THE MOSQUE BETWEEN MODERNITY AND TRADITION:
A STUDY OF RECENT DESIGNS OF MOSQUE
ARCHITECTURE IN THE MUSLIM WORLD

by

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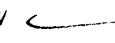DEGREE OF MASTER OF SCIENCE IN ARCHITECTURE STUDIES

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
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The mosque between tradition and modernity: A study of recent designs of mosque architecture in the Muslim world

By Yasir Sakr

ABSTRACT

In this study of four recent projects of mosque architecture in the Muslim world, the works of architects Abdel Wahid El-Wakil, Rasim Badran, Robert Venturi and Halim Abdel Halim conciliate the cultural heritage of Arab-Muslim societies with the Western modernizing design methods that have been introduced since the beginning of the twentieth century.

The designs of the four architects addressed the apparent dilemma of the duality between tradition and modernity, in an effort to suggest a character for the identity of the contemporary mosque architecture in a dynamic cultural environment. The study seeks to discern and to evaluate the theoretical models and the methodology employed in the design process of each project, with the intention of understanding their cultural compatibility. All the projects are located within the same general area, Iraq,Qatar and Saudi Arabia, and all are based on the hypostyle mosque,although they differ in their fundamental use of the architectural vocabulary. Reflecting on the hypostyle mosque and its traditional place in the liturgy as well as its identifiable historical transformations, we can weigh the responses of each design solution to its contextual requirements and to a historical continuum.

Thesis Supervisor : Stanford Anderson
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Introduction

This architectural study investigates one manifestation of the current dilemma of contemporary Arab-Muslim societies in their quest for identity, which is most commonly conceived in terms of a conflict between modernity and traditionalism.

The study is limited to the analysis of a single aspect of cultural production, the design of the mosque. This focal issue is viewed, however, within a wider framework which seeks to conciliate the cultural heritage of Arab-Muslim societies with western modernizing design methods, which have been abruptly introduced since the beginning of the twentieth century. The purpose of this study is two-fold:

(1) It suggests a vocabulary of architectural criticism for contemporary architecture in Arab-Muslim societies that is urgently needed in the light of the current scarcity of related literature.

(2) It offers a critical focus on the problems of architectural identity in the Muslim world.Hence this study will help clarify the confusion of positions among the Arab and Muslim architects.

The problem addressed here arose under the colonialist rule of the Arab world; it proliferated after independence. The cultural rupture and discontinuity experienced by colonized Islamic societies were institutionalized by the succeeding secularist national regimes, thus paving the way for the feverish and massive importation of western models of development and modernization. Both local architects, who were either educated abroad or in local institutions modeled after Western systems, and international experts introduced and perpetuated modern Western design ideas in shaping the architecture and cities of those societies. Few architects questioned the spread of modernism or tried to find links between their designs and the cultural heritage of their societies. The architects Hasan Fathy of Egypt and Rifat Chadirji of Iraq, are prominent in this regard, although each views the problem of identity differently.

Chadirji[1] believes that the identity of contemporary Arab architecture cannot be formed in isolation from modern Western architecture and its universal models.

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Because regionalism and Islam are associated with the pre-industrial era they are notcompatible with modernity. A precondition for modernity is therefore to transcend Islam and regionalism. According to Chadirji, the universality of the principles of modern architecture is justified by Western scientific and technological supremacy. Until the Arab societies catch up technologically with the advanced industrial West, contemporary Arab architecture is bound to be shaped by the regionalization of internationalism.[2] In his work, he demonstrates modern designs that regulated regional motifs applied on their outer shells. (Fig.1.)

Hasan Fathy, the defender of the indigenous architecture of the Arab-Muslim world has a completely different attitude from that of Chadirji. As a premise for creating a culturally authentic architecture for the Arab-Muslim world, Fathy has for fifty years preached a return to the generative, formative, and technical principles of traditional and regional architecture.[3] He condemned modernism because it seeks cross-cultural homogenization through the use of common norms and technology based on Western values and monopoly that are incompatible with the integrity and specificity of other cultures, in this case Islamic culture.[4] Fathy formulated an architectural language derived from both traditional Islamic architecture and the village architecture of Egypt that is based exclusively on traditional manual techniques (fig.2).

The political changes of recent years, which are in part the result of the disharmony between modernization and social change, now make the search for an identity in Islamic heritage a collective concern for Arab societies and their architects.The three Arab architects whose projects has been selected for this study represent this quest undertaken by the younger generation of Arab Muslim architects.

The first of them is the Egyptian Abd El Wahid El Wakil, who was Fathy's disciple for several years and adopts a design approach that conforms with Fathy's paradigm. El Wakil's buildings and literature represent an anti-modernist attitude and a total reliance on the traditional models of architecture and construction.

The second is the Jordanian architect Rasim Badran, who was educated in Germany. Until recently he displayed an experimental ideology, implementing a search for novel architectural forms that would reflect their time and region.[5] Badran's buildings assumed traditional, regional and historic forms, abstracted and
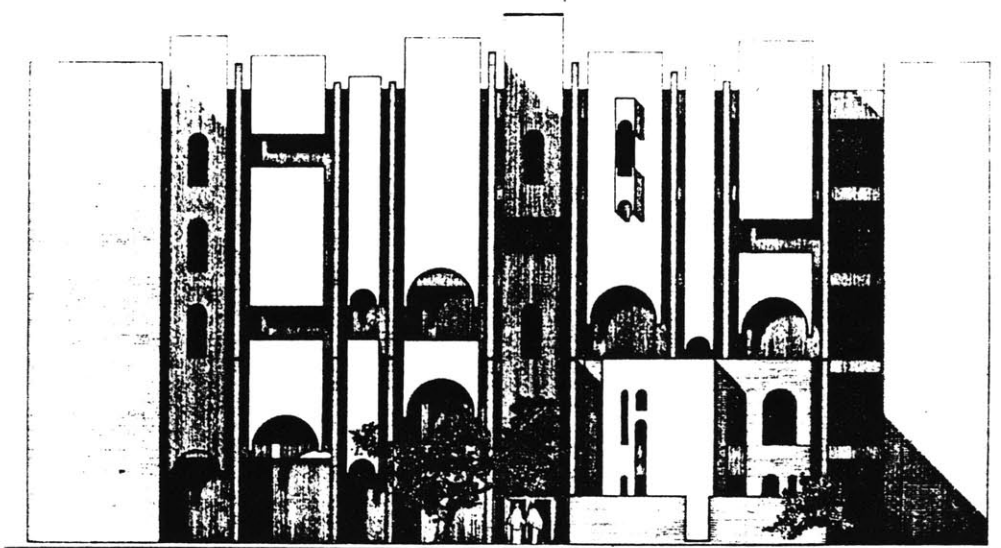
Rafidain Bank, Baghdad, 1971.
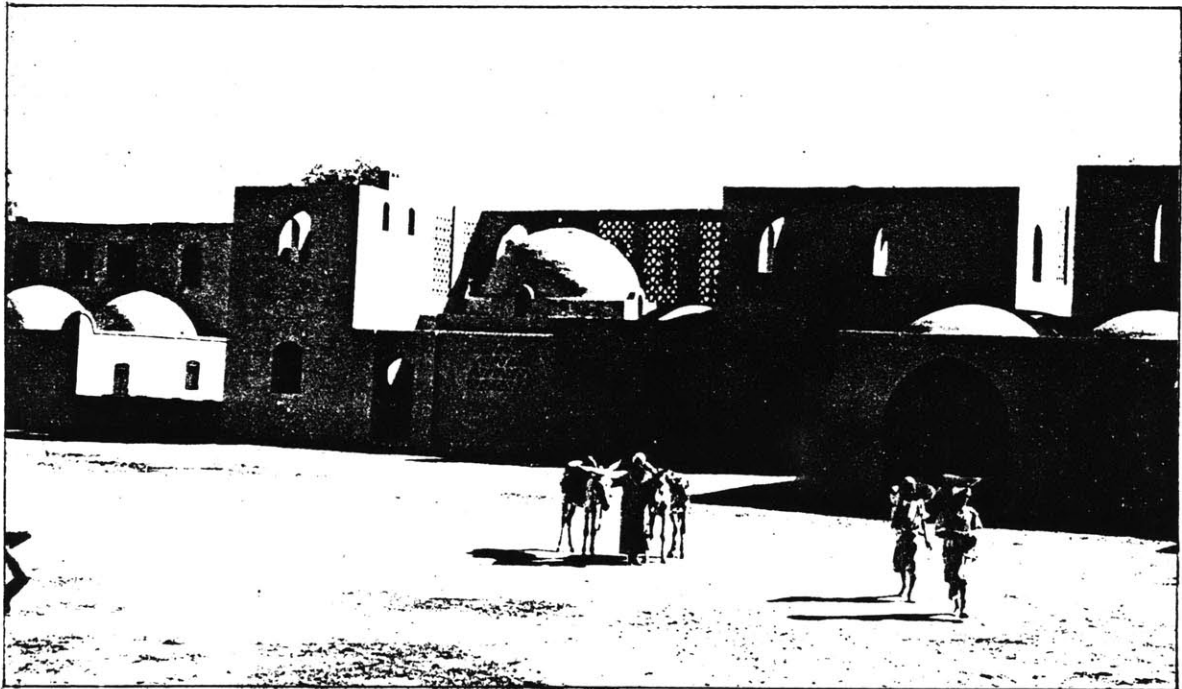
Fig. 1   Rafidain Bank, Baghdad, Rifat Chadirji, 1971.

Fig. 2   Street in New Gourna, Hasan Fathy, 1943.

arranged according to modernist aesthetics, especially functionalism and expressionism .

The Egyptian architect, Halim Abdel Halim, who received his Ph.D. degree from The University of California at Berkeley and worked closely with Christopher Alexander, views the problem differently. He does not see it as a duality or polarity between modernity and historicism or tradition. For Halim, Islamic culture is a living continuum that has survived the ruptures in Muslim societies. The ruptures can be mended in the confines of Islam. At a specifically architectural level, one must extract the underlying formative principles of traditional buildings, which are the creative expressions of Islamic culture, and continue them with the benefits of scientific and technological advancement. Their fusion will produce a culturally rooted and continuous architecture for the Arab-Muslim world.[6]

In addition to these Arab architects, this study looks at a design for the Muslim world undertaken by the internationally renowned architect, Robert Venturi. The mosque of his design demonstrates the direct contribution of western design theory in molding the contemporary architecture of the Muslim world.

Method:

The type of the hypostyle mosque has been chosen as a vehicle for this inquiry. This type commends itself both for its fixed core of cultural requirements and for a history of architectural and stylistic achievements (**see the appendix**). The four case studies refer, then, to the type of the hypostyle mosque, but each design differs from the other in its approach. By discerning the mode of transformation by which each design operated on the typological base, we are able to delineate the architect's relation to both modernity and historicity as well as the cultural compatibility of each design.

To enhance the comparisons, the four selected projects were designed for neighboring environmental and regional zones in the Arab world: Saudi Arabia, Qatar, and Iraq.Two of these projects were finalists in the International Design Competition for the State Mosque of Baghdad with its unusual programmatic requirements, especially the vast spaces required to accommodate 30,000

worshippers. Though much smaller, the other two mosques had programs analogous to that of Baghdad. They too are nationally significant as well architecturally demanding.

Each project will be studied through its relation and response to its context. Thus each mosque will be analyzed through a set of contextual screens: first the human factor, then the urban, regional, historical and the cultural contexts.This critical system of layering will distinguish the architect's design ideology from the programmatic and the contextual constraints on his design. The building is considered as a text that depicts its surrounding realities, and demonstrates a method of responding to them. Its medium of recording is a visual language, employing in our case the hypostyle mosque-type. This built language comprises both:

1. a vocabulary of constituent forms (minaret, dome, prayer hall, etc.)

2. a grammar or compositional and topological rules which are culturally defined by religious values that organize these elements.

It is appropriate to emphasize again that this method of analysis reveals the way the architect dealt with this type in terms of variations and transformations of its vocabulary, grammar, and topology, thus identifying his position vis-a-vis history and culture. When examining his design, the architect's theoretical work, was used to help distinguish the architect's design intentions.

Finally, I would like to be clear that I am fully aware that this selection is not representative of the wide range of mosque designs in the Arab world. Due, however, to the nature of this study and its scale, the limited selection of four distinct and different approaches to the same design problem provides a chance for more comprehensive and insightful analysis. Moreover, these projects are unbuilt and, except for El-Wakil's project, they may never be built. Thus, it may be hoped that this study, although faced with the difficulty of making architectural judgments based solely on drawings, will at least document these interesting endeavors before they fall into oblivion.

INTRODUCTORY NOTES

1. The Iraqi architect Rifat el Chadirji started to play an influential role in shaping the Iraqi architecture shortly after he returned from England where he did architectural education at HammerSmith. He worked as a practitioner, teacher, critic, and more importantly as a consultant of the municipality of Baghdad, which meant that he was responsible for the architectural development of the booming Iraqi capital. In that respect, he orchestrated the international design competition of the state mosque of Baghdad.

2. El-Chadirji's views are demonstrated all through his writings. However, the stated statement is literally expressed during the proceedings of the Aga Khan seminar on Architecture Education in the Islamic world, Granada, 1986. Page 60.

3. Hasan Fathy started his career immediately after graduating from the University of King Fuad I at Cairo in 1926. His major work is the design and building of El-Gourna village in Upper Egypt where he applied his theory. However, his influence on the architecture of Egypt and the Arab world was limited by his uncompromising stance in the face of the entrenched modernism and his failure to associate with authoritative and corporate patronage.

4. See J. M. Richards, I.Serageldin, D. Rastorfer, *Hasan Fathy,* (Mimar book, Concept Media Pte Ltd, 1985) Page 17.

5. Badran's attitude is stated in his statement on his entry to the International Design Competition for the state mosque of Baghdad. (Mimar 11.1984-P.56.) However, Badran is recently adopting a more defined position. His historical references are more extensive and substantial whereby he expresses a primacy of the Islamic principles in shaping the contemporary architecture in the Arab world.

   6.Halim's theoretical attitudes are conveyed through his lectures and a number of periodicals that published some of his projects such the Architectural Record of June 1984, in addition to the proceedings of the Aga Khan seminars, particularly the one on the Architecture Education in the Islamic world, Granada,1986.

The Mosque of Al-Qiblatein: Abdel Wahid El-Wakil

Introduction

From the early fifties to the early eighties, Saudi Arabia underwent a dramatic economic boom based on revenues from oil, of which Saudi Arabia is the key exporter in the world. This boom expanded to all the sectors of Saudi society, where modernization was feverishly pursued to catch up with the modern Western world. Architecture was one of the sectors most influenced by those policies. New cities were built and old ones renewed. Massive buildings modeled on the International Style swept over the Saudi cities, as the internationalists found Saudi Arabia a receptive arena for their uninhibited pursuits. Such a phenomenon was in tune with the nature of the Saudi economy as a service economy that is characterized by heavy consumerism and importation. But neither, this economic behavior nor its architectural expression was coordinated with the social change, and because of the still strong traditional Wahabi religious roots, that constituted a source of domestic instability. Starting in the early eighties, the drop in oil revenues and the consequent contraction of development projects combined with the success of the Islamic revolution in Iran contributed to a rise in pro-Islamic sentiments among the masses that were critical to the Saudi policies. People were dissatisfied with the affiliation of Saudi policies with the West, and with the behavioral ambivalence and squandering of resources by the Saudi upper social strata. The situation culminated in 1980 when Islamic activists captured the sacred mosque of Mecca in an attempt to overthrow the Saudi regime.

All those circumstances convinced the Saudi regime to modify its policies and to adopt more credible Islamic programs to restore the image of the monarchy as the faithful guardian of the most holy Muslim places, the Kaaba and the mosque of the prophet in Medina. As a result, architectural practices in Saudi Arabia officially began to incorporate Islamic and regional themes. By now the character of recent Saudi architecture ranges from the still predominant superficial cliches of Islamic architecture (Figure 1) to serious experimentation in contemporary Islamic
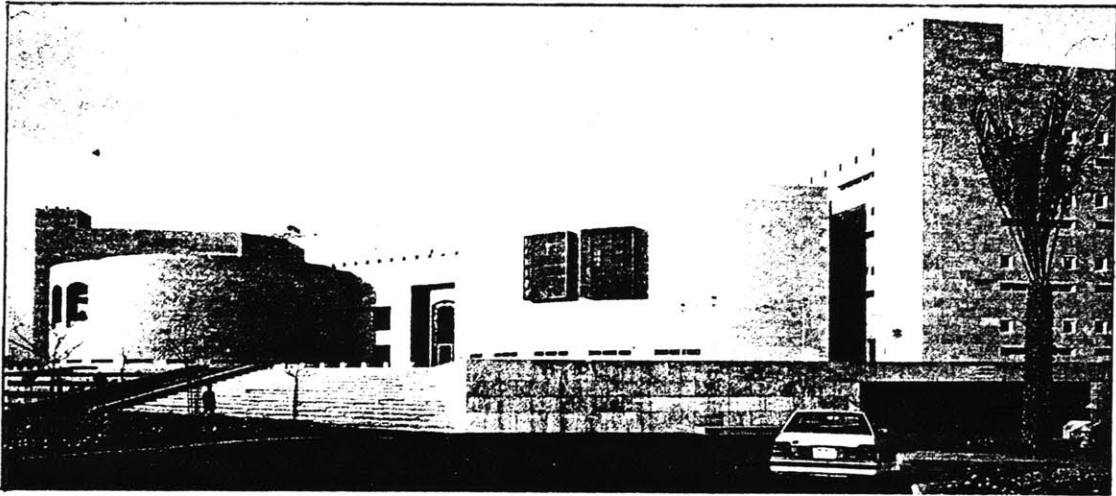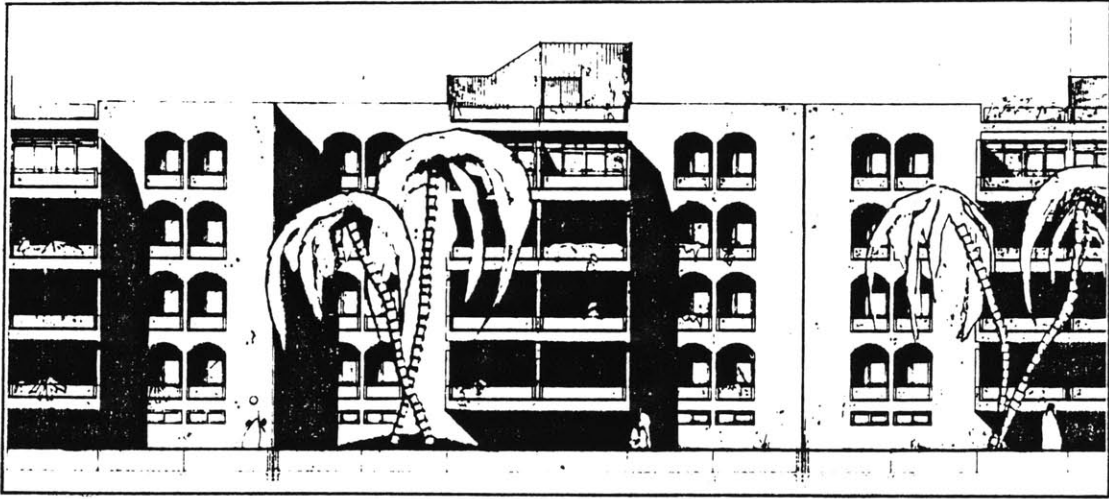
Fig. 1   S.A.M.A.project,Riyadh,Architects and Planners Group 1979.
Fig. 2   The ministery of foreign Affairs, Riyadh, Heninng Larsen 1983.
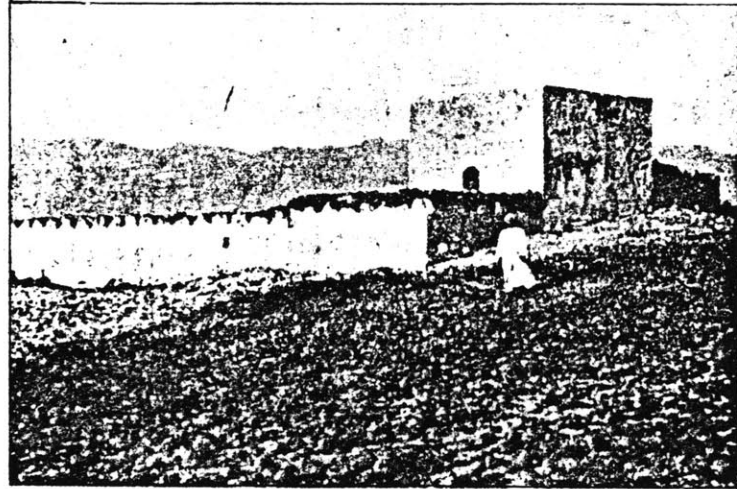Fig. 3   Al-Sulaiman Palace Jeddah, Abdel Wahid el- Wakil 1978-1984.

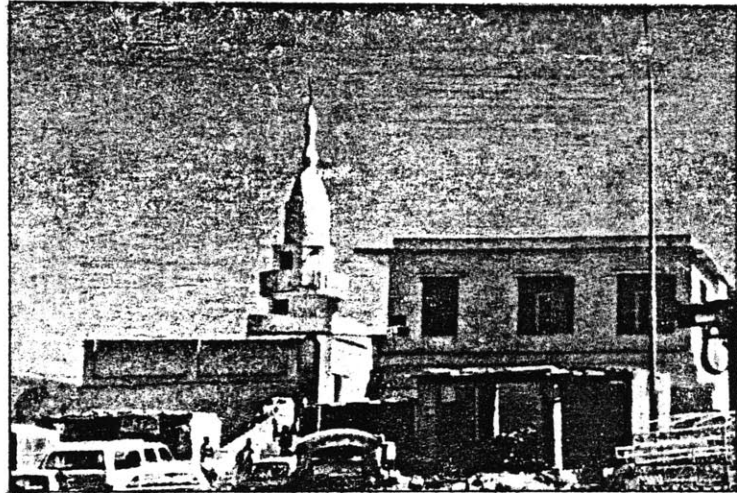Fig. 4.1   The mosque of El-Qiblatein
1908.

Fig. 4.2   The existing mosque.

رواق

رواق
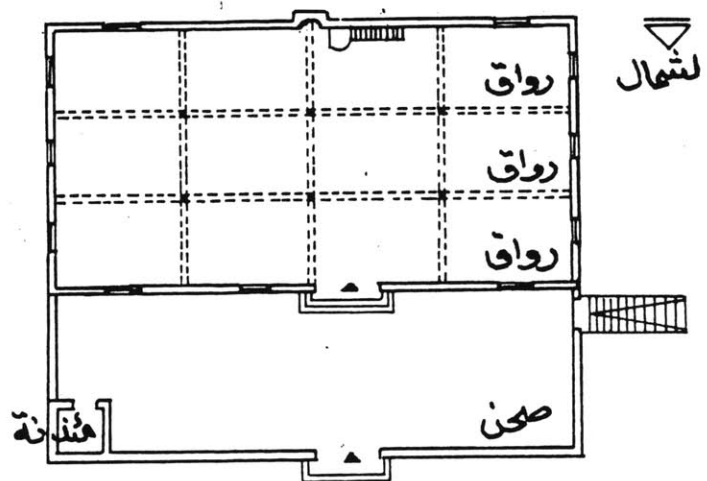
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صحن

Fig. 4.3   Plan of the existing
mosque.

architecture (Figure 2) to an extremely strict revivalism (Figure 3). The theoretical impetus for the last is found in the work of Hasan Fathy who, due to his uncompromising anti-modernist stance, Which did not meet the tastes of the westernized elites and consequently failed to attract corporate patronage, had only a limited influence on the contemporary architecture in the Arab world. His disciple, Abdel Wahid El-Wakil, overcame his master's predicament and translated his legacy to a successful, marketable formula, particularly in Saudi Arabia. There, El-Wakil, who operates his practice from London, found enthusiastic and affluent patrons for his works. The projects he realized in Jeddah in the early eighties were under the patronage of rich Saudis and the municipality of Jeddah. They included a number of palaces and small mosques, achieved by utilizing Fathy's vocabulary and traditional methods of construction. But the actual influence of El-Wakil dates from the time when King Fahd commissioned him to design numerous significant mosques in Jeddah and Medina. Among them is the Mosque of the Two Qiblas (Al Qiblatein) in Medina.

The mosque of Al-Qiblatein is of a great significance to Muslims because it is one of the earliest mosques built by the Prophet Mohammed (S.A.S.) and because of its association with a specific great event. It was the scene of the famous event when the worshippers turned from the old qibla of Jerusalem one hundred and eighty degrees to the qibla of Mecca in accordance with the divine revelation to the Prophet when he was praying there. Ever since, the mosque has been regarded as one of the primary holy places that are visited in Medina, especially at the time of pilgrimage. The building, however, was simple and of no special architectural value; it was probably built during the Ottoman period (fig.4). The Saudi government commissioned El-Wakeel to design a new mosque to replace it.

The design

The mosque is located in the outskirts of Medina. Its suburban site is roughly triangular and is bordered on the west by an ancient cemetery and by two streets on the two other sides. In El-Wakil's design, the qibla wall is aligned with the southern street (fig.5). Hence the rectangular mosque leaves irregular remnants of the site around it. To the east of the mosque, the acute angle is filled with housing for the imam and mue'zzen.

