Part Two

General Islamic Architecture
Chapter IX
The Islamic Dome, Some Considerations*\(^1\)

It has generally been recognized that domes – either as single domical buildings or as cupolas in larger complexes of buildings – have played a considerable part in Islamic architecture. From the Dome of the Rock in 691 – the earliest remaining major Muslim building and probably the first monumental construction of the new civilization\(^2\) – to the Taj Mahal in the middle of the seventeenth century, thousands of domes were built from the Atlantic Ocean to the Bay of Bengal. These domes vary considerably in size and in sumptuousness, but their number shows clearly the importance in the new Muslim culture of an architectural form which had had a long and still incompletely known pre-Islamic history. Furthermore, the influence of Islamic domes made itself felt in Western architecture as late as the nineteenth century.

A great deal is known about the construction of Islamic domes. The works of Creswell in Egypt, of Godard and M. Smith in Iran, of Madame Pugachenkova and others in Central Asia, of Bretanitskij in Azerbaijan,\(^3\) have brought to light considerable information on the techniques which were used in erecting domes. Nevertheless, much is still uncertain, especially in Spain and with respect to the crucial problem of the exact ways in which decorative values and constructional needs interplayed in the conception and erection of domes. It is also true that the evolution of techniques has not yet been properly traced; nor have regional variations

1 This paper was given at the meeting of the Society of Architectural Historians in Baltimore in January 1963. The limited time at the disposal of speakers permitted only a minimum number of examples and did not allow for the detailed elaboration of the main ideas. This written account substantially preserves the tentative scope of the spoken essay, but includes a more extensive critical apparatus.
been sufficiently studied or even identified. Only too often one hears or reads of Iranian or Syrian domes, when in reality considerable differences existed between Aleppo and Damascus, Isfahan and Bukhara. The regional refinement of constructional methods and principles which was achieved in Romanesque or Gothic Europe existed to a large extent in the Islamic world as well, but has not yet been studied, except in the two instances of Azerbaijan and Transoxiana. There recent Russian scholarship has developed detailed criteria for distinguishing one area from the other, which have not always been properly correlated with the evidence available from Iran proper.

But, as one deals with domes, problems of construction and techniques are not the only difficulties posed to the historian. The works of Strzygowski and Diez on the one hand, of E. B. Smith, C. Lehmann and A. Soper on the other, have raised a considerable number of aesthetic, historical and symbolic problems pertaining to the domical form. Some of these questions concern origins, in particular the vexatious possible relation of Islamic domes to nomadic tents or to wooden portable constructions in Central Asia and Siberia. Lack of adequate evidence or even of means to evaluate the existing evidence has constantly hampered the possibility of answering questions about Central Asian origins of Islamic domical forms, but I should like to

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4 All these references can be found in E. B. Smith, *The Dome* (Princeton, 1951).
present two little-known and recently discovered examples of domes which are of considerable interest for any historian of Near Eastern architecture.

The first example is the large (17 meters in diameter) domical construction, probably of the first century AD, excavated in the Parthian capital at Nyssa. In plan (Fig. 1) it is a square with remarkably heavy walls and a circular central hall; a sort of ambulatory – perhaps later than the original structure – surrounded most of it. The small entrance corridor suggests that this type of building was still fairly unfamiliar to the architects of the time. However, [192] the massive brick walls remained a characteristic of much of later Iranian architecture and the reconstructed elevation (Fig. 2) shows an impressive conception of interior space. The specific purpose of the building is uncertain; it may have been a temple or a trophaeon celebrating the victory of the Parthians over Rome.\(^5\) Regardless of its purpose and of the validity of details of reconstruction, the interest of the Nyssa dome is that it shows the existence of a monumental domical tradition in Central Asia which had hitherto been unknown and which seems to have preceded Roman imperial monuments or at least to have grown independently from them.

The second example is of far greater significance and curiosity for Islamic art. One of the most interesting painted fragments discovered in the early eighth-century Soghdian site of Panjikent represents a domical structure (Fig. 3).\(^6\) It cannot be clearly ascertained from the painting whether it was a permanent structure, a wooden sarcophagus covered with cloth, or a tent.

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3 Fragment of painting, Panjikent
and the exact identification of the ceremony which was depicted is still a matter of controversy. But the funerary nature of the object is clear from the body in it. The combination of five small arches, three larger ones and a dome, is obviously of architectural inspiration, even though no actual building of this type has remained. The significance of the Panjikent object for later Islamic architecture is considerable, for it appears to foreshadow some of the features of later mausoleums. Since no archaeological evidence exists for such buildings in pre-Islamic Soghd, it is possible that just as in Arabia\(^\text{7}\) a tent-dome or a portable dome with generally honorific and specifically funerary associations preceded the construction of actual mausoleums.

