

THE MOSQUE TODAY

AN ESSAY By IHSAN FETHI

"Islamic culture has only recently begun to emerge from a past whose aesthetic values were based on craft toward a future whose aesthetic values will surely be based on machine production."¹

This statement by the master jury of the Aga Khan Award for Architecture concerning the prizewinning Niono Mosque in Mali, is both profound and committed. Purely traditional or vernacular architectural solutions today should perhaps be regarded as the exception rather than the rule. They tend to be isolated examples of a rapidly disappearing culture and, at their best, an appropriate response to the conditions in the rural areas of Islam where traditional ways of building have never died. Such solutions, however, do not seem appropriate in the context of expanding urban centers, which have been fundamentally affected by Western culture and technology and where the widespread economic benefits from development would preclude any major reversal of the trend.

Islam, unlike most other religions, is an all-embracing faith that defines not only man's spiritual context in relation to the cosmos through the act of submission to Allah, but also regulates in great detail his daily life in the context of a disciplined social coexistence. It is on the latter that the influence of Western culture has been most profound.

Whereas in the past Islamic architecture was clearly the product of manual aesthetics, based on the subtle interaction of devoted builders and craftsmen and regulated by tradition, today it has become the product of machine aesthetics, based on a universal system of clients, architects, and contractors. The difference between the two systems is enormous: the first produces works of art slowly, which are highly distinctive and regionally identifiable; the second produces standardized or stereotyped buildings quickly, which tend to be anonymous and devoid of any valid symbolism. In some of the wealthy Muslim countries most major buildings are designed and executed by foreigners using largely imported materials. The difference between the Western import and the traditional method is well put by Bernard Huet, a French architect who has lived and worked periodically in Tunisia. "Whereas in our society," he writes, "there is a separation between intellectual

Conference Center Mosque, Riyadh, Saudi Arabia, by Trevor Dannatt and Partners. The view of this contemporary/modern example of mosque architecture is from the musalla, looking into the courtyard. Its simple form follows local tradition.



and material work, with specific and autonomous conceptual and methodological tools for creation and execution, in traditional cultures the person who actually conceives and he who executes (if there are two different persons) operate in exactly the same way and within the same conceptual framework—even though the knowledge of one may be more vast than that of the other.”²

In the last few decades the method of building in most Muslim countries has had to keep pace with the rate of development. Hence the widespread adoption of Western methodology and technology, both of which have made for speed and efficiency. Not surprisingly even the architecture of mosques, which tends to be conservative, has succumbed to this procedure.

In absolute terms, the Muslim act of prayer can be performed in any clean place. Early mosques in Islam were very simple, austere structures—each basically an open space enclosed by a wall, with a small shaded area for prayers, the plan for which the prototype, as we have already seen, was the Prophet’s house at Medina.

The orientation of all mosques toward the holy Ka’ba, or Black Stone, at Mecca, and the preference of worshipers to pray as close as possible to the *qibla*, necessitated an oblong plan for the prayer hall, with the *mihrab* marking its central axis. The spread of Islam, however, over a vast area with different cultural and ethnic characteristics brought about many changes and variations in mosque typology and style.

In terms of overall plan, most *masjids* and *jamis* fall into one of the four types described in the preceding essay—the Arab hypostyle, the Persian cruciform, the Seljuk pillar and dome, and the Ottoman centralized dome.³ Similarly, there was a further development in the liturgical-functional typology of mosques. From the simple daily mosque (*masjid*) developed the congregational Friday mosque (*jami*), the monastic mosque (*takya*, *ribat*), the collegiate mosque (*madrasa*), and the memorial mosque (*mazar*, *mashad*, *marqad*). Certain plan types were found to be more suitable than others; in the case of *madrastas*, for example, the cruciform type was almost universally adopted throughout Islam.

The development of the volumetric, formalistic, and structural elements, however, was related more to the section of the mosque and its stylistic regional influences than to the type of mosque. It is in these elements that we find almost limitless variations. The Arab hypostyle Friday mosque was monumentalized horizontally by enlarging its area. The mosque at Samarra, for example is 156 by 240 meters. The Ottoman centralized-dome mosque was kept relatively compact in area but monumentalized mainly vertically through its height. The dome was often stretched to its maximum structural limits and reached a diameter of as much as 30 meters and a height of more than 50 meters. Similarly Ottoman minarets were raised as high as 85 meters, as in the Suleimaniye Mosque at Istanbul.

Stylistic variations and the production of hybrids arising from local architectural traditions are obviously more visible and tangible than the usually slight, subtle typological changes. Thus symbolic elements such as the minaret, structural elements such as vaults, arches, and domes, and decorative and other finishing techniques took different forms, depending not only on their historical chronological context but also on their



geopolitical and regional context. For example, square minarets became associated largely with Syrian and Moorish architecture, while slender pencil minarets became almost exclusively Turkish. Consequently it is in the stylistic rather than in the typological development of mosque architecture in Islam that the local identity and important symbolic association are more strongly in evidence.

The arrival of modern technology and the general liberalization in architectural design have resulted in the breakdown of tradition and in a new permissiveness that has been the cause of some sound innovation but also of much misguided experimentation, resulting in stylistic transplants and strange hybrids. It has become more difficult, therefore, to define the typology of mosque design. Of the four basic mosque types only two seem to persist today—the Arab hypostyle and the Ottoman centralized dome, although in modernized or adapted forms. In addition there are other, more profound changes: in the urban context of the mosque, in the role of the Waqf Administration as a major client, in the stylistic and symbolic associations of the mosque, and in the quality of architectural design generally. Consequently it is perhaps more relevant today to attempt to identify and analyze stylistic design trends in the context of the contemporary factors that may have caused these trends.

