

**THE USE OF PRECEDENTS  
IN CONTEMPORARY ARAB ARCHITECTURE**

**Case Studies: Rasem Badran and Henning Larsen**

By  
Mohammed K. Ali

Bachelor of Architecture  
University of Jordan  
Amman, Jordan  
June 1981

SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE DEGREE  
MASTER OF SCIENCE IN ARCHITECTURE STUDIES  
AT THE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

June, 1989

© Mohammed K. Ali 1989  
All rights reserved

The author hereby grants to M.I.T permission  
to reproduce and to distribute copies  
of this thesis document in whole or in part.

Signature of author

\_\_\_\_\_  
Mohammed K. Ali  
Department of Architecture  
May 12, 1989

Certified by

\_\_\_\_\_  
Stanford Anderson  
Professor of History and Architecture  
Thesis Supervisor

Accepted by

\_\_\_\_\_  
Julian Beinart, Chairman  
Departmental Committee for Graduate Studies

MASSACHUSETTS INSTITUTE  
OF TECHNOLOGY

JUN 02 1989

LIBRARIES

**THE USE OF PRECEDENTS  
IN CONTEMPORARY ARAB ARCHITECTURE**

**Case Studies: Rasem Badran and Henning Larsen**

By  
Mohammed K. Ali

Submitted to the Department of Architecture on May 12, 1989  
in partial fulfillment of the requirements for the degree of  
Master of Science in Architecture Studies.

**Abstract:**

Much recent architecture in the Arab World utilizes historical precedents in an attempt to articulate an identity for regional architecture. This thesis investigates this approach in relation to place and cultural context. The study is focused on three institutional buildings from the Arab World: two projects by the architect Rasem Badran, Qasr al-Houkm (Justice Palace) in Riyadh and the Presidential Palace in Bagdad, and Henning Larsen's Ministry of Foreign Affairs in Riyadh. The analysis examines the architects' designs and design research in order to reveal the architects' theoretical positions and their artifactual realizations. This approach allows for a deeper understanding design as a method and a production, and suggests an approach for architectural criticism.

Thesis Supervisor: Stanford Anderson.  
Title: Professor of History and Architecture.

## CONTENTS

Abstract.	2
Acknowledgments.	4
1 -Introduction.	5
Preface.	6
Methodology.	8
Contextual domain.	12
2 -Architectural field of study:	18
Research Programme I	
Qasr al-Houkm palace in Riyadh.	20
Research Programme II.	
Ministry of Foreign Affairs in Riyadh.	38
Research Programme III.	
Presidential Palace in Bagdad.	58
3 -Critical Synthesis:	84
Selection.	85
Interpretation.	96
Transformation.	101
4 -Reflections.	109
Bibliography.	115

## ACKNOWLEDGMENTS

After thanking God for his uncountable blessings, I would like to express my great thanks to all who helped me in realizing my thesis. I am particularly grateful to my thesis advisor, Professor Stanford Anderson, for his guidance, insights and understanding. I am also thankful to Professor Oleg Grabar for his constructive criticism and interesting discussions.

I would like to thank, Professor Francesco Passanti for his valuable remarks. Also my special gratitude to architect Rasem Badran, in Amman, for his discussions and help in providing me with needed information without which this thesis would not have been conceived.

I wish to thank Professor Ronald Lewcock and Akhtar Badshah for their generous help in providing me with documents. I am particularly thankful to my roommate Khaled Asfour for his helpful criticism, and support. I thank Tarek Kazzaz and Muhammad Nasri for their last minute help in compiling the thesis.

My special thanks to the University of Jordan and department of Architecture for their scholarship and support. I wish to thank my friends in Amman for their help and support. I also thank Chris Sawyer for editing the thesis.

I must express my great debt for my family; whom without their help, support and patience I could not have completed my degree.

**INTRODUCTION**

## PREFACE

The prevailing attitudes toward architecture in the Arab-Islamic world persistently seek to render an identity for contemporary architecture that is expressive of their region and culture. This goal is conceived as achievable through employing the tradition in modern designs in an attempt to reconcile the two realms. The thesis inquiry aims at investigating certain approaches within this endeavor in order to gain profound understanding of the current situation by discerning theoretical positions and disclosing critical issues pertaining to the present use of traditional precedents in design.

This present interest in tradition and identity came about as a result of changes on two levels: on the one hand, the transformations in the Arab-Islamic world; on the other hand the recent shift in the global architectural culture.