The importance of the Nyssa and Panjikent monuments is twofold. First, they show that there was a considerable monumental domical tradition in Central Asia as early as the first century; second, the Panjikent painting indicates that, while we have no actual evidence for the construction of domical mausoleums, a consciousness and knowledge of the precise funerary significance later to be acquired by these domes existed in pre-Islamic Central Asia in the eighth century.

But, as was mentioned before, problems concerning the origins of domical forms are not the only ones posed to the historian. There are also problems of functions, symbols and purposes; for domes, as has often been shown, are particularly ambiguous in being both modes of covering especially suitable to brick countries like Iran and symbols of honor and glorification. And, just as we know that the technical developments of the Islamic dome began with the achievements of Mediterranean and Middle Eastern architecture before the beginnings of Islam, so it has been assumed that pre-Islamic meanings and associations were similarly carried over into the new civilization. Even if the latter proves also to be true, simply to assert that this is so begs the more fundamental question of why a new culture built on the foundation of many older ones appropriated for itself the old forms and gave them new or modified meanings. For Islamic civilization and Islamic art were original creations based on the past, and it is essential to understand, within the context of the new civilization, what any one form meant at the time it was taken over from the past. Regardless then of the origins or of the techniques of construction of domes, there is a problem as to the precise meaning or meanings associated with domes in the Muslim world. The problem is of particular significance in the early centuries of Islam, when the new civilization created itself by adopting or rejecting forms and meanings of the old; and it is with these earlier periods that I should like to deal in some detail, centering my discussion on the origins of the domical forms in mausoleums, but extending it to a few other monuments and texts, and to further types of buildings which used domes.

The domical mausoleum is the single most common and ubiquitous type of Islamic domical construction, whose quality may vary from the most primitive to the superbly elaborate. From the twelfth century onward mausoleums abounded everywhere except in the Far West: the ambiguity peculiar to mausoleums in which purely secular values of conspicuous consumption coexist with symbols of faith and religious emotion became as characteristic of the Muslim world as it was of the Hellenistic kingdoms of Egypt, Rome and even of our own world today. An interesting further development of the Islamic mausoleum – particularly in Syria, Egypt and Anatolia – was the manner in which its worldly and religious significance increased through the mausoleum’s association with schools, hospitals, monasteries and other pious institutions. Some of the more remarkable architectural compositions of the medieval Near East were thus created, and thus also the element of self-glorification inherent in mausoleums was, to a degree, attenuated by a philanthropic purpose. The social, economic and aesthetic characteristics of these later developments need not concern us here, but the very fact of this highly original development serves to show the tremendous importance of the mausoleum in the later Middle Ages and thus makes it all the more important that the less well-known origins of the domical mausoleum be elucidated.

There are two aspects to the problem: when were the first mausoleums built, and were they exclusively domical? The questions are particularly important if we bear in mind two facts of considerable significance. First, early Muslim doctrine was totally opposed to any manifestation of wealth or power in death through monuments. On this point there is a considerable and unequivocal literature. Hence, powerful pressures and changes within the society and the faith must have led to the growth of mausoleums. Second, the immediately pre-Islamic world was not characterized by a developed funerary architecture. In the Christian world monumental tombs were rare in the sixth and seventh centuries: first, because the faith emphasized equality in death; and second, because the cults developing around relics and places of burial of holy men took on so much importance that they were at the root of the growth of the martyrium church. Thus the mausoleum was incorporated in the church. In the western Iranian world of the Sasanians there were no monumental tombs, for Zoroastrianism did not develop extensive funerary practices. However, the small domical constructions (known as chehar taq) open on all four sides, which are so numerous in Iran and usually interpreted as fire-temples, may have served at times as memorial constructions; and the spirit of the commemorative monument, if not always its precise funerary aspect, appeared in Iran in domical shape. In eastern Iran the painting from Panjikent, and a few ossuaries which have

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8 It has often been summarized, the latest being in Creswell, *Muslim Architecture in Egypt* I, pp. 110–11.
architectural shapes, are our only evidence. There is no certainty that either form had actually been constructed.