Studying new mosques, built or designed within the last four or five decades, has proved difficult because of the obvious lack of good documentation in the Islamic world generally. The data obtained, however, from various published competitions, articles, books, and the documentation of the Aga Khan Award has provided enough information to identify recent design trends in mosque architecture. Five broad trends seem to have emerged: 1) traditional/vernacular; 2) conservative/conventional; 3) new classic Islamic; 4) contemporary/modern; 5) eclectic/Arabian Nights. The classification of new mosques into such categories is risky and perhaps too simple, but it may help to clarify some of the confusion in mosque architecture today and encourage further argument.

The inclusion of some mosque examples under a particular category may be disputed by some readers, or indeed by the designers themselves. This difficulty, implicit in any attempt at classification, may be modified if it is assumed that there are no sharp boundaries separating the five categories. In most cases, in fact, putting an example into a particular category was a question of degree, and in some cases there was even an overlap between two or more categories.



Dar al-Islam Mosque, Albuquerque, New Mexico, by Hassan Fathy (left). The first of a group of buildings to be built for an Islamic community in the United States that are to include a school, a clinic, a shopping center, and other public buildings, the mosque can be classified as traditional/vernacular. The Tauheed Mosque, Aleppo, Syria (above), and the Othman Mosque, Damascus (right), belong to the conservative/conventional category.

The following examples have been included because the documentation in every case was sufficient to make classification possible. The list is therefore highly selective.

1. Traditional/Vernacular. These mosques have distinctive regional characteristics and are essentially continuations of traditional building techniques. They are built mainly by local masons using locally available materials. The majority are in rural areas and unmodernized regions of Islam.

Algeria: Mosque, Timimoun New Town (1930).

Burkina Faso: Great Mosque, Bobo-Dioulasso.

Egypt: Mosque, New Gournah, by architect Hassan Fathy (1945).

Kenya: Riadhah New Mosque, Lamu (1970).

Mali: Great Mosque, Niono, by master mason Lassiné Minta (completed 1973, Aga Khan Award 1983). Great Mosque, Mopti (1935).

Philippines: Molundo New Mosque (late 1970s).

Tunisia: New mosque, Jara. Sidi Salim Mosque, Harusi (1963). Zamzamia Mosque, Gabès (1963). Shanini Mosque, Médenine. Mosque, Tatahouine (1958). Sidi Makhluf Mosque, Le Kef (1966).

2. Conservative/Conventional. The following mosques largely adhere to existing regional building characteristics, using fa-



miliar and stereotyped forms, with some modern architectural materials and services. Though modern structural systems such as reinforced-concrete roofs, beams, and columns were largely used, the mosques were still heavily dependent on local masons and craftsmen for finishing techniques, decorative work, and calligraphy. In other words, they tend to be quite modern in their structure, but conservative in their architecture and liturgical imagery.

Egypt: Abi Abbas al-Mursi Mosque, Alexandria, by architect Mario Rossi (designed 1928, completed 1945). Zamalik Mosque, Omar Mukarram Mosque, and Muhammad Karim Mosque, Cairo, by architect Mario Rossi. Salah al-Din Mosque, Cairo, by architect Ali Khairat. Sayida Safiya Mosque, Nasr City, Cairo, by architect M. A. Eissa (designed 1977, completed 1980). Fooli Mosque, Al-Minya (1946). Sports Club Mosque, Heliopolis (1953).

India: Nakhoda Mosque, Calcutta (1942).

Iraq: Ramadan Mosque (Al-Shaheed), Baghdad, by architect Fawzi Itani (designed 1940, completed 1957). Assafi Mosque, Baghdad, by architect A. Saghir (completed 1957). Qazaza Mosque, Baghdad, designed by *awqaf* (completed 1966). Adila Khatun Mosque, Baghdad, designed by *awqaf* (completed 1962).

Nigeria: Central Mosque, Ilorin (1978).

Pakistan: Maiman Mosque, Karachi (under construction 1984). Buhra Sect Mosque (three-story prayer hall), Karachi.

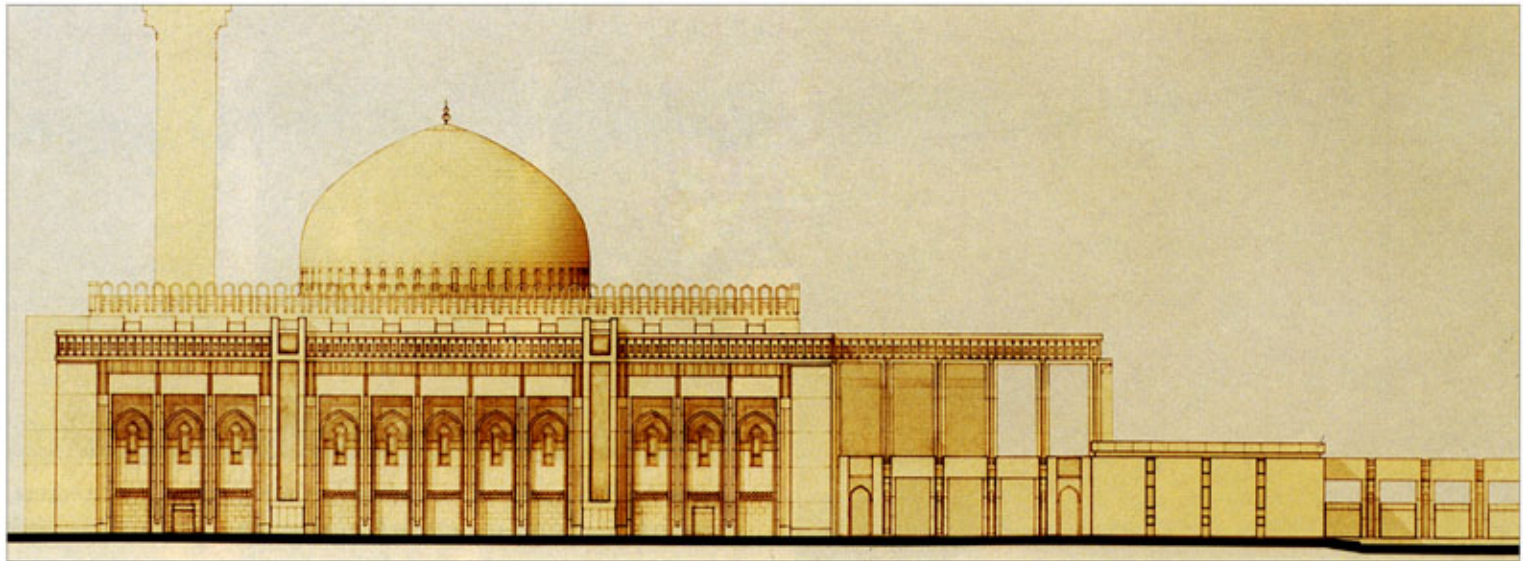
Senegal: Mouride Mosque, Touba (Moorish style). Great Mosque, Kaolack (Turkish style) (1983). Great Mosque, Dakar (Moorish style).