مخطط الموقع
SITE PLAN
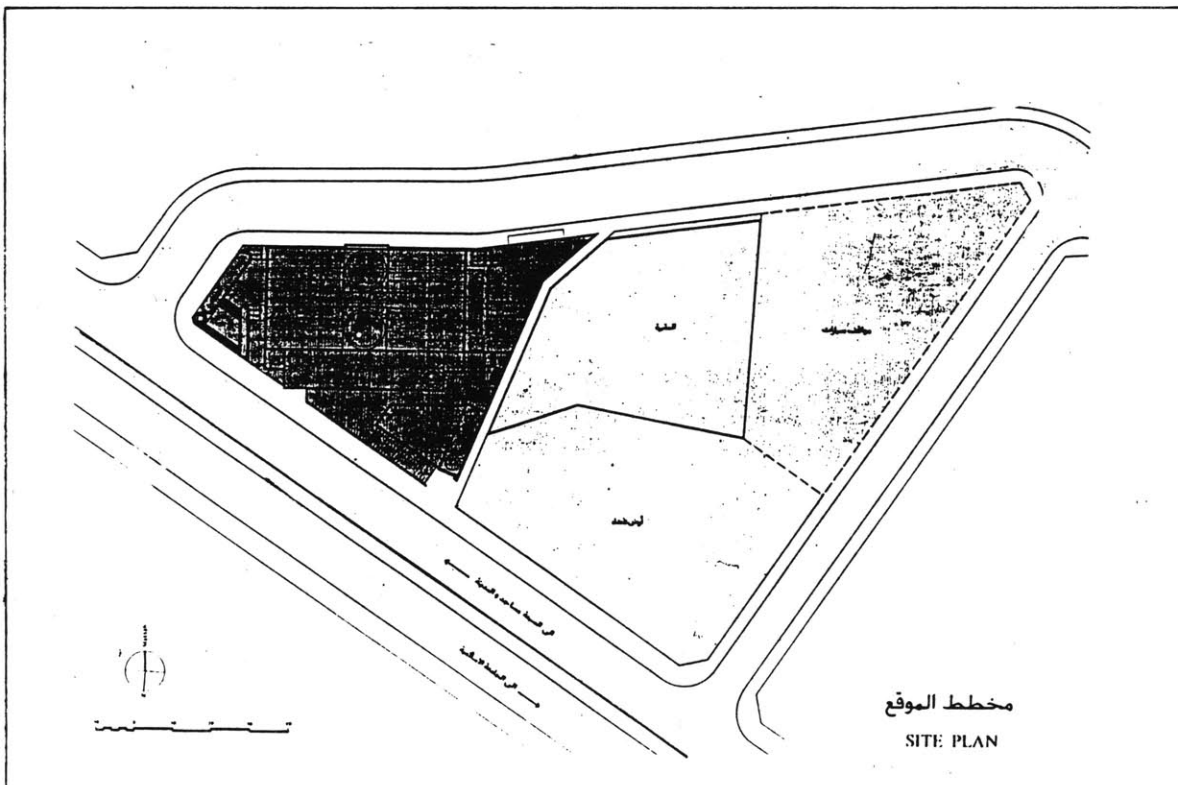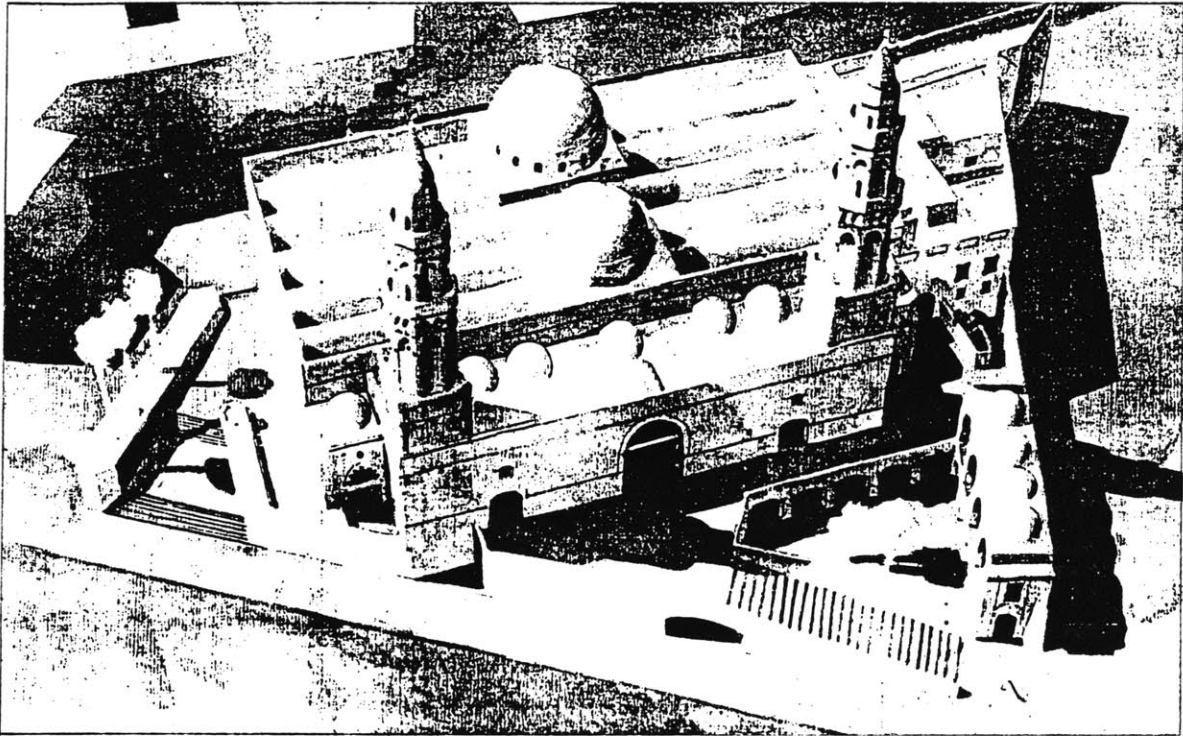
Fig. 5.1   Site Plan of the mosque.

Fig. 5.2   Top view of El-Wakil's mosque.

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In front of the mosque at ground floor is a small service courtyard and ablution facilities; they act as a platform for the prayer hall on the upper floor which is reached by several staircases . The prayer hall is raised one floor above the street on the northern side so as to stand clear of the high ground in the southeast corner of the site. The prayer hall accommodates 2,000 worshippers and has a prayer area for women and three rooms for teaching the Quran on the upper floor (fig. 6).

The mosque's composition can be broken down into two components: the rectangular prayer hall and the attached lower volume of the entrance in front of it . The latter houses two juxtaposed spatial layers: the external layer comprises entry points and staircases and bases for the two corner Mamluk-style minarets; the external one is a vaulted gallery that runs parallel to the prayer hall and acts as a buffer zone between the outside and the prayer hall(fig. 7).

The prayer hall of the mosque is a hypostyle type. It is structured by piers arranged on five arched aisles which support, 12 m. above ground, the barrel vaults of the roof which run parallel to the qibla wall. The vaults are interrupted in the middle by two domes which establish a central axis towards Mecca. The direction towards Mecca is emphasized by the main dome in the southern side above the mihrab area, which recalls the Mamluk dome; the smaller dome on the northern side refers to the direction of Jerusalem[2] (fig. 8).

The Urban Context

The irregularity of the mosque's site set a design constraint for the architect. El Wakil's responses to this problem are obvious: He omitted the courtyard because of the shallowness of the site. He filled the residual triangular area to the west of the prayer-hall with a housing block, and he left the eastern angle untreated except for a stepped pathway.

The housing is aligned to the borderline of the site, its geometry is tilted from the axiality of the prayer-hall. This established the distinction between the prayer-hall and the housing and the other elements of the complex.

القطل الرئيسي	1 Main Entrance
القطل الجانبي	2 Side Entrance
قاعة الصلاة	3 Prayer Hall
صحن	4 Saha
مئذنة	5 Minaret
مقصد	6 Loggia
محل سكنة الإمام	7 Imam's Flat Entrance
محل سكنة المؤذن	8 Muezzin's Flat Entrance
غرفة الإستقبال/الطعام	9 Living Dining
مطبخ	10 Kitchen
فناء	11 Courtyard

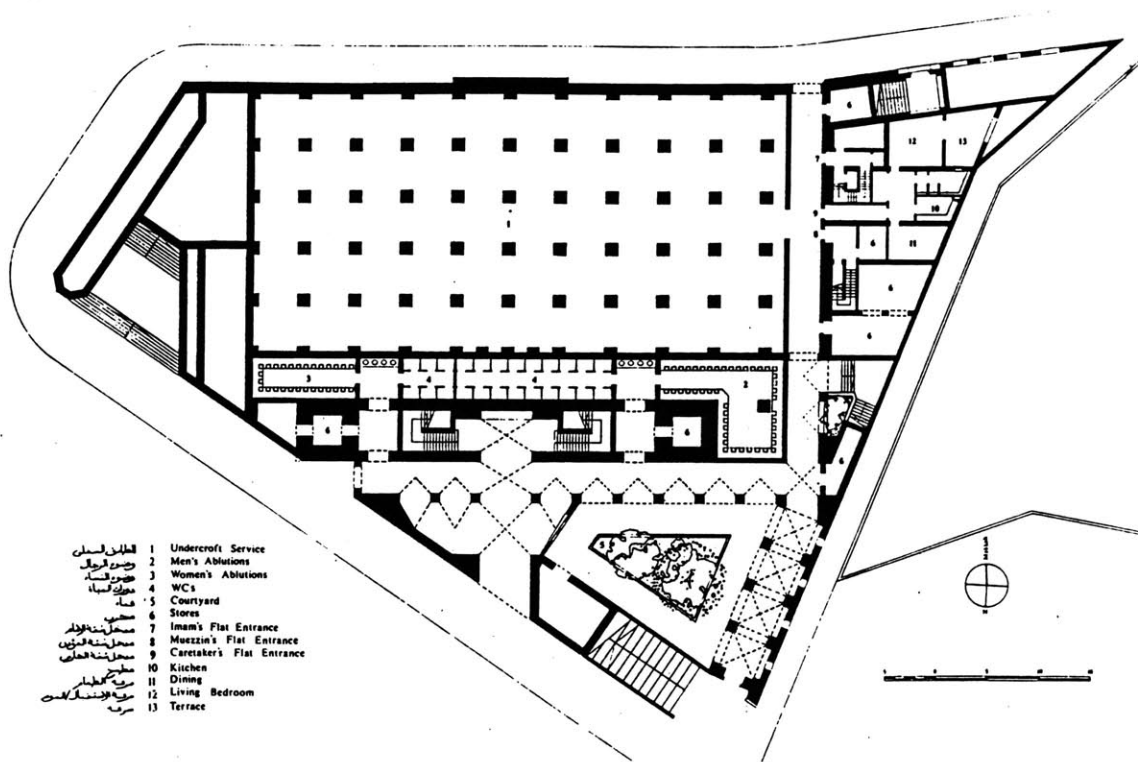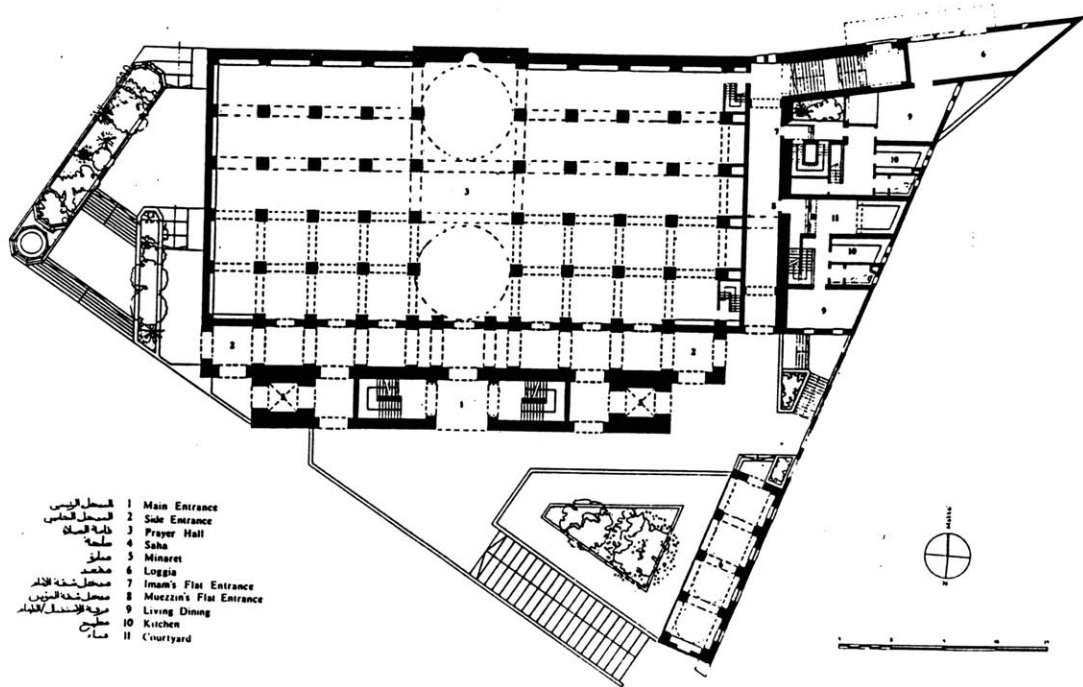|	
الطابق السفلي	1 Undercroft Service
وضوء الرجال	2 Men's Ablutions
وضوء النساء	3 Women's Ablutions
مغاسل المياه	4 WCs
فناء	5 Courtyard
مخازن	6 Stores
محل سكنة الإمام	7 Imam's Flat Entrance
محل سكنة المؤذن	8 Muezzin's Flat Entrance
محل سكنة الحارس	9 Caretaker's Flat Entrance
مطبخ	10 Kitchen
غرفة الطعام	11 Dining
غرفة الإستقبال والنوم	12 Living Bedroom
شرفة	13 Terrace

Fig. 6.1   Plan of the 2nd level - The prayer hall.
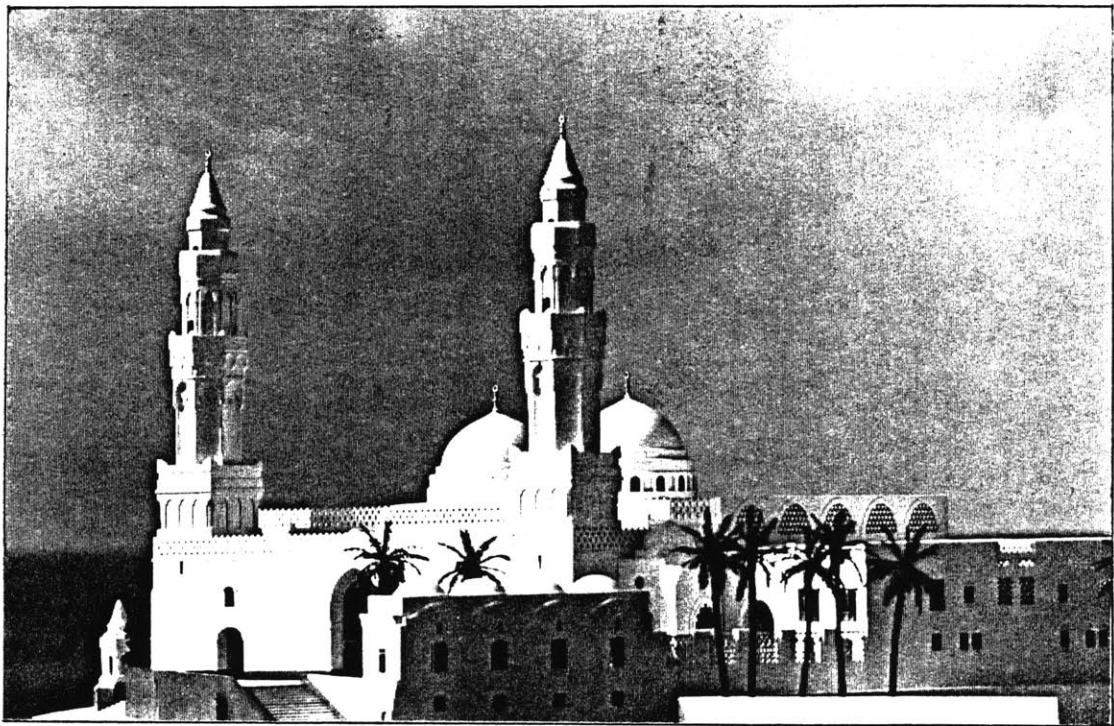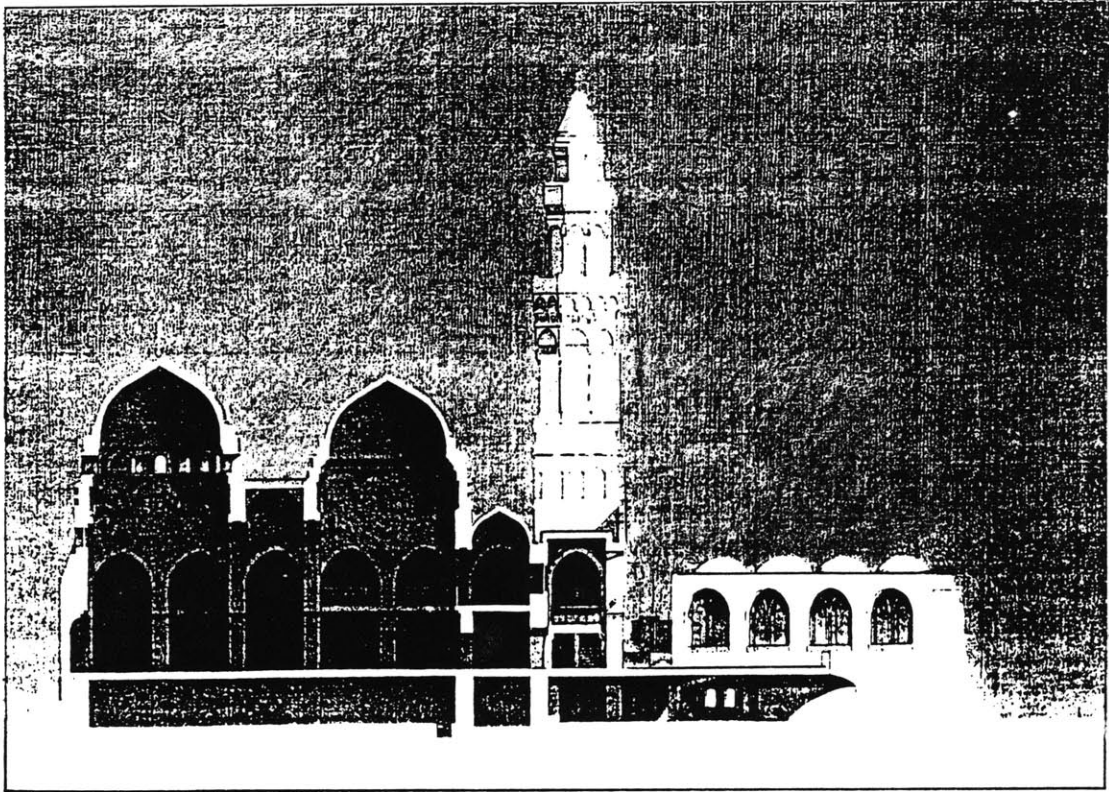
Fig. 6.2   Plan of the Ground level.

Fig. 7.1   Longitudenal section through the mosque.

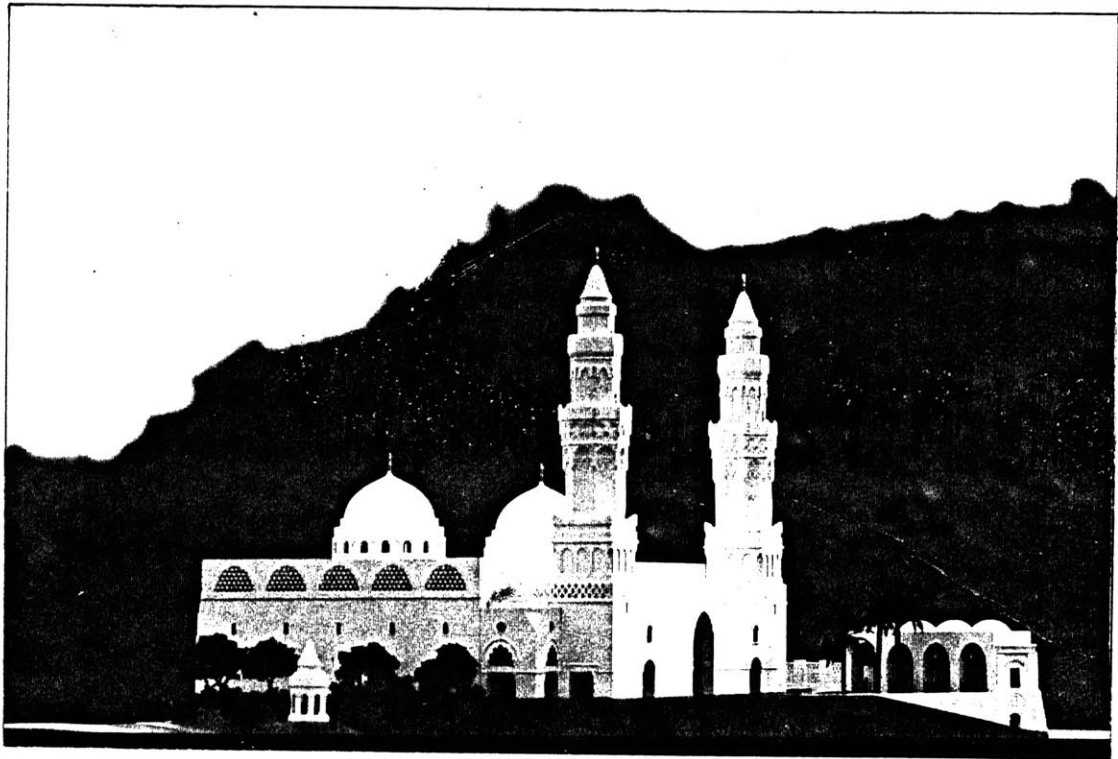Fig. 7.2   View looking towards the eastern Facade of the mosque.
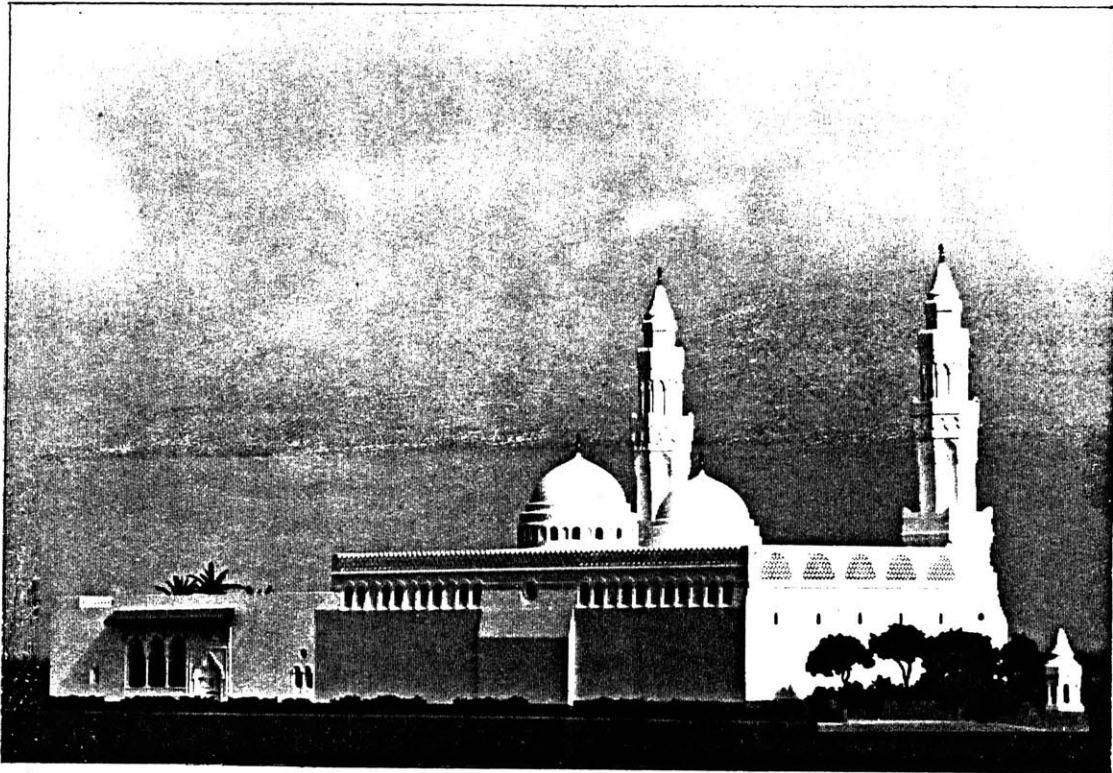
Fig. 8.1   Front view of the mosque.

Fig. 8.2   View of the back the mosque.

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Making a strong geometric and formal distinction between the prayer-hall and its surroundings is a major device of the architect in establishing the monumentality of the mosque. He does it by the volumetric diminution of the housing and the front cloister in contrast to the massiveness of the prayer-hall. The differentiation of the mosque from the urban surroundings is achieved by elevating it on a base. The base is of black volcanic stone in stark contrast to the white mosque.

The monumentality of the mosque is further emphasized by the contrast between the formal vocabulary of the prayer-hall and the vernacular and domestic forms of the ancillary functions. The prayer-hall uses the monumental vocabulary of the Mamluk style ; the housing reflects the Mamluk domestic vocabulary (fig. 9-1). The front cloister borrows the vernacular vocabulary of Hasan Fathy(fig. 9.2). But it is the use of the Mamluk vocabulary in the volumetric configuration of the prayer-hall that underlies most of its monumentality: the two Mamluk-style corner minarets dominate the design by their massiveness and duality. Their arrangement is also echoed by the duality of the domes surmounting the nave.The treatment of the prayer-hall's facades also contributes to its monumental image. Their bases are solid, but are topped by bands of decoration.

The monumentality El-Wakil achieves in the mosque is not without defects. His simultaneous application of the monumental and the vernacular vocabularies on the one hand and the two-dimensional vocabulary of ornamentation and the volumetric one, on the other, are not homogeneous. I shall discuss this issue later.

The Human Factor

Monumentality is the primary perceptual experience of the beholder of El-Wakil's mosque. The symbolic theme -- the historic change of the qibla -- which is represented by the two domes is not clearly visible. The imposing, massive configuration of the two minarets and the verticality of the front facade to the viewer make their dual arrangement hardly perceptible. The dynamics of his eclectic forms blur their imagability. The very close placement of the domes seems also to weaken the sense of the axiality they are supposed to denote.