The Arab world was not separated from the global shift in attitudes towards rethinking modern architecture especially in the west. There the failure of modern architecture in meeting the expectation, both socially and aesthetically, has provoked different reactions and a proliferation of solutions. The new concern, to accommodate for sub-cultures, ethnic groups and individual tastes in countries with great diversity such as United States stimulated calls for a multiplicity and plurality of attitudes to replace the "Universal Style". Dissatisfaction with the limited pure abstraction of the modern vocabulary initiated a new return to including meanings in architectural forms beyond their physiognomic character, in order to encompass cultural and symbolic associations. "The recent tendencies toward stylistic reference seem to be motivated by a need to reintroduce the notion of figure into architecture and to see architectural configurations as already containing a set of cultural meanings."<sup>1</sup>

---

1. Alan Colquhoun. *Essays in Architectural Criticism: Modern Architecture and Historical Change*. Opposition books, MIT Press, Cambridge MA (1981).p.191.

Despite these global changes the current situation is also influenced by local transformations in the architectural scene in the Arab world. It is a reflection of desires and endeavors for cultural identity. Architecture is viewed as a manifestation of the current dilemma of modernity and tradition, and taken as a vehicle to convey the political and cultural intentions to express that identity.

In the Arab world, processes of modernisation which started with the colonial period, were reinforced after independence. The newly-independent Arab countries hence, rushed towards development and modernization by adopting and importing Western methods and models of planning and architecture. This was accelerated and intensified by the oil price increases in the mid-seventies. Countries in the Gulf area and the Arabian peninsula witnessed unprecedented building activities and large-scale planning interventions. These processes of modernisation went hand in hand with the abandonment and sometimes even the destruction of the traditional environment.

The failure of the modern model to reflect the desired social and cultural values, in addition to the visual destruction and the creation of chaotic alien environments resulted in deep discontent. Reaction against this trend has activated an awareness of tradition and identity, not only between architects, but on social and political levels.

Calls for more sensitive approaches to the cultural tradition started as early as the fifties with architect Hassan Fathy and Rifa Chadirji. However, it was not until the late seventies and early eighties that a new generation of Arab architects took responsibility for formulating an architectural approach(es) and vocabulary relevant to the rising demand for cultural identity. These attempts seek relevance and a link with culture through employing tradition.

## METHODOLOGY

Although this thesis is aimed at investigating the use of precedents in contemporary design, I am not interested here in conducting a survey of the whole spectrum of approaches nor a survey of any kind. My endeavor, rather, is to concentrate on critically examining selected contemporary works and their use of traditional precedents as a means for cultural identity.

Upon undertaking this enterprise, a large number of architectural works came into consideration as possible targets for investigation. My selection, although it contains certain personal bias, nevertheless, implies a firm rationale underlying the decision.

Three institutional projects of contemporary architecture were chosen as the main body of research: Qasr Al-Houkm (Palace of Justice) in Riyadh and the Presidential Palace project in Bagdad, both by architect Rasem Badran from Jordan<sup>2</sup>, and the Ministry of Foreign Affairs in Riyadh by Henning Larsen.<sup>3</sup> The focus on an institutional building type is meant to allow for a unifying theme between the projects, and furthermore it serve as a reflection of acquired cultural and political meanings in architectural expression beyond its functional content.

Although they approximate one building type, the selected projects yet possess other interrelationships. The Qasr al-Houkm and Ministry of Foreign Affairs are located in the same place, the city of Riyadh, thus addressing the same cultural context. Yet their

---

2- "Born in Jerusalem in 1945, Rasem Badran received his school education in the nearby town of Ramallah and later in West Germany where he graduated in Architecture in 1970. Following his graduation he worked in Germany for two years and then returned to Jordan in 1973 where he has since been practicing." Mimar editor. "Profile, Rasem Badran" in Mimar 25 (Sep.1987) p.50.

3- "Henning Larsen was born in Denmark in 1925. He received his architectural education at the Royal Academy of Fine Arts in Copenhagen, the AA in London and MIT. In his early years he worked with Arne Jacobsen and later; Jorn Utzon. Since 1968 he has been a Professor of Architecture at the Royal Academy in Copenhagen. His own office, started in 1969, has won many top prizes in Scandinavian and international design competitions." From Henning Larsen on Architecture." in Living Architecture no.4 (1984)p.100.



designers are different, one Arab architect and the other European. While the two projects, Qasr al-Houkm and Presidential Palace, done by the same architect, Rasem Badran, address two relatively different places and cultural contexts: Riyadh and Bagdad.