Syria: Othman Mosque, Damascus, by architect Muhammad Farra (designed 1961, completed 1974). Tauheed Mosque, Aleppo, by architect Hickmat Yasji.

Tunisia: Habibiya Mosque, Tunis (1961). Sidi Daoud Mosque, Tunis (1964). Bourguiba Mosque, Monastir (1963). Bourguiba Mosque, Qafsa (1967).

United Arab Emirates: Great Mosque, Abu Dhabi.

3. New Classic Islamic. In these mosques an adapted classic Islamic architectural vocabulary has been used, especially in forms, patterns, and signs. The mosques have mostly modern structures, often incorporating sophisticated and innovative construction techniques and architectural services. In other words they are essentially modern, but an attempt has been made to make them fit in with the locality by the use of a traditional vocabulary and symbolism. They cannot be called



conservative, because they are adaptive and innovative; and they cannot be called contemporary, because they clearly depart from the usual internationalist architectural idiom.

Iraq: State Mosque Competition, Baghdad (1983, designs only): by Ricardo Bofill, Taller de Arquitectura (Barcelona), and Iraq Consult (Baghdad); Venturi, Rauch and Scott Brown (Philadelphia); Minoru Takeyama (Tokyo). Khulafa Mosque, Baghdad, by architect Makiya Associates (designed 1962, completed 1964).

Italy: Mosque and Islamic Cultural Center, Rome (1975, design only): by architects Paolo Portoghesi, Vittorio Gigliotti (Rome), and Sami Mousawi (Iraq).

Kuwait: State Mosque, Kuwait City, by architect Makiya Associates (designed 1978, under construction).

4. *Contemporary/Modern.* In the following mosques a contemporary International Style vocabulary predominates in usually abstracted forms and streamlined geometry, using modern structural construction techniques, services, and materials. Consequently they do not necessarily attempt to attain a specific local identity architecturally. They are perhaps more innovative than the previous categories and some show a remarkable degree of originality and purist simplicity.

Bangladesh: Bait al-Mukarram Mosque, Dacca, by architects Thariani and Co. (designed 1960, completed 1963).

Indonesia: Salman Campus Mosque, Bandung, by architect Achmad Nae'man (designed 1960, completed 1972).

Iraq: University of Baghdad Mosque, by architects Walter Gropius and T.A.C. (United States) (designed 1956, under construction). Dauodiya Mosque, Rashdiya, Baghdad, by architect Abdulla Ihsan Kamil (designed 1962, completed 1963). Buniya Mosque, Baghdad, by architect Qahtan Madfai (designed 1967, completed 1971).

Iran: Mosque for University of Jondishahpour, Ahvaz, by architects D.A.Z. (Kamran Diba) (designed 1971, completed 1974).

Jordan: King Abdullah Mosque, Amman, by architect Rasm Badran (1979, design only); alternative design by architects Ribhi Sobeh, Hasan Nouri, and Jan Cejka (1979, design only).

Kuwait: Fatima Mosque, Abdulla Salem District.

Lebanon: Aysha Bakkar Mosque, Beirut, by architect Ja'afar

Tukan (designed 1970, completed 1973).

Malaysia: Negara Great Mosque, by architect Eliche Barharuddin (designed 1957, completed 1965).

Oman: Sultan Mosque, Ruwi District, by architects Maath Alusi and T.E.S.T. (Baghdad) (1975).

Pakistan: King Faisal Mosque, Islamabad, by architect Vedat Dalokay (designed 1968, nearing completion). Ahle Hadith Mosque, Islamabad, by architect Anwar Said (designed 1970, completed 1973). Al-Tooba Mosque (Defense Society mosque), Karachi, by architect Babet Hamid (1969). Shuhada Mosque, Lahore, by architect Babet Hamid. Clifton Mosque, Karachi.

Qatar: Osman ibn-Affan Mosque, Doha, by architect Halim Abdel Halim in collaboration with Arab Bureau for Design, Egypt (award-winning design 1981).

Saudi Arabia: Mosque in conference center, Riyadh, by architects Trevor Dannatt and Partners (designed 1966, completed 1976). Mosque in conference center, Mecca, by architects Rolf Gutbrod and Frei Otto (designed 1966, completed 1973). Mosque for Youth Welfare Development, Dammam (designed 1980). Mosque for University of Petroleum, Dahrn, by architects Caudill Rowlett Scott (designed 1966, completed 1974). Mosque for Riyadh Railway Station, by architect L. Barbera (1978, design only). King Khalid Airport Mosque, by architects Vesti Corporation (Boston) (completed 1984).

