Chapter IV

The Iconography of Islamic Architecture*

Over 950 years elapsed between the construction of the earliest fully documented monument of classical Islamic architecture (the Dome of the Rock in Jerusalem, completed in AD691) (Fig. 1) and its latest celebrated masterpiece (the Taj Mahal in Agra, completed in 1654) (Fig. 2). During the millennium that separates them, tens of thousands of monuments were built from Spain to China, from Siberia to sub-Saharan Africa. Archaeologists, art historians and architectural lexicographers have made enormous progress in classifying buildings according to function (mosques, mausolea, palaces, houses, baths); geographical region (Egypt, Iran, Turkey, Central Asia, India; period (early Islamic, Seljuq or middle Islamic, Ottoman, Mughal); or any combination of these essentially taxonomic categories - that is to say, categories of definition and ordering. They are taxonomic because they are valid, incontrovertible and, once established, definitive. Anyone among us can give examples of discoveries - a dated inscription, an excavation or sounding, the subject-matter of a decorative program – that have permanently altered the history of a monument. An obvious recent example occurs in Galdieri's excavations in Isfahan. These led to postulation of the architectural evolution of the parts of the Great Mosque that is clear up to the construction of a large dome in front of the *mihrab*, even though what happened later is still uncertain, and even though the rather incongruous visual impression provided by Galdieri's pictorial reconstruction still raises doubts about the architectural competence of the time. In a more general way, Creswell's enormous achievement is the demonstration of a noble concern for the establishment of "facts" and for their reasonable classification in sequences according to formal and temporal characteristics and relationships.²

^{*} First published in Priscilla P. Soucek, ed., Content and Context of Visual Arts in the Islamic World (Pennsylvania State University Press, University Park and London, 1988), pp. 51–65.

E. Galdieri, *Isfahan: Masgid-i Gum'a*, II (Rome, 1973), and "Précision sur le Gunbad-e Nizam al-Mulk," *Revue des Etudes Islamiques*, XVIII (1975).

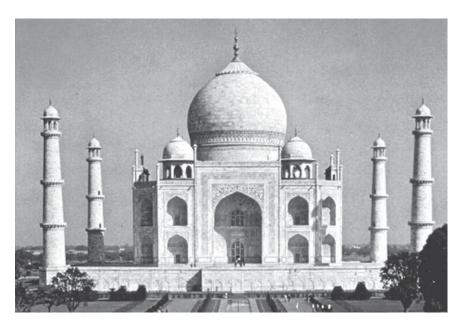
This is not to say that Creswell's volumes are free from deep-seated prejudices and preconceptions, but his system of identifying characteristic features and of seeking their prototypes bears all the external appearance of straightforward "scientific" rationality.



The Dome of the Rock,Jerusalem

Why not remain satisfied with the immense progress over the past fifty years in our knowledge [52] of facts about Islamic architecture and in our organization of this information into reasonably accepted categories?³ Two reasons not to, I believe, have emerged over the past decade. One derives from my involvement over the past several years with the activities of the contemporary architects and planners, Muslim and non-Muslim, who are reshaping the face of the whole Muslim world. The questions they ask are never: who built something? and why?, but nearly always: what is Islamic in this? and how can I, a modern builder (frequently alien to Islamic culture), use the traditional past and its monuments to create something today? From the point of view of *real* contemporary interests, this is necessary information – like the knowledge of anatomy for a doctor. In other words, out of the taxonomic order of knowledge, something is expected that is not normally required. I shall return to this expectation in my conclusion – but let me

³ Two recent publications illustrated two ways of categorizing Islamic architecture. John Hoag's *Islamic Architecture* (New York, 1976), provides a historical survey with clearly indicated and, for the most part, acceptable temporal and regional subdivisions. The volume edited by George Michell, *The Architecture of the Islamic World* (London, 1978), catalogs monuments according to areas and provides broad thematic essays.



2 Taj Mahal, Agra

now turn to the second reason for dissatisfaction with the taxonomic progress of the field. It lies in the monuments themselves.

