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## SURVEYOR VERSUS EPIGRAPHER

K. A. C. Creswell, army captain and surveyor, was not specially trained as an epigrapher, yet he could hardly have avoided being aware of the importance inscriptions held for Islamic architecture. The pioneering works of Max van Berchem on content and of Samuel Flury on style had influenced the field as a whole,<sup>1</sup> and Creswell was careful to include information about inscriptions in his discussions of individual monuments. He often cited texts from the *Répertoire chronologique d'épigraphie arabe*,<sup>2</sup> and in the case of two of the earliest Islamic masterpieces — the Dome of the Rock in Jerusalem and the Great Mosque at Damascus — even discussed the importance of the texts for understanding the monuments.<sup>3</sup>

Occasionally Creswell used inscriptions as a dating control. To date the mausoleum of al-Sawabi in Cairo, for example, he relied on stylistic analysis of the architectural ornament — the shape of the pendentives and the type of stucco frieze. He found examples of the round-ended panels alternating with medallions dating only from the last quarter of the thirteenth century, and adding that to the evidence provided by the shape of the pendentives, he came up with an attribution for the building of ca. 1285–86.<sup>4</sup>

In general, however, Creswell's interests lay in structure and architectural technique, and he used epigraphic style only to help in dating. What I would like to show is how Creswell's method of putting monuments in a series can be applied not just to epigraphic style but also to content. That is, by putting inscriptions in a logical order, to show how one can use the titles to suggest a date for the building. The example I have chosen — the south dome in the congregational mosque at Isfahan — is a monument that Creswell used for quite a different inquiry. He mentioned the dome chamber (fig. 1) under his discussion of the mashhad of Sayyida Ruqayya in Cairo and the role it played in the evolution of the stalactite pendentive. He was interested in finding out whether the mashhad drew upon local or foreign traditions or more generally how Persian art had affected that of the Fatimids.

To answer the question, Creswell turned to his usual

method of listing buildings. Having described the stalactite pendentive found in the mashhad dated 1133, he then assembled a list of the various devices employed for setting a dome on a square base. His Persian examples began with the shrine known as the Duvazdah Imam in Yazd dated 1037 and then moved to the dome chambers in Isfahan. The north one is dated by inscription to 481 (1088–89) and the south one contains the titles of Malikshah who ruled at this time, so that Creswell placed them under the same chronological heading. He then added four later buildings from the twelfth century — the mosques at Gulpaygan (dated by inscription to 498–

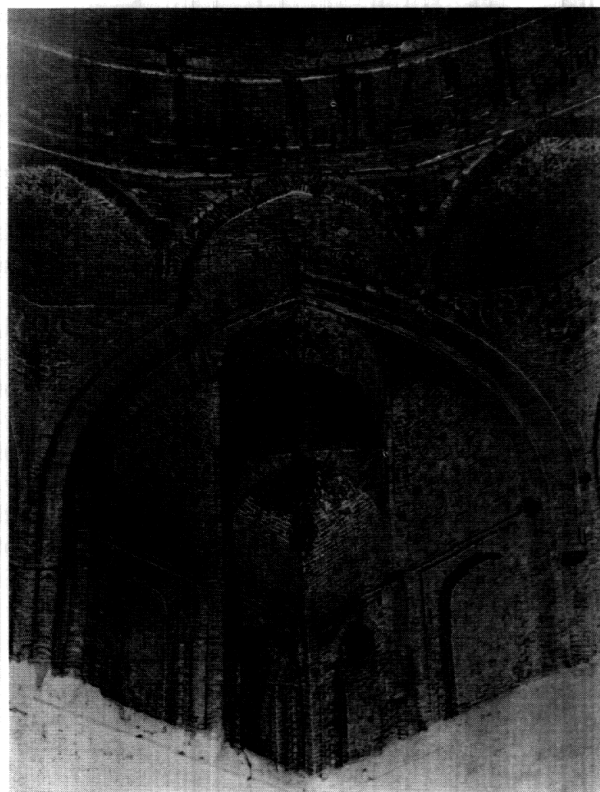


Fig. 1. Southeast corner of the south dome in the congregational mosque at Isfahan. (After *Survey*, pl. 288.)

511 [1104–18] and Qazvin (1113 or 1116), the Gunbad-i Surkh at Maragha (1148) and the mosque at Ardistan (redone in 1158).