Singapore: Majlis Ugama Islam Mosque, by architects of Housing and Development Board (1980). Al-Muttagin Mosque, Ang Mo Kio, by architects of H.D.B. (completed 1980).

Sudan: Safia Mosque, Khartoum North, by architect M. Hamdi (designed 1972, completed 1974).

Tunisia: Hammam Sousse Mosque, Sousse (1965); Sidi Abdul Salam Mosque, Gabès (1965). Bin-Bashir Mosque, Jandouba, (1967).

Turkey: Mosque for Etimesgüt Armed Units, Ankara, by architect Cengiz Bektaş (designed 1965, completed 1967).

Yugoslavia: Sherefudin White Mosque, Visoko (Aga Khan Award 1983), by architects Zlatko Ugljen and D. Malkin (completed 1980).

5. *Eclectic/Arabian Nights.* These are mosques in which whimsical and often bizarre combinations of Islamic forms and



Plan of State Mosque, Kuwait City, Kuwait (left). The design is for a new classic Islamic type of mosque. Aysha Bakkar Mosque, Beirut, Lebanon (above), and a mosque in Abu Dhabi (right). The first is representative of the contemporary/modern trend, while the second is a clear-cut example of the eclectic/Arabian Nights tendency in mosque design.

symbols have been used. The eclectic use of symbolic elements from various regional architectural styles, such as multifarious onion domes and frilly minarets, curious arches, and the excessive use of decoration, evoke Hollywood images of the Arabian Nights. As such, they tend to be imaginative but often clumsy in proportion and lacking in overall discipline. They seem to be popular in Pakistan and the Muslim Far East but also in some parts of the Arabian Gulf.

Brunei: Great Mosque, Bandar Seri Begawan.

Jordan: Queen Aliya Mosque, Amman, by architect Edward Mansfield (designed 1977, completed 1980).

Malaysia: Aboudiya Mosque, Kuala Kingisar. Zahir Mosque, Alor Setar, Kedah.

Oman: Omar Bin al-Khattab Mosque, Sur, by architects Ayoub Oghanna Associates (Masqat) (designed 1980).

Pakistan: Jeem Mosque, Chitral.

Although the mosque—both *masjid* and *jami*—is fundamentally a place for worship, it has traditionally played a much

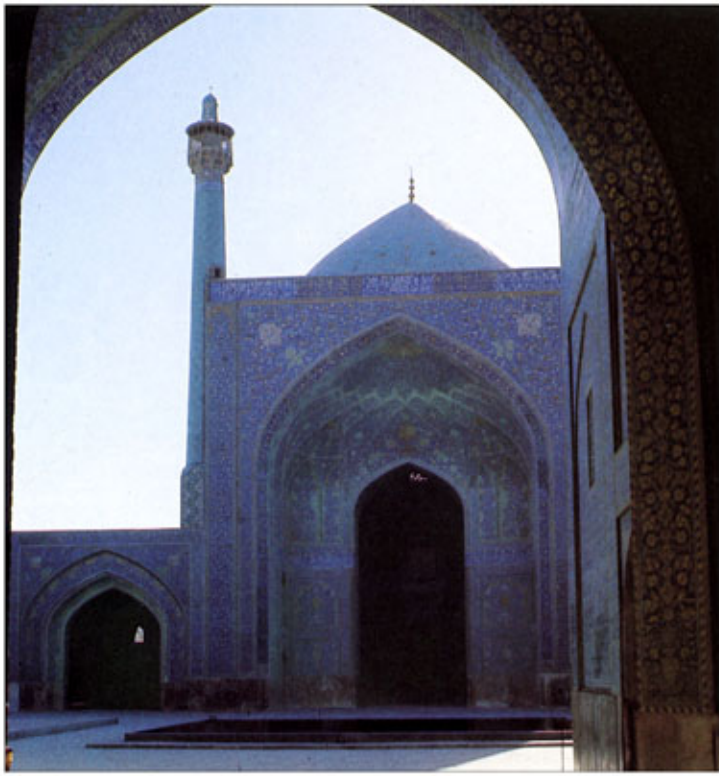


wider role in the life of the Muslim community. Its traditional functions of school, library, hostelry, law court, sociopolitical center, and much more have already been noted in the preceding essay. The *jami*, because of its relatively large size and close association with the Islamic state, was traditionally the biggest and highest building in the city. This tendency to monumentalize mosque architecture, first fully evident in Iraq under the Abbasids, did not result in the physical isolation of the mosque from the rest of the city, as was the case with some shrine mosques. Despite its size, the *jami* remained an introverted building, closely integrated with the dense urban fabric. It nearly always occupied a central location and was usually contiguous with the *suaqs* (markets), *hammams* (baths), *khans* (caravansaries), and houses of the area.

Since the late-nineteenth century Western influence on the urban fabric of Islamic cities, transmitted indirectly by European colonists, has caused an almost total change in the urban context of both *masjid* and *jami*. The arrival of the car led to the destruction of significant parts of the historic fabric to provide for the easy movement of vehicular traffic. As a result many mosques were demolished, while the more historic examples frequently were severed from their former urban context and pedestrian linkages by wide roads.

Furthermore, within the last fifty years, as a result of rapid urban growth combined with the importation of Western ideas in city planning, the new suburban mosque has been conceived as a freestanding extrovert monument, occupying a whole city block as defined by the four roads of a gridiron plan. This new context of the mosque has had as profound an effect on its function as a religious and social center as on its architecture.