Let me return to the Dome of the Rock and the Taj Mahal. In both instances we are dealing with masterpieces remarkable for the fact that their continuing importance within Islamic culture has very little to do with the reasons for their actual construction. The Dome of the Rock has become a commemorative monument for the Prophet's mystical journey into the heavens, but it was built in 691-2 for the very ideological local purposes of sanctifying the old Jewish Temple according to the new Revelation and of demonstrating to the Christian population of the city that Islam was the victorious faith.4

The Taj Mahal has always been considered the most romantic monument to a dead spouse, but a brilliant recent investigation has demonstrated that it was actually an extraordinary attempt to show God's throne on earth as it will appear at the time of the Resurrection.⁵ In a fascinating contrast to what happened with the Dome of the Rock, the romantic Western vision of the Taj Mahal was accepted by the Muslim world as a convenient explanation for a monument with an unorthodox purpose.

O. Grabar, "The Umayyad Dome of the Rock," Ars Orientalis, 3 (1957). For different views, see Creswell, Early Muslim Architecture, 2, 226 ff., and W. Caskell, Der Felsendorn und die Wallfahrt nach Jerusalem (Cologne, 1963). On the whole, I have not been swayed by most of these arguments, although the historical and cultural context of the last decades of the seventh century can now be explored in a sharper fashion than I had

Wayne Begley, "The Myth of the Taj Mahal and a New Theory of Its Symbolic Meaning," The Art Bulletin, 61 (1979).

The reinterpretation of both monuments was based on two elements. One was historical logic demonstrating that the later view of the buildings could not have been imagined at the time of their creation. The other was that each monument contains a document neglected by previous investigators: qur'anic inscriptions chosen to provide the immanent, concrete, specific meaning of the monument. Both historical logic and qur'anic inscriptions are not architectural features but extrinsic sources of information and understanding.

Why, then, is it legitimate to consider the Dome of the Rock and the Taj Mahal as masterpieces of *Islamic* architecture? Is it because they simply happen to have been sponsored by Muslim patrons, the great 'Abd al-Malik (founder of the first coherent state outside of Arabia), and Shah Jahan (the complex figure who ruled one of the last great Muslim empires)? Or is it because they both express, at a distance of almost a thousand years and in very different lands and political situations, a common idea, a shared thread, something which reflected the cultural needs and uniqueness of the Muslim world?

By raising the question in this fashion, I am immediately raising two subsidiary but fundamental questions of the history of art and of cultural history. Does something become Islamic because a Muslim builds it or uses it? In the case of the Dome of the Rock, for instance, all scholars agree that the shape of the building, its technique of construction, its decoration, and nearly all its physical attributes were not created by Islam but were part of the traditional - Christian - vocabulary of the eastern Mediterranean. To say this, however, is to indulge in academic pedantry. The origins of the forms used in the Dome of the Rock bear on the meaning given to it over the centuries only if one can demonstrate that a consciousness of these origins remained with the culture, or if one accepts a Jungian notion that every culture requires the same basic forms to [53] express its religious or social needs and that formal alterations are merely secondary.6 The other question, or, rather, the other way of posing the problem, is this: is there anything in the forms of these monuments – as opposed to their use – that makes them Islamic? And, if there is, what is it?

This second series of questions is the subject of this essay. My aims are to develop an intellectual strategy for further research on Islamic architecture, and to meditate on a key issue of contemporary thought: whether it is valid to apply the same investigative methods to the art of all cultures, or whether the very nature of artistic experience requires methods created by the culture itself.

One last introductory remark is in order. Much of what follows here is preliminary, and not all of it is my own work. It is the result of research,

⁶ This approach permeates parts of N. Ardalan and L. Bakhtiar, *The Sense of Unity* (Chicago, 1972), as well as studies – less directly involved with the Muslim world – by scholars such as M. Eliade.

often still unpublished, by a half-dozen students at Harvard, MIT and elsewhere, and it reflects what I can only call a collective laboratory effort at scholarship – to my mind the only way for research in the humanities to become true research.

It is, first of all, easy enough to demonstrate that Muslims quite consistently used certain forms, that courtyards with porticoes or with *iwans*, domes and towers became part of the setting in which Muslims live – but there is nothing intrinsically Muslim about a courtyard, an *iwan*, a dome, or a tower. Each one of these forms has a pre-Islamic history and non-Islamic functions. In these instances, the important issue is simply to discover the nature of the "charging" of forms that makes the towers of San Gimignano in Italy clearly non-Muslim but the towers of Fez or Cairo the minarets of a Muslim setting.