These works will be studied in two stages: First, an interpretive reconstruction and analysis of each project is aimed at unfolding its theoretical position in relation to the artifactual manifestation, and the underlying rationale of design decisions. Second, a critical review of the three projects is intended to discuss the issues related to these works and to assess and evaluate the projects in relation to these issues.

The notion of "design thinking" by which any architectural work is conceived as a complex consequence of theoretical and artifactual decisions, facilitate this inquiry. As the process of thinking and design reasoning are considered integral parts of the architectural work, thus the work can not be comprehended fully without taking all parts into account. This is not to say that design is a totally rational process nor is it a completely arbitrary endeavor. There is simply a certain level of rational thinking inherent in the design process that allows for an internal study of it.

To follow up this hypothesis, it is possible to choose a rational model for studying the design thinking. One of the important models in studying and handling this problem of rational thinking and its epistemological inquiry is the methodology developed by Imre Lakatos. The model known as the methodology of scientific research programme is an attempt to study the history of science as a rational development. In science several theories and epistemological concerns were centered around the advancement of science and on the role of rational thinking in this process. The common consensus was an agreement on experimental tests as a prime tool for verifying theories and thus advancing scientific knowledge. This was criticised by Karl Popper who rejected the idea of strong test and falsification. " Popper recognizes that large systems of theory are under test, but he argues that the scientific community can, and does, guess and agree as to what part of the system has failed."<sup>4</sup>

---

4- Anderson, Stanford. "Architectural Design as a System of Research Programmes" Design

Lakatos modified Popper's ideas and proposed a model dependent on the notion of a "research programme" rather than theory. " A research programme is strongly temporal and historical, though Lakatos is concerned more with the logic of its development than with a historical account. A research programme is built around a particular problem situation. Lakatos recognizes that more than one research programme may be addressed to any problem situation. Indeed, it is in the competition and comparison of research programmes that Lakatos locates much of the success and rationality of science."<sup>5</sup> Lakatos' model of rational reconstruction of science, therefore, seems to offer a possible method to study and understand architectural design.

In this regard Lakatos' methodology of scientific research programmes is considered as a tool for studying the proposed works.<sup>6</sup> Benefiting from its explanatory power, the hope is that an interpretive reconstruction of these works will enable us to understand the logic behind the design process, its internal consistency and the rationality of the design decisions, i.e., the internal interaction with the external world.

For the purposes of this architectural inquiry one can summarize Lakatos' model for a research programme as follows: Every research programme has an inviolable "hard core" which contains the common or basic theories and conceptions. These are, by a methodological decision, unquestionable and stable within the same programme. The hard core is specified and sharpened by a fixed set of rejections called the "negative heuristic". The negative heuristic works to tell the researcher where not to look. Thus, the elimination of alternatives is achieved by rejecting the unacceptable theories and hypothesis that contradict the basic assumptions of the hard core.

---

Studies, V#3 (July 1984) ,p.147.

<sup>5</sup>- Ibid.p.148.

<sup>6</sup>-For more detail of the adaptation of lakatos' model as architecture research programme see: Stanford Anderson article "Architectural Design as a System of Research Programmes", Design Studies, V#3(July 1984), pp. 146-150. Also see: Royston Landau. " Notes on the concept of an architectural position" AA File 1 (1982) p.111-114.

A research programme is assumed to be directed by its heuristic power bounded, as we have seen, by the negative heuristic, but also facilitated by suggestions and strategies, known as a "positive heuristic". These hypotheses are to be modified, adjusted, or even replaced according to the internal development to meet the new empirical conditions, and in order to keep consistency within the programme. A research programme is considered successful if it achieves a "progressive problem shift" and unsuccessful if it results in a "degenerative problem shift"<sup>7</sup>.

Although Lakatos' model account for the rational study of the design thinking, the arbitrariness of architectural design and its contextual and cultural bonds are different from the scientific rationale. To cope with this arbitrariness and the particularity of the design inquiry, I propose to superimpose another model on the methodology. Three operational questions of design method are used in this respect. The questions are directly concerned with the problem at hand; the use of precedents in architectural design. These questions are: How is one select precedents? How is one interpret and study these precedents? And how is one employ and transform it in design? This breaking down of the process into three distinct parts, however, does not mean that the design is a linear process of steps; overlapping and interference is the rule. Nevertheless, in order to understand the design thinking and its complexity it is helpful to follow this partitioning which allows for arbitrariness in answers.

The first process of selection is viewed as an outcome of the theoretical position of the research programme; thus it is discussed in light of the hardcore, theoretical assumptions, and the negative heuristic. The process of interpretation is defined and directed by the positive heuristic of the programme. The process of transformation is more based on the artifactual assumptions and modifications of the programme in response to the circumstances and design conditions.