Fig. 9.1   Loggia of Mamluk house in old Cairo-Egypt.

Fig. 9.2   New Gourna Village - Hasan Fathy 1943.

The experiencing of those symbols in the interior is also unclear: The lack of the courtyard makes the transition between inside and outside too abrupt. The first dome, for instance, is not even visible, let alone its symbolic relation with the second dome which is spaced close to it.

The close placement of the two domes, which are nearly equal in size, over the short nave weakens the spatial orientation of the prayer-hall towards Mecca. Moreover, this arrangement partitions the prayer hall into two distinct spaces that have no subtle relation to each other -- one is a spacious and broad nave, the other is composed of repetitive and narrow aisles. This appears to disturb the morphological unity of the mosque and the egalitarian purpose of its space.

The Regional, Historic, and Cultural Context

One can argue that the association of Al-Wakil's mosque with the regional architecture of the Hijaz is indirectly achieved through its reference to Mamluk architecture. The Mamluks, who originally had their seat of rule in Egypt, left their imprint on the monumental architecture of the province of the Hijaz or Medina, when it was under their rule between 1263 and 1516. Their most significant mosque in Medina is the Prophet Mohammed's (S.A.S.) mosque, which is known for its green dome. The Ottoman architecture is more common in the Hijaz, however El-Wakil used the Mamluk vocabulary, whether monumental or residential – in the minarets, the southern loggia, the crenellations, and other places. But his borrowings were not confined to one particular area. He had also borrowed architectural forms from other sources. Both the front cloister and the side arched openings filled with cloister belong to Fathy's vocabulary (Fig.10-1), which he originally codified from the rural architecture of upper Egypt and the urban architecture of Mamluk Cairo. Nor are the Mamluk forms that El-Wakil used solely Egyptian.The two minarets and the qibla wall are almost exact replicas of their counterparts in Al-Ashrafeyyah mosque at the city of Ta'z in Yemen (fig.10-2). That Mamluk mosque, which was built between the 13th and 14th century exhibits a specific regional adaptation of the Mamluk high style especially in its minarets . It is ironic that the Mamluk architecture from which El-Wakil borrowed exhibited certain adaptation to the various regions in which it was deployed, while he does not. He
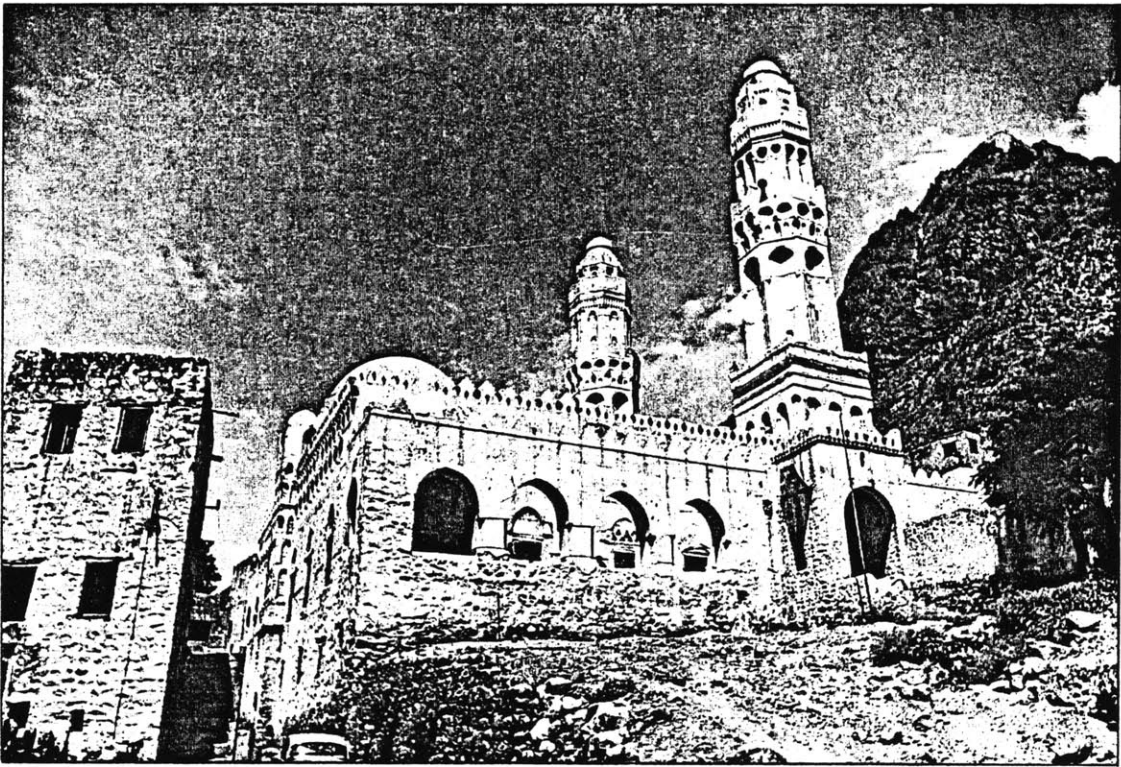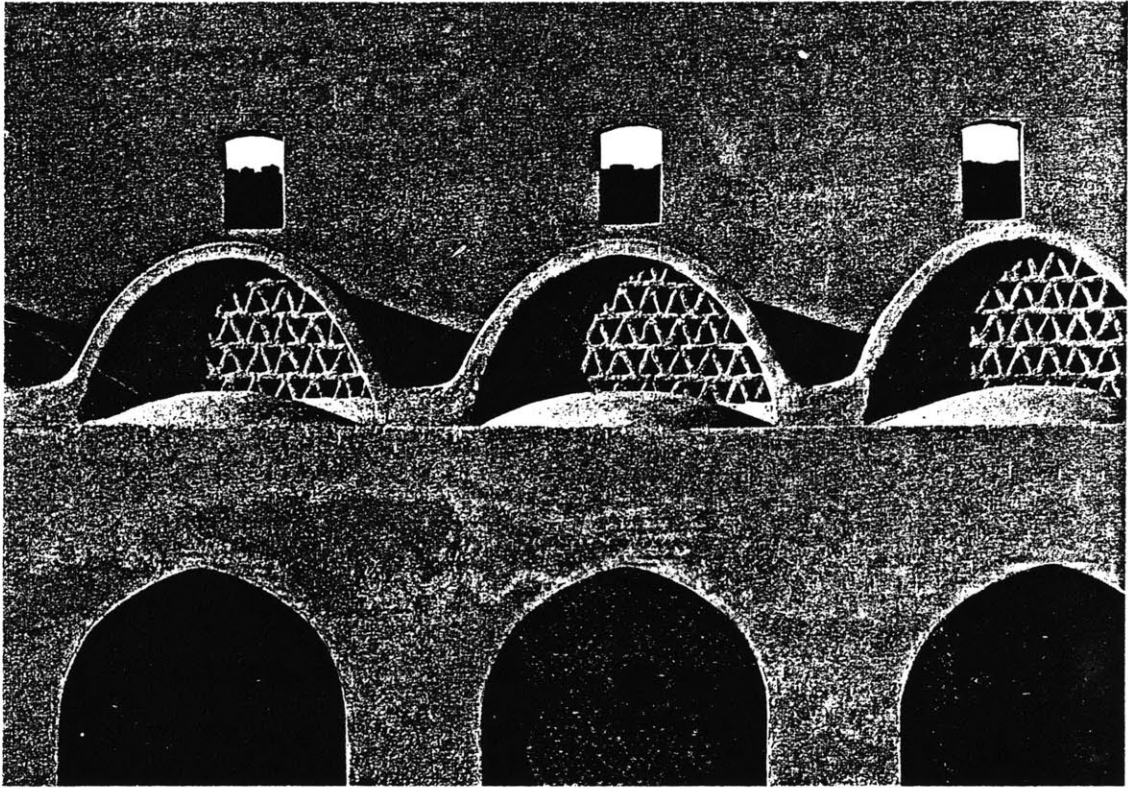
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Fig. 10.1 New Bariz Village, Hasan Fathy 1967.
Fig. 10.2 Ta'izz, Ashrafiyah mosque(from the west).

ignored the regional Hijazi forms in Medina and was not responsive to the regional architectural tradition. He did, however, reintroduce in his architecture the traditional methods of construction. Vaults and domes are built of local brick and without recourse to shuttering and forms.

At first glance, El Wakil's work is strictly revivalistic, in the sense that it reintroduces the stylistic and structural characteristics of traditional forms. The sizable variation and transformation he applies to the traditional typology of the hypostyle mosque shows another dimension, however. Essentially, El Wakil adopted the traditional typology of the hypostyle mosque as it is represented by the Umayyad and the North African mosques (fig. 11-1). Both their trussed aisles and his vaulted aisles run parallel to the qibla wall. But while the trusses of the North African mosque are visible, El Wakil's vaults are concealed behind the external facades, and only their lateral arched profiles are revealed. In contrast with the traditional hypostyle mosque which usually has one cupola dome surmounting the nave at the end, El Wakil's nave is surmounted by his two symbolic domes. Compared to those of the Al Kairouan mosque, they are very closely placed(fig.11-2). The other significant difference between Al Wakil's mosque and the traditional ones is that his has no courtyard; it has been replaced by a gallery at the entrance which acts as a transitional zone to the prayer-hall.

El Wakil's work is extremely eclectic. As I mentioned before, he has borrowed excessively from various historical and geographic sources — to the extent that every facade and even every window represents a different stylistic treatment. As a result, the morphology of the mosque seems to lack unity and articulation. This is most obvious in the junction of the facades. The eastern facade demarcated at the top by a series of cloister arched openings expressing the profiles of the vaults of the roof recalls Fathy's vernacular vocabulary. The qibla wall, recalling as it does the qibla wall of the Ashrafiyya mosque in Ta'z, is crowned by a continuous band of crenellation, below which a series of small arches run. The joint between the facades with their different stylistic treatment is awkward and unresolved.

Another symptom of the missed composition of the mosque is the incoherent synthesis of the two-dimensional vocabulary of the decoration (which he uses to dematerialize his volumes) and the volumetric grouping of the various elements by which he expresses their sculptural qualities. This is obvious in the entrance, which

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Fig. 11.1   Al Qarawyeen Mosque, Fez 875-1135.

Fig. 11.2   Al-Kairwan Mosque, 816-863.

was treated by El-Wakil as a volume by itself that is juxtaposed to the larger volume of the prayer-hall. At each of the two side corners, where they meet, El-Wakil motivated by a sculptural tendency, abruptly interposed a domed pavilion. This addition is an external representation of the internally sandwiched gallery at the entrance. It is not only stylistically different from both the prayer-hall and the entrance, but it is also neither volumetrically nor two-dimensionally articulated with them.

Altogether it seems that El Wakil's way of dealing with historical themes is not structured by a fully clear and coherent framework. Apparently, the only consistent characteristic of his work is his refusal to address modernity, both its technological program and its design models. "The design of the mosque," he says, " should express the immutable and the everlasting and must not succumb to or be dictated by materialistic tendencies of innovation through slogans of progress, so much aspired to in modern architecture with its profane technology."[3] Yet even his traditionalist, anti-modernist stance is incoherent on its own grounds. This is manifested in the way he dealt with the traditional hypostyle mosque. El Wakil reduced it solely to a structural skeleton. On that skeleton he superimposed his eclectic facades and images. The fact that they are put together without cohesion or harmony demonstrates that his revivalist design mechanics are limited. They only operate in borrowing ready-made typological fragments, or images, whether from Fathy or from traditional architecture. Beyond that figurative transposition, he can only exclude or interchange the surface elements; he cannot adapt or rework the compositional and the organizational rules of the hypostyle model to articulate those transformations, and to meet the different contextual requirements – whether urban or symbolic.His rigid constructs could not adjust the traditional topology effectively to express the historical act of changing the qibla. When he tried that, his symbolic act encroached on the spatial integrity of the prayer hall. As a whole, El Wakil's inability to master the traditional typology indicates that he himself is almost distanced from that tradition. On the other hand, one can say that his adherence to the traditional method of production at least kept his mosque from being totally divorced from the historical tradition.

In his anti-modernist attitude, El Wakil is perpetuating the notion of cultural immobility. It is evident in his fixing on the typology of the hypostyle mosque and

its traditional technological program. However, the mode of transformation he employed on the typological base seems an attempt by him to demonstrate a possibility of typological growth within the constraints of tradition. El Wakil writes, "Variation, development and originality in the architecture of the mosque evolve through continuity and perpetuation of a tradition, expressing unity and universal truth through the multitude of forms, as abundant as those in nature, growing and evolving in time."[4] Ambiguity arises when we compare his theoretical statement with his way of dealing with the hypostyle-type. His literal eclectic transposition of typological fragments like facades, minarets, and domes and his grouping of them without homogeneous syntactic structure, belies the claim of historical continuity and typological development. On the other hand, the elimination of the courtyard, regardless of its contextual causes, is a symptom of typological change. This leads one to ask: Is the removal of a primary typological component like the courtyard a progressive act of transformation that has no repercussion on the cultural core of the hypostyle type? This is a tricky question to answer.

In the traditional mosque, the courtyard functions as an intermediate spatial layer between the urban domain and the prayer hall. Its function is a psychic and a liturgical one; it forms the needed psychic transition between worldly engagement and the spiritual consciousness of the worshipper. The fact that the courtyard occupies a greater area than the prayer-hall in many traditional mosques - Ibn Tulun, Samarra and Kairouan, for example – further indicates its significance. Its other function is that of the communal gathering place in the Islamic city, comparable to the piazza or the square in the west.

Whatever its function, the indispensable presence of the courtyard in the hypostyle mosque is affirmed by its historical perpetuation in variable climatic zones and in other mosque-types, such as the four-iwan and the Ottoman prototype. The courtyard was also retained despite the urban pressure of growing Islamic cities like Cairo, where one can argue that the central courtyard of the four iwan-type replaced the bigger courtyard of the hypostyle-mosque. Other elements of the mosque, like the domes and the minaret, did not have the same enduring role. El Wakil's elimination of the courtyard and his eclectic consolidation of less significant elements like the facades, domes, and minaret seem therefore debatable and controversial on the ground of his premises. The courtyard, which intrinsically embodies the

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introversion of the mosque, is replaced by his paradoxical external representation of the prayer hall as an object by itself. This can be observed in lifting the mosque on a podium, the disposition of the entrance's volume with its imposing minarets, and the vernacular loggia and, more significantly, his facade. This leads us to question the formal representation of his facades. Is the disjunction of El Wakil's facades a deliberate act by the architect to express different messages in a spirit comparable to the post-modernist design theory postulated by architects like Venturi?

If the answer is yes, which I suspect it is, this poses a serious paradox in El Wakil's design, since the post-modernist design method exemplified by Venturi's work is meant to express the contradiction, complexity and ambiguity of the relationship between the past and modernity.[5] This is obviously inconsistent with El Wakil's notion of the perpetuation and the continuity of tradition.

Nevertheless, El Wakil's eclectic formalism and his stylistic facadism seem to convey a political message. To establish a link with the masses, the ruling Saudi elite seems these days to favor overt representational typologies and traditional images which are thought to conform to society's expectations better than abstract modern designs do.

The Mosque of Al-Qiblatein
NOTES

1. Haroon Sagich, "Traditional Architecture Finds a Royal Patron," Arts and the Islamic World, volume 3, no. 24, 1985-1986, p. 47. Also Prof. Ronald Lewcock, who is closely connected to El-Wakil, confirmed the symbolic intent of the two domes.
2. Ibid., p. 27.
3. Mimar 17, Jul-Sept 1985, p. 13.
4. Ibid.
5. See Denise Scott Brown,Venturi Robert, & Steven Izenour, Learning from Las Vegas (MIT Press, Cambridge, MA, 1977).

The State Mosque of Baghdad :
Rasim Badran - Robert Venturi

Background

In 1982, when the Iraqi government sponsored the international design competition of the State Mosque of Baghdad, Iraq had already entered the second year of its war with Iran ,but this did not stop the Iraqi government from continuing its development policies. Like these in the neighboring oil countries, those policies had their impetus in the late sixties, and were meant to push Iraq into the modern world within a very short period of time. They had begun after the independence of Iraq from British rule in 1948. Since that time, modernization had gone hand in hand with the secularization of the educational, the social and the economic institutions of Iraq.

Secularism was also equated with nationalism. Iraq, like the other newly founded Arab nation states, had to fabricate and create a national heritage and culture to legitimate its existence. Architecture was a major tool in carrying out that nationalistic program. Massive building projects of every type and scale were implemented all over the country. Those projects, which were mostly commissioned to the Internationalists (including Frank Loyd Wright, Le Corbusier and Gropius), experimented with modern architectural vocabularies to create a national style.

In the late seventies the situation changed. A number of political changes, including the success of the Islamic revolution in Iran and the overthrow of the Shah, awakened pro-Islamic feelings. Islamic activism with its universal aspiration spread rapidly to Muslim societies alienated by the nationalistic and the secularist policies of their governments. This disillusion powerfully expressed itself in several actions, including the assassination of the Egyptian president Anwar Al-Sadat in 1981.

To defuse the increasing threats of Islamic activism, the Iraqi government adopted new Islamic banners beside its national slogans. As a gesture the Iraqi

government initiated the international competition for the design of the state mosque in Baghdad, which, according to its program, was intended to be one of the largest mosques in history. The statement of purpose of the competition reads as follows:

> The creation of a state mosque in the capital of the republic of Iraq is a historic event. Its design and construction will be the highest expression in creative and physical terms of the religious state mosque and national beliefs and aspirations of the people of Iraq and their leadership.[1]

The program of the mosque called for air-conditioned prayer areas for 30,000 men and 4,000 women. It also allocates huge areas for teaching, research, library, meeting rooms, and accommodations for the visiting religious officials. Altogether the program contained three determinants for the design of the mosque: The monumentality of the mosque is emphasized, in response to the intention of the Iraqi government. It was to signify the guardian role of the state towards Islam as well as the national identity of the people of Iraq. The mosque should express in stylistic terms its Iraqi, Islamic and contemporary character. The suburban location of the mosque in one of the outskirts of Baghdad seemed, however, to conflict with the concept of the state mosque as an urban focus.

Invitations were sent to 120 local and international architects to submit their design proposals. Seven of them were on the short list; from them Rasim Badran a Jordanian architect, was awarded the first prize by the Master Jury. The results of the competition were not officially released, however, because Rifat Chadirji, the sponsor of the competition, was dissatisfied with the Jury's decision. He then asked Robert Venturi, also one of the competition finalists, to head a design team to make a new design for the state mosque. Then the outbreak of the Iraq-Iran war shelved the project indefinitely.

A. Rasim Badran's State Mosque of Baghdad

Badran's plan for the mosque comprises two basic components. The primary one consists of a square platform on which the prayer hall with the cultural, educational, and public facilities are all grouped around a large communal courtyard (fig. 1). The second component is the residential cluster which is juxtaposed with the platform of the mosque but rotated, emphasizing the distinction between it and the mosque as it is aligned with the borderline of the site. This distinction emphasizes the axiality of the mosque towards Mecca. In order to reduce the monumentality of the mosque ,as dictated by the program requirements, Badran framed the mosque by a protective earth-mound that concealed behind it one third of the actual height of the mosque (fig. 2). This sloping mound, reminiscent of the base of the ancient Mesopotamian Ziggurat temple (fig. 3), defines a gap between itself and the mosque. This in-between transitional space recalls the ziyada space of the great mosque of Samarra or of Ibn Tulun which similarly serves as a buffer zone(fig. 4) . The earth mound houses the mosque's utilities, including its ablution facilities and the kitchen.

In designing the mosque, Badran, like El-Wakil, adopted the traditional prototype of the hypostyle mosque – an obvious example of which is the great Abbasid Mosque in nearby Samarra . Badran worked a series of transformations on that typological base. He broke down the mass of the mosque into a series of cubes, thus differentiating the space of the prayer hall into a cluster of repetitive, structurally independent cells . Each cell is 15 x 15 meters and is spanned by pointed arches at the four sides which are tied by reinforced concrete beams. To provide daylight to the prayer hall, stepped windows are interposed between the arches of the cells in the same way as in the traditional structure of Khan Murjan in Baghdad[3] (see Fig. 6). The height of the roofs of the cubicals of the mosque are not the same, because they are graded towards the center of the prayer hall in a bi-symmetrical way to raise the huge dome of the mosque. The dome rests on a brick drum, then on a series of transitions from the circular circumference to the square base. Those transitions were achieved by means of a complicated structural configuration of intersecting arches and concrete beams, and resemble on a larger scale, the traditional
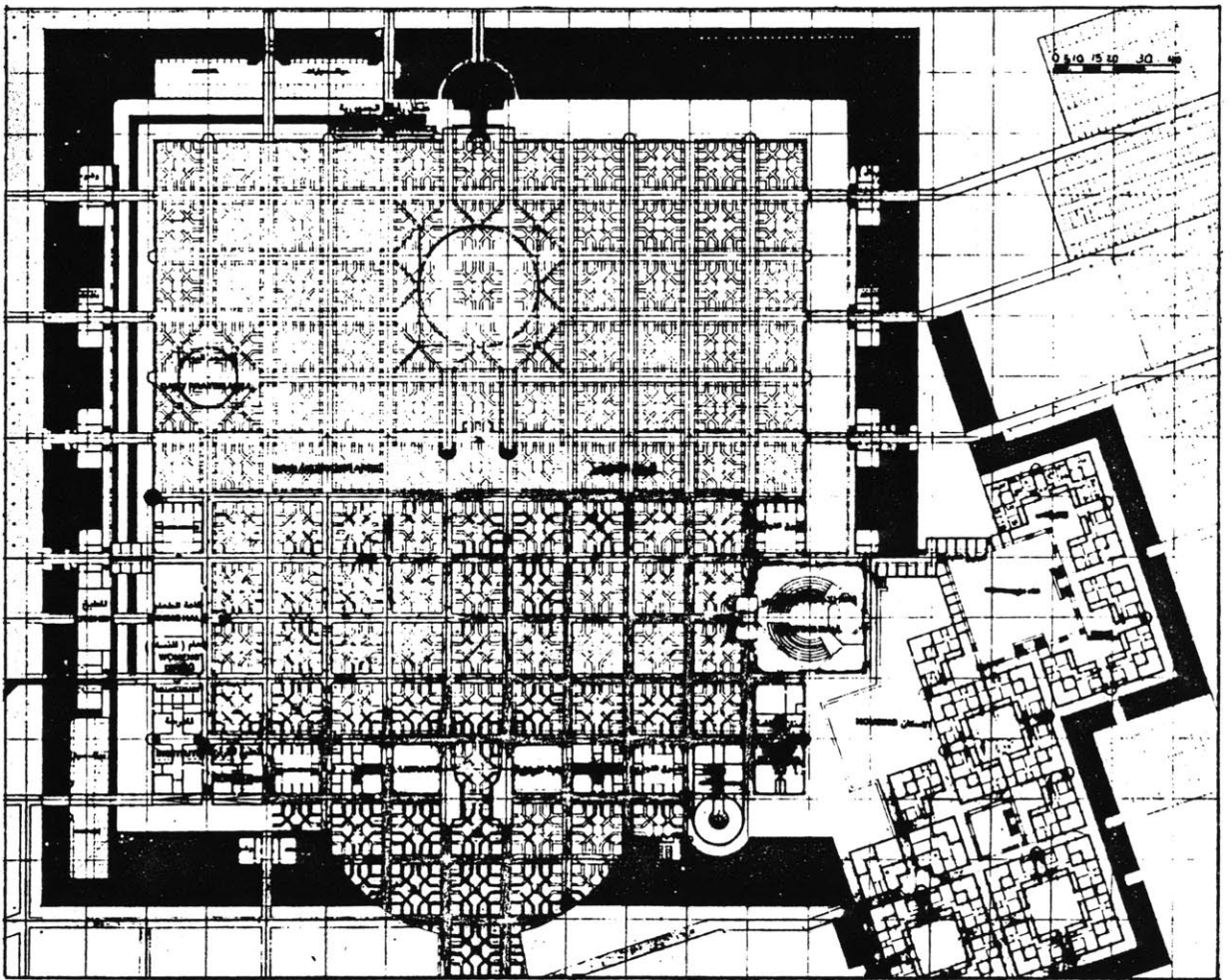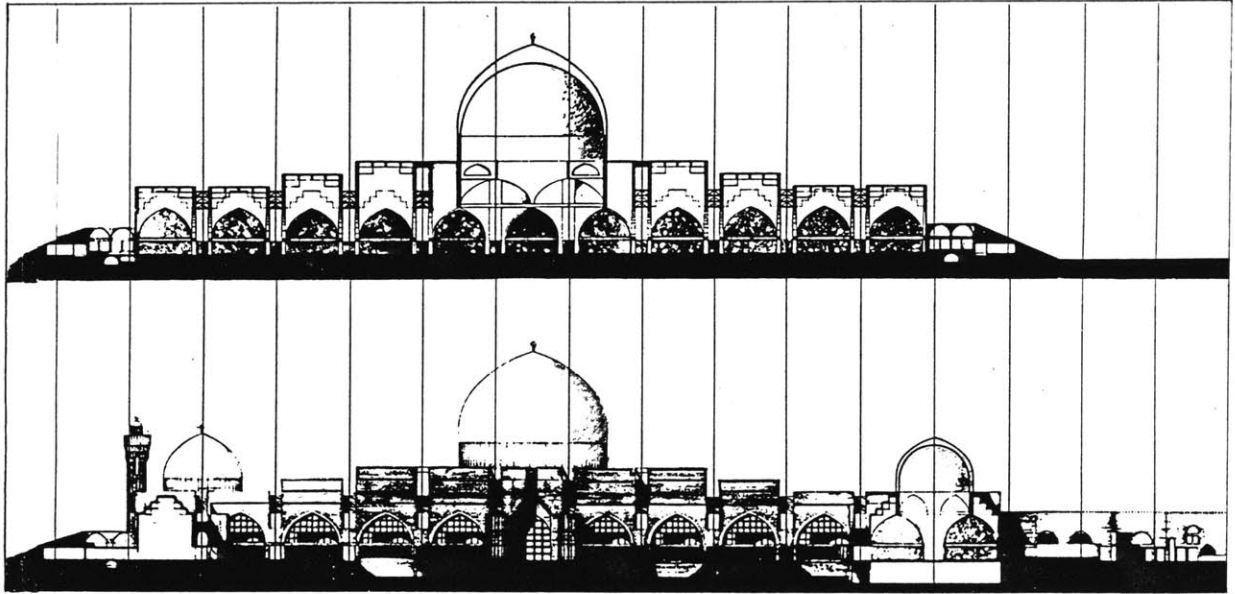
Fig. 1.1   Transverse sections through the courtyard and the prayer hall.