The notion of the mosque as an isolated monument, depending on vehicular accessibility for a congregation that no longer lives in its shadow, has become widespread. Thus the



Exteriors of the seventeenth-century Shah Mosque, Isfahan, Iran (above), and the 1969 Al-Tooba Mosque, Karachi, Pakistan (right), compared. Domes, arches, and minarets are used in both, but it is the minaret only that signals the identity of the Karachi mosque. The change of axis in the Shah Mosque absent in the freestanding Al-Tooba Mosque also shows the change from the orientation to Mecca to the axes of the city plan.

mosque, even if its catchment area is a well-defined suburb, no longer appears to belong to a specific locality, because it is no longer physically connected to the surrounding urban fabric. One of the consequences of conceiving the mosque as a freestanding structure surrounded by large open spaces rather than as an inward-looking structure hugging the perimeter of the site has been the obsolescence of the great courtyard, which has either shrunk in size or been omitted altogether. The mosque is therefore designed as an enclosed building, which cannot function properly without the active support of such modern services as artificial lighting and cooling, a tendency that is particularly evident in the wealthier Muslim countries where energy consumption and cost factors are often not considered to be of any major consequence.

Two outstanding examples may help illustrate the negative effect of this new urban context. The Um al-Tubool Mosque in Baghdad, built in 1964 as a major Friday mosque, has become so isolated from the surrounding residential districts, because of an elaborate multilevel traffic intersection, that it fails to attract even a modest number of worshipers on Fridays, let alone other days.⁴ The Hilali Mosque in Kuwait is in a worse predicament, because it is situated in the center of a large traffic circle.

The dismemberment of the mosque from its traditional urban setting and the reorientation of its traditional introverted form to an extroverted one has also resulted in the disappearance of the outer wall and its gateways. This wall, which represented the physical demarcation between the profanity



of the street and the sanctity of the mosque, is now replaced by a low, often see-through parapet, which represents a major break with tradition. Similarly, the main gate, traditionally facing the *qibla*, has tended to become artistically unimportant and visually insignificant.

Westernization and political nationalism have helped to bring about a *de facto* secularization in many Islamic states. The *awqaf*, the guardian of mosques, has lost its independence and become an official governmental organization. In most Islamic states it has acquired a large share of the real-estate market and is heavily involved in property development. As a result it has often become too busy, with its heavy investment program, to give proper attention to the care and maintenance of its large stock of historic mosques or to the building of well-designed new ones.

The available evidence suggests that most private mosques are built by local contractors with permission from the municipal planning authorities and not the *awqaf*, which does not appear to give much architectural guidance or exercise design quality control in most Muslim countries. Because good, experienced masons and craftsmen are now hard to find and in any case prohibitively expensive, hundreds of badly executed and strangely hybrid mosques are built every year all over the Islamic world. Some examples in Pakistan, Southeast Asia, and the Gulf countries—the eclectic/Arabian Nights category—are difficult to accept as serious contributions to religious architecture. It would be tempting to dismiss them and to regard their proliferation as a degenerative trend in Islamic architecture if it were not for their genuinely popular appeal. Indeed the same ostentatious love of color and gaudy decoration can be found in Hindu temples and in houses and extends in Pakistan and Afghanistan even to motorized vehicles. This suggests that the trend is perhaps a genuine manifestation of folk art. But whereas this manifestation may be acceptable in the design of small rural and urban *masjids*, it cannot be considered appropriate for the large-scale *jamis*, which are architect-designed and officially sponsored and which must therefore display a degree of dignity and *gravitas*.

The influence of some European engineers and architects has also helped to give credence to the concept of the mosque as freestanding monument. Mario Rossi, an Italian architect (1897–1961), for example, was influential in the development in Egypt of a new, but still basically conservative, style of mosque design. His mosques in Cairo and Alexandria are an



Interior of the fourteenth-century Friday Mosque, Isfahan, Iran (above), and the 1973 Ahle Hadith Mosque, Islamabad, Pakistan (right), compared. The vaulting in the contemporary mosque is insubstantial and seems to float in comparison with that in the medieval hypostyle hall.

attempt to create a synthesis of the Ottoman and Mamluk styles, with some innovations of his own. Rossi came to Egypt while in his twenties and was first employed by the Ministry of Works, which assigned him duties in the Royal Palaces. Later, in 1928, he was commissioned to design the Abi al-Abbas al-Mursi Mosque in Alexandria, which took sixteen years to complete. During this period Rossi was converted to Islam and began his systematic study of mosque architecture in Egypt. He compiled an impressive atlas of Islamic architecture and decoration, which remains unpublished and is kept by the *awqaf*.

With the exception of certain innovations, Rossi's mosque designs show a basic adherence to tradition, especially in his repeated use of the Ottoman centralized dome type. His experiments were mostly stylistic, in the decoration of the mosque and in the shape of the minaret, dome, etc. Of particular interest are his mosques of Zamalik and Omar Mukarram in Cairo, and the Mahatat al-Raml, Muhammad Karim, and Abi Abbas al-Mursi Mosques in Alexandria. In most of his designs he did away with the open courtyard altogether, and raised the mosque well above street level, thereby treating it as a totally enclosed monument. The mosque was reached by ascending a flight of steps that led to a colonnaded portico instead of the usual *iwan* gateway. The omission of the open courtyard, in particular, became popular, because it was difficult to find large enough plots in town centers.

Rossi's notable stylistic innovations include new forms of arabesque (*tawriq*) decoration, especially for filigree masonry screens, which he used extensively and which became very popular in Egyptian mosques; carved stone domes in the corners

of mosques in addition to the main central dome; and his treatment of the minaret, whose form and height he sometimes exaggerated as at the Mahat al-Raml Mosque (1948–1951), which soars to 73 meters above ground level.