---

<sup>7</sup>- For a full account of this methodology see: Lakatos, "The Methodology of scientific Research programmes," Cambridge University Press (1978).

## THE CONTEXTUAL DOMAIN

### A. Bagdad:

The site of Bagdad was occupied by numerous settlements dating back to the Babylonian Era. The Round city of al-Mansur was built in A.D.768 on the westerside of tigris (fig.1 ), soon after that the limited area of the round city resulted in external extention out side the walls on both sides of the Tigris.<sup>8</sup>

During the Abbasid era the city witnessed different periods of decline and flourishing. As a result of the transfer of the capital to Sammara by al-Mut'asim (836-892) Bagdad went into a decline. But later on during the latter Abbasid period (1152-1258) it regained its importance as a capital of the empire. But the importance of Bagdad was diminished by the rise of other Islamic centers like Cairo and later Istanbul.

It was the Mongols who put an end to the Arab rule and reduced Bagdad to an insignificant small town, by their partial destruction of the city in (1258) The Mongol after adoption of Islam, repaired some of their damage and rebuilt new mosques and public buildings.

During the late Ottoman period between 1860 and 1917, Bagdad underwent a series of Western-inspired modernisation schemes. In 1915 with German help, for the first time Bagdad was linked to Europe by railway . Under the British Mandate Bagdad was established in 1921 as the capital of the new kingdom of Iraq. New bridges to link the two sides of Bagdad were erected and new streets, straight and wide to accomodate the motorcars, developed during the 20s. "In 1936, two German engineers prepared the first masterplan for Bagdad. It strongly emphasised opening new wide roads, European type commercial streets."<sup>9</sup>

---

<sup>8</sup>- For a brief historic survey of the city of Bagdad, see: A. A. Duri. "Baghdad," Encyclopedea of Islam, 2nd ed., vol.1. pp.894-908.

<sup>9</sup>- Technical report. Al risafa.A3.p.5.

It was in 1958 that Iraq acquired full independence. Soon after the independence the modernisations and the establishment of an Iraqi identity started and focused on Bagdad. Major foreign interventions were proposed; few however, were implemented. "Famous international architects such as Frank Lloyd Wright, Le Corbusier, Walter Gropius, Alvar Aalto and Pier Luigi Nervi were invited to develop spectacular projects which would put Iraq into the mainstream of modern architectural development."<sup>10</sup> None of their projects were ever realised.

Two factors affected the architectural attitudes in Iraq: one, the establishment of a school of architecture at Bagdad University in 1959, and the two prominent figures which overwhelmed the architectural atmosphere in Iraq; Mohammed Makkya and Rifa Chadirji. Although the Iraq-Iran war affected the Iraqi economy, there were still many large-scale urban developments in old Bagdad and major architectural competitions.

## **B. Riyadh:**

Contrary to the common notion that the Arabian Peninsula is one large desert, the area comprised of a number of distinct and different climatical terrains: The sand desert of the south, the eastern and southern mountains, the coastal strip and the central Plateau. The city of Riyadh is located on the latter plateau region of Nejd, six hundred meters above sea level.

Riyadh was one of many small agricultural villages built of mud brick scattered along the sides of Wadi l-Hanifa. It gained some importance during the first Saudi State in Nejd, which came to power as a result of the religious revival movement by Shaikh Mohammed Ibn Saud in support of Shaikh Mohammed Ibn Abd al-Wahab in the 1760s. The Saudi rule took Dirriyya -now part of the city of Riyadh- as their capital. Between 1803-1806 they extended their power beyond Nejd to encammpass most of the Arabian peninsula including Hejaz.

---

<sup>10</sup>. Udo Kulterman. "Contemporary Arab Architecture: The Architects of Iraq." in *Mimar* 5.(July-Sep.1982)p.54.

The Hejaz region where the two holy cities of Mecca and Medina are located, passed under Ottoman control in 1517 A.D. Their authority in the south and west of Arabia was tenuous and sporadic. But by the establishment of the Saudi State all over the area, the Ottomans ordered their governor of Egypt, Muhammed Ali Pasha, to undertake a punitive expedition against the Saudis. Different expeditions were held which finally succeeded in capturing Dariyya in 1819. The destruction of most of Dariyya in that year marked the end of the first Saudi State .

With the fall of the Saudi capital the city went into decline. Imam Turki bin Abd Allah Al Saud had returned to Nejd by 1823 to lay down the foundation of the second Saudi state. In 1825, he adopted Riyadh as its capital. From that time on, Riyadh remained the capital of the Kingdom of Saudi Arabia which was established in 1902. During the reign of King Abdulaziz, the unifier of the Arabian peninsula, many offices of the government remained in Hejaz, but in 1955 the transfer of the ministries was completed.