There are two kinds of more or less traditional methods of dealing with such issues. One approach I would like to call symbolic: its assumption is that there are features, perceptible visually, which, whatever their origin, possess or have possessed an immediately accepted cultural association. A most obvious example in Islamic architecture is the minaret, whose meaning as the place for the Muslim call to prayer is accepted by all, even though, as I shall suggest later, this was not always so. A less obvious but more important example is the *mugarnas*, that fascinating composition of three-dimensional units often called a stalactite or honeycomb. The mugarnas has two features lacking in the minaret: it is an entirely Muslim invention, almost never copied in a non-Muslim context except by Armenians in the thirteenth and seventeenth centuries, and it is a form used in nearly all kinds of Islamic monuments, not only in mosques. The symbolic approach would then be to say that the minaret or the mugarnas must have been uniquely meaningful to Islamic culture, and meaningful only in the Muslim world. They must symbolize something deep within the culture; they must stand for something essential to the purposes and existence of the ummah or community. Our task then is to study what within the culture was symbolized, and to explain the complex of meanings and references involved in a Muslim's reaction to a minaret or mugarnas. As in most symbolism, the proof of meaning lies less in the form itself than in the conscious or unconscious make-up of the viewer or user. For instance, purely optical observation, whatever the physiological or psychological reasons, tells us about the "projecting activism" in red or yellow and the "receding passivity" in blue or green, but only literary or ethnographic sources identify green as the color of the Prophet or as the color of the naked heart.⁷ One cannot explain the symbolism of the colors of a Persian dome as a reflection of the mystical or even archetypical unity of creation, or the whiteness of a North African town as a reflection of

⁷ Ardalan and Bakhtiar, Sense of Unity, p. 54. See also H. Corbin, L'Homme de Lumière dans le soufisme iranien (Paris, 1971), pp. 164 ff.

the purity of the Prophet's message, without concrete textual or ethnographic evidence, that is, without the agreement of the culture itself.

The second approach is iconographic, meaning that in Islamic architecture certain forms denote or describe a Muslim idea or concept. A simple example would be the *mihrab*; its location in a religious building, its decoration, and its most common inscriptions (Qur'an 9:18 on the masajid Allah (Fig. 3) or 24:35-8, the verses on Light) indicate that an architectural form of no particular [54] significance – the niche found in thousands of buildings in classical architecture - has been transformed into a sign denoting very precise Muslim purposes: the direction of prayer, the commemoration of the Prophet's presence, and other even more complex meanings.8 If, in any covered space, archaeologists find a niche directed to the qiblah, they decide that the building is a mosque. And the presence of a niche supported by columns (and sometimes including a lamp or a vegetal motif) on tiles, tombstones, rugs and other media indicates that the mihrab form became an iconographic sign with some constant meanings and a number of variables. The extension of the iconography of the mihrab, however, is less an architectural phenomenon than a decorative one, as it appears in twodimensional rather than three-dimensional space.

A related mode of iconographic interpretation can be demonstrated at Qusayr 'Amrah, at Khirbat al-Mafjar, possibly at the Aqsa mosque or the Cordoba *maqsurah*, the Cappella Palatina and, I suppose, later monuments with which I am less familiar. These include the Chihil Sutun or the Hasht Bihisht, where paintings, sculpture and other techniques of decoration provide the charge to architectural forms. It is, however, usually difficult to demonstrate that such meanings as are provided are an intrinsic part of the architectural forms themselves. The wealth and ubiquity of this type of iconographic charging through decoration has been amply demonstrated in Karl Lehman's great study of the Dome of the Heaven.⁹ But, with a few exceptions such as the Pantheon,¹⁰ Hagia Sophia, or the church described in a celebrated Syriac hymn,¹¹ it is not in the architectural forms that the complexities of meanings were found. Architecture here is iconophoric, not iconographic.

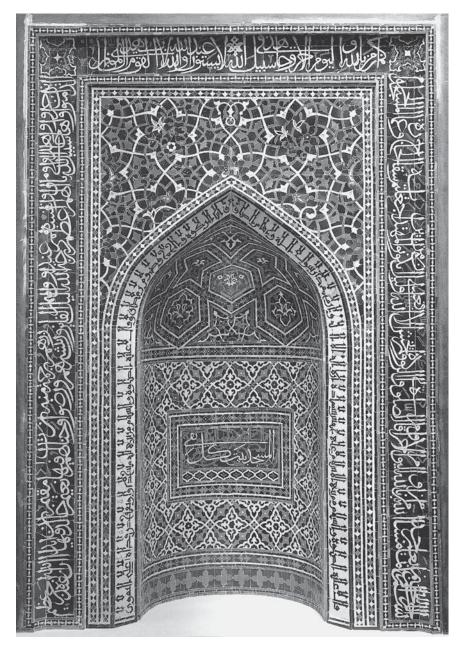
More complex instances of architectural iconography occur when one monument becomes a model for successive copies, imitations and transformations or when a certain type of monument denotes something special in the culture. To my knowledge, there are few examples of the first type in classical Islamic architecture, but they do exist, as, for instance, the visual

⁸ The history of the *mihrab* still needs to be written, as more energy has been spent investigating its origins than on the 1400 years of its development and use.