Having exhausted his Persian examples, Creswell looked to other areas. Material from Iraq was scanty, but it preserved the earliest surviving example of a muqarnas dome at Imam Dur (1094). Turning to Syria and Palestine, Creswell began with the spherical-triangular pendentives resting on squinches that were part of the Fatimid caliph al-Zahir's restoration to the Aqsa Mosque in Jerusalem in 1035 and then added five other examples of oversailing courses, muqarnas domes, and double glacis pendentives from the twelfth century. Creswell concluded that no contemporary example from Syria or Iran resembled the Egyptian stalactite pendentive and that the Persian examples in brick differed in setting out and composition from the Egyptian ones. Hence, he felt that "the old theory of Persian influence on Egyptian architecture has received another

blow and we can say without hesitation that the evolution observed in Egypt was entirely a local creation."<sup>5</sup>

Just as Creswell arranged his vaulting systems to delineate the evolution of the stalactite pendentive, one can arrange inscriptions in the same sort of series to date the south dome in Isfahan. The text mentioned by Creswell is executed in a band of simple Kufic with U-shaped ornament that runs around the base of the south dome chamber beginning on the west wall.<sup>6</sup> The text gives the foundation inscription for the dome chamber (fig. 2):

Basmala. During the days of the great sultan, august shahanshah, king of the east and the west, pillar of Islam and the Muslims, succorer of the world and religion, Abu'l-Fath Malikshah b. Muhammad b. Da'ud, right hand of God's caliph, the Commander of the Faithful, may God glorify his victory, the poor servant in need of God's mercy al-Hasan b. 'Ali b. Ishaq ordered the construction of this dome under the supervision of Abi'l-Fath Ahmad b. Muhammad, the treasurer.<sup>7</sup>

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ  
 سَا هَا سَا هَا اَلَا عِزٌّ مَلِكٌ الْمَسْرُورُ وَالْمَعْرُورُ وَالْاِسْلَامُ وَالْمُسْلِمُ  
 مَعْرُورٌ وَالْاِسْلَامُ وَالْمُسْلِمُ  
 اَللّٰهُ اَمْرٌ مَوْجِبٌ اَعْرَابُ اللّٰهِ نَحْوَهُ الْعَرَبُ الْعَرَبُ وَالرَّحْمَةُ اَللّٰهُ  
 الْكَبِیْرُ الْعَلِیْمُ عَلَیْهِ سَلَامٌ

Fig. 2. Drawing of the Kufic inscription around the base of the south dome in the congregational mosque at Isfahan.

In other words, it says that during Malikshah's reign, his prime minister Nizam al-Mulk ordered the construction of a dome under the supervision of the treasurer Abu'l-Fath Ahmad b. Muhammad. The latter is not mentioned in contemporary chronicles, but he was probably the master-of-works who supervised the accounts under the auspices of the chief vizier, Nizam al-Mulk.

The inscription provides no titles for Nizam al-Mulk; he is identified only by his given name and genealogy. Titles are often omitted in endowment inscriptions,<sup>8</sup> and their absence may have been meant to attest to Nizam al-Mulk's piety in ordering the renovations to the mosque. More likely, however, it signifies that he used the state purse and not private funds to finance the work. Thus, it is no surprise that most of the inscription is reserved for the name and titles of the sultan Malikshah.

The text is one of twelve surviving ones in the name of Malikshah. Of the other eleven, four were engraved on the pillars supporting the dome chamber of the congregational mosque in Damascus. They were destroyed in the great fire in 1893 and are known only from van Berchem's copy made just before the fire. The texts record

that during the caliphate of al-Muqtadi, the sultanate of Malikshah, the reign of his brother Tutush, and the vizierate of Nizam al-Mulk, the vizier Abu Nasr Ahmad ordered the reconstruction of the dome, maqsura, roof, arches, and piers with his own money in 1082.<sup>9</sup>

The fifth text with the name of Malikshah is preserved on the congregational mosque at Ani (fig. 3). The part of the text that survives records the construction of the minaret by the Shaddadid Manuchihr b. Shavur during the reign of Malikshah.<sup>10</sup> Although undated, the inscription can be attributed to ca. 1086–87, several years after the Damascus work. The previous year Malikshah had deposed the unruly Shaddadid Fadl III (thereby extinguishing the line of the Shaddadids of Ganja) and installed Fadl's more faithful uncle Manuchihr.<sup>11</sup> An earlier inscription in the name of Manuchihr does not mention his Seljuq overlords,<sup>12</sup> and hence this inscription marks his new subservience to them. Ordering renovations to the congregational mosque would have been an appropriate thing to do just after his appointment by the Seljuq sovereign.