The city walls were demolished in 1951, and new areas, building materials and modern facilities were introduced. Many governmental and departmental buildings were constructed in the northern part of the city in the period between the mid fifties and the seventies. And a wide unregulated, uncontrolled expansion outside the central old area of Riyadh was the main factor behind the Saudis request for the first master plan for the city of Riyadh. The work was began in 1968 and lasted for four years. In 1973 the proposal by Doxiades Associates was approved by the Council of Ministers.

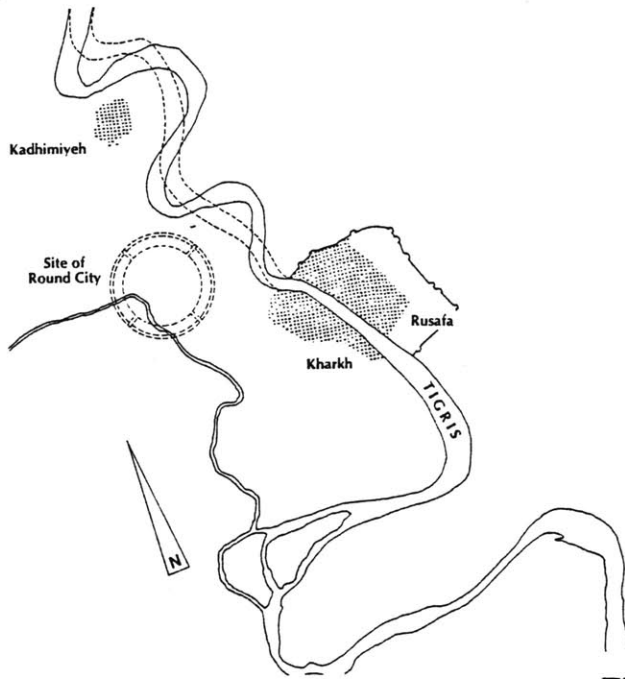
The master plan ( fig.3 ) is characterised by imposing the grid as a solution for the city growth and the modern automobile streets. It defined different zones for residential, commercial and other activities. Concerning the old city there was not much left, but the narrow streets were replaced by wide ones, and new apartment buildings were built.

With the increase in oil prices in the mid seventies, Riyadh witnessed enormous growth in building activities of all kinds. The city expanded beyond the initial master plan limits

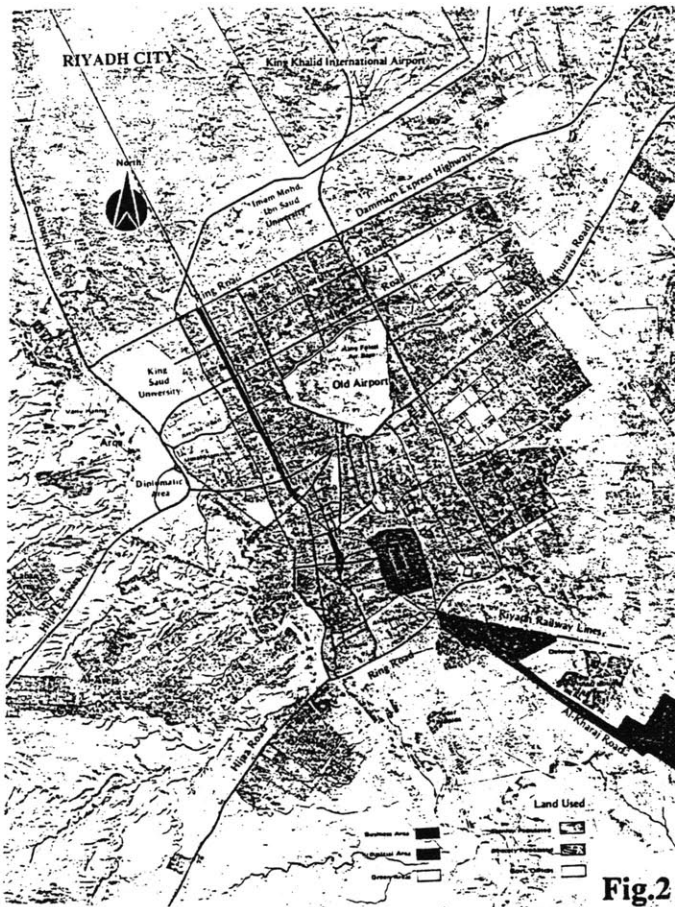
which had been designed to serve for the year 2000. Most of the buildings designed by foreign architects, experimenting with different approaches from totally modern models, often with climatic modifications, to facade imitation of so called "Islamic architecture".<sup>11</sup>

---

<sup>11</sup>- For more information see: Udo Kulterman. " Contemporary Arab Architecture; The Architects of Saudi Arabia." in Mimar 16, ( Apr.-Jun. 1985 )pp.42-53. Also see: Sikander Khan. *In Search of a Direction in the Contemporary Architecture of Arabia*. MIT -S.M.Arch.S Thesis 1988.