Rossi's mosques, together with those of several Egyptian architects, notably Ali Thabit and Ali Khairat, established a style that became popular in Egypt and spread as far as Saudi Arabia, the Gulf countries and even Iraq, which has a strong building tradition of its own.⁵

The current approach to mosque design by architects all over the world seems to favor a modern style, though the majority of mosques actually realized are in fact conservative. The Madrid Islamic Cultural Center Competition of 1980, which included a mosque as a major component of a larger complex, attracted 455 entries from more than 2,000 architects. Of the forty-five different countries represented, sixteen were Muslim. The Union of International Architects (U.I.A.), the organizers of the competition, published a monograph that reproduced all the entries. It is a document of exceptional interest, because of the wide variety of types and styles it covers, which makes it a major source for anyone thinking about mosque design today.

A detailed analysis I did of all the submissions revealed several interesting and some startling results (table, p. 60). As far as design approach is concerned, the overwhelming majority of architects (76 per cent) opted for an unconventional modern solution, while only 13 per cent opted for a low-key conservative one. Yet today, barely five years later, few new mosques are being built in a truly contemporary style. The evidence shows a remarkable attachment to familiar and stereotyped forms, due perhaps to the resistance of the Islamic clergy and *awqaf* to formal innovation. Because there seems to be no religious objection, on the other hand, to the use of advanced technology, traditional forms often disguise modern structures as well as imported materials and technical services.

Why is it, then, that unconventional styles—modern or

eclectic—are encouraged in certain Muslim countries and not in others? The reasons are complex and are to be found in the particular religious, geopolitical, and cultural circumstances of each country. In general, a conservative approach is more likely in a country that possesses a strong building tradition than in one that does not, or where there are other building traditions besides the Islamic. This may explain why the eclectic/Arabian Nights type is abundant in certain oil-rich Arab Gulf countries, in Pakistan, and in the fringe regions of Islam such as Malaysia, Singapore, and the Philippines, but hardly found at all in such countries as Iraq, Egypt, Tunisia, Morocco, Iran, and Turkey, all of which have a strong Islamic building tradition. It may be of interest to note that the type is often architect-designed and that, in the Madrid competition, twenty-four entries fell into this category, two of which were by Muslim architects.⁶

Only thirteen entries (3 per cent) that could be classified broadly as “high tech” were identified, though some may also be described as “postmodern”.⁷ This is hardly surprising since it is difficult to imagine a mosque designed in an exposed steel frame with clips and gaskets ever being acceptable to the Muslim clergy, let alone the people. The problem, however, is one of distinguishing between means and ends. If an architect were able to use high tech as a means to an end that fulfilled the cultural aspirations of a people rather than as an end in itself—as the style that it has become—the possibility of such a mosque being built becomes plausible. A design like Ludovico Quaroni’s for the Rome Mosque,⁸ or Toyokazu Watanabi’s for the Madrid Mosque⁹ might then do for mosque architecture what Philip Johnson/Burgee’s Crystal Cathedral in California (1980)¹⁰ has done for church architecture.

The fundamental difficulty in mosque design arises from the fact that it is not always possible to draw clean lines between what is feasible or acceptable and what is not, when there are only a few rules governing mosque architecture. The Koran refers to the word *masjid* twenty-eight times, but in none of these references is there any relevance to mosque architecture. Equally, the Hadith, the Traditions of the Prophet, do not specifically refer to mosque design and, surprisingly, there is no major historical account of architecture by Muslim scholars. The only rules that qualify a building as a mosque are that it should be a clean enclosure or sheltered space, with a *mihrab* oriented toward Mecca.

Indeed there are thousands of small mosques in the Muslim world that contain only a small *musalla* with a *mihrab* and ablution facilities. They have no minarets, domes, arches, or decoration, but perhaps some Koranic inscriptions painted simply on the *mihrab* and the entrance gate. The only condition of making a *masjid* into a *jami* is the addition of a *minbar* (pulpit), essentially a piece of furniture to facilitate Friday *khutba* (sermons).

There are on the other hand many unwritten rules and traditions (*urf*), which the architect cannot afford to ignore, especially when the mosque is of significant size and of urban and townscape importance. These rules are the accumulated traditions, norms, associated symbols, and signs of a particular culture in a particular region.

The history of the mosque itself shows a slow but definite evolution from the simple utilitarian models of early Islam to

The Madrid Islamic Cultural Center Competition, 1980— Selected Analysis

Style	number	per cent
Traditional/vernacular	0	0.0
Conservative/conventional	58	13.0
New classic Islamic	14	3.0
Contemporary/modern	346	76.0
Eclectic/Arabian Nights	24	5.0
High tech	13	3.0
Total	455	100.0

Musalla plan		
Square	176	38.8
Rectangular (oblong)	175	38.6
Rectangular (deep)	51	11.3
Polygonal	40	8.6
Circular	7	1.5
T-shaped	3	0.6
Diagonal (<i>mihrab</i> in corner)	2	0.4
Triangular	1	0.2
Total	455	100.0

Musalla columns		
Hypostyle	265	58.2
Minimum number of columns or none	190	41.8
Total	455	100.0

Symbolic elements		
With one minaret	423	93.0
With more than one minaret	8	1.8
Without minarets	22	4.8
With leaning minaret	2	0.4
With dome(s)	136	30.0
With arches	204	45.0

Sources: *Madrid Islamic Cultural Center Competition*;
U.I.A. monograph, Paris, 1980.

the unsurpassed monumentality and magnificence of Ommiad, Abbasid, Fatimid, Seljuk, Safavid, Mogul, and Ottoman models. The history also shows a continuous evolution in mosque architecture, even within one region. It is beyond doubt that the designers and builders of those historic periods employed the most sophisticated building technology available at the time and were willing to experiment with new materials and techniques. In fact Islamic architecture as we know it today is the result of a long synthesis of a number of cultural interactions and adaptations, and what gives Islamic architecture its vitality comes from the great variety of regional contexts that together form an overall unity.