The next two texts relate to construction in Aleppo under the government of Alp Aqsunqor. In 1087–88 Malikshah ordered reconstruction work, probably to

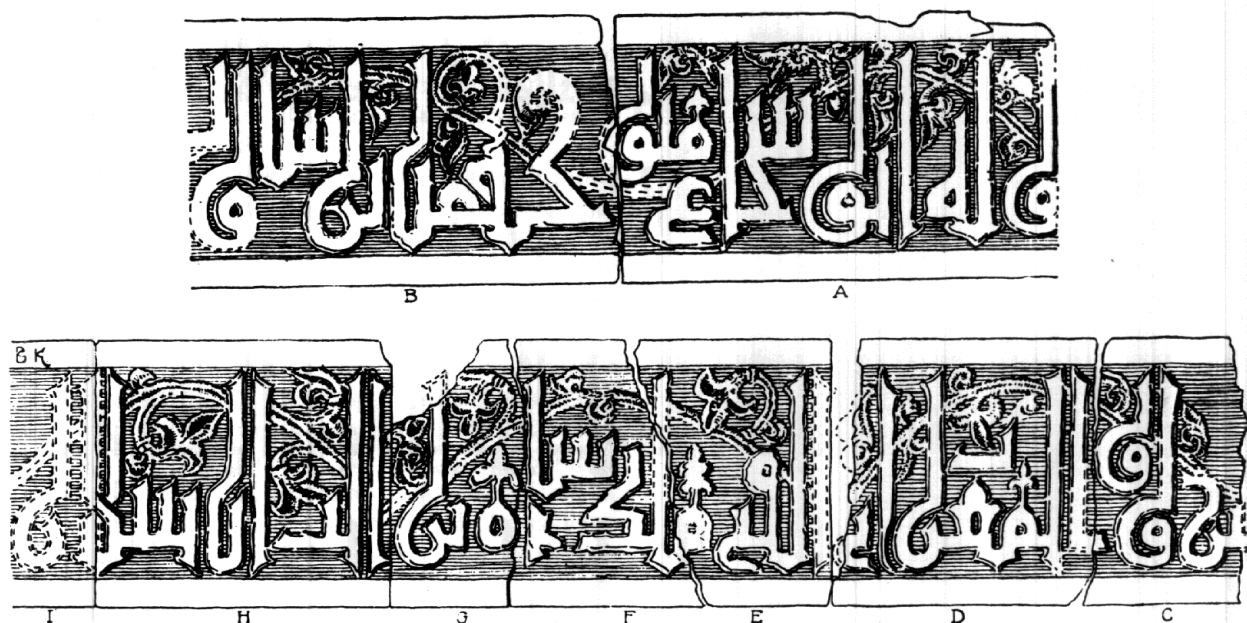


Fig. 3. Panels from the congregational mosque at Ani. (After Krachkovskaya and Krachkovsky, "Iz arabskoy epigrafiki v Ani" in *Akademiku N. Ya. Marru.*)

the qanat serving the citadel.<sup>13</sup> In 1090–91 the chief judge restored the minaret of the congregational mosque; the work was done by an architect from Sarman.<sup>14</sup>

The final four inscriptions comprising the set of twelve record work in Diyarbekir done in the years 1087–92. Three belong to urban restorations. In 1088 walls were restored by a supervising chief judge and a builder under the governing amir.<sup>15</sup> The same people worked on the enceinte in the following year.<sup>16</sup> Work continued in 1092–93, with the same chief judge and builder, but a new governing amir.<sup>17</sup> The other work in Diyarbekir was the reconstruction of the congregational mosque: an inscription dated 1091–92 names the same judge and an intervening amir/vizier.<sup>18</sup>

These twelve inscriptions, then, record constructions made during the last decade of Malikshah's rule (1072–82), in Iran, Syria, Armenia, and the Jazira. The works mentioned were either mosques with their minarets (Isfahan, Damascus, Ani, and Diyarbekir) or civil works (Aleppo and Diyarbekir). Noting subtle shifts in Malikshah's nomenclature allows us to put the inscription from the mosque at Isfahan within its proper context.

In all the inscriptions, the sultan carries his full name, including *kunyā* (patronymic), *ism* (given name), and *nasab* (genealogy). He is always Abu'l-Fath Malikshah (the father of victory Malikshah) but his father's name differs. Sometimes his father carries his Muslim name, Muhammad; at other times his Turkish one, Alp Arslan. One might expect that the difference depended on the type of construction ordered — that is, that he would use his Muslim name on mosques and his Turkish one on civil foundations, but this is not the case. Nor does the distinction follow a chronological evolution. Rather, the selection of Arabic or Turkish name depends on where the inscription is located. The Muslim name occurs in those from Syria and Iran; the Turkish one in those from the Jazira and Armenia, that is, places where Turkish power was strongest. Turkmen tribesmen provided the military might behind the Seljuq dynasty, and they were anxious to take booty in holy wars against the infidels, especially on the western frontier of the empire against the Christians or in the Jazira against the Marwanids.