Fig. 1.2   Plan of the mosque.
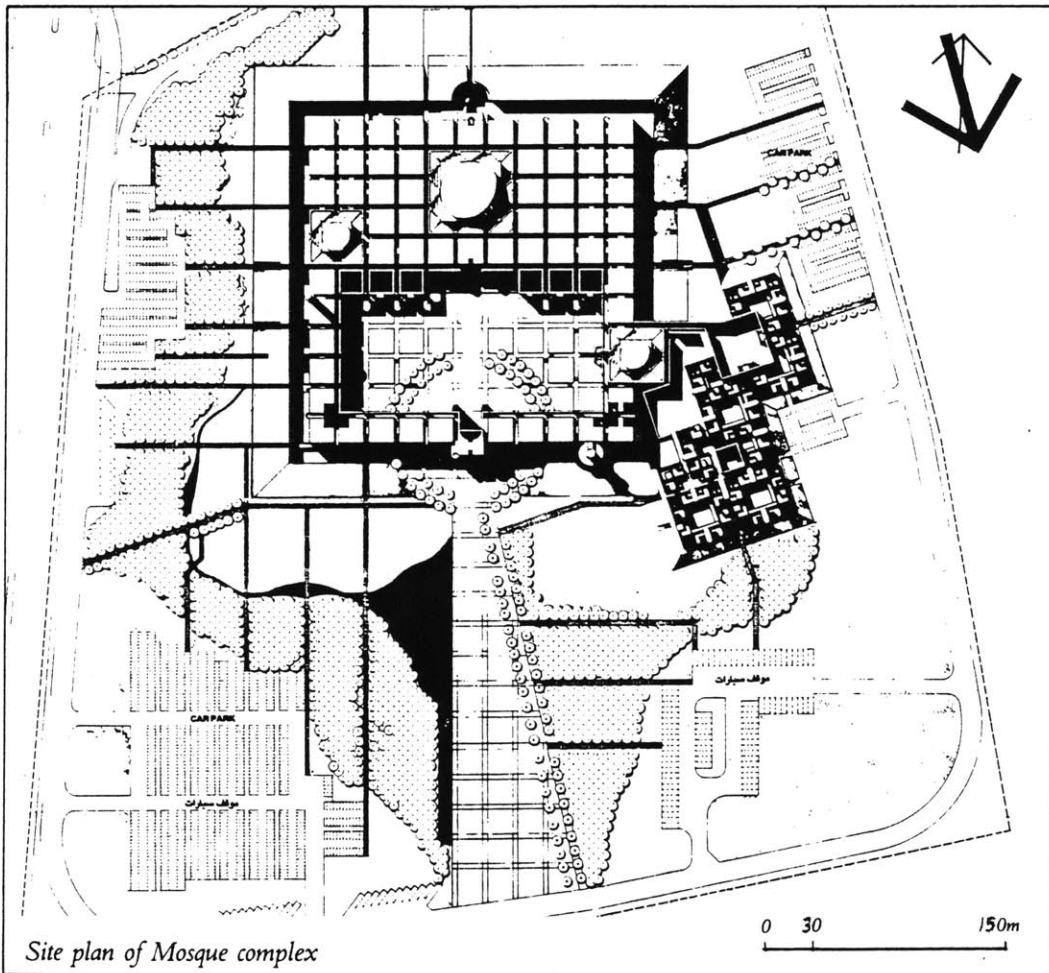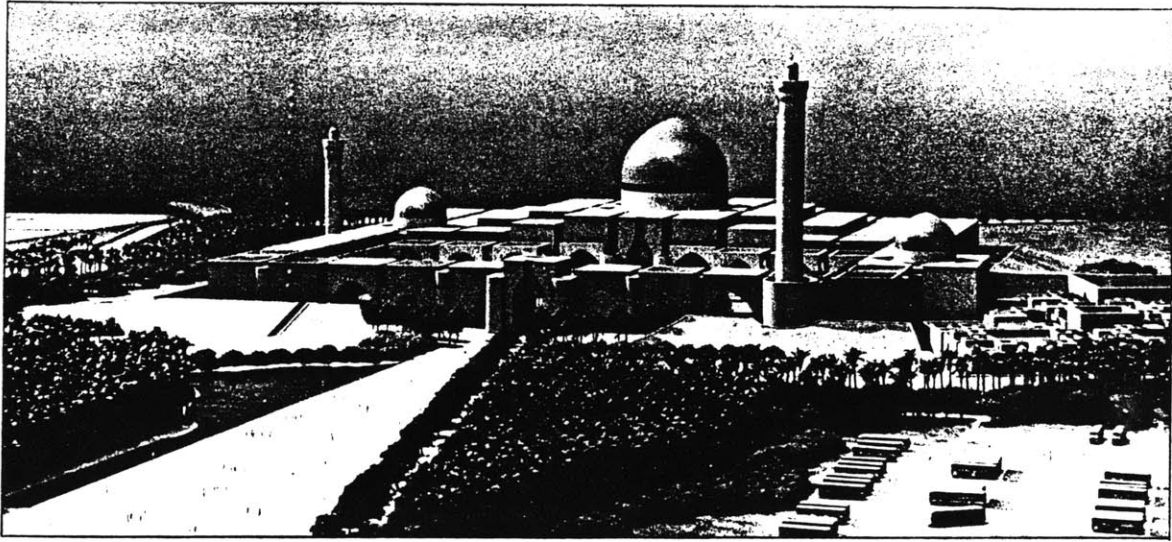
Site plan of Mosque complex

0   30   150m

Fig. 2.1   View of the mosque looking towards the entrance.

Fig. 2.2   Site Plan.

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VIEW FROM WEST
RESTORED

THE WHITE TEMPLE & ZIGGURAT,
AT WARKA   ARCHAIC PERIOD B.C. 3500·3000

TERRACE

WHITE TEMPLE

PLATFORM

RAMP

FT
0   25   50

0   5   10   M

PLAN

Fig. 3.1   View of the mosque looking from North.
Fig. 3.2   Ancient mesoptamian ziggurat .

Fig. 4.1   Ibn Tulun mosque and the (ziyada).

Fig. 4.2   Badran's incorporation of the (ziyada).

muqarnas-squinch. The exterior surface of the dome is coated with gold-plating and glazed ceramic ,which are supposed to be the traditional colors of the domes of Iraqi mosques.

Human Factor

Badran manipulated the spatial experience of the beholder on two levels. First, he worked out an elaborate sequence of transitions between outside and inside the mosque. As soon as the viewer approaches the site of the mosque, he is influenced by the perspective of the triangular passage that narrows towards the gateway. Before one reaches the gateway, he can see around the passage-way palm trees and an artificial lake that simulates the Iraqi landscape. Those who approach the mosque from the direction of the parking lot walk through passages surrounded by palm trees, and cross streams before reaching the earth mound. The earth mound encapsulates a belt of space around the mosque in which bridges connect the paths with the courtyard or the prayer-hall. Th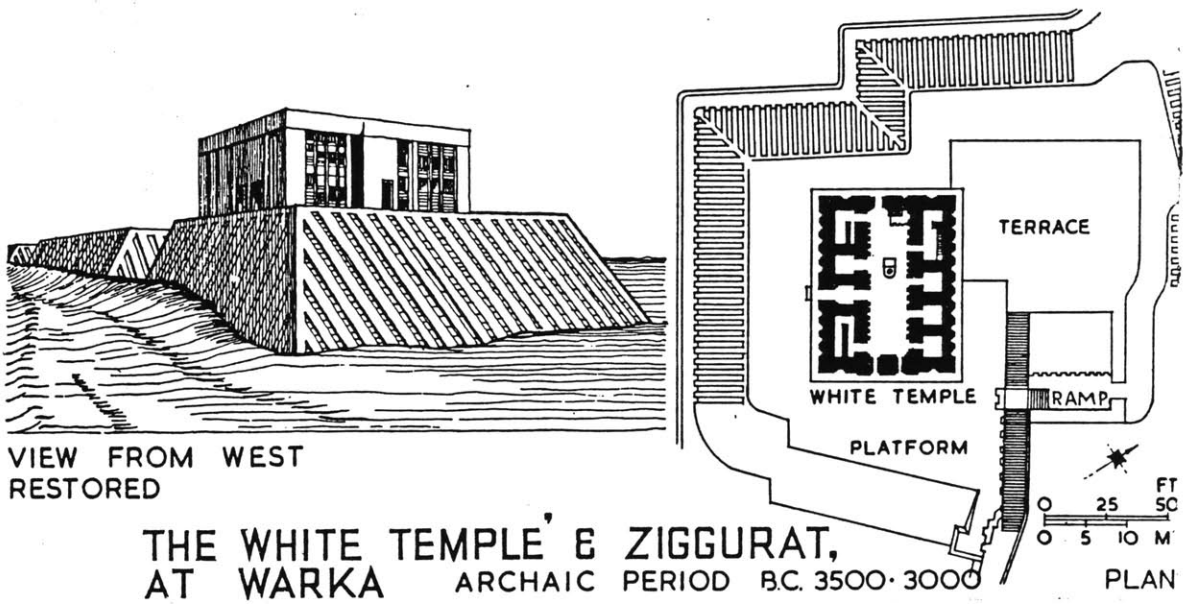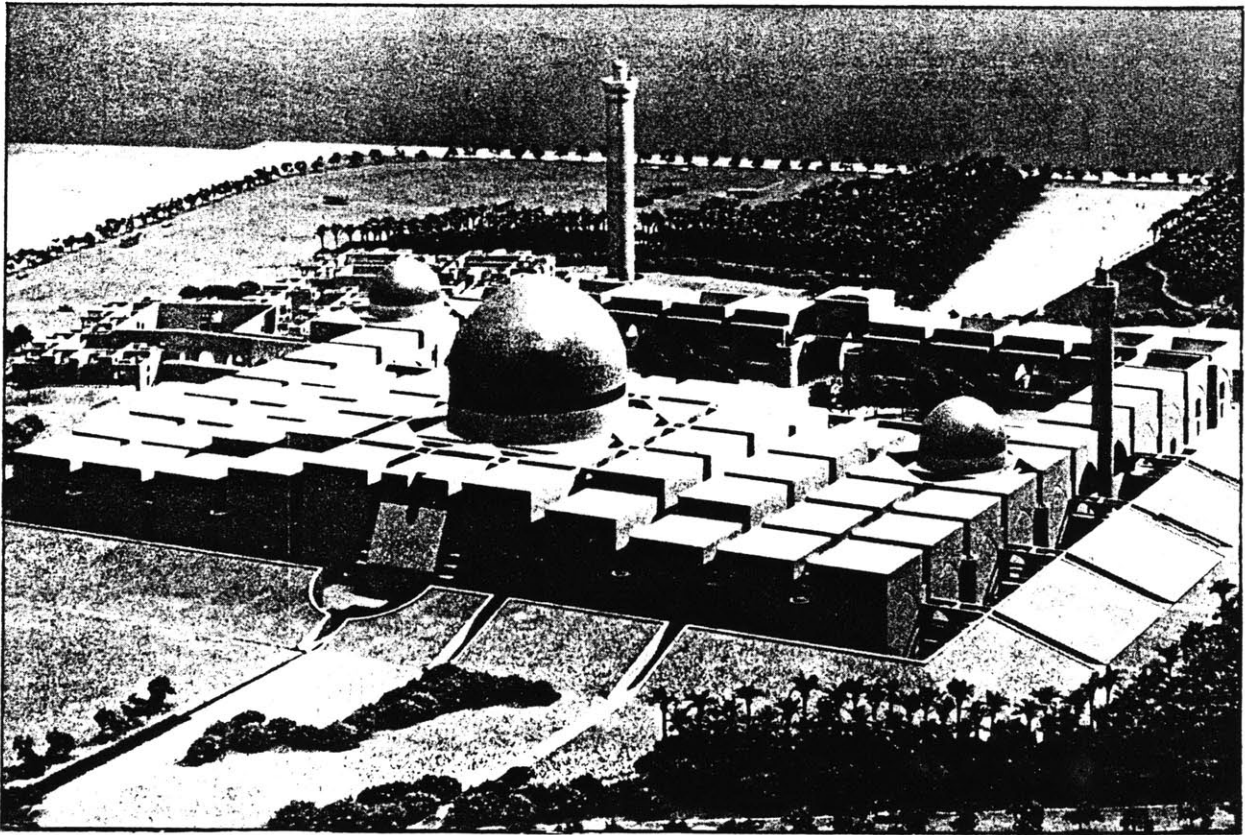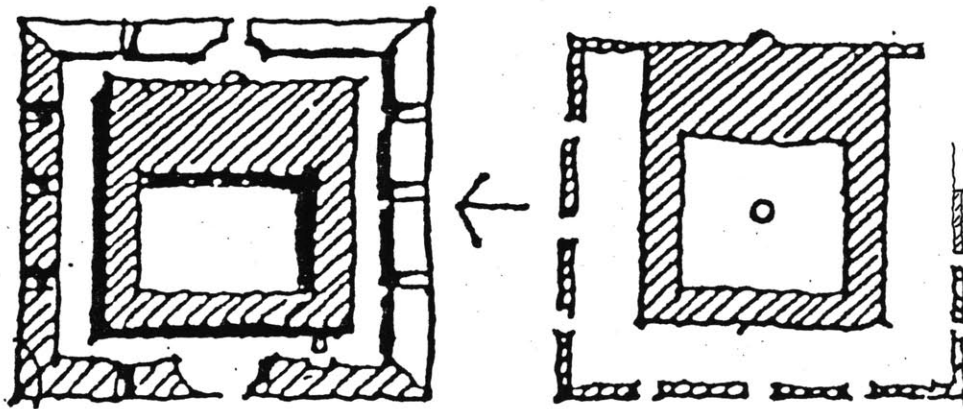e main gateway, a muqarnas-arch portal, is flanked by two cylindrical towers and leads to a vast courtyard. The courtyard is a multi-layered. The gateway is surrounded by a circle of trees. The courtyard's floor is grided according to the geometric system of the mosque; Badran uses the grid to demarcate squared platforms for prayer. A series of free standing cubic frames are juxtaposed in front of the prayer hall.

Second, by breaking down the vast space of the prayer hall into clusters of frames, Badran attempts to overcome the drawbacks of the vast prayer area for 30,000 persons that the program required. He used the tie beams of the cubic frames to lower the ceiling and create a human scale. For the architect, the repetition of the frames, the series of tie beams and double arches was meant to evoke the democratic space of the traditional hypostyle mosque in symbolizing the equality of man before God.[4] By structurally dividing the prayer-hall into independent structural skeletons, Badran avoided the huge massive piers, which would have been needed if those skeletons were structurally connected. According to Badran, this arrangement evoked the four corner colonnettes of the brick piers of the Great Mosque of Samarra, or Ibn Tulun in Cairo (see fig. 6).

Despite these humanizing effects, Badran's design has its defects. The proportions of the cubic frame are not compatible with the human scale; their broad pointed arches and their 15 meters long horizontal beams give an overwhelming feeling of heaviness.

The Urban Context

Badran's design demonstrates his sensitivity to the mosque's urban setting. His attachment of the housing cluster to the mosque precinct and its geometric tilt from it are attempts to contextualize the mosque, and integrate it in this extramural site, on the one hand, and emphasize the axiality of the mosque towards Mecca on the other. The housing is modeled after an Iraqi village. It is clear that Badran is playing on the contrast between the formal and the vernacular architecture to evoke the urban setting of the traditional mosque in the urban fabric (fig. 5). In doing so, he "tried to create an elementary cell of an 'Islamic city' on the site."[5]

Badran's de-monumentalizing deconstruction of the mass of the prayer hall, the reduction of the verticality of the mosque by the sloping mound and the asymmetrical arrangement of the minarets and domes enhance the informal and symbiotic relationship to the urban context. Badran used an existing circle of trees on the site as a hinge to rotate the mosque towards Mecca. This conceptually follows the stated geometric role of the housing cluster in emphasizing the axiality of the mosque towards Mecca.

Regional, Historical and Cultural Context

In addition to adopting the hypostyle type, Badran incorporated other regional quotations such as the earth mound, the slit Abbasid arches, and the dome. The inclusion of those forms was not literal, however. The way he used the borrowed stylistic elements in his design provides no direct visible associations with their original sources. He abstracted those forms by integrating them into the modern building technology and by changing their scale and proportion, but without altering their structural meaning. This can be noticed in the cluster of 4 columns as it refers to the traditional pier and its 4 colonnettes and the adaptation of the stepped windows
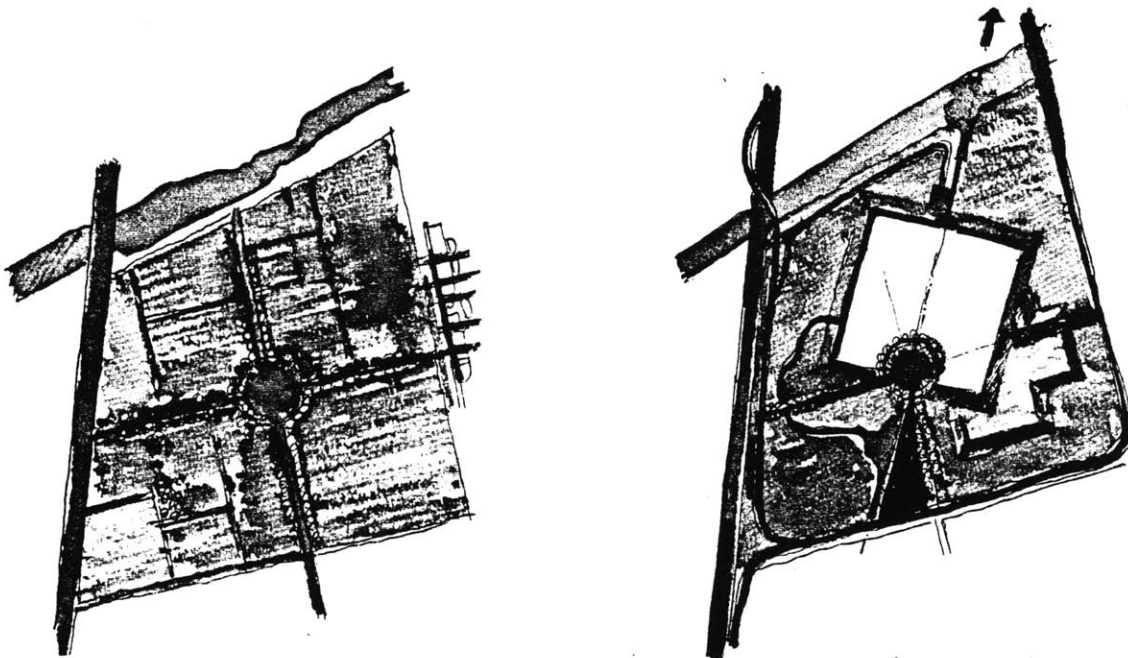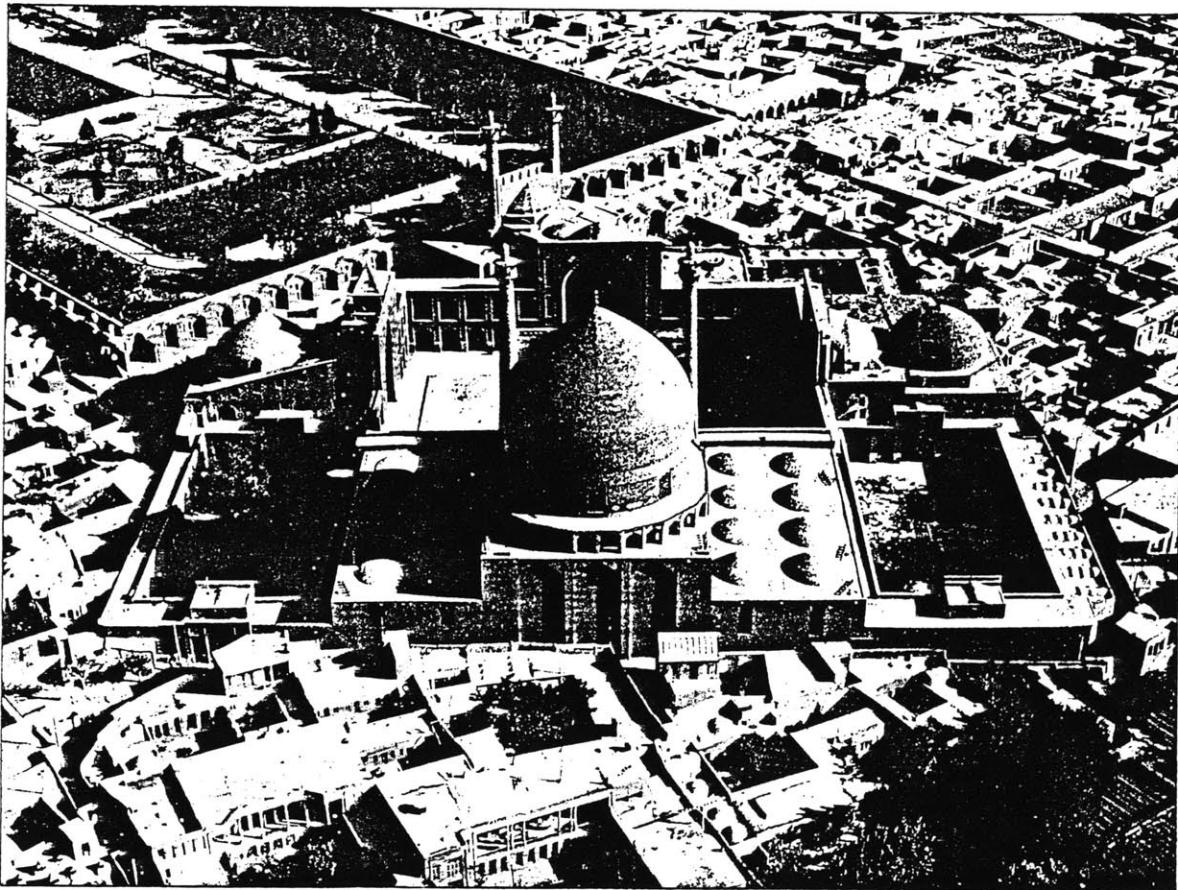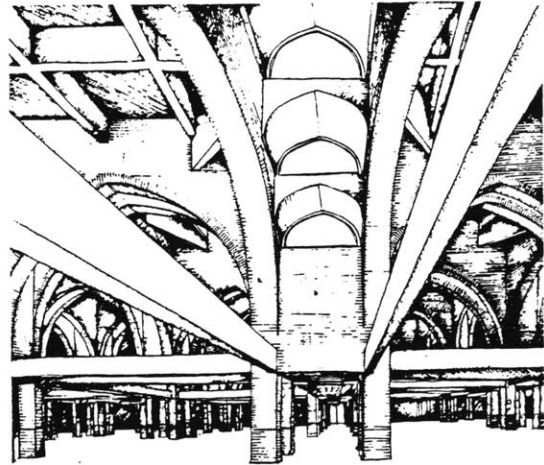
Fig. 5.1 The shah-mosque, Asphahan, 1610.
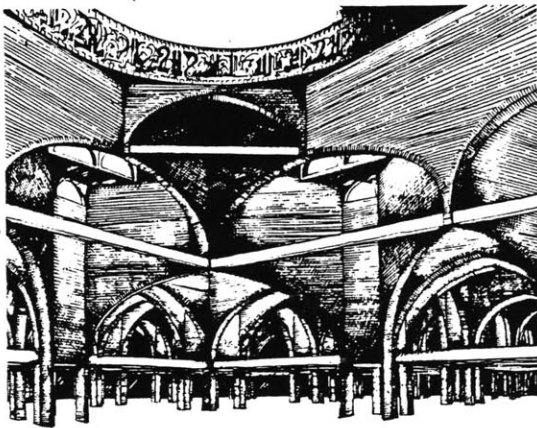
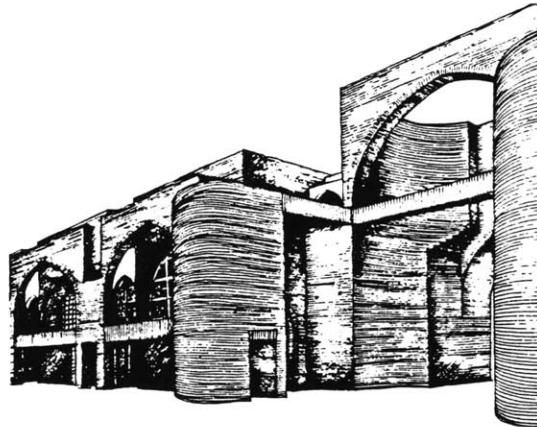Fig. 5.2 Badran's conception of the urban situation of his mosque.