Karl Lehman, "The Dome of Heaven," *The Art Bulletin*, 27 (1945).

W. Macdonald, *The Pantheon: Design, Meaning and Progeny* (Cambridge, Mass., 1976).

C. Mango, *The Art of the Byzantine Empire, 312–1453: Sources and Documents* (Englewood Cliffs, 1972), pp. 72–102, 57–60.



3 Tile mosaic *mihrah*, Isfahan, dated 1354; outermost inscription is Qur'an 9:18–22, including *masajid Allah*

imitation of the Dome of the Rock in Qala'un's mausoleum in Cairo, and I have no doubt that further studies will uncover iconographic derivations of the type that Richard Krautheimer described around the Holy Sepulchre in Christian architecture. For instance, an iconographic sequence of the *hazirah*

¹² R. Krautheimer, "Introduction to an Iconography of Medieval Architecture," *Studies in Early Christian Medieval and Renaissance Art* (New York, 1969).

in funerary complexes goes back to the Prophet's mosque in Medina in ways only barely sketched out up to now.¹³ And I have tried elsewhere to construct a similar iconographic history for the Court of the Lions in the Alhambra.¹⁴ The point in all these cases, as in all such instances of architectural iconography, is that some mechanism of cultural perception makes a genetic association between forms that may be quite different in detail. This kind of iconographic investigation can probably only be made through texts, for instance, by comparing Ibn Jubayr and Ibn Battuta's accounts of buildings.

More interesting are the meanings attached to specific architectural types. Let me give two examples.

One is a fairly simple one. Sometime in the sixteenth century the Ottoman mosque acquired its classical characteristics (Fig. 4): a large central dome supported by half-domes, a porticoed courtyard, slender minarets, and a unique compositional logic based on the diameter of the cupola, with size, light and decoration as variables. This type, almost certainly a creation of the Ottoman capitals, is best expressed in the great mosques of Istanbul, but it occurs in Algiers, throughout the Balkans, in Syria, and even in Muhammad 'Ali's Cairo. It does not occur in Morocco, Iran, India, or Central Asia because this type is tied to Ottoman supremacy. It serves an Islamic function, but its architectural forms signify a specific empire.

The second example is more complicated. It seems clear that in the seventh and eighth centuries, the central lands of Islam (primarily Iraq, if my conclusions are correct) developed a type of mosque based on a multiplicity of single supports known as the hypostyle mosque (Fig. 5). This [55] type both served and reflected the characteristics of the early Muslim community and acquired a more elaborate regional variant with the mosque of Damascus. Nearly every early mosque in the new cities of the Muslim world – Cordoba, Qairawan, Isfahan, Siraf, Nishapur – was hypostyle. What is interesting is what happened later. The hypostyle mosque with a single minaret and an elaborate *mihrab* area became characteristic of the entire Arab world until today, from Morocco to Iraq; it appears in all sizes, from huge buildings, as in Rabat, to small ones, neatly fitted within their urban setting, such as the Aqmar mosque in Cairo and any number of *masjids* in Syria.

The hypostyle mosque was also often the first type of mosque built when a new area was conquered or converted. In Konya, the new congregational mosque of the thirteenth century is a hypostyle, and so are some of the earliest mosques in India. Most African mosques of any size tend to the hypostyle. It is as though at those moments and places when the important cultural objective was the strengthening of Islam, and not the extension of a

¹³ L. Golombek, *The Timurid Shrine at Gazur Gah, ROM Art and Archaeology Occasional Paper* 15 (Toronto, 1969).