Malikshah himself is always given the generic titles “great sultan” and “august shahanshah” (*al-sultān al-muʿazzam shāhanshāh al-ʿazam*). Shahanshah was an ancient Persian title revived by the Buwayhid ʿAdud al-Dawla and passed on to the Seljuqs. The word *sultān* had the abstract meaning of power or authority. ʿAdud

al-Dawla's grandson Abu Shuja<sup>c</sup> had been granted the title *sultān al-dawla wa ʿizz al-milla* when he succeeded his father Baha<sup>ʿ</sup> al-Dawla as chief Buwayhid amir in 1012.<sup>19</sup> Like the other titles used by the Buwayhids, that of *sultān* passed to the Seljuqs. When Tughril first occupied Nishapur in 1038, he assumed the title *al-sultān al-muʿazzam*, but the caliph did not officially bestow it upon him until several years later; it did not appear on coins for almost a decade.<sup>20</sup> *Sultān* had been one of the many epithets applied to early Ghaznavid rulers by poets, and they officially adopted it on their coins in the mid eleventh century. The earliest Ghaznavid coin bearing the title *al-sultān al-muʿazzam* was issued during the reign of Farrukhzad (1053–59), and it became standard during the reign of his successor Ibrahim b. Masʿud (1053–99).<sup>21</sup> The Seljuqs were not to be outdone by their rivals: they adopted a pair of titles, *al-sultān al-muʿazzam shāhanshāh al-ʿazam*, which became the hallmark of the dynasty.<sup>22</sup> It was used by Alp Arslan and Malikshah and by their successors.

In addition to the standard pair, Seljuq sovereigns also used a series of titles referring to territory. One of Malikshah's favorites (it occurs eight times in these twelve inscriptions) was *sayyid mulūk al-umam* (seigneur of the kings of nations). It was sometimes followed by the rhyming title *mawlā al-ʿarab waʿl-ʿajam* (client of the Arabs and non-Arabs, i.e., Persians). Other pairs included *sultān arḍ allāh nāṣir ʿibād allāh* (sultan of God's earth, protector of God's servants), and *mālik bilād allāh muʿin khalīfat allāh* (ruler of God's lands, defender of God's caliph). At Isfahan, however, Malikshah is called “king of the east and west” (*malik al-mashriq waʿl-maghrib*). This title occurs in only one of the other eleven inscriptions in the name of Malikshah, that at Ani, datable to 1086–87. The caliph al-Qaʿim had bestowed this title on Tughril in 1058,<sup>23</sup> and Alp Arslan had used it occasionally on coins,<sup>24</sup> but it became especially appropriate for Malikshah in the mid 1080's. He was at the height of his power, and had conquered the Qarakhanids on the eastern frontier and Armenia, Georgia, and Anatolia on the west. In the 1080's he twice traversed his realm from Uzgend to Antioch, as the story goes, ending up in Latiqiyya where he allowed his horses to drink the sea water of the Mediterranean, and he kissed the ground beside them, saying that this kingdom reached from the furthest east to the furthest west.<sup>25</sup> The use of this title “king of the east and west” suggests a *terminus post quem* of 1086 for the Isfahan inscription.

The other pair of honorifics used in the inscription in

the south dome at Isfahan concerns religion, community, and empire and designates Malikshah "pillar of Islam and the Muslims, strengthener of the world and religion" (*rukṅ al-islām wa'l-muslimīn mu'izz al-dunyā wa'l-dīn*). The inscription lacks a similar rhyming honorific, "glory of the state and beauty of the community" (*jalāl al-dawla wa'l-jamāl al-milla*), a title which occurs in all six of Malikshah's inscriptions dated 1087 or later and on his coins from 1087 onward.<sup>26</sup>

The chronicles provide us with an apt reason for its sudden occurrence in 1087. From Dhu'l Hijja 479 to Safar 480 (March–May 1087), Malikshah made his first visit to Baghdad on the occasion of his daughter's marriage to the caliph. The texts describe hunting and feasting parties and Malikshah's introduction of his rather rough-and-tumble amirs to the caliphal court. Malikshah's daughter was married to the caliph with great pomp and circumstance before Nizam al-Mulk, Terken Khatun, and a large audience, and the following year an offspring, Abu Ja'far Fadl, was born. Nizam al-Mulk had disapproved of the marriage, but the caliph's generosity overwhelmed his previous objections. Malikshah was so pleased that throughout Iraq he abolished illegal taxes, transport levies on goods, and transit payments on pilgrims, and increased the caliph's own *iqṭā'*s. In return, the caliph must have awarded the sultan the new titles that appear on monuments and coins dating from the end of 1087.