Selling arcade

Interior of prayer hall

Prayer hall seen from under the dome

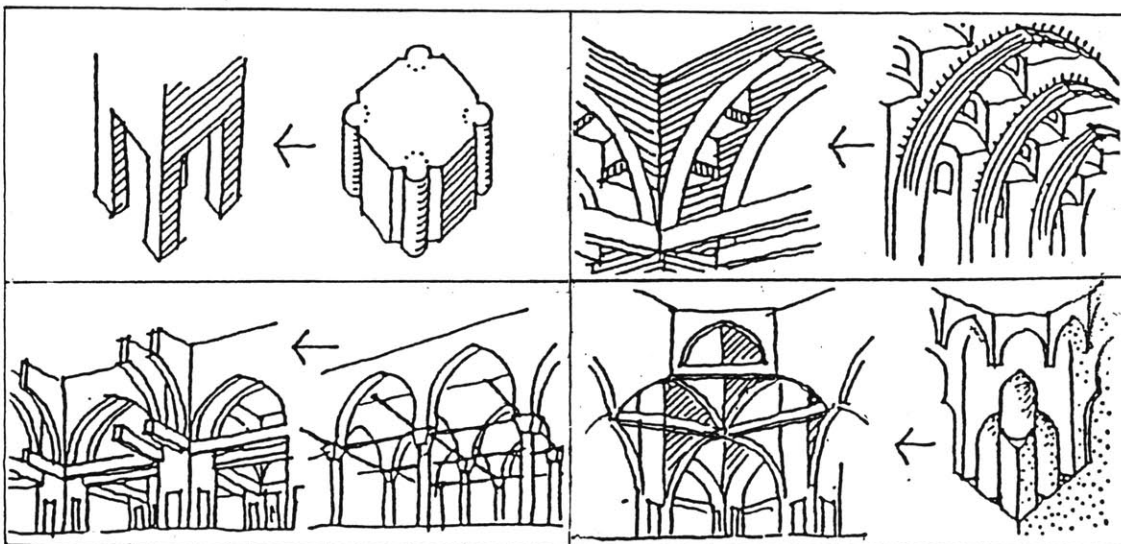*Main entrance from inside the courtyard*

Fig. 6.1   Interior views in Badran's mosque.

Fig. 6.2   Badran's transformation of the traditional structures.

of Khan Al Murjan. His muqarnas dome also represents his attempt to modernize this traditional building system (fig.6).

Nonetheless, one can view his adaptation of the traditional forms as an attempt to imbue the modern technology with a cultural expression. His incorporation of the tie beams to the arch recalls in principle and form the tie beams in a traditional hypostyle mosque.

Badran adopted the reinforced concrete construction to cover the vast spans of the mosque. The structure plays the determining role in defining the spatial organization and the formal expression of the mosque. For example, instead of the traditional arrangement of the aisles, which were at most 6 meters apart, Badran differentiated the prayer hall by means of structural frames, each 15m x 15m, which were also expressed in the exterior. This preoccupation with expressing the structural potentials of the concrete had the stated repercussions on the human scale and the typology of the hypostyle.

The question that poses itself at this juncture is, How valid is the notion that the building technology determines the space form of the hypostyle mosque? Part of the answer lies in the primacy of the liturgical requirements in shaping the space form of the hypostyle mosque. The organization of the aisles, which followed the row arrangement of the prayer, was institutionalized as an archetype. Its correspondence to the liturgy and to its psychic structure allowed it to endure despite frequent technological advances, which would have allowed for more structural variation and freedom. Badran seems to overlook the cultural confinement of the deployment of technology, though he recognizes some of the symbolic elements of the hypostyle hall in his arrangement.

This indifference is more obvious in the external expression of the structural system, which represents a departure from traditional typology of the typically introverted hypostyle mosque. As represented in traditional Iraqi architecture as well as in its referents in Persian architecture (this can be safely generalized to Islamic architecture), the formal emphasis and the symbolic representation were usually on the planer expression of the facades, behind which the structural elements of the building are concealed. False ceilings and facades like the Pishtaq (Fig. 7) were often used to define proportionate types of space such as the iwan and the

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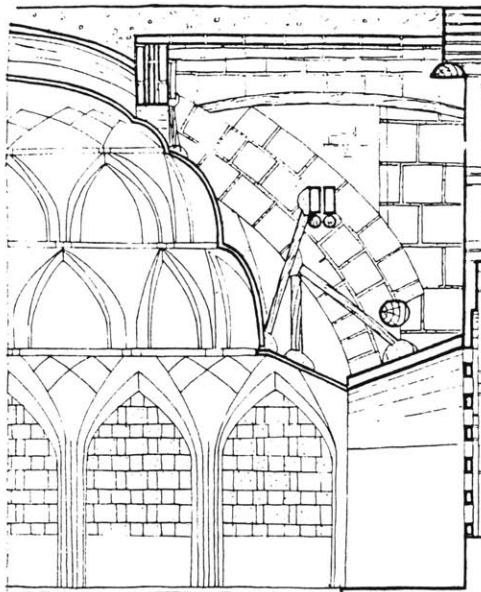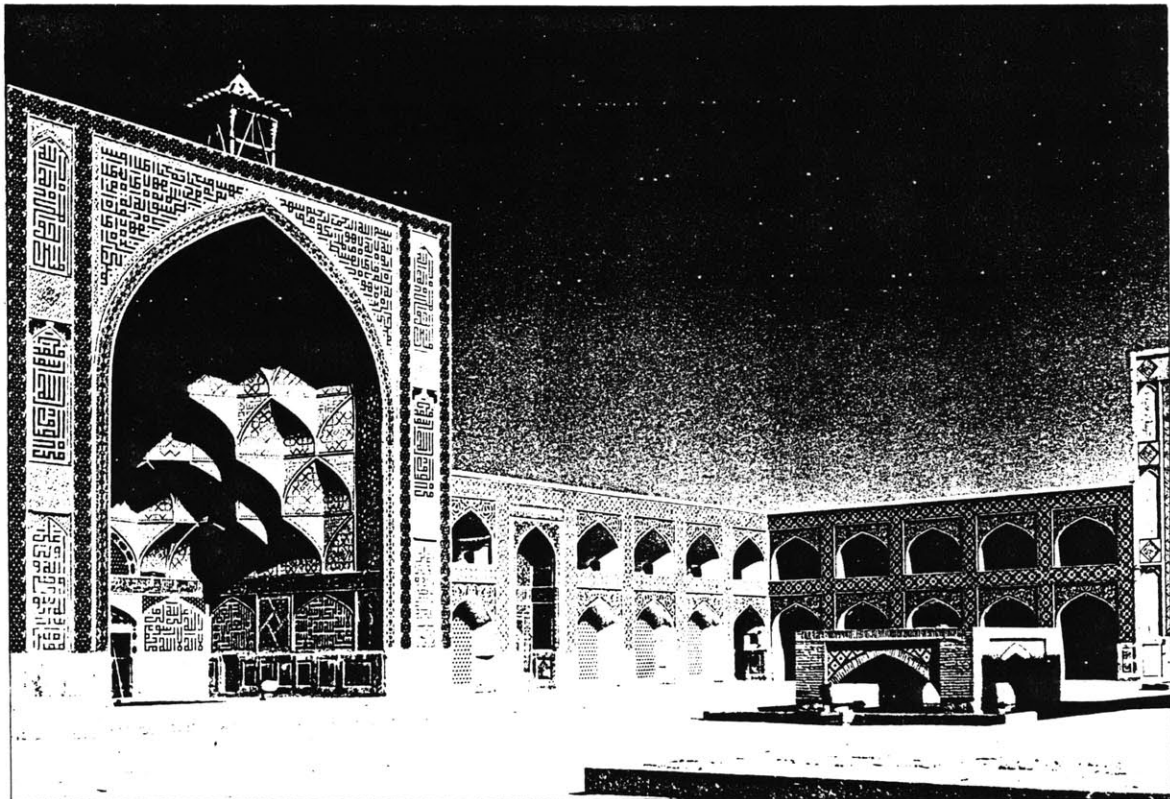
A muqarnas vault section. Instead of being supported from underneath, the stucco vault is actually suspended from above by means of a complicated system of timber hangers attached with lumps of gypsum mortar to the brick or stone structural arches – and to each other.

Fig. 7.1   The courtyard and the pishtaq, Friday mosque, Asphahan.

Fig. 7.2   The back of the pishtaq, Friday Mosque, Asphahan, 12th century.

Fig. 7.3   Section through the Pishtaq.

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courtyard . Emphasis is given to space-type over form and even function. Consequently the disassociation between form and function, and between exterior and interior, was established as a norm. This detachment allowed the space-type to persist, despite the changes in the building technology affected and freed both the exterior and the interior, so that each could respond to its contextual requirements without clashing with the other.

By contrast, the form, function and structure in Badran's design are congruent in the external image of the building. The building is a manifestation of functionalist thinking, which views the formal representation of the building in the expression of its construction, structure and materials in the exterior. In other words, the building expresses itself as a self-referential symbol and not as a carrier of external symbols and social messages.[6] Nevertheless, there are traces of symbolic connotations and messages in Badran's design.

First, his de-monumentalizing composition achieved by breaking the mosque down into small volumes represents a powerful gesture against the authoritarian objectives of the mosque's program which originally implied gigantic scale and monumentality, a requirement that the other architects like Venturi met favorably. The huge dome is not compatible with that aim, however, and appears to be a concession to the nationalistic objectives of the program.

The external formal composition of the building also reveals something about the architect's historical perspective. There is a system of layering in which the huge dome is resting on the cubical volumes of the prayer hall, which in turn rest on the ancient Mesopotamian ziggurat base. This reflects a cumulative notion of history manifested in the stratification of these historical layers-ancient Mesopotamian, Islamic and modern. Yet it is not precisely that, because here modernity is equated with Islam. The expressionist cubes of the prayer hall with their slit Abbasid arches on the external facades are surmounted by the dome as a symbol of the mosque. The message this conveys that Iraqi history has two phases: pre-Islamic and Islamic.

Though Badran's design was based on the traditional hypostyle mosque type, modernism seemed to have an upper hand in coloring his vision of its cultural and traditional core. In his design the hypostyle was reconstituted by the ordering power

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of the grid. The grid as a non-organic, non-hierarchical and anti-referential geometric system has been widely adopted by modernist avant-gardes to produce designs that have no association with a particular region, culture or history. According to them, it endows their designs with a universal applicability.[7]

The inherent characteristics of the grid are powerfully manifested in Badran's design. The differentiation of the mosque into repetitive cubic modules make the prayer-hall a non-directional, non-hierarchical, and static space. This partially reflects the egalitarian nature of the hypostyle mosque. But there is a substantial difference. The spatial organization of the traditional hypostyle mosque as it corresponds to the row arrangement of the worshippers, usually comprises arcades that run parallel to the qibla wall. this arrangement demarcates space by orientation, but not by an obvious axiality. The hypostyle hall embodies an intricate balance between axiality and its essentially static nature.

Badran's differentiation of the prayer hall into a cluster of $225m^2$ cubicals eliminates the original directionality, not to mention its incompatibility to the human scale despite Badran's attempts to humanize it. The influence of the grid in Badran's design is amplified by the simultaneous application of two other modernist design principles "firmness and delight!"[8] The former operates in the exteriorizing of the structure and the construction of the building; the latter in the "abstract play of volumes under light." In three dimensions, Badran's mosque is fragmented into its primary structural modular frames which are playfully arranged as in the graded configuration of the prayer-hall. This exteriorization of the underlying grid system unfolded a built-in conflict in Badran's design, which is formally represented in the lack of an overall unity of the mosque's exterior. Conversely, the traditional hypostyle mosque was formally unified by an all-embracing planer wall in the exterior, which endowed the mosque with a simple and horizontal profile.

On the whole the problematic aspects of Badran's design result from his attempt to synthesize what seems to be opposing forces, modernism and traditionalism. The conflict arises as he deals with the traditional typology while still adhering to modernist conventions. This leads to some misreading and misuses of the traditional hypostyle mosque. For instance, the dome is awkwardly placed over the prayer-hall. Unlike the traditional hypostyle type, where a cupola, a much smaller dome is usually placed over the mihrab area proportionally with the axiality

of the prayer-hall, Badran's dome, is huge and placed in the middle, with no convincing geometric articulation with the axiality and the rectangularity of the prayer hall beneath it. With its centralizing force contradicts the orientation towards Mecca. Another misinterpretation is in Badran's treatment of the courtyard; he transforms this essentially introverted, self-contained and autonomous space into a theatrical setting and a conveyer of the formal representation of the clutter of forms and volumes interposed within its domain, such as the segment of the trees, the structural frames, and the exteriorized masses on the periphery.

Badran's traditionalism operates on borrowing forms from the cultural heritage; his modernist tendency reworks those forms into another mode of compositional relationship. Although the results are often incompatible, at least the typological base of Badran's design and his struggle against his modernistic affinities to endow them with cultural expressions protected his design from being totally detached from the mosque's cultural core.

B. The State Mosque of Baghdad: Robert Venturi

The most conspicuous feature of Venturi's project for the state mosque of Baghdad is its overwhelming monumentality, achieved by the scale of the components of his project and their relation to each other. The box-like volume of the mosque dominates both because of its overscaled proportions and because the surrounding volumes of the cultural, educational, and residential facilities were deliberately played down (fig. 1). Combined with the huge podium around the mosque – which houses the parking underneath it – they contribute to the representational power of this monument (fig. 2).

The exterior is characterized by both the dramatic verticality and the horizontal expansion of the facades. The surface treatment also has a major role in its monumentality. The facade consists of four horizontal layers. The lowest is a plain solid continuum that is occasionally punctuated by the gates of the mosque, the most significant of them is the long horizontal opening of the main entrance. The upper layer is a continuous turquoise strip of Quranic calligraphy. Above that is a band of what is supposed to be a traditional ornamental motif, which originated in the Abassid city of Samarra. This motif was characterized by a small size of its ornamental module, which, by repetition, was applied on large surfaces. But as it is used in Venturi's project, it is dramatically magnified and distorted. Venturi stated, "On the exterior, the mosque ornament is used eclectically and at a size consistent with the great scale of the building."[1] The facade of the mosque then recedes back above the ornamental band as a solid wall topped by continuous crenellations. The ornamental bands run along only three facades of the mosque, leaving the fourth which is the qibla wall solid and untreated. This signifies Venturi's peculiar method of formal representation .

In addition to the facades, the gigantic turquoise dome with its unfamiliar form is no less powerful. The dome is composed of a progression, on a large scale, of a muqarnas-like structure that assumes a cake-like form on the exterior. The unfamiliar character of this dome stems both from its bizarre form and its relationship with the morphology of the mosque.
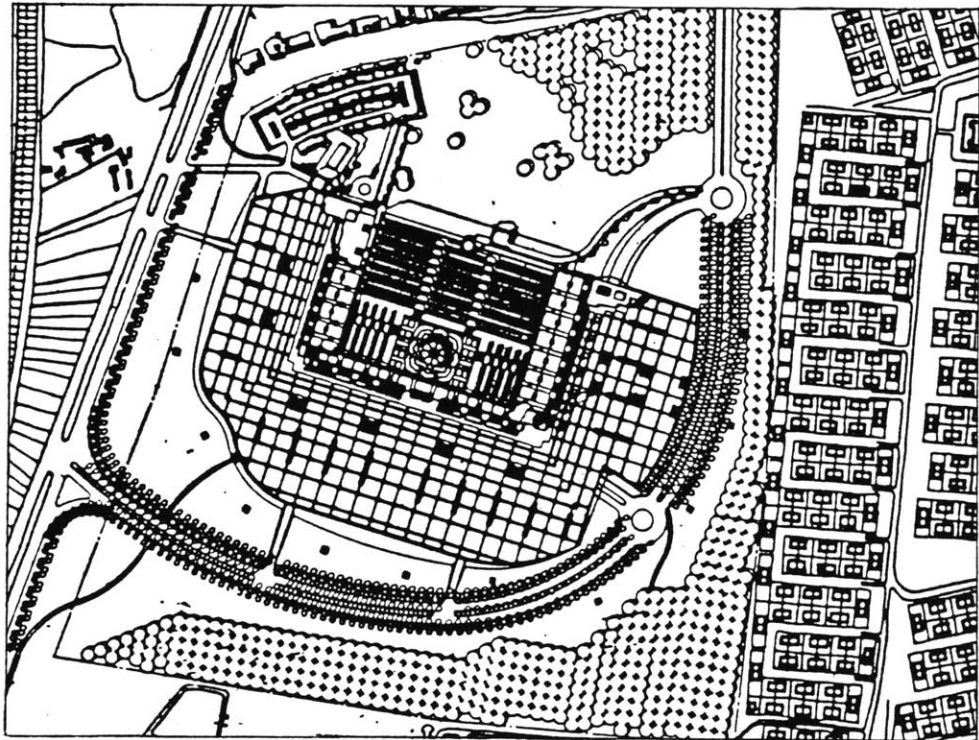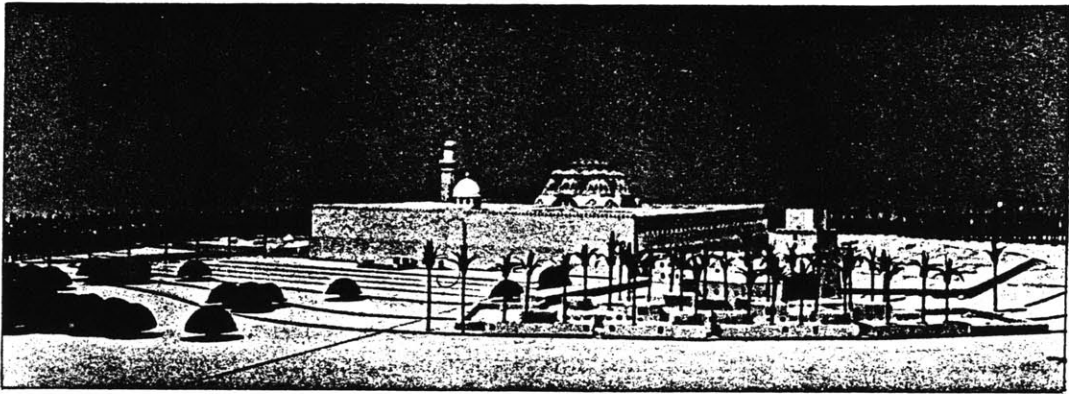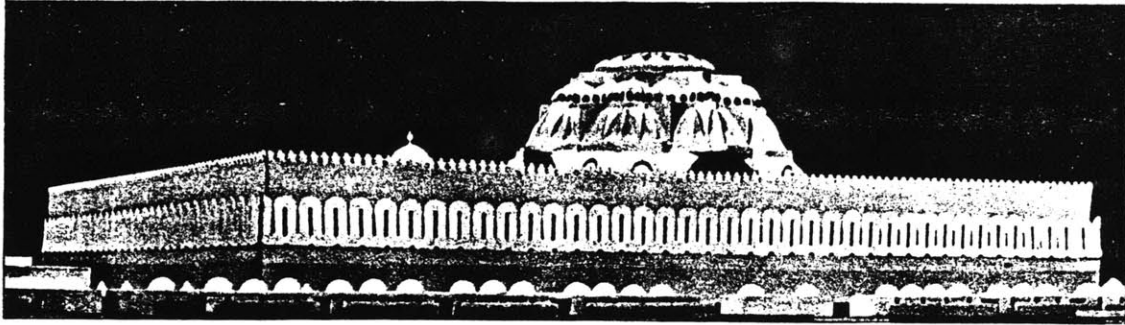
Fig. 1.1   View looking towards the Main Facade of the mosque.

Fig. 1.2   View looking towards Qiblah Facade of the mosque.

Fig. 1.3   The site Plan.

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Ground floor plan
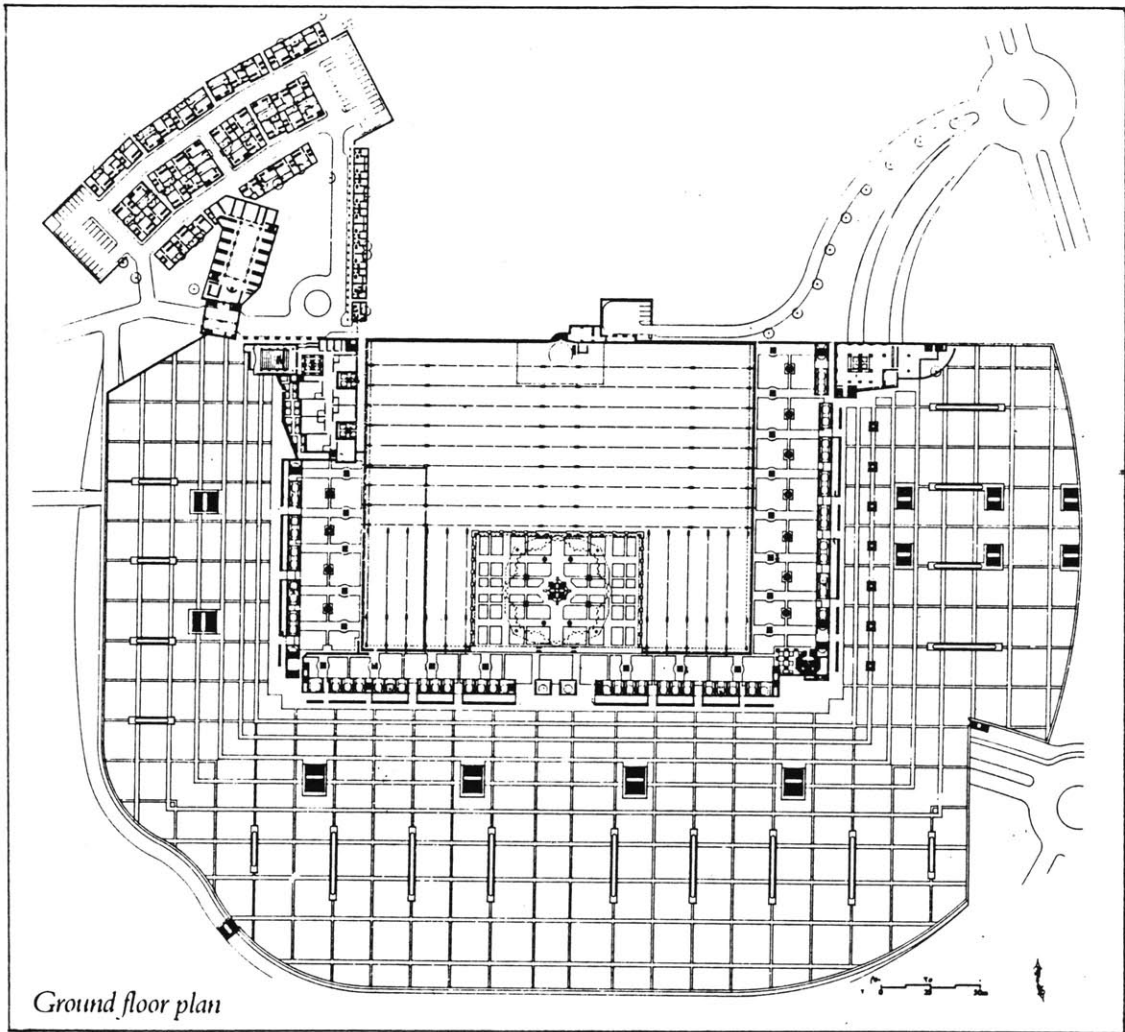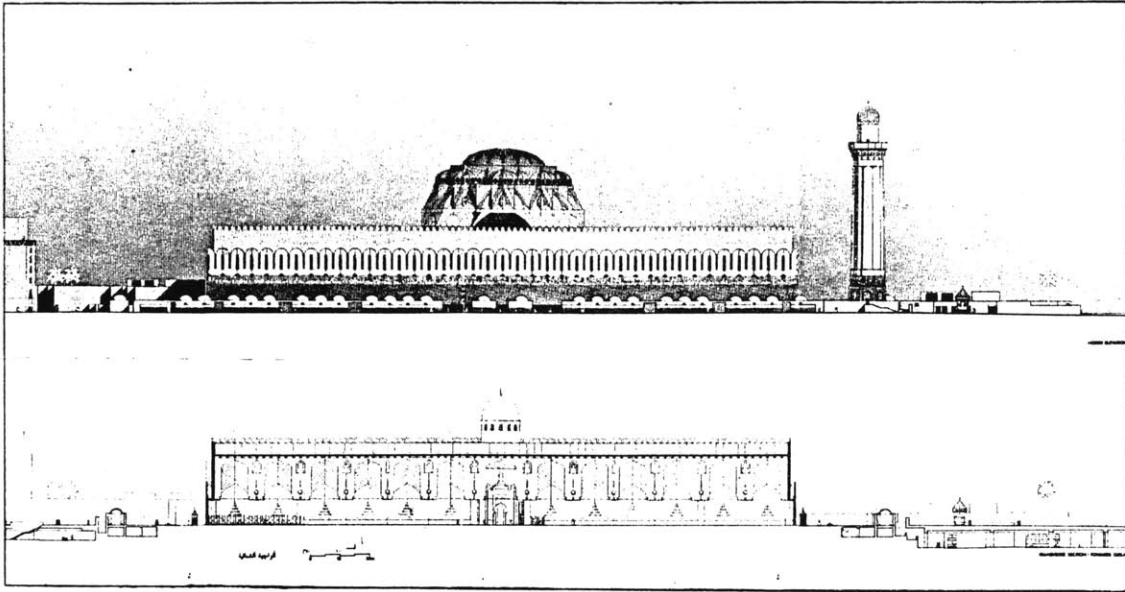
Fig. 2

Venturi's mosque is based on the hypostyle type. But unlike the traditional hypostyle model, Venturi superimposes his dome over the courtyard of the mosque (fig. 3). Says Venturi about this typological intervention, "The form of this dome is not traditional. What is perceived from the distance as a monumental dome appears at close range as a buoyant, tree-like canopy shading the sahn."[2]

This was not, however, the only major alteration Venturi made on the typology of the hypostyle mosque. Venturi defines the other alterations and changes by stating, "We have adapted the hypostyle plan to take advantage of modern construction techniques. The series of arcades which define the form of the sanctuary are lifted high overhead and are supported from above so that the great space is delineated by the arcades aloft but relatively open below" (fig. 4).[3]

Venturi's method of handling the ornamentation and decoration, denotes another feature of the transformation of the mosque's interior" . There, Venturi employed the decoration in a very eclectic manner. Patterns of ornamentation are borrowed from diverse geographic and historical sources in the Islamic world, deformed in scale and altered in material, and then blended and applied over the interior surfaces of the mosque. An example is the mihrab where a collage of incomplete patterns of decoration and calligraphy, striking and contrasting in color, are deliberately applied over its adjacent surfaces without thematic articulation.