The minaret, for example, has become functionally obsolete, because for the last forty years loudspeakers have commonly been used in town mosques. But the minaret, irrespective of its shape, is now so deeply established as an important sign of the Islamic faith, that it is difficult to think of a mosque of any architectural significance without one. It

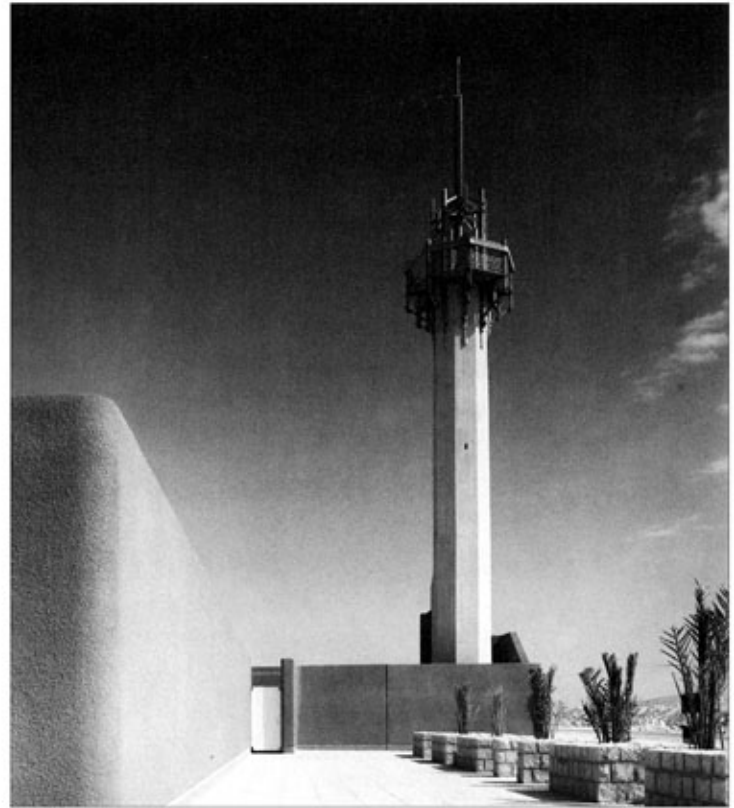
is not surprising, therefore, that minarets continue to be used despite their obsolescence as functional elements. In the Madrid competition the overwhelming majority of mosque designs (93 per cent) had at least one minaret. It is my opinion that, in terms of external formal symbolism and recognition, the minaret and not the dome is the most important single architectural element in mosque design. Without it the form will not easily be recognized as a mosque. Domes alone can be taken for a shrine, a *hammam* (bath), or indeed any other public building. So important was the minaret to Makiya's design for the Baghdad State Mosque Competition, that he elevated it to a height of 240 meters, "forming a monument with a powerful vertical axis. As such it becomes a spiritual, visual and cultural symbol expressed on the skyline of the city."¹¹

Another architectural problem associated with mosque symbolism and not functionality is the special ambience of the *musalla*. While it is a well-known fact that in Islam a rectangular plan with its long axis parallel to the *qibla* is preferable, there is no specific religious objection to other shapes. It follows, however, that to emphasize the sense of direction toward the Ka'ba, the Black Stone, the volume of the *musalla* should be designed to achieve and preferably enhance this essential symbolic requirement. Consequently any nondirectional shape that has equal sides, such as a square or an octagon, should be avoided because of its tendency to emphasize the centrality of the space rather than the axially of the *qibla*.

Circular or triangular shapes are unacceptable.¹² The Al-Tooba Mosque in Karachi (built in 1969), which is virtually an enlarged copy of Walter Gropius's design for the University of Baghdad, is not only symbolically disconcerting, but with its circular domed space it creates acute acoustical problems. Similarly, the frequent examples of square and octagonal plans today suggest that the symbolic meaning of the interior space of the mosque is misunderstood by many architects. In the Madrid competition there was an unexpected fifty-fifty split between oblong and square *musalla* plans (38 per cent for each).

Equally important in the plan of a large *musalla* in a *jami* is the question of the modular and structural punctuation of its space. In traditional Arab hypostyle mosques the *musalla* had to be subdivided by columns or arcades in spans determined by the structural properties of the materials in current use. Besides the obvious economic advantages of such a method, the frequent supports also acted as physical reference points that helped worshipers to align themselves in parallel rows. The division of space into smaller, equal bays gave the hypostyle hall its characteristic ambience and sense of equipoise. Furthermore, when the dome became common in mosques, it was placed nearer the *mihrab* area and away from the center of the *musalla*. In this sense the dome, which symbolizes the sky and the cosmic turtle, emphasizes the shift in the space toward Mecca. Ottoman centralized-dome mosques, therefore, represent a major break with this important symbolic tradition.

Unlike the Gothic church, whose volume is essentially vertical, the volume of the hypostyle mosque is strongly horizontal. The meaning of this horizontality must be properly understood by architects and clergy alike, for it constitutes one of the basic requirements of mosque design. Yet it is a requirement that seems to be widely ignored. One needs to



Conference Center Mosque, Riyadh, by Trevor Dannatt and Partners. The minaret and entrance area of this contemporary/modern mosque are given weight by clean lines, plain surfaces, and harmonious geometric shapes.

look no further than one of the 1983 Aga Khan Awards, Sher-efudin's White Mosque in Visoko, Yugoslavia, to find a *musalla* with a top-lit vertical space, whose source is more easily found in the work of certain modern European masters than in traditional mosque design.