O. Grabar, *The Alhambra* (London, 1978), especially chapter 3.



4 Ottoman imperial mosque: Suleymaniye, Istanbul



5 Hypostyle mosque: Great Mosque of Qairowan

state, the hypostyle mosque provided the architectural form through which the presence of the faith could most easily be expressed. Why? There may be practical reasons, for instance, the possibility of creating a space tailored to any size of community (the hypostyle is an unusually flexible form) or the absence of a hierarchy of parts reflecting the equality of the Faithful. But a more profound explanation is that the hypostyle form remained in the collective memory of Muslims and was associated with an early, unadulterated Islam, and that it expressed that view of itself that the Muslim world was particularly anxious to project.

Such revivals of early Islam are probably more numerous than we recognize. For instance, in the early fourteenth century, in the north-central Iranian city of Bistam, two small cells were built in the sanctuary of the great mystic Abu Yazid ai-Bistami.¹⁵ They were probably meant for private meditation, but it is interesting that in an inscription they are called *sawmaʻah*,¹⁶ an old word found in the Qur'an (22:41) but with unclear significance. It means "minaret" in North Africa for reasons elucidated by Creswell, but in some

A definitive treatment of the sanctuary has not yet appeared. Pope, SPA, p. 1080; and D. N. Wilber, The Architecture of Islamic Iran (Princeton, 1955), pp. 127–8.

¹⁶ *RCEA*, 8 (1944), no. 5155.

historical sources it also refers to the small rooms for hermits found in the towers of the mosque of Damascus at the time of the conquest. The term is rarely used in medieval literature, but its reappearance in the early fourteenth century to describe the setting of a pious function so reminiscent of the stories spun around seventh-century mosques in Syria seems to me to demonstrate the persistence of early Islamic concepts and their reappearance when an association was made, for whatever reason, with the first century of Islam. These examples indicate the existence within the evolution of Islamic architecture of an order of meaning which is inherent neither to forms nor to functions, nor even to the vocabulary used for forms or functions, but rather to a relationship among all three. This relationship had a history, a development, almost certainly a number of constants and variants. That history, these constants and variants, still requires an extraordinary amount of research, not only in the monuments themselves but in the huge literature that deals with them or refers to them. But that there is (or was) an iconography of Islamic architecture seems clear to me. This is not surprising, for there is every reason to assume that Islamic architecture contains the same complex meanings as does classical, Christian and Hindu architecture. It is simply that so little effort has been spent on the meanings of Islamic architecture that their depth has been overlooked.

How does one deal with this underappreciated area? The problem is that Islam does not possess the two vehicles through which Christian or Hindu architecture can be understood. One is a complex, codified liturgy that would affect architecture. (There are cases, known to me especially in the Mediterranean area, in Cordoba or in Fatimid Egypt, where complex ceremonies did accompany Friday prayer and affected the shape and possibly the decoration of *minbars* and *mihrabs*,¹⁷ but as a rule the absence of a liturgy and of a clergy makes matters more difficult.) A [56] second traditional aid to the understanding of architectural meaning is the creation of decorative programs. Such programs actually existed, but the fact that they were not based on images makes them extremely difficult to approach, because the West-centered universal culture of today finds it difficult to understand anything without a system of representations. At this stage of research, all that can be done is to indicate some of the techniques that I believe will help to deal with the question of how to look for meaning in Islamic architecture.

I will use the two examples I mentioned at the beginning of this essay as apparently symbolic of something within Islamic culture: the minaret and the *muqarnas*.

Almost everyone agrees that the minaret derived from a specifically Islamic requirement, the *idhan* or call to prayer. There is little doubt that, from 1500

¹⁷ Caroline Williams, "The Cult of Alid Saints in Cairo," *Muqarnas*, 1 (1983), pp. 37–52; and Jonathan M. Bloom, "The Mosque of al-Hakim in Cairo," *Muqarnas*, 1 (1983), pp. 15–36.

onward, and perhaps even as early as the middle of the fourteenth century, the call to prayer was the main official purpose of the minaret and most minarets were used for that purpose, as they are today. (Iran is the exception; some complexities were introduced there through the existence of a *guldastah*.) When minarets were provided with inscriptions, the most common one was from Qur'an 62:9–10:

O you who believe, when the call is made for prayer on Friday, then hasten to the remembrance of God and leave off trade; that is better for you, if you know. But when the prayer is ended, then disperse abroad in the land and seek of God's grace, and remember God much, that you may be successful.

There is a perfect coincidence between the purposes of this structure and the verbal sign of God's revelation inscribed on it.