This began a time of intimacy between caliph and sultan. Malikshah's coins from this period mention the caliph, and the inscription from Diyarbekir dated 481 (1087) includes the territorial title *mu'īn khalīfat allāh* (defender of God's caliph). We can also see this closeness in the honorific following the sultan's name in the inscription from Isfahan. Malikshah's genealogy is followed by his caliphal title, "right arm of God's caliph, the prince of believers." Malikshah's inscriptions in Damascus and Aleppo use the shorter form, "right arm of the prince of believers,"<sup>27</sup> but this is the only one of Malikshah's inscriptions that includes the words "God's caliph."

The amity between caliph and sultan did not endure. In 1088–89 the Turks who had accompanied the Seljuq princess to Baghdad were thrown out of the caliph's harem for rowdiness. By the following year, the princess was complaining to her father of the caliph's neglect, and Malikshah demanded the return of his daughter and their offspring Abu'l Fadl Ja'far. Relations grew so strained that by 1091 when Malikshah visited Baghdad for a second time, the caliph simply ignored him.

Textual analysis of the inscription around the south dome at Isfahan shows that the work must postdate the work at Ani attributed to 1086 and predate the adoption of Malikshah's new titles *jalāl al-dawla wa'l-jamāl al-milla* conferred in the spring of 1087 during his first visit to Baghdad. The work was probably commissioned before he and Nizam al-Mulk left for Baghdad in Dhu'l Hijja 479 (March 1087). This narrow range allows us to set the building into its proper historical context. According to Ibn al-Athir, in Jumada II 479 (September 1086) Malikshah set out on his conquest of Syria. He was accompanied by a grand retinue, including his heir apparent Ahmad (in whose name the Maqam Ibrahim in Aleppo was repaired in that year) and ministers such as Taj al-Mulk. In Damascus, Malikshah could not have failed to see the restorations to the Umayyad Mosque that the vizier Abu Nasr Ahmad b. Fadl had ordered with his own funds in 1082. The previous dome, destroyed in a fire in 1069, had been described by Maqdisi as "an orange surmounted by a pomegranate, both of gold." Ibn Jubayr who saw the new dome in 1184, described it as "the finest in the world."<sup>28</sup> Malikshah must also have been impressed by the work he saw in Damascus, so impressed that when he returned victorious to Isfahan that winter, he ordered his vizier Nizam al-Mulk to add a new dome to the congregational mosque in his capital at Isfahan — a dome slightly larger than the one in Damascus.<sup>29</sup>

The layout and the style of the inscription around the south dome at Isfahan suggest that Malikshah intended the dome chamber to be a testament to Seljuq authority and prestige. The inscription begins in the center of the west wall and runs around the base of the dome so that the initial titles lauding Malikshah as great sultan, august shahanshah, and king of the east and west fall on the south wall over the mihrab. His name begins in the center of the east wall, just opposite the invocation beginning the inscription.

The inscription around the interior of the south dome chamber at Isfahan has long been known, but another inscription on the exterior of the impost blocks is a much more recent discovery (fig. 4). When the Italian excavators began their work, they were aware that there were traces of Koranic inscriptions on the interior of the sanctuary, but all the visible impost blocks on the exterior sides of the sanctuary are decorated with vegetal ornament in a beveled style. In order to uncover the façade of the originally free-standing dome chamber, they delved between the sanctuary façade and the extrados of the muqarnas vault of the south iwan and uncovered an-



Fig. 4. Cursive inscription on the impost blocks of the south dome in the congregational mosque at Isfahan. (After Galdieri, *Isfahān: Masjid-i Gum'a* 2, fig. 13.)

other inscription in cut deep-pink stucco on a blue ground. Their excavations revealed the last words of Koran 23:6 in the northeast corner, but the band must originally have run across all the impost blocks of the façade where there would have been enough space for verses one to six: “[Blessed are believers who are humble in prayer, shun futile things, give alms, cherish chastity, except with their own wives and with what their right hands possess,] for they are not to be blamed.”<sup>30</sup>

Galdieri noted that the text was an appropriate exhortation for the first known work in the congregational mosque that the orthodox Seljuqs made after they had seized the city from the hands of the Shi'ite Buwayhids.<sup>31</sup> It is especially appropriate in view of the suggested function of the sanctuary as a sign of Seljuq sovereignty in the capital. The two inscriptions, inside and outside of the sanctuary, were obviously meant to go together, for the Koranic text forms a play on words with the historical inscription running around the base of the dome. The Koranic text exempts believers from chastity with their wives and with “what their right hands own” (*mā malakat aymānuhum*). The phrase can be seen as an oblique reference to the sultan's name and caliphal title which appears on the northeast side of the interior: Malikshah, right hand of God's caliph (*malik shāh yamīn khalīfat allāh*). This message about the power of the Seljuqs, particularly that of the sultan Malikshah, would have been visible to people praying in the mosque, for the inscription across the façade of the sanctuary would have faced believers standing in the courtyard praying toward the qibla. Its legibility was enhanced not only by its bold coloring (pink on blue), but

also by its script and proportions.