It becomes apparent then that the existence and tremendous development of the Islamic domical mausoleum has to be explained on two levels: its significance within Muslim culture, and its revival or reinvention of the domical form for funerary purposes. A recently completed catalog of all Muslim mausoleums prior to 150 known through archaeological or literary sources has brought forth the following results. First, the period when mausoleums appeared in any number can clearly be established as the tenth century. Second, two areas are particularly notable for early developments: Iran, especially northeastern Iran, and Egypt. Some, however, of the earliest clearly identifiable religious mausoleums, and some of the holiest ones, were in southern Iraq. Third, there are two primary purposes for early mausoleums: princely initiative in emphasizing places where dynastic founders or members of a dynastic succession were buried, and the heterodox movement known as Shi'ism, in which the descent of the Prophet is particularly venerated. Fourth, the earliest mausoleums were, for the most part, very simple structures. As described by medieval geographers for early Iraqi sanctuaries, or as still remaining in eastern Iran or in Aswan, they were what Creswell has called “canopy” tombs, namely, simple domes on square walls often open on all sides (Fig. 4); in eastern Iran an important variant existed, the tower-tomb, whose origins are obscure and need not concern us here.

Although simple domical mausoleums had existed in Hellenistic times, there is no way in which one could explain a genetic passage from the first or second centuries AD to the tenth century. We must, then, assume that the Muslim world rediscovered the simple domical mausoleum at the moment when its own cultural and spiritual development demanded a monumental tomb. The causes of this development need not detain us here and will be treated elsewhere. Our problem is rather to explain how it happened that this particular form was chosen not only in areas west of the Euphrates where a possible Roman source can be supposed, but also in northeastern Iran where it is less likely. Two answers may be suggested. On the one hand, the example from the Panjikent paintings and a number of literary examples gathered several decades ago by H. Lammens and used anew by E. B. Smith may indicate that the idea of a funerary dome was fairly common in pre-Islamic Arabia and in Central Asia and that this idea remained dormant until conditions were ripe for its translation into buildings. There are many

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9 The most celebrated of these is the Bianayman ossuary, on which the latest study is by B. Staviskij, “Ossuarii iz Biia-naiman,” Trudy of the Hermitage Museum, V (1961).
11 For eastern Iran there are several examples in Pugachenkova’s book, for Egypt in Creswell’s.
objections to this romantic theory, not the least of which is that, at the time when mausoleums appeared in numbers, the Arabs of the desert had lost much of their impact and the Soghdians of Panjikent were hardly a major force in Muslim life. The second explanation which suggests itself is that the funerary structure became domical not because domes had at the time a funerary significance, but because domes had some other attribute which was applicable to tombs, if one otherwise wanted to give them a monumental character. In order to investigate this possibility, we must first find out whether domes were used elsewhere, and for what purposes.

A first category of domes comprises rooms or halls with cupolas in larger building complexes. These vary in purpose. In a group of mosques, whose earliest remaining, and probably first, example was the Prophet’s mosque in Medina as rebuilt by the Umayyad caliph al-Walid, the dome identifies and separates one of the bays of a hypostyle building: the one in front of the mihrab. From this time onward, such domes, often tied to an axial nave leading from the court to the back wall of the mosque, became heavily decorated and even multiplied in the sense that additional domes were built at the beginning of the axial nave or at the corners of the wall showing the direction of prayer (Fig. 5). This last development had mostly an aesthetic

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significance and our primary concern is with the main dome in front of the *mihrab*. Like the *mihrab* itself, it [195] could be interpreted as serving primarily to emphasize the holiness of the spot commemorating the place of Muhammad, when he led prayers. But the fact that the dome did not become a standard feature of the mosque, whereas the *mihrab* did, suggests that its purpose was not liturgical; its use must have been other than to identify a significant spot in the ceremony of prayer. One could propose that the intent of such domes was purely decorative and interpret them as features which differentiated rich mosques from simple ones. Yet there is evidence to show that a more precise interpretation of these domes can be suggested. For Medina itself, Sauvaget has already proposed that the domed bay served as a sort of throne room; in his scheme the *mihrab* as well derived from royal ceremonies, which is perhaps more doubtful, but the princely connotations of the dome and of the axial nave are quite likely. In the mosque of Cordoba the domes are intimately related to the whole complex of the *maqsura*, of the royal preserve in the sanctuary. In the Hakim mosque in Cairo, a complex ceremony around the prince took place in the area of the *mihrab*. The detailed account of the ceremony\(^\text{13}\) mentions