When we turn to the beginning of Islam, matters are confused. Whereas the call to prayer is as early as Islam, the precise time, place and manner of its association with the tower, a form known since time immemorial, are extremely unclear. (I have presented my own explanation of what happened elsewhere, but would be perfectly happy to be proved wrong.)¹⁸

The earliest consistent and authentic evidence we possess is of the eleventh to thirteenth centuries, a period from which nearly two hundred minarets have survived. A large number of them are provided with inscriptions, and at least twenty of these are qur'anic passages. Only one, the Qutb-minar in Delhi (Fig. 6), uses Qur'an 62:9–10, and this passage is only one-thirtieth of the qur'anic inscriptions on the minaret. All the other minarets, from Hakim's in Cairo to the minaret of Jam, in Afghanistan, are not merely inscribed with other qur'anic passages but also with passages that differ from each other: at Jam the whole of the Surah 19 ("Maryam") appears, whereas the inscription on Aleppo's minaret is a passage (2:121–22 and 60:60) dealing with those who have erred from the straight path, and Delhi's minaret has not only the *Ayat al-Kursi* but the five *ayats* that follow, which have little to do with prayer. In Sangbast, the inscription is 41:33:

Who is better in speech than one who calls (men) to God, works righteousness, and says I am of those who bow in Islam.²⁰

If we add that an unusually large number of minarets are not even located near mosques (especially in Iran and the eastern part of the Muslim world),²¹ we must conclude that the towers we call minarets fulfilled a broad range of

O. Grabar, *The Formation of Islamic Art* (New Haven, 1973), pp. 118 ff.

¹⁹ A. Maricq and G. Wiet, *Le Minaret de Djam* (Paris, 1959); all other inscriptions are taken from the *RCEA*.

²⁰ D. Sourdel and J. Sourdel-Thomine, "A propos des minarets de Sangbast," *Iran*, 17 (1979).

²¹ See a study of these minarets by Prof. R. Hillenbrand in his unpublished doctoral dissertation. In the meantime, see J. Sourdel-Thomine, "Deux Minarets," *Syria*, 30 (1953).



6 Qutb Minar, Delhi

functions within the architectural sign system of the time. My own explanation, very tentative at this stage, is that minarets at that time were still primarily expressions of power and wealth, of victory, and of Islamic presence in non-Muslim settings, or else were signals and signposts leading to major holy sites or to other significant mosques, rather than identifying them.

[57] A fascinating example of the use of the minaret occurs in Jerusalem, where, until the Crusades, a physical balance had been established between a western Christian sector centered on the Holy Sepulcher and an eastern Muslim area around the Haram al-Sharif, with a small Jewish quarter probably to the north. No Muslim building, with one small and very temporary exception, was found in the western city and no Christian one remained in the east. After the defeat of the Crusader state in the thirteenth century and the development of a Jewish quarter to the south, two minarets were built in the Christian quarter equidistant from and framing the Holy Sepulcher.²² Minuscule sanctuaries, which hardly fulfilled an important social role, are attached to them. But the minarets serve to emphasize the victory of Islam, just as the later towers of the Lutherans and of the Franciscans identified both the return of Western Christianity to Jerusalem and the competition there between Protestantism and Catholicism, whereas a Russian tower on the Mount of Olives showed the presence of Orthodoxy.

Several very different conclusions derive from these observations. One is that the single, collectively accepted source of Truth in Islamic culture, the Our'an, is used in so many different fashions on minarets that we must assume that its message takes precedence over architectural forms; whatever use or explanation may have been given to these towers later on, they initially had a practical, specific, time-bound purpose, and it is only within the limits of the time that created them that their iconographic meaning can be securely established: unless otherwise demonstrated, iconographic time is short. The second point is that even though different local circumstances led to the creation of each of these minarets, when considered as a group they belong to two subsets. One is the subset of the tower, the strong, high unit, visible from afar and dominating its social setting; at this level, the minaret is today no longer "Islamic" (nor was it ever), since television towers, towers of silence, or even office buildings fulfill a universal human need for a vertical architectural focus. The other subset is stylistic, for instance, the treatment of brick on Iranian minarets can be related to the treatment of brick on Iranian mausolea of the time.