The Human Factor

To understand how this unbuilt project relates to the human scale and perception, we need to follow the sequence of impressions the building makes on the beholder or the worshipper as he moves through it. This experience starts in a dark underground parking garage. The visitor then ascends to the huge podium of the mosque. There he encounters the facade of the mosque with its stunning dimensions, 217 meters wide and 30 meters high with its 10 meters high ornamental band and the gigantic cake-like turquoise dome. He will also view the mosque as a back drop for the 4 meters high volumes of its ancillary buildings, which appear like toy-like forms. After passing by them, he arrives at the entrance of the mosque, an

Fig. 3.1   Axonometric of the mosque.

Fig. 3.2   Axonometric showing the structure of the mosque .

Longitudinal section of Mosque and cupola
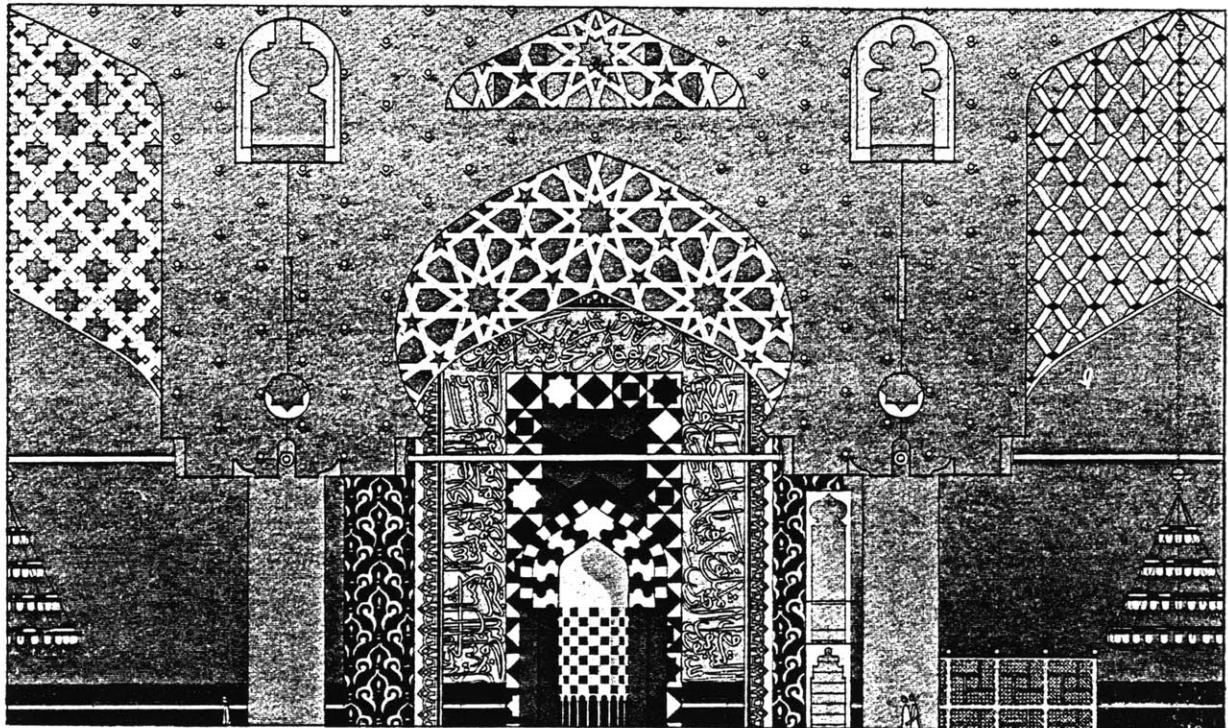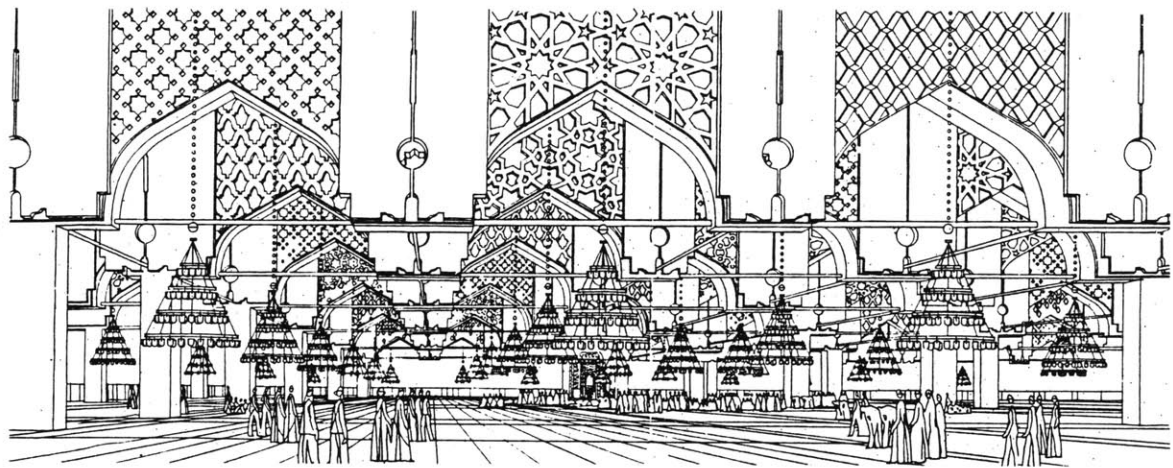
Fig. 4.1   Section through the mosque.
Fig. 4.2   Interior of the prayer hall.
Fig. 4.3   Surface patterns of the Mihrab.
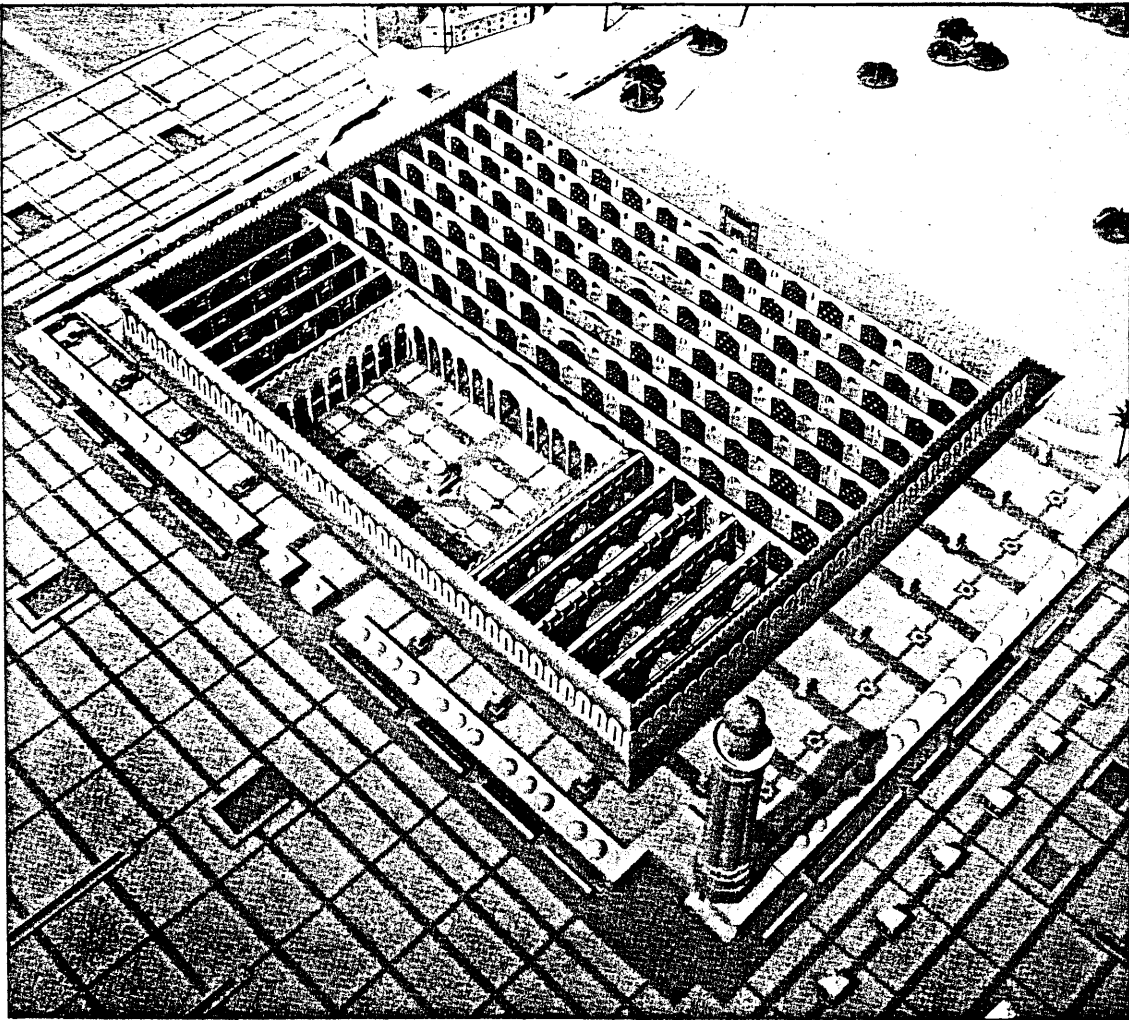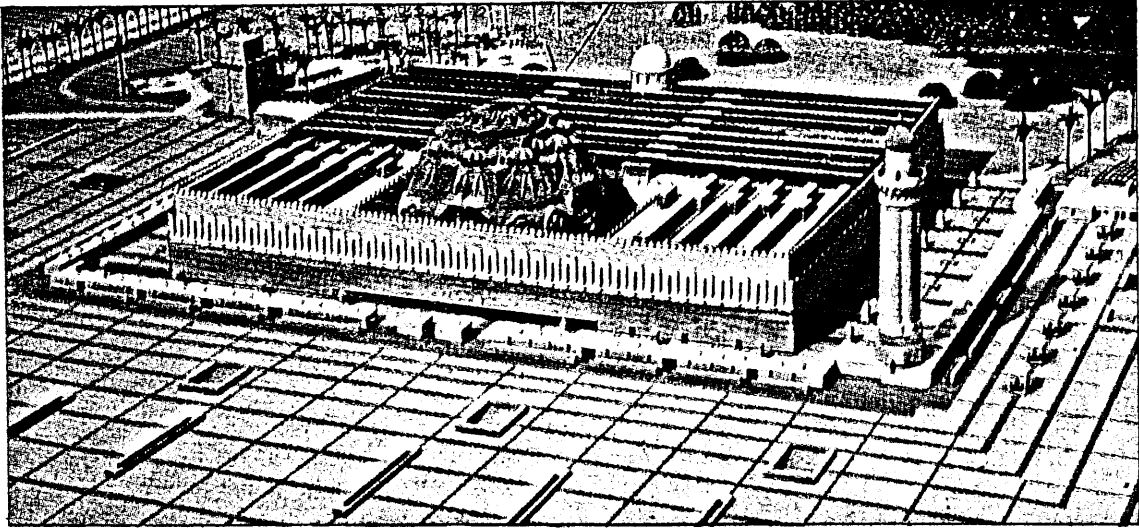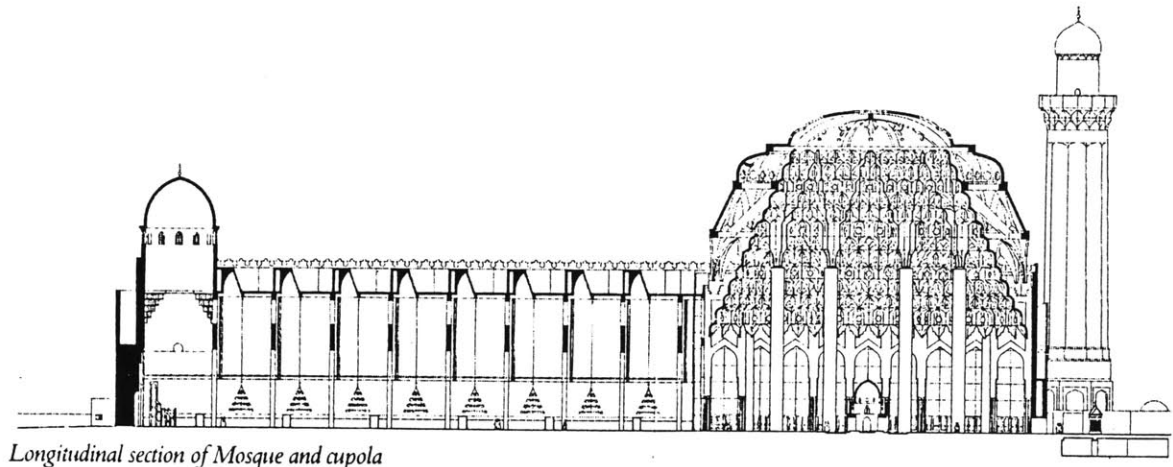
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opening 50 meters wide and 3 meters high. Immediately, the beholder steps inside a ceremonial and grandiose hall, 100 meters long by 65 meters wide, covered by a dazzling muqarnas dome that reaches to 60 meters high. In the middle of this space, there is a 7-meter high domed fountain, a replica of that in the Ibn Tulun mosque. Past this, the beholder finds himself in the huge open space of the prayer hall, 100 meters deep and 217 meters wide. But 10 meters above his head, the worshipper will see the lower edges of the elevated arcades, supported at the roof of the mosque 27 meters above his head.

The visual experience of the viewer will also be dominated by the variety of patterns of ornamentation covering the surfaces of the mosque, especially at the mihrab. There the beholder will face a collage of incomplete ornamental patterns with contrasting colors, especially bright red, yellow, and green.

Altogether the overdramatized and monumentalized spatial and formal construct of Venturi's mosque seems to disrupt and distract the religious, psychic experience of the worshipper and his pious feeling as it conflicts with the original characteristics of the hypostyle mosque:

The typology of the hypostyle mosque provides an intricate process of psychic shifts that is manifested in the morphological transition in light, section, and extension from the urban domain to the prayer hall. First the worshipper traverses the threshold of the mosque to the transitional space of either the contained space of the ziyada or the semi-dark linear "majaz." Then he finds himself in the courtyard a contained space open to the sky. Finally, he approaches the prayer hall. In comparison Venturi's sequence of spaces is as abrupt and severe as one moves suddenly from the huge ceremonial podium to the ceremonial hall surmounted by its dazzling dome. While the differentiation of the traditional hypostyle hall by the arcades corresponds to the normative row arrangement of the worshippers and their scale defines more intimate spaces among the columns, Venturi nullifies that by lifting and magnifying the arcades, which depersonalizes and disassociates the prayer hall from the human scale. His elimination of the columns as a way of leading the eye to qibla wall, which his perspective drawing may suggest, is a serious negation of the concept of the hypostyle hall. Comparing the hypostyle mosque with a church basilica , Titus Burckhardt wrote that the parallel arrangement of the arcades in relation to the qibla wall gives an entirely different feeling. "Instead

of 'leading the eye' into the deep interior in the direction of the choir (as the basilica does), the arcades cross the oratory frontally and 'bring the eye to rest,' in accordance with the essentially static and non-dynamic conception of space, in a state of equilibrium and repose."[4] Venturi's departure from the traditional typology of the hypostyle mosque was conceptual. The traditional mosque hypostyle represented an egalitarian space; Venturi negates that by partitioning the mosque into two distinct ceremonial and grandiose spaces.

Venturi's overlaying of the internal surfaces of the prayer hall with colorful ornamental sumptuousness is also contradictory to the spatial purity of the hypostyle hall which is meant to accommodate the spiritual focus of the worshippers. Historically the colorful ornamental surfaces in the traditional mosque architecture, especially in Iraq, were reserved "for specific enclosed spaces, glimpsed from doorways, and for volumes which dominate the enclosure, such as minarets and cupolas."[5]

Urban Context

Venturi's mosque is sited as an unmistakable landmark. Its scale, formal treatment and the huge formalized surrounding landscape demarcate a monumentality that imposes an abrupt barrier between the mosque and any potential urban growth in the surrounding area. Its minaret is treated as a freestanding object. Venturi's enshrinement of his mosque does not lend itself to the historical urban transformation that placed the traditional mosques in an urban situation that allowed them to become integrated in the city fabric, and to which Badran's design addressed itself. One might ascribe this shortcoming to the program that dictated an isolated site. But by looking at Badran's solution which established a more symbiotic relationship with the urban context and by considering Venturi's theoretical work, it becomes clear that his mosque reflects his design ideology. His model for the urban form, the "decorated shed" as he labels it, is a building that assumes a rhetorical image by applying an ornamental veneer that is independent of the building's structure.   In this way, Venturi views the image of the building as a piece of propaganda about itself directed to the society. Venturi in Learning from Las Vegas, Says "There is no reason why the methods of commercial persuasion and the skyline

of the signs analyzed here should not serve the purpose of civic and cultural enhancement."[6] The enshrinement of his mosque was intended to enhance the propagandistic and the persuasive imagability of the mosque. The three facades visible to the front podium incorporated the overscaled ornamental veneer, which was abruptly terminated at both edges of the back qibla wall, which as a less-visible facade is left untreated. This disjunction between the back and the front of the building is a major theme in Las Vegas, where "the only transition between the strip and the Mojavi Desert is a zone of rusting beer cans. With the town, the transition is as ruthlessly sudden. Casinos, whose fronts relate so sensitively to the highway, turn their ill-kempt backsides towards the local environment, exposing the residual forms and spaces of mechanical equipment and service areas."[7] Venturi continues, "We have explained, how, for us, commercial vernacular architecture was a vivid initial source for symbolism in architecture."[8] He concludes, "Finally we shall argue for the symbolism of the ugly and ordinary architecture and for the particular significance of the decorated shed with a rhetorical front and conventional behind."[9] It then becomes clear that the stated formal and urban characteristics of Venturi's design are of the "decorated shed."

Regional, Historical and Cultural Context

Venturi's adoption of the hypostyle type as a premise of his design could be considered a regional trait, as can his incorporation of Abassid stylistic elements, such as the Samarran type of ornamentation. He altered the regional theme dramatically, however, with his placement of a huge dome over the archetypical courtyard, the magnification of the prayer hall and the distortion and reshuffling of the ornaments. Furthermore, he altered the structural meaning of the hypostyle hall. The traditional hypostyle hall was structured by the arcades as load-bearing members; he reversed its structural behavior by removing the columns from the arcades, magnifying them, and elevating and supporting them from above by a huge truss structure. Instead of being compression members,Venturi turned them into tensile members.

Venturi's transformation of the vocabulary of the hypostyle type was underlined by a process of reinterpretation that suggests a specific reading of the

relation between tradition and modernity. Venturi's statement of the mosque design says:

> We have juxtaposed symbols and ornaments from diverse sources without being historically literal in scale, context, or materials. There is no ambiguity, therefore, about the age of the ornament or its craftsmanship which is often not practical to emulate today. Form and ornament, reinterpreted in this way, can be easily recognized not as a literal reproduction of the old. In this way, the building becomes at once modern and familiar.[10]

As this statement and as his building demonstrate, Venturi's design is characterized by displacement, deformity, and reshuffling of the traditional forms he borrowed from diverse sources. In this process, those symbols, contrary to Venturi's claim lose most of their meaning, which correspond to their charge and appeal to the society and culture, and become alienated and unrecognizable. The distorted Samarran ornament on the outside is an obvious example. Another is the surface pattern of the mihrab. There Venturi abruptly juxtaposed two-dimensional calligraphy and ornamental panels with heterogeneous colors, and with no structural articulation. They dialectically interact with each other, and the net effects are a perceptual confusion and a loss of focus.

There is no doubt that Venturi does not establish any continuity with tradition. On the contrary, his random dealings with history blur the possibility of discerning its historical associations, unless one realizes that all of those dazzling collages and clichés are merely a thin coat on a modern structural skeleton. Venturi is deliberately expressing the contradiction between the ornament and the structure it adorns as the major visual theme in the mosque, hence highlighting the rupture between tradition and modernity.[11] "The pruning of columns and their replacement by great spans make it clear that the mosque is a product of advanced technology," says Venturi.[12] His paradoxical lifting of the arcades of the prayer hall conveys the unmistakable message that the power of modern technology entitles him to juggle freely with traditional typologies regardless of their symbolic and structural integrity.

It could be argued that Venturi established a foothold for his design in Islamic culture by premising his design on the hypostyle type. Venturi identified the

hypostyle mosque as an iconographic entity that derives its value exclusively from the visual association of the people with its symbolic and representational elements. As a historical reading, this identification with the typology of the hypostyle mosque can be seriously criticized.

Conceptually, the value of the hypostyle type lies in its correspondence to the liturgical framework dictated by the religious norms of Islam. As those norms are aniconist in nature, the space of the hypostyle hall is structurally and formally subtle, and the structural and symbolic programs are subjugated to its service.[13] Therefore, Venturi's treatment of the space of the mosque exclusively as a medium of conveying the representational and visual forces of his dynamic structural and symbolic forms is controversial.

It could be argued that the architect's selection of the hypostyle model as the base for his design was an easy solution to the problem of providing such a huge prayer area. The hypostyle represented a ready-made spatial system for the prayer that he could easily modify to meet the requirement of the program. But like Badran, he did not rework the rules of the spatial growth of the hypostyle mosque, which by the horizontal expansion of its aisles, allowed a traditional mosque like the one at Cordoba to accommodate 30,000 worshippers (fig. 5). Instead, he expanded and multiplied the hypostyle hall both vertically and horizontally. This abrupt leap dissociated the mosque from the human scale, which was then totally liquidated by the other alterations he applied.

One can also argue that the magnification and the enshrinement of the mosque were ways to meet the authoritarian political objectives of the program. His superimposition of the gigantic dome over the courtyard, by which he differentiated a ceremonial grandiose space, as well as his formal treatments of the exterior could be considered as efforts to appeal to the ruling regime. Nonetheless, those typological alterations demonstrate that Venturi's design ideology transcends mere programmatic responses. This ideology, which operates on its own terms rather than contextual terms was partly observed in its urban features but was unmistakable in the treatment of the arcades and surface pattern of the hypostyle hall. Here are two modes of design eclecticism and mannerism, act simultaneously. The former

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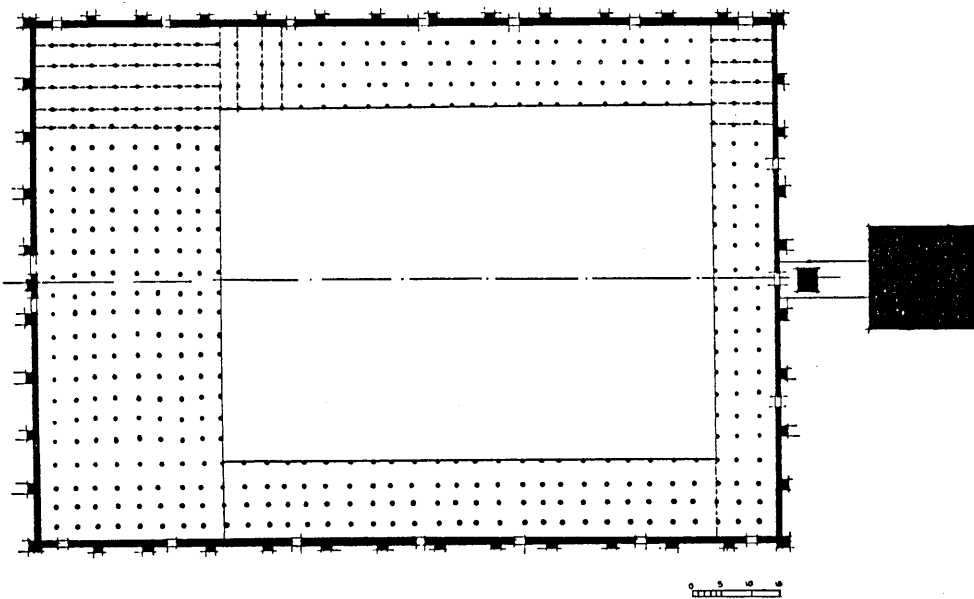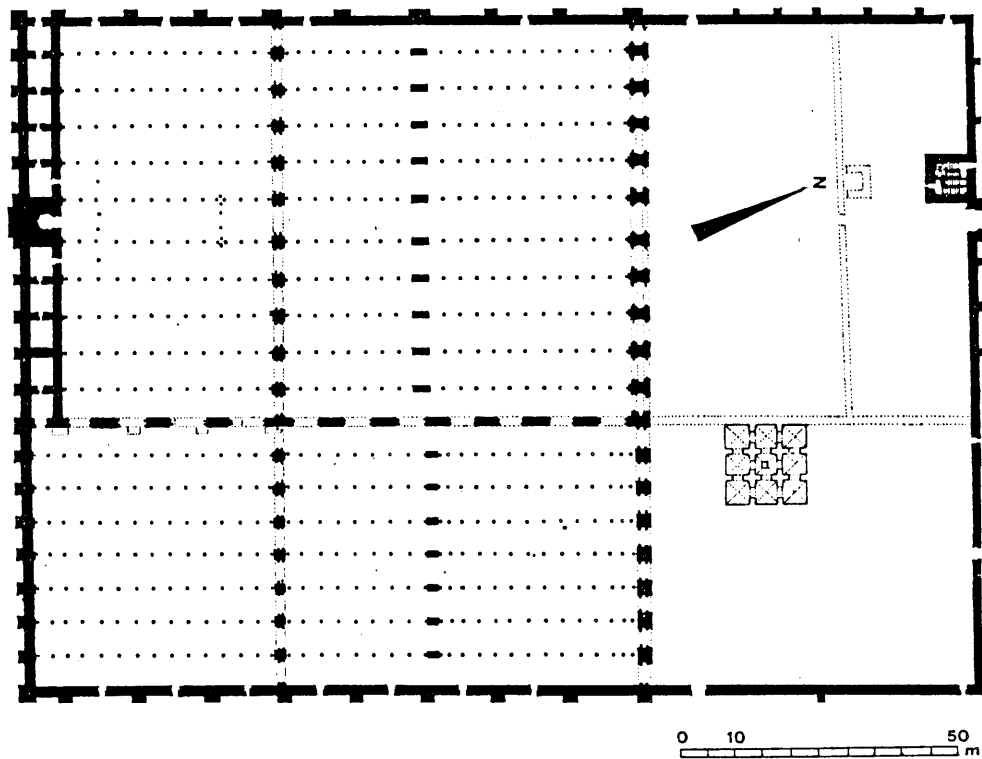
Fig. 5.1   Plan of Cordoba mosque , 822-982.