\(^{13}\) Maqrizi, *Khitat* II (Cairo, 1270 H.), pp. 280–81.
processions, censing and prayers, and includes a careful description of the clothes worn by all the participants. In Damascus the parallel between the façade of the sanctuary on the court and a palace façade has been made by Creswell. One of the existing interpretations of the monumental domes in front of the mihrab, which characterized Persian mosques from the eleventh century onward, is that they served also as princely rooms before being transformed into the centers of the composition (Fig. 6). All these examples may then justify the hypothesis that, originally at least, the dome in front of the mihrab served to emphasize the place of the ruler and should be related

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to palace architecture, even though it eventually acquired an aesthetic purpose as the focal point of architectural compositions and decorative designs in the mosque, and a religious one as the symbol of the direction toward which prayer was orientated.

There is yet another group of domes in mosques. When Ibn Tulun built his mosque in his new city near Old Fustat in 879, he ordered for the courtyard “a domed building open on all sides and gilded, on ten columns of marble; and there were sixteen columns of marble around it; the whole building was also covered with marble; under the dome there was a marble basin four cubits to the side, in the middle of which there was a fountain spurting water. The dome served for the call to prayer … On the roof there was a sundial and balustrades of wood.” This construction burnt down in 986–87 and was eventually replaced by the present aedicule which no longer has any of the same functions. Single domical constructions in courtyards of mosques or somehow attached to the pillared parts of the building are also known from descriptions to have existed in Nishapur in eastern Iran and in Tripoli and Ma’arrat al-Nu’man in Syria. According to Benjamin of Tudela, a fountain covered with a dome existed in the mosque of Damascus as well, although the exact meaning of the text is not very clear. In later centuries these fountains came to be considered as places for ritual ablutions and many are now so used. But such was not the case of the buildings we have mentioned, since places for ablution usually existed outside the main area of the mosque. Here again we are faced with two possible interpretations. On the one hand, these buildings are related to the sacred tholoi of Antiquity which became in the Middle Ages common themes of illustration in biblical manuscripts, especially in the Orient. They were associated with the Fountain of Life and with Paradise. Paradisiac themes can be identified in the trees and water channels of certain Andalusian mosques (for instance the courtyard of the mosque of Seville, now the cathedral, or the court of the Cordoba mosque) and especially in the mosaics of the mosque of Damascus. One may suggest that these small buildings were part of a tradition of Hellenistic origin, which, through small buildings and vegetal themes, sought to identify certain parts of a holy building as a sort of paradise. But, on the other hand, the earliest evidence in our possession suggests that this theme had at the beginning primarily a royal character. Such has been the result of R. Ettinghausen’s recent analysis of the Damascus mosaics. Furthermore, in the palace of Khirbat al-Mafjar (mid-eighth century), in the main courtyard running alongside the whole façade of the building, there was uncovered an extraordinary domical

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construction on two sets of separate piers with such a shallow pool underneath that a symbolic interpretation of the pool as part of the royal establishment is clearly indicated (Fig. 7).21 An actual pool is represented in the frescoes of the desert bath of Qusayr ’Amrah.22 Altogether the dome and water combination of a group of early mosques is clearly relatable to a well-documented palace tradition.

The last set of early domes in larger complexes of buildings comes from actual palaces and does not seem to have had an immediate impact on mosques. Domes served as gateways (Khirbat al-Minyah, an early eighth-century palace), as parts of throne rooms (Mshatta in the middle of the eighth century, Samarra in the ninth), or, as in the celebrated case of Baghdad, as the center of the ideal palace-city.23 These domical features in palace architecture are not peculiar to the Muslim world; they go back to Sasanian, Roman and Hellenistic imperial traditions. The significant point for us is that Muslim secular architecture adopted domical halls in palaces as early as in the monuments of the eighth century; that is, considerably before domes became standard features of religious buildings. It is in palaces and in mosques under the impact of palaces that the dome appears to have been first naturalized as an integral part of large architectural compositions. In all early instances it was used not merely as a constructional device, but as a form identifying definite ceremonial and symbolic purposes.24

While considerable information exists with respect to domes within larger architectural complexes, much less is known about freestanding domes. The Dome of the Rock is in almost all respects an exceptional building. Otherwise most of the evidence derives from literary sources. Maqrizi’s descriptions of Fatimid ceremonies constantly refer to royal domes which existed at certain spots in the city of Cairo, serving both a ceremonial purpose as the terminal point of imperial processions and as settings for the pleasures of dancing, music and other princely pastimes.25 [197] Single pavilions are also known from the tenth century in Shiraz and in Bukhara,26 and one such pavilion may be represented on a well-known salver in Berlin (Fig. 8).27