Examination of the inscriptions, then, suggests that Malikshah ordered the dome chamber added to the mosque in his capital at Isfahan as a sign of Seljuq authority and prestige. When the sultan visited Baghdad for the second time in 1091, he decided, despite the cooling of his relations with the caliph, to make it his winter capital. He ordered extensive building, including a new mosque, the Jami' al-Sultan. Could it also have had a monumental dome?

The monumental dome chamber was soon recognized as a sign of Seljuq authority and prestige, for it was copied in mosques built under court patronage like the ones surviving at Gulpaygan, Qazvin, and Barujird. But repetition dulled its iconographic charge, and the dome chamber soon became a cliché, repeated without its imperial connotations in small village mosques such as the one at Barsiyan and then incorporated in the standard Iranian mosque plan.<sup>32</sup>

Dating the south dome chamber at Isfahan to the winter of 1086–87 also accords with the internal chronology of the mosque at Isfahan. The north dome chamber (figs. 5–6) is a smaller and, to modern eyes, an aesthetically more successful imitation of the south dome. Its inscription also echoes that found in the south dome. It is dated 481 (1088–89) and is thus an apt response to the southern construction done a year or two earlier by a rival vizier.

Setting the inscriptions in the name of Malikshah in chronological sequence, then, allows us to date the dome chamber in Isfahan to the winter of 1086–87, that

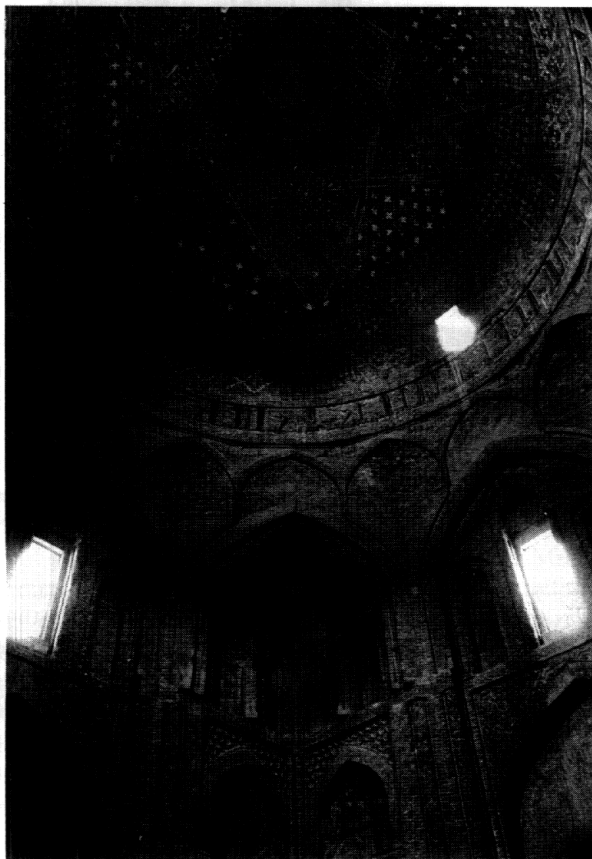


Fig. 5. Interior of the north dome in the congregational mosque at Isfahan dated 481 (1088–89).

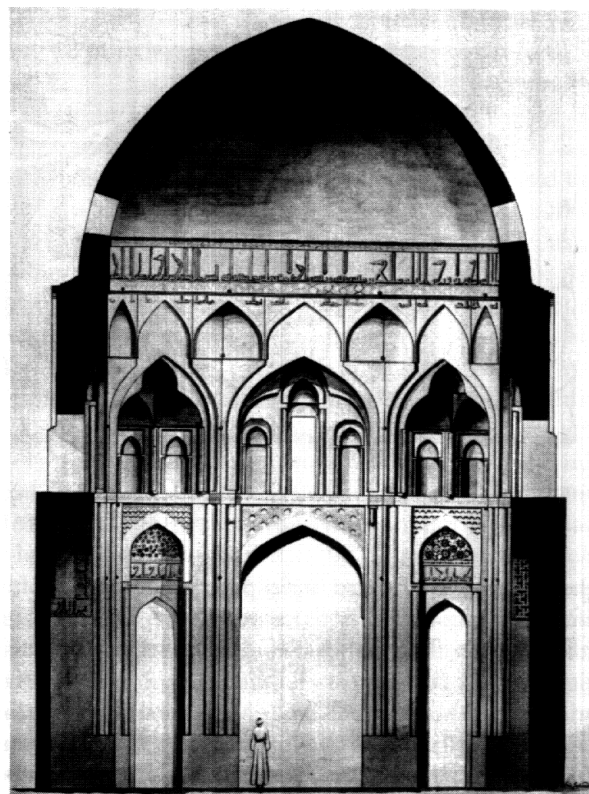


Fig. 6. Section of the north dome in the congregational mosque at Isfahan. (After *Survey*, pl. 289.)