**Fig.1** The old city of Bagdad.



**Fig.2** The city of Riyadh.



Fig.3 New Riyadh.

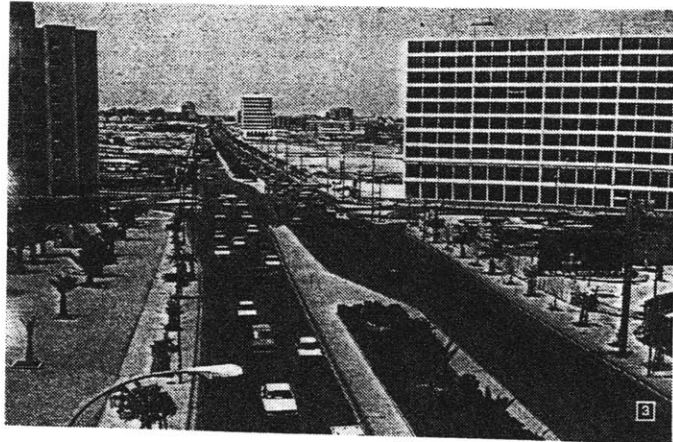


Fig.4 New Riyadh.

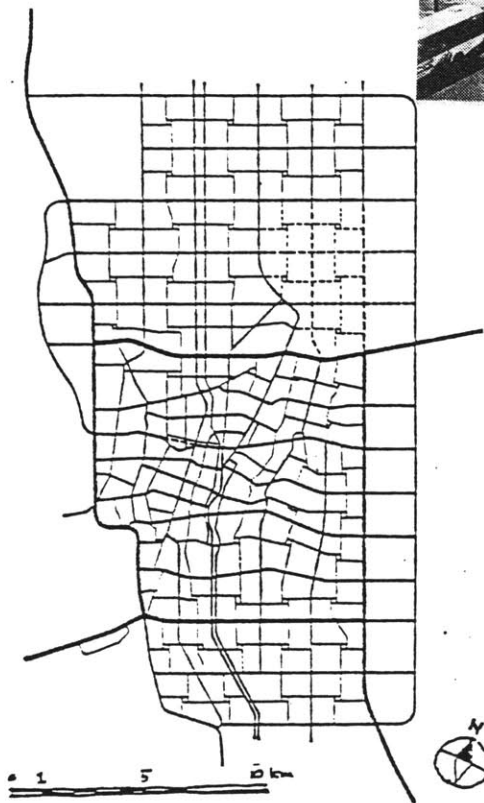
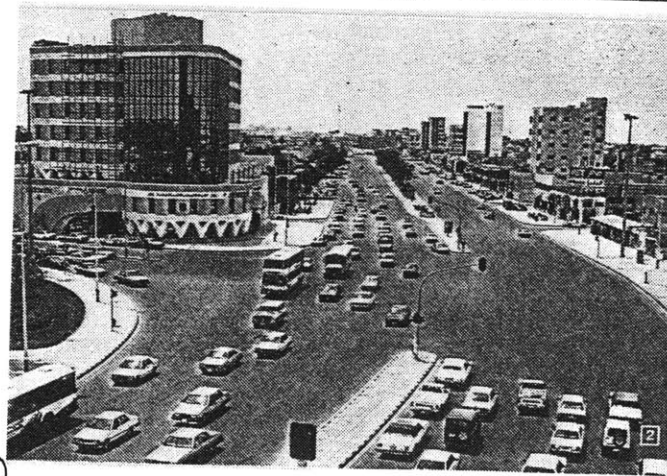


Fig.5 The Riyadh Master Plan.

**ARCHITECTURAL FIELD OF STUDY**

In this section, I will discuss three contemporary architectural works: Qasr Al-Houkm (Palace of Justice) in Riyadh and The Presidency Palace project in Bagdad both by architect Rasem Badran, and the third is the Ministry of Foreign Affairs in Riyadh by Henning Larsen. These three projects are conceived as three different architectural research programmes. The intention is to interpret them in order to unfold the positions and approach of the architects, pertaining to the current use of historical precedents in the relation to place and culture.