22 A. Musil, *Kusejr ’Amra* (Vienna, 1909), pl. XXVI.
23 All these examples can be found in Creswell’s shorter *Early Islamic Architecture* (London, 1958).
24 The only exceptions are the apparently purely functional domes in certain baths (Khirbat al-Mafjar, Qusayr ’Amrah), but it should be noted that the paintings of the Amrah dome are astronomical in character and thereby do suggest a wider meaning to the construction than mere usefulness in a hot room.
25 The texts have been summarized and discussed in M. Canard, “Le cérémonial fatimite et le cérémonial byzantin,” *Byzantion*, 21 (1951).
27 There is a considerable bibliography and controversy around the meaning of this plate; for references see A. U. Pope (ed.), *A Survey of Persian Art* (London, 1939), 1, pp. 765–66.
Domed pool in forecourt, Khirbat al-Mafjar
The conclusion which suggests itself from these examples is that, in the earliest centuries of Islam, the most characteristic domical structure was a secular one which was related to varying aspects of a highly diversified princely life. In almost all instances, in their secular uses, domes served to emphasize places honored by royal presence. Furthermore, we have tried to show that the appearance of domes in early mosque architecture should, in most instances, also be related to royal ceremonies. It is in following the same line that we may propose an explanation for the growth of the domical mausoleum. In a number of instances a direct impact of royal constructions can be assumed. These are the instances of direct princely patronage, as in one of the earliest known mausoleums, the Samanid mausoleum in Bukhara.
(Fig. 9), which dates from the first half of the tenth century. Its extraordinary use of brick gives to the very medium of construction a luxurious texture, which should be derived from the brilliant secular architecture which had been sponsored by Samanid princes. But, of course, all early mausoleums

9 Samanid mausoleum, Bukhara

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28 There is a considerable literature in Russian on this mausoleum, the most comprehensive being by V. L. Voronina in Trudy, Akad. Nauk Tadjik SSSR, 27 (1954); the most important article in English is by L. Rempel, “The mausoleum of Isma‘il the Samanid,” Bull. Amer. Inst. Persian Art, 4 (1935).
were not for princes. For the others, instead of assuming the unlikely perpetuation of antique funerary domes, one might suggest that their common use in palaces and around princes had maintained for domes in the early Muslim world the abstract significance of honor and prestige which had been theirs for centuries and that it is this abstract significance rather than a concrete funerary meaning which explains their adoption for mausoleums. It might be added that domes were not the only instance in the formation of medieval Islamic architecture in which the secular world developed forms to be used later by religious constructions. Even though the growth of the monumental gateway, so characteristic of Islamic architecture from the twelfth century on, has not yet been studied in detail, it is most likely that a similar movement of influences from secular to religious could be shown to have existed there as well.

These remarks, which attempt to give preeminence to secular royal art in the development of a given architectural form common to princely and religious buildings, should not be construed to mean that a single impetus led to the tremendous development of domes in Islamic architecture. In countries such as Iran domes were in fact an almost natural mode of covering. Our point is rather that, as one tries to understand the meaning given to architectural forms in Islamic art and the reasons why certain forms were adopted for certain purposes, it is well to recall that, even though so many of them have disappeared, palaces and secular buildings in general played, at the beginning at least, a far greater part in the growth of Muslim taste and of a Muslim vocabulary of forms than religious buildings. For, in contradistinction to Christianity, the Muslim faith was on the whole quite puritanical and ascetic in its liturgical needs and lacked a forceful ecclesiastical organization which would have created and transmitted symbols and ideas or which would have sponsored religious monuments ad majorem gloriam Dei, in the manner of Christian abbots and bishops. It was the princes who in fact sponsored most of the early monuments of architecture and who created the dimension of luxury and ornamentation which, in architecture as well as in other arts, appears so often as an Islamic characteristic and whose impact was so great far beyond the frontiers of Islam. It is finally significant that when, after the eleventh century, a greater cohesion developed in religious architectural themes, and specifically religious plans and decorative designs appeared, the contemporary Sufi mystical orders and orthodox madrasas or schools of jurisprudence and theology may be considered as the beginnings of an ecclesiastical organization. Their slow emergence as a significant factor in the sponsorship of a monumental architecture, their roots, and the origins of the forms they developed are problems which still await investigation. But even they did not ever completely replace the taste-making patronage of princes.