is, just after Malikshah had returned from Damascus where he had seen the newly built dome chamber in the congregational mosque. This in turn suggests that the building was meant to be a sign of Seljuq authority and prestige. But what more general conclusions about Islamic architecture and epigraphy can be drawn? First, it should be obvious that Creswell's method of using seriation was both valid and useful. He restricted his use of it to architectural forms, but it can also be used for epigraphic texts, where it can be applied not just to style but also to content.

Creswell's approach to regionalization, however, needs to be modified. Usually, he arranged his series along modern geographical lines, as in the case of the stalactite pendentives where he grouped his examples in terms of Persia, Iraq, and Syria-Palestine. But the case of Isfahan shows that at the time Malikshah ordered the dome chamber, he not only controlled, but had visited, all of these regions. Thus, in the study of

medieval monuments, modern political boundaries should be eschewed and the buildings set into their contemporary context.

That context had important consequences for architectural style. Once again, the case of Malikshah and Isfahan demonstrates the point. The earliest of the inscriptions in the name of Malikshah is the superbly carved stone band from the congregational mosque at Ani. The vertical strokes march across the band, but the strong rhythm they engender is countered by the organic arabesque that swirls behind the letters. It sprouts bilateral tendrils whose sinuous curves terminate in trilobed flowers filling the spaces between the letters. Similarly shaped curves on individual letters echo the decoration of the arabesque and unite the letters to it. With the opening up of Armenia, the Muslim world became acquainted with its long tradition of stone carving. This new awareness may well have stimulated the "classical revival" of stone carving in Syria.<sup>33</sup>

On the one hand, then, as the title of this paper suggests, one can draw a dichotomy between surveyor and epigrapher. They study different material. One is interested in structural matters and the evolution of architectural technique and style, the other in the forms and uses of writing on buildings. On the other hand, they play compatible roles. Both can use the same method to achieve the shared goal of understanding the work of art and its function in its own time.