Fig. 5.2   Plan of Samarra mosque, 846-852.

displaces images and fragments from diverse sources. The latter deforms, distorts and reshuffles them before juxtaposing them to the modern structural skeleton of the mosque, which affirms its presence by demeaning their structural and visual integrity.It is of no new insight to say that this is the outcome of a process of the re-interpretation and reconstitution of symbols and forms through the different cultural idioms of the architect. As the symbols lost their cultural core, they no longer conveyed their original meaning to the society. This seems to answer Grabar's question about Venturi's design, "Does it mean that the conception of space and the patterns of surface design have different ideological contents? Does it matter in a contemporary building that it is so easy to identify a formal ecclecticism which chooses from the past according to a contemporary visual interpretation of that past rather than from a vision of past monuments as closed and completed syntagmas of their own?"[14]

Presenting those reconstituted symbols with hints of their profile in an ironic framework, whereby their contradiction and disharmony with the underlying modern structure is amplified, has undoubtedly deep cultural and ideological implications, which classify the reality of the architect's stand toward the culture he is designing for. William Curtis said, "Venturi demonstrated his own notions of mosque architecture in his entry for the great mosque competition for Baghdad a 'decorated shed' on a vast scale, which has been described as a 'supermarket plastered in Islamic quotations lifted from history.'"[15]

Venturi was consciously distant from Islamic culture. He used his design to distance the society from its culture. This was carried out by an intelligent penetration to its key institution, which is the mosque. He diffused its cultural charge and sanctity, reducing it to a consumerist commodity reminiscent of the profane casino of Las Vegas.

Rasim Badran
NOTES

1. "Regenerative Approaches to Mosque Design," Mimar 11, 1984, p. 4.

2. State Mosque Competition Baghdad, p. 25.

3. Built in the Jalayirid period in 1359, Khan al-Mirján was a waqf for the neighboring madrasa.

4. State Mosque Competition, Baghdad, p. 25.

5. Ibid.

6. Venturi, Learning from Las Vegas, 1977, p. 100.

7. R. Krauss, The Originality of the Avant-Garde and Other Modernist Myths, MIT Press, 1985, p. 158.
   --William Porter, "Technology Form and Culture in Architecture," Aga Khan proceedings: Architecture Education in the Islamic World, Granada 1986, P.561.

8. This refers to Gropius' equation: Firmness+Commodity=Delight and to Le Corbousier's notion of architecture as "the masterly,abstract and correct play of volumes brought together in light".

Robert Venturi
NOTES

1. Venturi's description statement of his design, "Regenerative Approaches to Mosque Design." Mimar 11,1984, page 50.

2. Ibid.

3. Ibid.

4. Titus Burckhardt, "Art of Islam" <u>World of Islam Festival Trust</u> 1976.

5. Bernard Huet, "Regenerative Approaches to Mosque Design", <u>Mimar</u> 11, 1984.

6. Robert Venturi, Denise Scott Brown, Steven Izenour, <u>Learning from Las Vegas</u>, MIT Press 1977, p. 6.

7. <u>Ibid</u>., page 35.

8. <u>Ibid</u>., page 119.

9. <u>Ibid</u>., page 90.

10. "Regenerative Approaches to Mosque Design." <u>Mimar</u> 11, 1984, page 50.

11. In <u>Learning from Las Vegas</u>, p. 87. Venturi wrote, "We shall emphasize image over process or form -- in asserting that architecture depends in its perceptions and creation on past experience and emotional associations and that these symbolic and representational elements may often be contradictory to the form, structure, and program with which they combine in the same building. We shall survey this contradiction in its two main manifestations: (1) the duck, (2) the decorated shed."

12. <u>Ibid</u>.

13. See Oleg Grabar, "From the Past into the Future." <u>Architectural Record</u>, June 1984, page 154.

14. <u>Ibid</u>.
15. William Curtis, "The Aga Khan Award for Third-World Myths and First-World Fashions." <u>Architectural Review</u>, February 1985.

The Mosque of Othman Ibn Affan:
Halim Abdel Halim

In 1981, the government of Qatar, one of the Gulf emirates, sponsored the international design competition for the mosque of Othman Ibn Affan at Doha , the capital city. Othman Ibn Affan, one of the Companions of the Prophet Mohammed (S.A.S.), was the third of the four "well guided" caliphs in the history of Islam. He is regarded by the Muslims with great respect. Hence his name was chosen for the mosque by the emir of Qatar: "expressing the wish of the emir to endow it with greater importance than merely a place for community worship."[1] The program of the competition required areas for 3,000 worshippers as well as educational and residential facilities.

Halim Abdel Halim was among the architects invited to participate in this limited competition. Though his project was found to be a very fascinating design by the jury, the first award was given to the Iraqi architect Mohammed Makiya .[2] Nonetheless, the significance of Halim's design remains. It was reviewed afterwards in several architectural periodicals, and in June 1984, Oleg Grabar wrote a critical essay in the Architectural Record describing Halim's project as one of the most significant and innovative in the contemporary design of mosques in the Muslim world.[3]

The Design

The morphology of Halim's mosque is based on a multiple system of geometric formulations, which according to the architect, corresponds to the symbolic manifestation of the meaning of the mosque.Hence Halim identified the architecture of the mosque first, as a spatial embodiment of the series of rituals that the mosque accommodates; and second, as a metaphoric representation of the spiritual meanings of those rituals, which transcend their functionality. The first, the literal representation, is seen in the sequence of spaces that correspond to the liturgical matrix of the mosque starting from the entrance foyer,

majaz, which represents the procession and the transformation from mundane to sacred. Then comes the courtyard which represents the gathering of the worshippers, and finally there is the prayer hall, which conforms to the rows of worshippers, the ablution fountain for purification and the minaret for calling to prayer.

The second, the metaphorical representation, is observed in a two faced geometric formulation: (1) The rotation of two hypothetical squares, one representing the urban domain and the other the mosque's domain(fig. 1). While the first is axially defined by the surrounding fabric, the peripheral parking lots and the terraced treatment of the landscape, the second organizes the outdoor yard with its geometricized patterns. (2) The mosque is structured by another process of geometric formulation. This process, the core of Halim's, design is based on the unfolding of two interlocking crystals, which are horizontally represented by two interlocking squares: One represents the secular; the other represents the sacred as it faces the direction of Mecca . Their horizontal unfolding which first takes place in the center of the minaret forms the plan of the mosque, by extending from the diagonals of the two interlocked crystals and by their multiplications. Consequently, a multi-layered network is constituted for organizing the elements of the mosque. The spaces for ancillary functions,such as ablution which flank the prayer hall are all formulated by an analogous process of geometric rotation centered on the ablution fountains.

The vertical unfolding of the two stated crystals gives three-dimensional form to the spaces of the mosque, the transept, the prayer hall, and the minaret(fig. 2). The form of the minaret is a result of a sequential process of rotating, multiplying, and truncating the basic square module of the crystal into an octagon, then into a circle, and finally to a point at the top of the minaret. This transformation recalls in principle the vertical transformation of the Mamluk minaret (fig 3). The crystalline form of the minaret is extended to the courtyard of the mosque, which was made structurally possible by the use of the concrete shell structure. Halim installed an electric lift inside the minaret as he wished to transform it from being "a looked at object to a walked and climbed through space, turning it from a landmark seen from the distance to an element of contemplation by the worshippers."[4] "The experience

The plan is of the main floor and indicates (1) the terrace for outdoor prayer; (2) the entrance transition; (3) the courtyard; (4) the sanctuary; (5) the Koranic school; (6) the Imam's residence; (7) the women's fountain; (8) the men's fountain. a solid line. The point of rotation becomes the place for the minaret.

The diagram shows the rotation of the plan to match the orientation to Mecca. The mosque domain is expressed in a dotted line and the city domain by

Urban
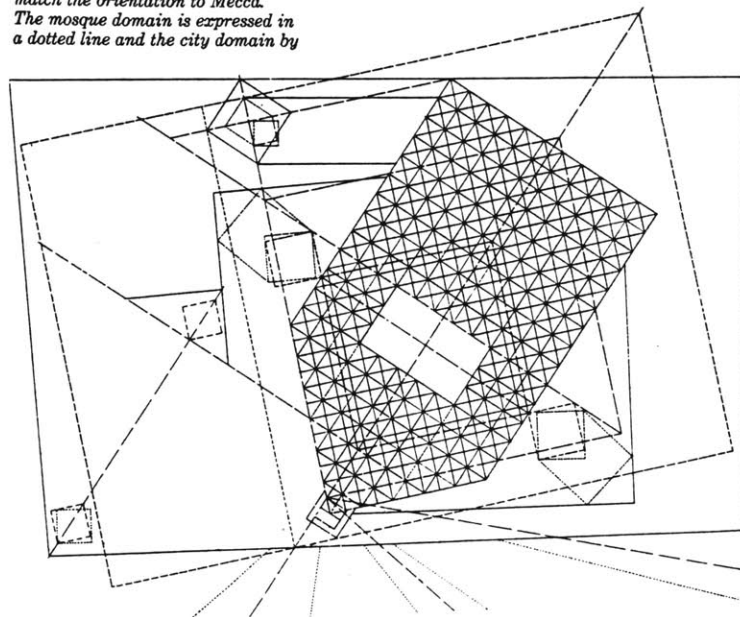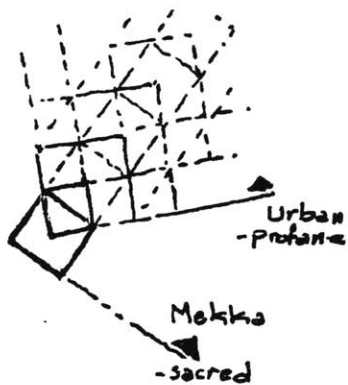-profane

Mekka
-sacred

Fig. 1.1   Plan of the mosque.

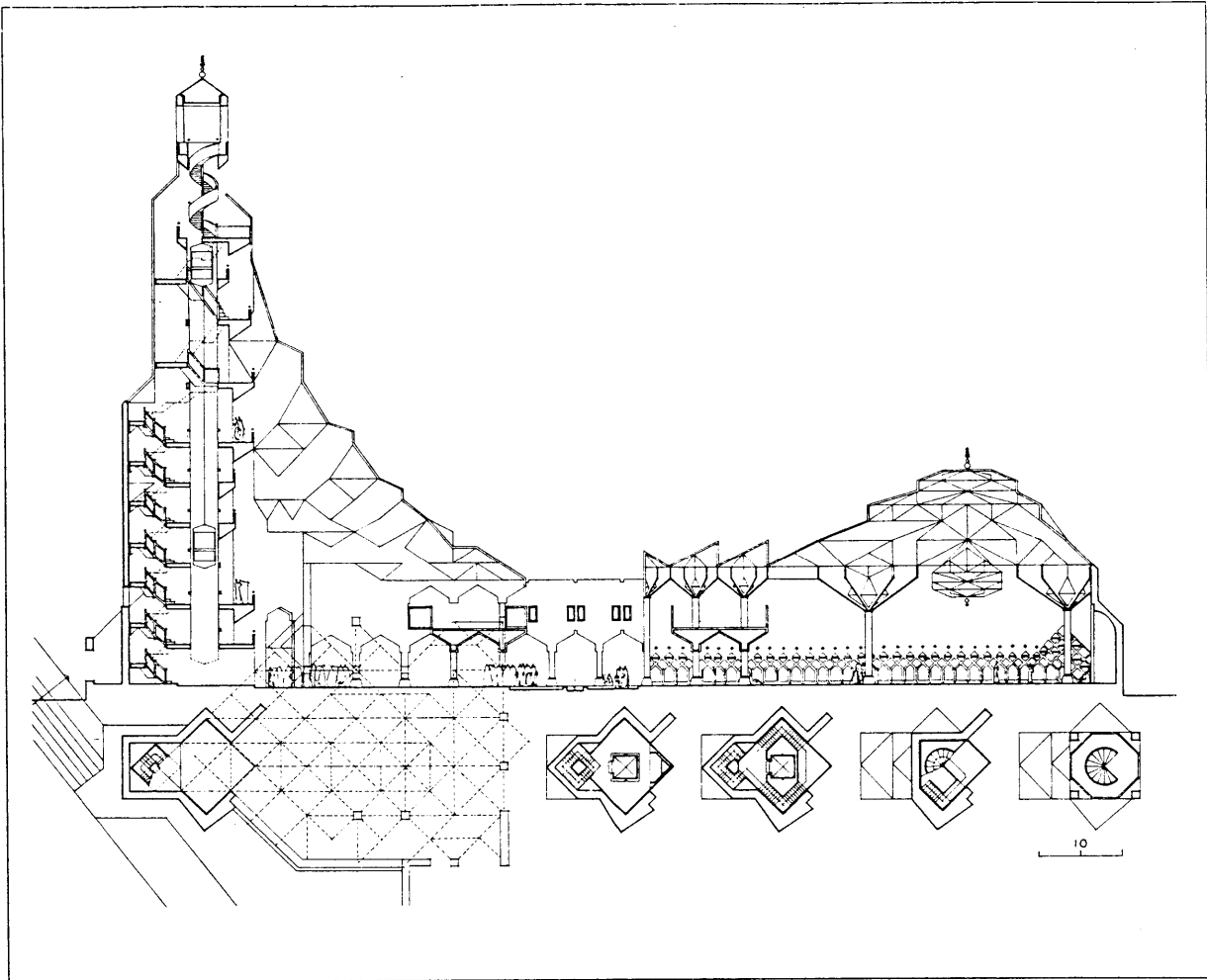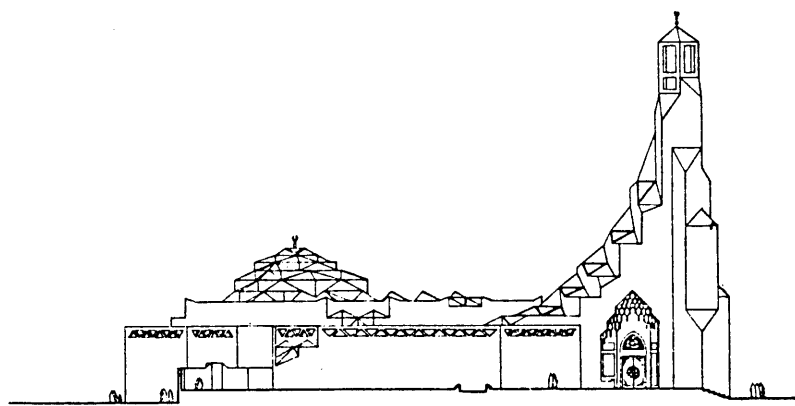Fig. 1.2   The Geometric system and the unfolding of the two crystals.

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Fig. 2.1   Lateral section.
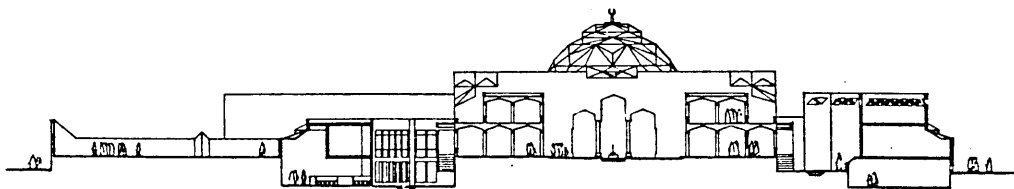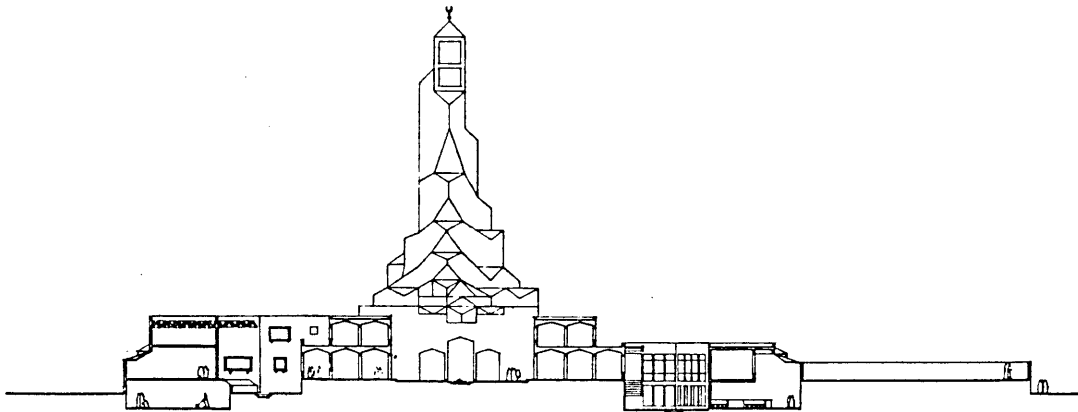
Fig. 2.2   Southern Elevation.

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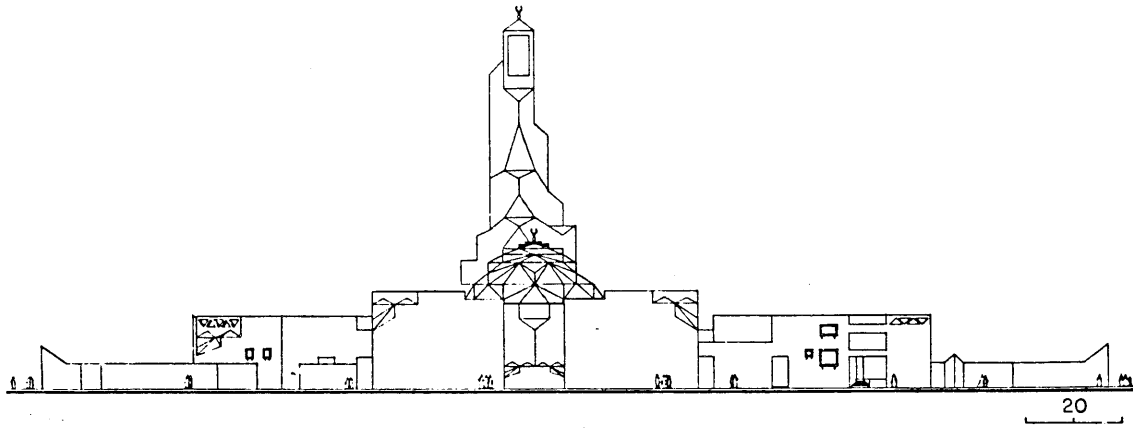
Fig. 3.1 The Qibla Facade.

Fig. 3.2 Section through the courtyard looking towards the east.

Fig. 3.3 Section through the courtyard looking towards the prayer hall.

of climbing to the top would not be reserved for the muazzin, but could be enjoyed by the whole community," says Halim[5].

Human Factor

Halim worked out every space in the mosque to be a metaphor of the event or ritual it accommodates. He deliberately made those metaphors and symbols strikingly visible in their formal manifestation. There is no doubt that Halim wanted his metaphors to be intuitively perceived and experienced by the worshippers to catalyze their pious consciousness in an ascending manner comparable to the visual ascent of the building to the minaret. But is this in fact the case? Because the design is unbuilt, we can not provide a conclusive answer to the question, but some deductions can be made from the drawings. Tracing the sequence of the worshippers' movements through the project, yields some significant observations.

When the worshipper steps inside the mosque, he will encounter the very dynamic space of the foyer. There, he will face the dazzling crystalline ceiling of the minaret which ascends with its reflective surface to 70 meters above and extends 40 meters out to the edge of the courtyard. The grandeur of this space is accompanied by a communal and utilitarian atmosphere, as the beholder views the electric lift and people ascending and descending the stairs of the minaret. After that the worshipper will walk through a small courtyard to the prayer hall. There he will encounter the breath-taking structure of the ceiling of the prayer hall, characterized by the crystalline transformation of a dome mushrooming from the huge fan-shape-capitals of four supporting columns. The maximization of the semantic change and the visibility of the crystalline expressions of the roof seem to explain the architect's reduction of the arcades in the foyer and the prayer hall. This major alteration on the typology of the hypostyle hall which characterizes Halim's spaces by unhierarchical flow comparable to the modern open plan. This, in conjunction with the experiences of the beholder, highlight the non-hierarchical and the abrupt spatial transitions in his mosque. Combined with the fuzziness of the dramatic plastic formations, Halim's spaces may indeed preclude a smooth formation of the spiritual consciousness of the prayer.

Urban Context

The peculiar morphology of Halim's mosque determines independently -- to a certain degree -- its urban setting. The generation of Halim's geometric system was based on defining its relation with the hypothetical representation of the urban surroundings. He distanced the mosque from the surrounding fabric by peripheral parking lots. He then emphasized the distinction of the mosque further by the raised podium in front of the mosque. In this way, he provided a theatrical setting for the mosque as a detached object. Here, the formalism of the mosque was powerfully expressed by the dynamic formulation of the minaret and, to a lesser degree, by the crystalline profile of the dome.

Nonetheless, Halim demonstrated some sensitivity towards the surroundings. This is manifested in the hierarchy of the volumes of the mosque. Not only was this achieved by the ascending movement of the minaret but also by differentiating the juxtaposed ancillary functions of the mosque by lowering their volumes in relation to the prayer hall. This hierarchical formal configuration represents Halim's symbolic notion of the transition from the urban domain of the profane to the sacred.

Regional, Historical & Cultural Context

Despite the presence of some traditional typological features such as the courtyard and the minaret, in Halim's design, it has formally very little to do with the regional architecture of the mosque in Qatar in particular and in the Gulf in general. The traditional Qatari mosque is a simple, monolithic volume, which contains a hypostyle hall and outdoor courtyard (fig. 4). It is domeless and its minaret is a short simple cylindrical shaft, unlike Halim's minaret which recalls the transition of the Mamluk minaret, and at which the prayer hall is almost without arcades. Nonetheless it is obvious that Halim thought he invented a new tradition that would lend itself to the region for two reasons: Halim regarded Qatar culture and architecture as having been formed in an area historically open to outside influences and imported architectural stylistic idioms, especially those from Persia and India. Hence his mosque could be regionally assimilated. He also assumed that his mosque, a product of his spiritual pursuits and objectives, would communicate with
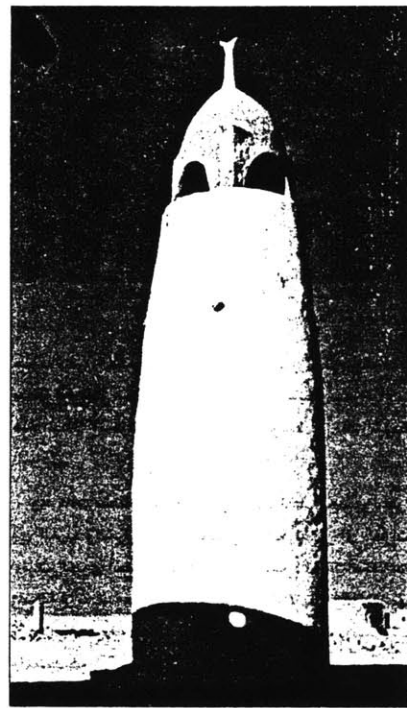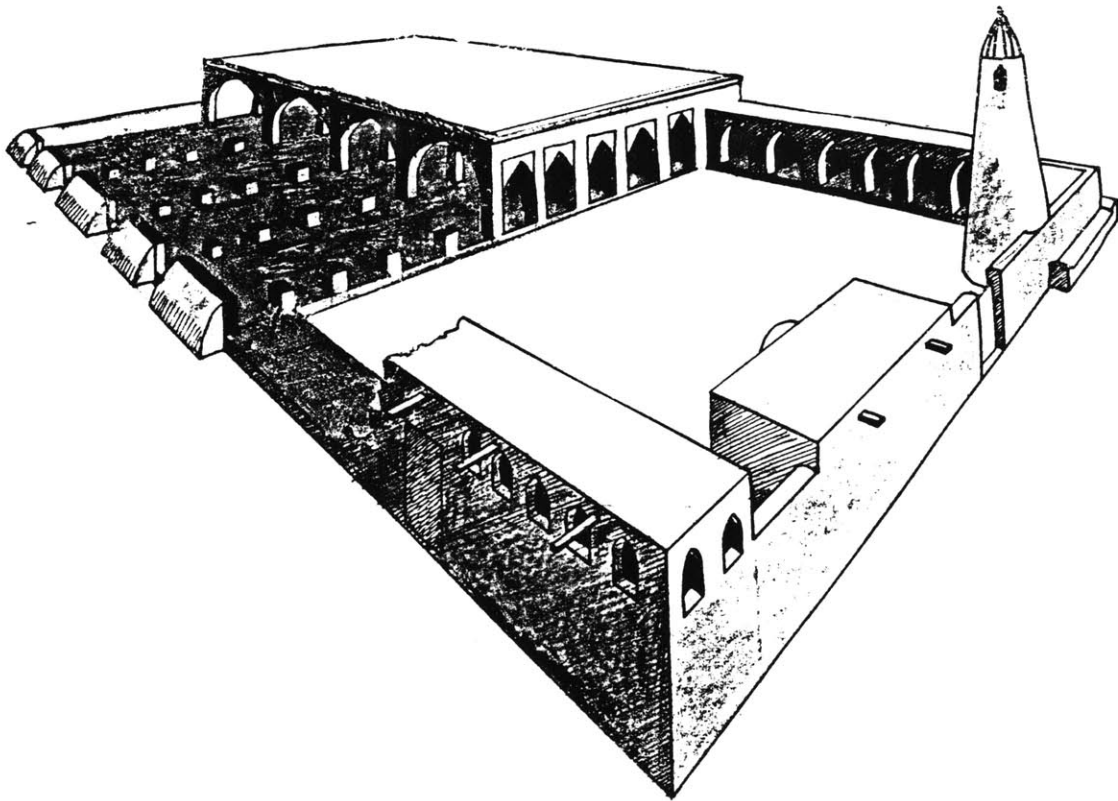
Fig. 4.1   Typical Qatari mosque.