For us as historians of forms, the universal value of the tower, its more limited relationship to a period style, and whatever local need led to its creation are all essential categories, but they should not be confused in

²² A. Walls, "Two Minarets Flanking the Church of the Holy Sepulchre," *Levant*, 8 (1976).



explaining monuments. One point, however, is clear: the tower form we call the minaret was not originally used in the whole Islamic world with the sole purpose of calling for prayer; this function emerged gradually. Now it has been superseded by the loudspeaker and tape recorder in its function, and by the office building in its form. It has lost its iconographic value both as a universal form and as a concrete expression of very varied functions, but it has retained the symbolic function of indicating the presence of Islam. As a sign in the past, its strongest meaning, its greatest change, lay not in its form but in the confluence between its form and decisions by several layers of the community that endowed the form with whatever needs the community had at any one time.

The implications of this point will emerge shortly. Before dealing with these, let me turn to the *muqarnas* (Fig. 7), this ubiquitous combination of three-dimensional or curved shapes that can be used on anything from a flat wall, where it becomes a frieze, to a whole cupola.²³ The origins of the motif are not altogether clear, but it seems to have developed first in eastern Iran and then, perhaps independently and perhaps not, in Egypt and North Africa some time in the tenth century. Why did it develop? What does it or

The most useful recent works in this also insufficiently studied form are D. Jones and G. Michell, "Squinches and Pendentives," *AARP*, 1 (1972), and U. Harb, *Ilkhanidische Stalaktitengewölbe* (Berlin, 1978), with an excellent bibliography.

7 Muqarnas, Hall of the Two Sisters, Alhambra, Granada

did it mean? For how can one possibly even begin to discuss the meaning of Islamic architecture when no explanation exists for its most uniquely original form?

External sources are, to my knowledge, of little help. A fourteenth-century manual by al-Kashi²⁴ and a sketch discovered in the excavations of Takht-i Sulayman²⁵ indicate that at least the plane geometry of the *muqarnas* had been worked out and was available in simple manuals. It is [58] also probably not an accident that the *muqarnas* appears at the time of al-Farabi and the first major school of mathematicians in the Muslim world. But the exact relationship between the *muqarnas* and scientific development is difficult to establish, because no source exists, at least to my knowledge, that would explain why a theory of numbers or advanced geometry should have found an application in the *muqarnas*. I am not aware of anything comparable to the celebrated Syriac hymn previously mentioned or a number of Greek texts that explain the symbolic and iconographic meaning of the domed church.²⁶

If we turn to the *mugarnas* itself, some tentative answers may be suggested. First of all, there are instances when an inscription does provide a specific meaning to a *mugarnas*. The most remarkable instance is at the Alhambra, where Ibn Zamraq's poetry makes it legitimate to understand the cupola as a dome of heaven, in this instance even a rotating one. But this obviously does not mean that every mugarnas dome is a dome of heaven. In other words, the form itself may be considered as neutral, as simply a technical device of construction or decoration, unless a vector charges it with some meaning. The problem with this explanation is that it weakens, in fact even cheapens, the social effort necessary to make, for instance, a mugarnas-covered portal in stone; is it likely that the stupendous mugarnas of the Sultan Hasan Madrasah in Cairo was nothing but an ornament? Hence a second explanation may be provided that is broader than the first one and in fact does not exclude it. One peculiarity of the *mugarnas*, wherever it is found, is its ability to suggest almost infinite subdivision and, by modulating whatever surface or shape it occupies, to create the illusion that an architectural form - a wall, a ceiling, a doorway, a hall - is different from (usually larger than) what it is. This peculiarity can be understood as a game, which the *mugarnas* certainly was at times, but it can also be seen as an illustration of a profoundly Islamic notion of the immateriality of human creation, a notion often expressed through inscriptions like al-mulk lillah, la ghalib illa Allah, or albaqi huwa Allah. An architectural form serving to deny the materiality of

L. Bretanitsky and B. Rosenfeld, "Arhitekturnaia Glava," Iskussivo Azerbaidjana, 5 (1956), pp. 125 ff. See also M. S. Bulatov, Geometricheskaia Garmonizatziia v Architekture Srednei Asii (Moscow, 1978).

²⁵ It is the subject of Harb's booklet, note 23 above.

Note 11 above.

forms would in the deepest sense be an affirmation of divine truth. And then, in monuments of secular architecture like the Alhambra, an inscription can charge the *muqarnas* in different fashion, but only superficially so, for whatever meaning is temporarily given to it, the fragility of human creation is always conveyed, for the other – endlessly repeated – Alhambra inscriptions refer to the eternal permanence of the divine alone.

