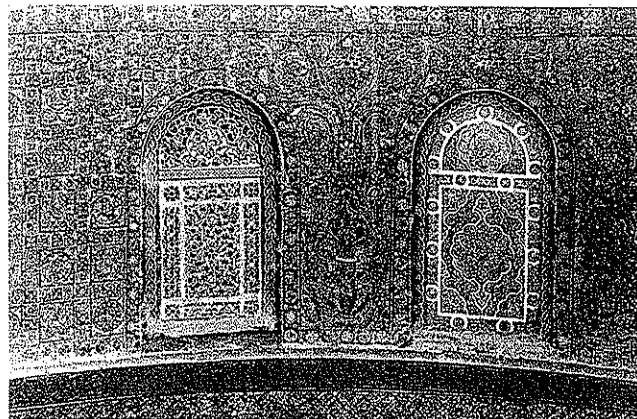
Pl. 28.13 Dome of the Rock, window-grille formerly in the dome (after Richmond 1924: fig. 67).



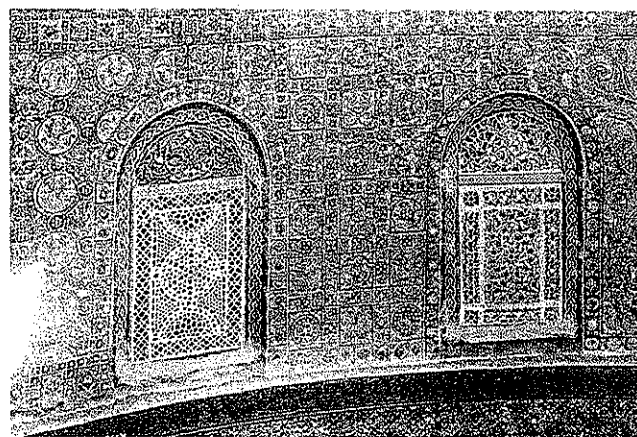
Pl. 28.15 Dome of the Rock, detail of the ceiling of the outer ambulatory (Photograph James Allan).



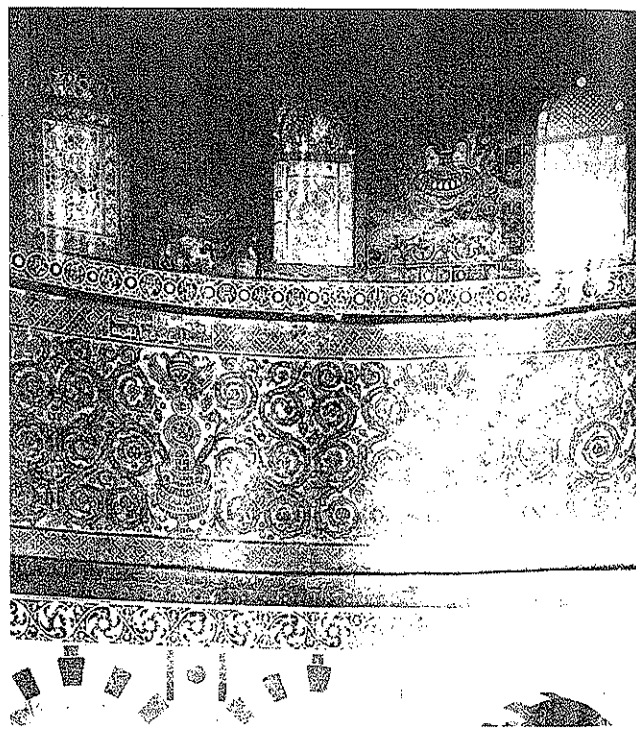
Pl. 28.16 Dome of the Rock, detail of the ceiling of the outer ambulatory (Photograph James Allan).



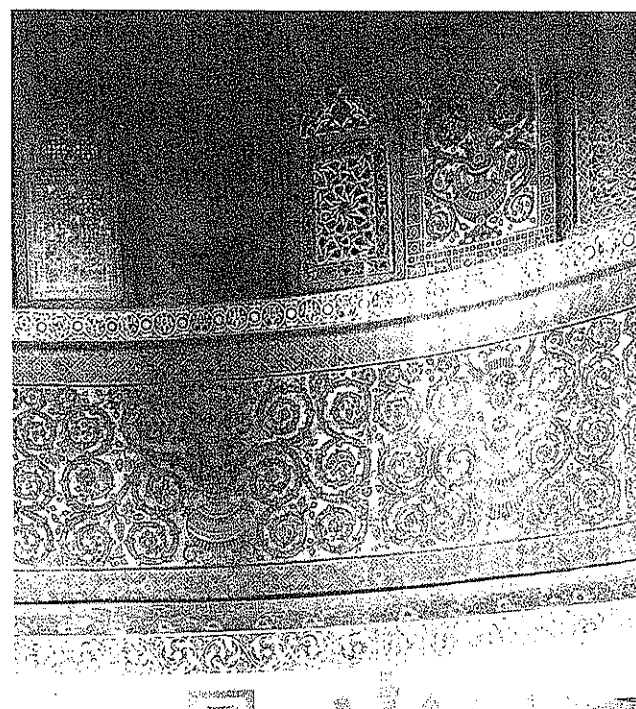
Pl. 28.18 Dome of the Rock, detail of windows in the dome (after van Berchem 1927: Pl. XX).