Each of the three projects will be discussed as a set of theoretical statements and an architectural product that relates to certain design conditions. The focus will be on the rationale behind the process of employing historical precedents, from which three concerns arise. The first is, how is one to select historical precedents out of otherwise unlimited alternatives? Secondly, how is one to obtain the necessary and appropriate knowledge about the selected historical precedents? And the third, to what extent does one have to use, transform, and utilize the selected precedents to come to terms with the new design circumstances?<sup>1</sup>

---

<sup>1</sup>- For theoretical discussion of these questions see: John Hancock. "Between History and Tradition: Notes towards a theory of precedent" in The Harvard Architectural Review.5, Rizzoli (1986) pp. 64-77.

## Architectural Research Programme I

### Qasr Al-Houkm (Palace of Justice) in Riyadh, Saudi Arabia

Architect: Rasem Badran

When the Saudi government decided to develop old central Riyadh, it proposed a plan to build a palace of justice, a great mosque and a cultural center. It intended to provide a seminal point to initiate further development in that area.<sup>1</sup> This architectural research programme will focus on Rasem Badran's project for the palace of justice.

The hard core of this research programme consists of the basic principles and conceptions of the architect as he dealt with this design. In his statement about this project, Badran argued that, " Architecture is the reflection of a nation's culture". So, on a conceptual level, architecture is believed to be a cultural product, a cultural artifact; and different regions, nations, or cultures will usually acquire different architectures. How is one to make a new architectural work relevant to its culture? This question has resulted in different attitudes among architects and a great proliferation of answers.

To Rasem Badran, this culturally-bound architecture is an outcome of an "attempt to address the question of how contemporary design practice can make use of the cultural heritage of a society and still meet the requirements of the contemporary life"<sup>2</sup>. Thus

---

1- A full study of the urban and planning proposals, as well as an architectural guide lines, for the whole area is presented by Ali Shuaibi and Saleh al-Hathloul in "The Justice Palace District, Riyadh" in The Aga Khan Program publications, Designing in Islamic Cultures 4, Continuity and Change; Design Strategies for Large-Scale Urban Development (1984) pp.37-48.

2- Badran, Rasem. "Historical References and contemporary Design" in *Theories and Principles of Design in the Architecture of the Islamic Societies*, The Aga Khan Program for Islamic

the traditional architecture or what he called the 'cultural heritage' is considered the authentic manifestation of the culture. This heritage is to be used as a reference and source for architectural ideas and vocabularies.

The notion of 'cultural heritage,' however, narrows the selection of precedents for design and is too vague to provide a well-articulated position without further explanation. In the Arab world, this 'cultural heritage' might stand for the entire Islamic culture, or for the Arab-Moslem culture as geo-politically defined by the Arab world, or for a national cultural identity, defined by political boundaries, such as Saudi Arabia, Iraq, Egypt and so forth. It might also refer to a certain climatic and geographical region, which could transcend or be contained within political boundaries, like Bilad al-Sham, Wadi al-Neal, the Gulf region and so forth.

In this project, architect Badran chose local tradition as the main source for design references. His definition of a 'cultural heritage' is bound to a local context of the design, in this case, the Najd region. His design process was directed towards "getting acquainted with the Saudi environment in general and Najdi in particular"<sup>3</sup>. Even though a political national entity is considered nowadays a legitimate and highly appealing way to define an architectural identity<sup>4</sup>, we see that Badran concentrated exclusively on a more specific local region within larger political boundaries.

Najd was always a well-defined region, due to geographical and socio-political circumstances, and it maintains a high degree of autonomy which has allowed it to develop a distinctive local character.<sup>5</sup> Badran was aware of this fact which facilitates

---

Architecture Symposium-1987, Cambridge MA (1988) p.149.

<sup>3</sup>-Rasem Badran. "The Jamea Mosque, Qasr Al-Houkm" in *Albenaa* 36 V.6 (Aug-Sep.1987) pp.74-80 [in Arabic]. From the English translation p.4.

<sup>4</sup>- The famous Iraqi architect Rifa Chadirji is one of the protagonists in defining identity on nationalistic bases.