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#### NOTES

1. Max van Berchem's major work was to initiate the monumental *Matériaux pour un Corpus Inscriptionum Arabicarum* (hereafter *MCIA*), for which he worked on volumes on Cairo (Part I: *Inscriptions d'Égypte*, vol. 1, Cairo, Mission Archéologique Française du Caire 19 [Cairo, 1894–1903]); Anatolia (with Halil Edhem, Part III: *Asie Mineure*, Section 1, *Siwas, Diwrigi, Tekkeh*, Mémoires de l'Institut Français Archéologique Orientale 29 [Cairo, 1910–17]); and Jerusalem (Part II: *Syrie du Sud: Jerusalem*, Mémoires de l'Institut Français Archéologique Orientale 43–45 [Cairo, 1920–27]). Samuel Flury devised a methodology for comparing scripts; see, for example, his *Islamische Schriftbänder Amida-Diarbekr XI. Jahrhundert* (Basel, 1920).
2. Etienne Combe, Jean Sauvaget, and Gaston Wiet, eds., *Répertoire chronologique d'épigraphie arabe* (hereafter *RCEA*), 17 vols. (Cairo, 1931 ff.); see, for example, the indices to *Early Muslim Architecture* under "Kufic inscriptions" for the citations to the inscriptions at Susa, Tunis, the mosque of Ibn Tulun, etc.
3. K. A. C. Creswell, *Early Muslim Architecture* (hereafter *EMA*), 2 vols. (Oxford, 1969), 1: 69–73; 167–68.
4. Idem, *Muslim Architecture of Egypt* (hereafter *MAE*), 2 vols. (Oxford, 1956), 1: 214.
5. *MAE* 1: 247–53.
6. I have arbitrarily called the qibla south.
7. *RCEA* 2775.
8. A close contemporary example is the rebuilding of the congregational mosque at Ardistan ordered by Abu Tahir al-Husayn b. Ghali b. Ahmad in 1158–60 (*RCEA* 3224 and 3228).
9. Max van Berchem, "Inscriptions arabes de Syrie," *Mémoires de l'Institut Égyptien* 3 reprinted in *Opera Minora* (Geneva, 1978), 1: 360–67; *RCEA* 2734–37.
10. *RCEA* 2707.
11. *Cambridge History of Iran*, vol. 5, *The Saljuq and Mongol Periods*, ed. J. A. Boyle (Cambridge, 1968), p. 95.
12. *RCEA* 2702.
13. Ernst Herzfeld, *MCIA*, pt. II: *Syrie du Nord*, vol. 2, *Inscriptions et monuments d'Alep*, Mémoires de l'Institut Français Archéologique Orientale 76–78 (Cairo, 1954–56), no. 57.
14. *Ibid.*, no. 75.
15. *RCEA* 2773; the inscription is not recorded in Max van Berchem, J. Strzygowski, and G. Bell, *Amida* (Paris, 1910).
16. *RCEA* 2780; van Berchem et al., *Amida*, no. 16.
17. *RCEA* 2798; van Berchem et al., *Amida*, no. 17.
18. *RCEA* 2792; van Berchem et al., *Amida*, no. 18.
19. *Cambridge History of Iran*, vol. 4, *From the Arab Invasion to the Saljuqs*, ed. R. N. Frye (Cambridge, 1975), pp. 296–97.
20. Dominique Sourdel, *Inventaire des monnaies musulmanes anciennes du musée de Caboul* (Damascus, 1953), xvi–ii, lists a coin dated 438 (1046) where Tughril is called *al-sultān al-a'zam shāhanshāh*.
21. C. E. Bosworth, "The Titulature of the Early Ghaznavids," *Oriens* 15 (1962): 221–26.
22. André Maricq and Gaston Wiet, *Le Minaret de Djām*, Mémoires de la Délégation Archéologique Française en Afghanistan 16 (Paris, 1959), pp. 51 ff.
23. Ibn al-Jawzī, *al-Muntazam fi ta'rikh al-mulūk wa'l-umam*, 8 vols. (Hyderabad, 1357–59/1938–41), 8: 182; *Cambridge History of Iran*, 5: 47, with other references.
24. Dominique Sourdel, "Un trésor de dinars gaznawides et salguqides découvert en Afghanistan," *Bulletin d'Études Orientales* 18 (1963–64): 201.
25. Ibn al-Athīr, *al-Kāmil fi'l-Ta'rikh*, 13 vols. (Beirut, 1402/1982), vol. 10, s.v. anno 479/1086–87; al-Fath b. 'Alī b. Muḥammad al-Bundārī al-Iṣfahānī, *Zubdat al-ṣuṣra wa nukhbat al-ṣuṣra*, ed. M. Th. Houtsma in *Recueil de textes relatifs à l'histoire des Seldjoudes*, vol. 2: *Histoire des Seldjoudes de l'Iraq* (Leiden, 1889), p. 70; *Cambridge History of Iran*, 5: 98.
26. George C. Miles, *The Numismatic History of Rayy*, American Numismatic Society, N. S. 2 (New York, 1938), no. 244a.
27. Another inscription dated 479 (1086) in the Maqam Ibrahim in Aleppo (Herzfeld, *MCIA Alep*, no. 87) refers to Malikshah's son as Ahmad, son of the right arm of the prince of believers (*ahmad ibn yamīn amīr al-mu'minīn*). One in Diyarbekir (*RCEA* 2773) also calls Malikshah *mu'īn khalīfat allāh*.
28. For collecting these descriptions, one is once again indebted to Creswell (*EMA* 1: 168–169).
29. One should underscore our debt to Creswell in the matter of finding accurate measurements for buildings. Finding the dimensions of the dome in the mosque of Damascus is relatively simple as one can measure directly off Creswell's plan: transept 21.66 m across; interior diameter of the dome chamber 12.80 m. Finding the dimensions of the south dome chamber at Isfahan proved to be a more involved process: none of the standard descriptions of the mosque by Schroeder or Galdieri give measurements or large enough scale plans to provide accurate measurements. The best measurements were those given in one of the earliest works on the mosque, the article by Albert Gabriel, "Le Masjid-i Djum'a d'Iṣfahān," *Ars Islamica* 2 (1935), where he mentions a diameter of 15 m. Extrapolating from his plan (fig. 7), the exterior dimensions of the dome chamber measure 21.3 m.
30. Eugenio Galdieri, *Iṣfahān: Masjid-i Gum'a 2* (Rome, 1973), pp. 37–39.
31. *Ibid.*, pp. 38–39.
32. See Sheila S. Blair, "An Inscription from Barūjird: New Data on Domed Pavilions in Saljuq Mosques," *Art of the Saljuqs in Iran and Anatolia*, ed. R. Hillenbrand (Malibu, Calif., forthcoming), for a list of dome chambers dating from the Seljuq period.
33. The latest work on the architecture of this period is Terry Allen, *A Classical Revival in Islamic Architecture* (Wiesbaden, 1986).