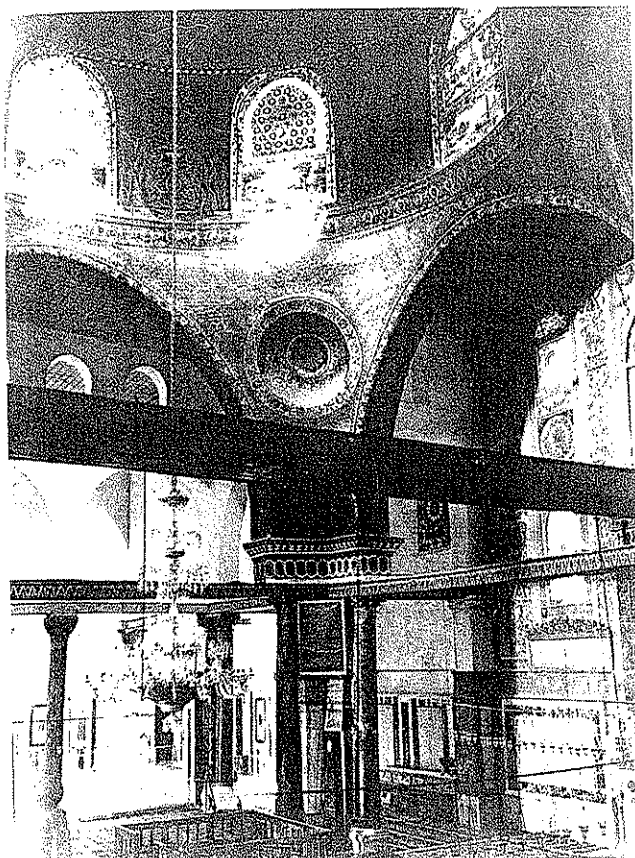
Pl. 28.19 Dome of the Rock, detail of windows in the dome (after van Berchem 1927: Pl. XX).



Pl. 28.17 Dome of the Rock, window-grilles in the dome before 1342/1923 (Creswell Archive, negative no 93).

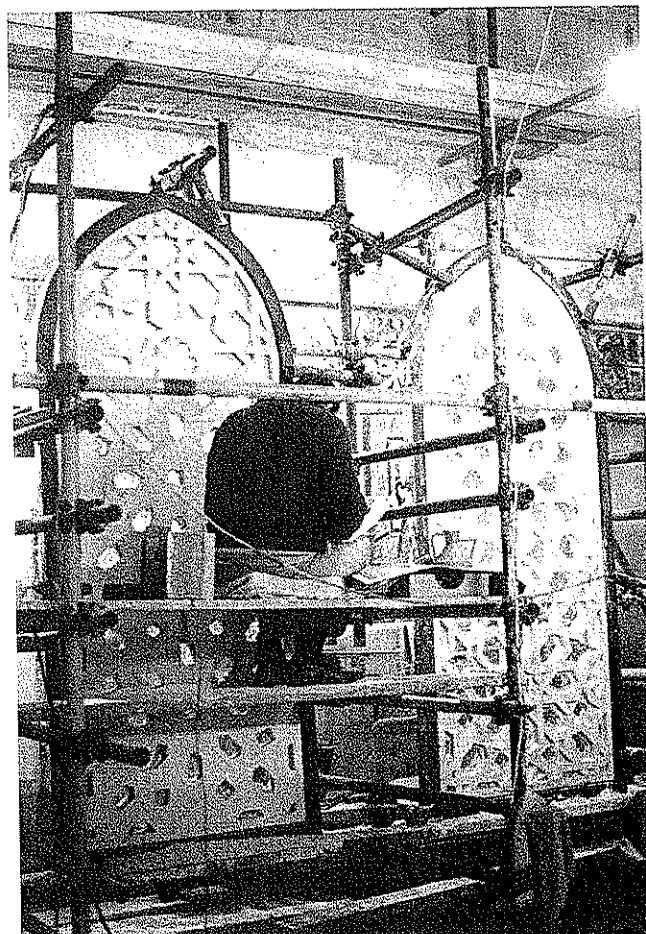


Pl. 28.20 Dome of the Rock, window-grilles in the dome before 1342/1923 (Creswell Archive, negative no 55).

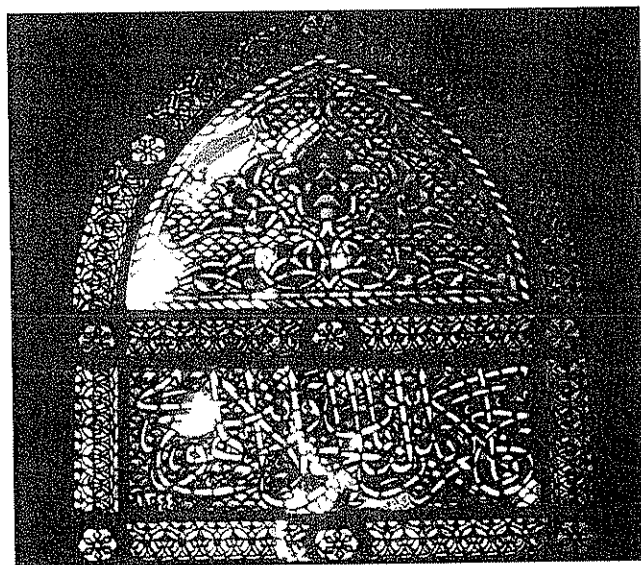


The Aqsa Mosque - Dome in Jerusalem

Pl. 28.21 Aqsa Mosque, interior of the dome before 1342/1923 (courtesy Israel Antiquities Authority).



Pl. 28.23 Window-grilles being manufactured in a workshop adjoining the Aqsa mosque.



Pl. 28.22 Church of the Coenaculum, detail of a window-grille bearing the date 1344/1925.

OTTOMAN JERUSALEM

THE LIVING CITY: 1517-1917

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