Modern technology offers the designer virtually limitless possibilities in the choice of structure. It is quite possible, for example, to have a very large *musalla* without any supports other than the outside walls—an advantage for worshipers who prefer to see the *mihrab* and the *khatib* on the *minbar* during Friday sermons. The symbolism associated with the "palm forest" of columns, however, remains irresistible, to judge from the Madrid competition, in which nearly 60 per cent of all entries employed the hypostyle plan. In the Baghdad competition all seven competitors opted for a hypostyle plan, despite their widely divergent design ideologies. Interestingly the Ricardo Bofill and Iraq Consult entry for this competition was based on the principle of standardization and prefabrication, with hollow columns for the distribution of air-conditioning in an integration of symbolism, services, and structure.

Symbolic elements in mosques—the minaret, dome, pointed arch, decoration, calligraphy, crenellations, and finials, which incidentally are often used as standards to mark the particular sect to which a mosque belongs—are not absolute requirements but nevertheless offer great potential for stylistic elaboration. The associated symbols have evolved in the past and may do so in the future, but whereas in the past it took many generations for an established symbolic element to be changed, today such changes are fast and frequent.

The compression in the time scale of modern development



has offered new horizons but has also meant the disruption of tradition. This is especially pertinent to mosque architecture where the religio-functional requirements and constraints are minimal but the psychosymbolism is extremely demanding. The resultant cultural discontinuity and the loss of identity, created by the dramatic intervention of Westernization and global technology, are manifested in the present confusion in Islamic architecture generally.

In the somewhat desperate search for reassuring symbols many architects, both Muslim and non-Muslim, have made choices in their mosque designs that must be called into doubt, and the following examples are cited in a questioning rather than condemnatory spirit. The use of metaphorical analogy can be seen in the Bait al-Mukarram Mosque at Dacca (built in 1963), which imitates the cubic form of the Black Stone.¹³ The mosque, according to the architects, has become a special attraction for non-Muslim tourists who otherwise cannot visit Mecca. Its height of 99 feet from *mihrab* level, moreover, is supposed to correspond to the ninety-nine names of Allah, a conceit that is obscure enough but would become meaningless if the height was measured in meters.

Similarly a mosque in Amman, Jordan,¹⁴ designed by the British architect Edward Mansfield has four domes to signify the four years of marriage of the notable commemorated by the monument. In Saudi Arabia a mosque designed by the Iraqi architect Basil Bayati takes the form of an open book (the Koran), complete with open leaves and inscription, and contains five shafts, which are to be understood as the Five Pillars of Islam.¹⁵ A mosque built in Ankara in 1967, described by the architect as the first really modern mosque in Turkey, has Koranic inscriptions in the Latin alphabet on its *mihrab*.¹⁶ Paolo Portoghesi in his design for the Rome mosque (1975) compares the elaborate shafts of the *musalla* to "hands during the act of prayer," which prompted Charles Jencks's comment that the "flying exuberance of these structural members, a modernist conceit . . . are like a Nervi structure on a holiday."¹⁷ Among the Madrid competition entries there were a Greek temple,¹⁸ a Black Stone,¹⁹ a hypostyle hall with real palm trees,²⁰ two designs with inclined minarets,²¹ and a minaret incorporating residential apartments, which was given fifth mention despite strong objections from several members of the jury.²²

At the same time the Madrid competition included many sober entries that deserve full credit for the way in which the

Said Naum Mosque, Jakarta, Indonesia, by Atelier Enam (left). The building is contemporary in spirit, with distinctly traditional characteristics of the region. Above: University of Petroleum Mosque, Dahrhan, Saudi Arabia. The mosque falls uncompromisingly into the contemporary/modern category. Right: Um al-Tubool Mosque, Baghdad, Iraq. The isolation of the mosque by a multilevel traffic intersection is indicative of an increasingly common characteristic of modern Islamic cities. Instead of an intimate part of the urban fabric and daily life of the people, mosques are often accessible only by automobile.

architects tried to create a truly contemporary mosque. The winning design, for example, by the Polish architects Jan Czarny, Jolanta Singer, J. Zemla, and M. Zemla²³ shows a courageous approach that makes use of modern technology, attempting a subtle fusion of traditional architecture and today's needs.

In conclusion it must be said that the architecture of the mosque is generally in a stagnant state, due in no small measure to the erosion of its regional vitality. The unquestioning acceptance by the clergy of modern planning requirements has severed the mosque from its lifeblood and made it a detached monument, whose importance as sculptural form is essentially untraditional. The resistance of the clergy, on the other hand, to all design innovation has made most architects today adopt the conventional approach and the use of familiar imagery as the safest path to client satisfaction. Despite its shortcomings, the contemporary approach—seen in Sherefudin's White Mosque, the Aysha Bakkar Mosque in Beirut, the Conference Center Mosque in Riyadh, the Sultan Mosque in Sur, Oman, and the Hamman Sousse Mosque in Sousse, Tunisia—can produce bold and original results. Similarly, Makiya's mosque in Kuwait and the designs for the Baghdad competition by Bofill and Iraq Consult and by Venturi, Rauch and Scott Brown are equally bold attempts at a reinterpretation of traditional elements and the way these are put together.

A truly contemporary approach must take into account the needs and aspirations of the people for whom the mosque is built. The technology is the means by which it is built, and the choice of technology, to be appropriate, must depend on the conditions of a particular place. It is through an honest response to such considerations rather than through a literal expression of past styles that the mosques of the future will retain their differences and remain close to the spirit of Islam.