It is tempting to understand the *muqarnas* as a visual metaphor for a certain traditional Muslim view of reality, as the abstract carrier of a message that also found verbal equivalents and often learned ones in the more elaborate qur'anic and *hadith* inscriptions on some monuments. Nevertheless, I must conclude that, whereas we know that some Islamic meaning is associated with the *muqarnas*, we do not yet know what it is; we may be compelled to follow the example of the minaret and argue that each *muqarnas* is an independent form, whose discrete meanings must be understood before pan-Islamic meanings are proposed.

These remarks and observations are in many ways inconclusive, for they clearly indicate the insufficiency of the information we possess and the absence of intelligent thinking about whatever information we *do* possess. But perhaps a few directions for work and thought can be suggested.

The first and most important one is that, regardless of how much pressure is put on us singly or collectively to generalize about Islamic architecture, we cannot do so without a clearer understanding of the meaning of any one monument in its time, in the fullness of its historical circumstances. This is essential if we are to deal usefully and meaningfully with the traditions of Islamic architecture. It is not simply a scholar's professional interest that is involved here but a contemporary's judgment that today's world can only be true to itself if it is aware of the immense complexity of its time past.

[59] The second conclusion is that the forms of Islamic architecture, like those of any architecture, carry meanings that build systems of communication and of social relations. The carriers of these meanings, however, are, in architecture, less the forms themselves than signs added to these forms. The uniquely Muslim one is writing, qur'anic inscriptions in particular, but also hadith, poetry, and simple aphorisms or formulas, which served to define the precise aims of a monument, at least at the time of its creation. Other carriers are still incompletely understood – like geometry, for instance, the mugarnas, color, and perhaps certain formal orders. There is still some uncertainty as to whether these carriers were culturally distinctive or merely universal forms of honor or focus in architectural compositions. And we are only beginning to grapple with the infinitely more complex question of the time of art, that is, today, the duration of acceptance of synchronic meanings for any one monument. However we resolve these issues, the point remains that in order for the meanings of Islamic architecture to be understood, both a high level of literacy and an unusual power of abstract thinking were required.

Is it likely that these requirements were actually met in classical time? Here again, I cannot answer with a demonstration, for lack of preliminary studies, but I *can* argue that Islamic civilization with its many variants in time and space could not have existed and maintained itself if its message had not reached the kind of abstract sophistication that made it accessible to the Hinduist culture of Java, to the pagan Berbers, or to the Christians of Spain. What we do not know is *how* it worked, and this is what we have to find out.

If this were 1880, or preferably 1850, the way to answer these questions would be fairly easy, as Max van Berchem outlined in an extraordinarily perceptive paragraph in his modestly entitled "Notes d'archéologie arabe." We would learn languages slowly and well, read what our predecessors had done, put it all down on cards and in our heads, travel without haste by boats and on horseback, take thousands of notes and a few intelligently chosen photographs, rework them in the evening, share them with each other in long letters full of references and comments, return to comfortable and properly endowed homes and institutions, and publish it all within six months of completing the writing.

But these are the 1980s and other ways must prevail. Beyond the obvious taxonomic task, I see three clear directions. One is the investigation of the historical vocabulary of architecture in all pertinent languages. Words like dar, iwan, magsurah, or bug'ah have acquired such a range of meanings over the centuries that only a careful chronological investigation could bring out an approximation of their meaning at any one time; it is highly unlikely that they always had the confused sense they have now. The second direction is the more complicated one of identifying the mental processes and expectations of the environment of these structures as they developed in any one time or place. Of course, we shall never be able to reach the precision that texts and monuments allow for the nineteenth century in Europe, but we should be able to achieve the kind of precision found in Western medieval, Early Christian or Byzantine art. Finally, we must be able to show that, by understanding and explaining Islamic architecture, we are doing more than explaining a specific culture and its inheritance; we are also observing a unique way of creating an architecture that, because of its discrete and unique cultural setting, focuses on the relationship between men and buildings, not between buildings and buildings, not even between architects and buildings. This is a strikingly contemporary effort, and thus I return to my early remark about our role in the contemporary scene. We, as historians, can indeed bring something to the new world created in the Middle East and elsewhere, but only if we are allowed to do it with the secure knowledge of the past. This, as yet, we do not possess.

²⁷ Max van Berchem, "Notes d'archéologie arabe," *Opera Minora* I, (Geneva, 1978), pp. 78–9.