Fig. 4.2   Mamluk-minaret, Qayt Bay Madrasa, Cairo, 1427-74.

Fig. 4.3   Qatari Minaret.

the people who share with him the Islamic system of faith. But the physical expressions of the mosque did not perfectly match with his intentions.

Halim's design has no strong visible relation with the past. Its tangible relation with the past can only be formally recognized in the "implicit presence" of certain archetypal elements, such as the minaret, the dome, and the courtyard. Otherwise, his design seems to celebrate its contemporaneity. The modern aspects of his design are the incorporation of the advanced technology that went along with the reinterpretation, and the reconstitution of the traditional formal vocabulary of the mosque such as the dome, the minaret, and the muqarnas. Halim explained that by saying, "The dome has been invalidated as a symbol of the universe by the passage of man into outer space. Furthermore, the passage of man into the inner nature of matter to the atom made the use of the Euclidean geometry of the muqarnas a naive one."[8] This is why though rooted in the muqarnas, Halim's symbolism is based on the crystal. "The content of the crystal and its substance," says Halim "are defined by its interaction with light, its ability to turn light into illumination. That's why the crystal stands as a significant symbol of the meaning and the structure of the mosque."[9]

Regardless of whether or not his interpretation of the meanings of those symbols is valid, Halim conveys a clear message in dealing with history in the contemporary context. It is boldly to decode the traditional forms into their formative rules, examine them in the light of the contingencies of the time, and then to reconstitute them in a contemporary symbolism. This is also demonstrated in the morphology of his minaret, which in its series of transitions from earth to sky refers to in the Mamluk minaret. By incorporating the modern concrete shell structure in the crystalline extension of the minaret to the roof of the mosque, he integrated the minaret into the body of the mosque instead of retaining it as a lonely tower.

The minaret, which accommodates the liturgical function of calling the faithful to the prayer is the major symbolic element identifying the mosque by its vertical tower punctuating the horizontal skyline of the traditional Islamic city. Nowadays, the clusters of skyscrapers on the skyline of modern cities in the Islamic world have almost destroyed that raison d'etre, as the urban orientation and identification of the

mosque. Halim therefore modifies the morphological position of the minaret not only by integrating it with the body the mosque, but also by demarcating it as generative source of the mosque's geometry. This is a reversal of its situation in the morphology of the traditional mosque, where the impact of the minaret on the internal spatial organization of the mosque was insignificant. The dominating position of the minaret in Halim's design not only makes it spatially and formally the most significant element in his mosque but reduces significance of the other components such as the courtyard and the prayer hall. Consequently, the overall organizational structure and the unity of the mosque are disturbed. In the interior this is manifested in the arbitrariness of the transitions between the various spaces. Looking at the exterior, the minaret with its grandiose proportions, is still not fully articulated with the horizontal configuration of the mosque.

At first glance, Halim's design might seem to constitute a rupture in Islamic culture. But a more insightful reading reveal a remarkable attempt to address Islamic culture. Halim saw Islam as a cosmological vision that prescribes the whole round of human life in an indivisible unity of the secular and the sacred. Thus he envisaged his design task as an act of faith whose objective was worship God Almighty and to attest to his glory. His design became a dynamic pursuit in search of a language and physical expression that would translate his religious conscious and charge. To do this he coded a geometric system derived from the square and based on two interlocking crystals that metaphorically represent the act of prayer as a shift from the mundane to the spiritual realm. One can argue that Halim approached the design of the mosque from within instead of approaching it with a ready-made model. This allowed him to establish a remarkable link with Islamic culture, which Grabar highlighted when he stated, "First of all, Halim's mosque picked up from the Muslim tradition not so much a system of forms, a morphemic structure, as a set of principles, a semantic structure. It asserts powerfully, almost brutally, that complex geometry is the organizing force of a monument and thus rediscovers principles, which had been worked out by the mathematicians of Baghdad and of Central Asia in the tenth and the eleventh centuries. It is a system which fully belongs within the Muslim tradition."[11] Grabar refers here to the recently discovered manuscript of the Muslim mathematician Abul Wafa Buzjani,[12] a manual on the use of the geometry

for architects and designers. In it Abu'l Wafa describes a generative process of the geometric transformation of the cube, which is strikingly identical to Halim's own.

Halim did not know about this manuscript, but he seemed to have come upon the same spiritual frame work for his creative act as al-Buzjani did. This consolidates his notion of design "as an act of faith "as a prerequisite of an authentic association with Islamic culture.

The presence of the traditional typological elements such as the minaret, the dome, and the courtyard, in Halim's design, indicate another form of the association with the cultural heritage of Islam, which is typological. His design is a pattern of reciprocal design acts between abstract geometry and the vocabulary of the hypostyle mosque. The outcome of Halim's design did not accord perfectly with his spiritual objectives, probably because he overlooked the spatial characteristics of the traditional mosque and their implicit psychic values, in his preoccupation with symbolic values. This incomplete reading of the traditional vocabulary of the mosque seems to be influenced by his modernist affiliation. The symbolic expressions in his mosque are confused with the expressionism of the technology and the structure of the building. One can even read Halim's symbolism as being subjected to the representational acts of the building's modern technology. The perceptual experience of his dramatic metaphors are problematic, unlike the traditional mosque, where both the structural and the symbolic programs are subordinated to its liturgical space. The framework of aesthetics in Islamic architecture, and particularly in the designs of the mosques, was defined by religious aniconic norms, which prohibited the representation of human figure and the naturalism[13]. This determined the metaphoric representation in the traditional mosque, as opposed to Halim's, as mostly non-figurative and two dimensional. Hence the space of the hypostyle mosque was generally defined by planer surfaces, incorporating subtle geometricized ornaments and calligraphy which co-exist peacefully with the essential structural purity of the mosque's liturgical space. For the same reason, and contrary to Halim's crystal which dominated the whole space of the mosque, the muqarnas was traditionally confined to specific spots like the portals, the cupolas, the and capitals.

Halim Abdel Halim

NOTES

1. Oleg Grabar, "From the Past into the Future," Architectural Record, June 1984, p. 150.

2. Ibid. Makiya's design incorporated traditional motifs with modern concrete structure.

3. Ibid. Also my personal and a professional association with Halim was helpful in preparing this study.

4. Ibid.

5. Ibid.

6. In a lecture delivered at M.I.T. on December, 1986, Halim explained his design intentions of Qatar Mosque.

7. Ibid.

8. Grabar, "From the Past into the Future, p. 153.

9. Ibid.

10. This is the central theme in Halim's works, which he indicates throughout his writings and talks.

11. Grabar, "From the Past into the Future, p. 151.

12. Though several copies of this manuscript exist in libraries in the Middle East, its significance was not recognized until recently when the Iraqi scholar Wasmá Chorbaji began to study it.

13. See Ismail al-Farouqi "Tawhid: The Implication for Thought and Life" (The International Institute of Islamic Thought, Wyncote, 1982.) El Farouqi quotes von Grunebaum "Islam has no figurative arts (sculpture, painting and drama)because it is free of any gods incarnated or immanent in nature (gods whose activities conflict with one another or with evil)".

SUMMARY

Our analysis reveals a common feature in the four projects in their dealing with the historical and the cultural dimension of the design problem. All four chose the hypostyle mosque type. The form of that reference and the way of transformations each architect applied to that type demonstrates his attitude toward the society and culture. The hypostyle mosque type, with all that it represents in terms of cultural values, religious norms, and historical layers of achievement, acted as a reference for weighing the architect's associations with history and culture. One might question the accuracy of this inquiry in discerning and evaluating those attitudes, for each project adheres to a different matrix of contextual requirements. But a glance at Badran's and Venturi's designs, which do respond to the same requirements makes it clear that the objective contextual requirements are not the primary determinants of designs. The formal outcome of each is dramatically different from the other, and shows the determining role of the architect's design ideology their shaping his product.

El-Wakil reproduces the hypostyle model with its traditional stylistic and technological features. He avoids the modernist models of design and technology and considers the hypostyle mosque as a closed system that represents a static and fixed cultural norm. Although he claims the possibility of evolution within the confines of tradition, his design does not support this claim. The alterations he makes are superficial and have a negative impact on the topology of the mosque. He dealt with the hypostyle mosque as a model or a skeleton, on which he placed images from diverse sources, which he was not able to synthesize. Beyond the reproduction of the hypostyle hall, his rigid design did not allow him to rework the compositional order of the hypostyle type to meet the various contextual, especially the urban and the symbolic demands. This inability to command the traditional language of the type placed El-Wakil in an awkward position between the modernity he was denying, and the tradition he did not adequately understand. Nonetheless, he should be credited for using indigenous building techniques, that had been neglected since the introduction of imported modern models. This conserving of a segment of the cultural heritage might provide a base for a new regional architecture.

Badran was more liberal than El-Wakil in dealing with the hypostyle type. He made substantial transformations, and they did not totally conform to the inherent rules of the hypostyle type. He retained the basic forms of its vocabulary but he replaced their morphological and compositional rules with a set of modernist ones. Like Venturi, he disregarded the original rules of the hypostyle growth in order to meet the large area requirement.Traditionally, the hypostyle was expanded by horizontal extension and incremental addition of its bays, allowing the mosque as at Cordoba, to accommodate as many as 30,000 worshippers. Badran, in contrast, magnified the mosque both horizontally and vertically and then fragmented it into cubic volumes, partly to demonumentalize it, and bring it to human scale, but mostly to create modernist abstract formulation.To his abstract design he added regional rhetorical layers such as the Abbasid slit arches and muqarnas. But the clash between traditional vocabulary and modernist organizational principles and technology is evident on many levels. He transformed the essentially introverted, self-contained and integral space of the courtyard into a theatrical conveyer of the representational forces of the clutter of objects ,interposed within its domain, such as the structural frames and the fragmented masses on the periphery. Thus he eliminated the primordial serenity and the meditative value of the courtyard. This exemplifies the tension between Badran's Western training and his attempt to reconcile it with a cultural heritage that has another logic.

Venturi in dealing with the hypostyle type, adapted an unorthodox approach to Islamic culture and history. He viewed the hypostyle mosque type exclusively as an iconographic frame for symbols and signs. He abruptly blew it up partly to accommodate the large prayer areas, but mostly to maximize its semantic charge and its sensational effects, which were also to be achieved by commercial techniques of propaganda. In that respect, he simultaneously applied other paradoxical alterations on the hypostyle type. He placed a huge bizarre dome over the courtyard; he pruned off the columns of the prayer hall, and he randomly juxtaposed colorful collages of distorted ornaments over the surfaces of the mosque. He intentionally confronted those disharmonious elements with the advanced structure of the mosque. By this he celebrated the disjunction, incompatibility, and contradiction between an incoherent tradition and a legitimate modernity. Such mannerist transformations are antithetical to the religious meaning of the mosque, its typological integrity, and

human dimension. The abrupt cross-cultural imposition of a design theory that is bound by its own cultural circumstances whose sources are in places like Las Vegas, to shape a product that adheres to an entirely different cultural domain is bound to cause disruption. If it is built, the society will be alienated from its most important institution.

It is illuminating to compare Venturi's iconography and El-Wakil's. In contrast to Venturi, El-Wakil wanted to demonstrate the continuity of the hypostyle within the confines of its traditional mode of production. His ornamentation is comprehensible and readable, as it is reproduced by its original craftsmanship, despite the geographic displacement of its components and the inconsistency of their synthesis. In contrast, Venturi's ornamentation is ambiguous, having been subjected to re-interpretation and reconstitution through distortion and change in both material and context as it is applied on the modern structure. Unlike Venturi, Badran retained and modified the structural properties of the historical and regional forms which he had incorporated in the modern concrete structure of his project.

Halim, like Venturi, emphasized the symbolic dimension of the mosque architecture. But unlike Venturi, he viewed the space of the mosque as a symbolic manifestation and a metaphor for its spiritual meaning. Hence, by contrast to Venturi, whose metaphors are fragmented and ready made ornaments, he embodied those meanings, by codifying a reflective geometric system of formulation that supercedes the traditional typology in addressing itself to modern technology.

Despite its frequent association to the traditional typology of the mosque, Halim's mosque is mostly generated with a modified compositional system and a revised vocabulary. His conception of Islam is a permanent ,viable continuum, within which the creation of types is a continuous historical process which opposes El-Wakil's notion of the immobility of the traditional type. Halim achieved a remarkable level of association with Islamic culture, as noted by Grabar , as he rediscovered a generative process of geometric formulation that was developed in the tenth century by the Muslim mathematicians. However, Halim's symbolism was confused with an excessive pursuit of sculptural and technological exhibitionism, whereby the structure becomes an ornament to increase the beholder's sensation. Its overdramatized expression, which did not match with the liturgical requirement of the mosque space and its psychic structure,is partly due to some of the architect's

misconceptions of symbolism in Islam and a lack of reading the spatial characteristics of the traditional type.

Halim's confusion between means and ends was shared with the other architects, who, owing to their preoccupation with the formalistic aspects of the building and the hegemonic influence of modernist theories such as functionalism, expressionism and post modernism (and other isms), overlooked the mosque as a spiritual core that corresponds to distinctive and sensitive spatial arrangements . Titus Burckhardt wrote "The sacred architecture of Islam does not reflect the measurement of time, oriented as it is on a terrestrial center. The space of which it communicates the experience, is as if reabsorbed into the ubiquity of the present moment; it suggests no tension or antimony or between the here below and the beyond, or between earth and heaven; it possesses all its fullness in every place. This is particularly evident in the so-called peristyle 'hypostyle' mosques, which are built on the model of the first mosque at Medina."[2]

From our discussion of the four designs, no conclusive answer is provided to the question of whether the mosque architecture exemplified by the hypostyle type is open to innovations and capable of being "modernized,"while still maintaining its original meaning.

The projects demonstrate the repercussion of juggling modernity and historicity, in a type that adheres to an essentially fixed core of spiritual and liturgical requirements.The social repercussions are equally serious regarding the sensitivity of the religiously oriented Muslim society to abrupt imagery change in the function and meaning of its key institution . Despite the traditional base of El-Wakil's design the repercussion of his uncontrolled eclectic treatment of the hypostyle language made his design no less problematic.

One should not, however, exclude the possibility of a culturally safe transformation of the hypostyle type and a healthy rapport with modern architectural thinking, if modernization is not pursued for its own sake. The critical use of modern technology is not an anathema if it is subjected to the stated liturgical, spiritual and environmental requirements of the mosque space. As long as the egalitarian nature of the hypostyle mosque, its aniconic characteristics, human dimension, symbolic clarity and the compositional harmony and integrity are all

maintained, modern designs may indeed establish a vital continuity of mosque architecture. Badran's precarious adaptation of his modernist design constructs to the cultural specificity of the design problem of Baghdad's mosque produced abstract formulations ,that avoided excessive rhetorical statement, hence meeting the aniconic needs of the mosque space.Halim,despite the unfortunate drawbacks in his product,is proposing a design method that seeks authentic cultural continuity not through the figurative captivity to the traditional model but by the power of the 'modern spirit', which,if rightly guided, will creatively sustain the core of Islamic culture.

As a whole, El-Wakil, Badran and Halim seem to achieve designs that are historically and culturally more compatible and rooted than Venturi's, whose design is hostile to the very meaning of the mosque. Any authentic search for contemporary mosque design, which is an intrinsic cultural production, requires a fundamental belonging and understanding of its context.

SUMMARY NOTES

1. Though he also confined himself to an anti-modernist stand, Fathy unlike El-Wakil was able to synthesize a harmonious universe of forms from different regional and historical sources without falling into a literal imitation.
2. Titus Burkhardt, Art of Islam Language and Meaning (World of Islam Festival Trust, Kent 1976) p 19.

APPENDIX

The Cultural Parameters of the Mosque

The typology of the hypostyle mosque, which originated in the mosque of the Prophet in Medina reflects the general norms of Islam(fig.1.1). Those are primarily derived from the canonical sources of Islam, the Quran and the prophetic tradition sunna. These specify a liturgical framework for the mosque that remain fixed and unchanging. They include the following:

1. The cosmic orientation of the prayer hall towards Mecca.[1]

2. A place for the imam in the middle of the front qibla wall which signifies the direction to Mecca to lead the prayers. This element the mihrab ,which historically has been given the form of a niche , caused the bilateral symmetry of the mosque around its central axis.[2]

3. A high place for calling the prayer, the adhan, which eventually assumed the form of the minaret.

4. Places for performing the ablution, and for other rituals, such as the minbar.

Other religious principles also influenced the form of the prayer hall. The absence of a clerical hierarchy in Islam and the paradigmal equality of man before God characterized the hypostyle hall as an egalitarian space manifested in monolithic spatial, structural repetition and uniformity achieved by the equidistant and parallel disposition of the arcades(fig.1.2). This disposition also lends itself to the row arrangement of the collective prayers. One can argue that the rectangular prayer hall was dictated by the religious norm that gave preference and blessing to the first row of worshippers[3,] which led to the elongation of the prayer hall to accommodate as many worshippers as possible in the first row.

However, the exact formalization of the hypostyle mosque's vocabulary was left to the interaction between the stated norms and the historical and environmental variables.Symbolic elements like the cupola and the minaret were produced with variable stylistic expressions. But one can argue that at a certain point, the hypostyle mosque reached to a level of syntactic fixation in its typology that persisted through
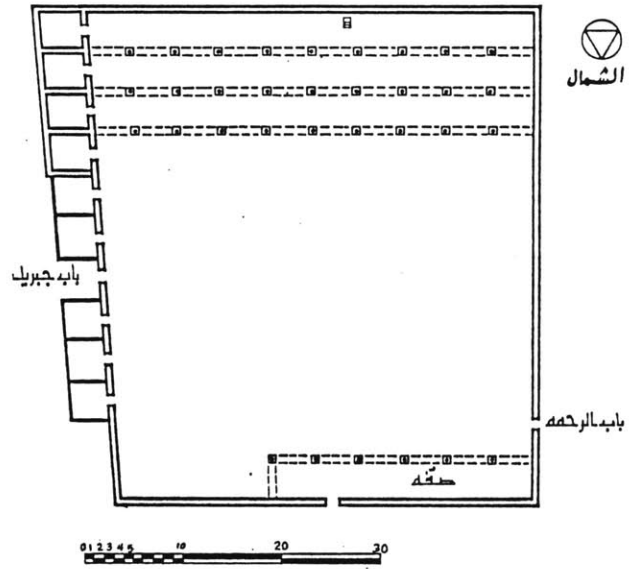
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الشمال

بابـ جبريل

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0 1 2 3 4 5　10　　20　　　20

Fig.　1.1　Plan of the Parophet's mosque, Medina, 628.

Fig.　1.2　Interior of the prayer hall, Kairawan mosque, 772.

the ages. The hypostyle type thereby became identifiable with a socially agreed upon set of constituent elements and forms which are more or less organized by a consistent geometric and morphological order.

One can attribute that to the unchanging nature of the liturgical rules of the mosque combined with the power of the archetypical Prophet's mosque in Medina. In this regard, one understands the "intrinsic typological presence" of an archetypal element like the courtyard. Representing the primordial introversion of the mosque, the courtyard accommodates the worshipper's psychic shift and retreat from worldly affairs to spiritual encounter, which is also mediated by another set of spatial transitions between outside and inside.

One should also not overlook the impact of the aniconic rules of Islam in defining the symbolic and metaphoric elements of the mosque. In contrast with the classical anthropomorphic aesthetics, Islam's prohibition of the figurative representation characterized the internal space of the mosque by a formal and structural subtlety and purity.The minaret and the geometricized surface patterns become points of orientation rather than final symbolic goals. In addition to its introversion, the hypostyle mosque form was characterized externally by an unassuming image represented by a simple planer profile and a horizontal skyline.

The position of the mosque in the urban fabric corresponded in general to the cultural role assigned to it. According to the Sharia' the mosque is a polyfunctional institution ,that is,its functions are political, educational, social, and even residential as well as religious. In addition to the five daily prayers, the mosque acted as a communal node and an integrating urban focus. The courtyard served as the major gathering place in the Islamic city ,comparable to the pre-existing agora and piazza.

Nonetheless, the spread of the hypostyle mosque type, or rather some of its elements was not always cross-regional. It continued to prevail in the Arab world and in some areas in Africa and India,but the four-Iwan types were more common in Persia, and the centrally domed Ottoman mosque dominated in Turkey.

The vocabulary of the hypostyle mosque comprises the following forms:The aisled prayer hall,the courtyard,the cupola dome,the minaret,the minbar,the mihrab and other minor elements such as the ablution fountain.Some of those elements including the dome are regionally bound. The grouping of those elements follows a

specific organizational and geometric framework. The arcades are generally disposed in a parallel arrangement to the qibla wall following the liturgical row arrangement of the prayers. The displacement of these arcades has partly to do with the structural properties of the building system used, but mostly they relate to the scale of the worshipper and the space he requires. These dictate a spatial organizational module for the prayer hall, which is a rectangle of 1 meter long and 0.5 meter wide, the minimum space to accommodate the different acts of prayer: bowing, prostration, genuflection,and so forth.

The courtyard flanked by a shallow layer of arcades is juxtaposed to the prayer hall to the side opposite of the qibla wall. A transitional layer is usually incorporated into the mosque in a form of a spatial belt around it (ziyada), or a linear space(majaz) ,acting as a buffer zone between the mosque and the urban domain.

A cupola dome is often located above the mihrab area to provide light through its clerestory so that the Imam can be seen and to denote the directionality of the mosque towards Mecca. In contrast with the cupola dome, the minaret has no fixed location, or morphological association with the internal space of the mosque.

Axiality, or other formal treatment to provide orientation,is generally not used in the hypostyle hall, except in cases where subtle emphasis is given by the nave.

APPENDIX NOTES

1. Several Quranic verses dictated the orientation of the mosque towards such as Verse 144 surah 11: "We see the turning of the fact 'for guidance' to Heavens: Now we shall turn thee to a Qibla that shall bless thee. Turn then thy face in the direction of the sacred mosque (in Mecca)."

2. Abu Hurairah relates that Prophet Mohammed (S.A.S.) narrated; "Put the Imam in the middle and close the gaps in the row". (Abu Daoud). 1094, Gardens of the Righteous.

3. Abu Hurairah relates that Prophet Mohammed (S.A.S.) narrated: "The best rows of men in prayer are the first ones, and the worst are the last ones." (Muslim) 1088.

   Bara Bin Azeb relates, "The blessed Prophet would pass between the row from one end to the other; putting our chests and shoulders in line, while saying: 'Don't be out of line, else your hearts would be out of line,' and added 'Allah and his angels send down blessing on the front rows.'" Abu Daoud 1100 Gardens of the Righteous.

Illustration   Credits

Introduction
Fig. 1   Hasan-Uddin Khan   Mimar 14. 1984
Fig. 2   Hasan Fathy. Architecture of the poor.

The   Mosque   of   El-Qiblatein:
Fig. 1   Keang Nam Enterprises, Charity Hospital.
Fig. 2   Christian Norberg-Schulz. Architecture Education in the Islamic World.
Fig. 3   Abdel Wahed El-Wakil. Al-Benaa 25-1985.
Fig. 4 (1.2.3) Saleh Mustafa. Al-Madina Al-Munawwara.
Fig. 5,6,7, 8 Abdel Wahid El-Wakil.
Fig. 9.1   John D.Hoag, Islamic Architecture.
Fig. 9.2   Hasan Fathy. Architecture of the poor.
Fig. 10.1 J.M.Richards, I. Serageldin, D. Rastorfer, Hasan Fathy.
Fig. 10.2 Ronald Lewcock
Fig. 11   John D. Hoag, Islamic Architecture.

Baghdad's state mosque: Rasim Badran
Fig. 1   Amanat Al-Asima, State mosque of Baghdad.
Fig. 2.1   Amanat Al-Asima, State mosque of Baghdad.
Fig. 2.2   Rasim Badran, Mimar. 1984.
Fig. 3.1   Amanat Al-Asima, State mosque of Baghdad.
Fig. 3.2   Sir Banister Fletchers, A history of Architecture.
Fig. 4.1   Ulya Vogt-Goknil, Mosquées.
Fig. 4.2   Rasim Badran
Fig. 5.1   Ulya Vogt-Goknil, Mosquées.
Fig. 5.2   Rasim Badran, Mimar no 11-1984.
Fig. 6.1   Rasim Badran, Mimar no 11-1984.
Fig. 6.2   Rasim Badran.
Fig. 7(1.2) Ulya Vogt-Goknil, Mosquées.
Fig. 7.3   Ronald Lewcock, Architecture of the Islamic World.

Baghdad's state mosque: Robert Venturi
Fig. 1(1,2,3) Amanat. Al-Asima, State Mosque of Baghdad.
Fig. 1,2,3 ,4. Robert Venturi, Mimar no 11-1984.
Fig. 5.1   John D. Hoag, Islamic Architecture.
Fig. 5.2   Ulya Vogt-Goknil, Mosquées.

The mosque of Othman Ibn Affan: Halim Abdel Halim.
Fig. 1,2,3, Oleg Grabar, Architectural Record. June 1984.
Fig. 4.1   Mohammed Ali Abdullah, Al Ma'thurat Al Sha'biyyah no 2- 1986
Fig. 4.2   John D. Hoag, Islamic Architecture.
Fig. 4.3   Mohammed Ali Abdullah, Al Ma'thurat Al Sha'biyyah no 2- 1986.

Appendix
Fig. 1.1   Saleh Lamei Mostafa, Al-Madinah Al Munawwara.
Fig. 1.2   John D. Hoag, Islamic Architecture.

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