<sup>5</sup>- For a brief account of the geographical and architectural aspects of Najd and other Saudi regions see: G R D King. *The Historical Mosques of Saudi Arabia*. Longman, London (1986). For historical and architectural context in Saudi Arabia in general and Riyadh in particular see: Sikander I. Khan. *In Search of a Direction in the Contemporary Architecture of Arabia*. MIT -S.M.Arch.S Thesis 1988. pp.14-102.

the development of a local contextual approach based on the "particular geographical, climatic and architectural characteristics which give the Najd region its significance and distinguish it from other Saudi regions, such as the coastal region of Hijaz, and the mountainous region of Abha, to mention but two."<sup>6</sup>

This position of a local contextual architecture is reinforced and defined by its opposition to other rival architectural positions. An idea is clearly expressed by the architect talking about his design: " The final outcome, we expect,....., stand[s] in confrontation with foreign imported theories and ways of life that brought the Arab Muslim into isolation within his own surrounding"<sup>7</sup>.

This rejection of all competing theories and approaches works as the negative heuristic of this architectural research programme. Thus, the universality of modern architecture, the so called 'International Style', and other related approaches are considered alien and imported, insensitive to place and culture. By methodological decision, theories that negate the importance of culture and history in architecture, and claim priority for the functional utilitarian needs, as well as, the eclectic and non-locally bounded architecture, are rejected.

Therefore, the negative heuristic directed the design research into a well-defined area by eliminating unacceptable alternatives, and limited the selection to a manageable body. In this case, the traditional vernacular architecture of Najd region is considered the main source out of which the historical precedents are to be chosen. We see in this project references to precedents from: the residential vernacular architecture of old Riyadh (fig.13), the traditional Najdi urban fabric in Riyadh and other towns, the mosque architecture in the Najd region particularly the Dariyya mosque and the old mosque of Riyadh (figs.15,16,18), and the Musmak fortress in Riyadh (fig.7).

The positive heuristic of this research programme directs and orients the design inquiry

<sup>6</sup>-Rasem Badran. "The Jamea Mosque, Qasr Al-Houkm" *Albenaa* 36, p.76 [in Arabic].

<sup>7</sup>- Ibid, [ English translation] p.5.

to explore and assess the potentials of the historical precedents for their employment in the new design. An analytical study<sup>8</sup> of the traditional environment through site visits, sketches, photos and reference books, are used by Badran as tools for studying and interpreting historical precedents, and consequently facilitating the transformation and utilization processes. This heuristic power of studying the traditional architecture is an important part of the design process. Badran acknowledged this in saying: "Our participation in the Justice Palace projects competition - Jamea Mosque and Justice Palace - was an outcome of long research based on the analytical study of all aspects of our environment."<sup>9</sup>

Architect Badran developed his own means of studying the precedents which are evident from the large number of sketches and analyses he did for this project. There are different drawings of plans, sections, elevations and three dimensional sketches. These drawings depict and represent different levels of architectural analysis from simplified basic geometries and relationships to detailed elevations and ornaments.

In figure (9) different sketches of the Musmak fortress are focused on the external wall. These sketches show the external image of the Musmak, and two dimensional drawings of the elevation are abstracted to volumes and surfaces without any details and openings. The space between the external wall and the internal buildings of the Musmak is also studied emphasising the idea of an internal passage between the two.

In figures (15,16) the old mosque of Riyadh is studied from different view points: as volumetric and spatial relationships with its surrounding urban fabric, and with attention on its internal courtyard 'Sahn' and the courtyard elevations with all the details and ornaments. Figure (17) shows more detailed sketches of the same mosque. Here

---

<sup>8</sup>- John Hancock in his article in Harvard Architectural Review.5. distinguishes three methods for understanding the historical work:" These methods may also be organized into three complementary categories, now corresponding to the three kinds of knowledge which we might agree it is possible to have of an architectural work: analytical, experiential, and transformational." (p.73). But for this study I am going to use the analytical study to refer to analytical and experiential because architect Badran was using it to mean both.

<sup>9</sup>-Rasem Badran. "The Jamea Mosque, Qasr Al-Houkm." Albenaa 36, p.4 [ English translation].

the emphasis is on the structural system of the prayer hall which is interpreted as a series of parallel walls.

The Mosque in Darriyya (fig.18) is also analysed, its plan organization and entrances, its courtyard and minarets. Special interest is given to the visual images of the minarets, their shapes and openings. Other figures show Badran's interest in analysing and apprehending the street views of the old Riyadh, the skyline of Riyadh (fig.19), the dimensions, sizes, sunlight and shadows, ventilation and different aspects of the traditional Najdi architecture.

This method of research and interpretation dictates certain ways of perceiving and comprehending the traditional environment as a set of volumetric and spatial relationships, with different architectural, structural and ornamental elements. Certainly it has been affected by Badran's architectural education in Germany<sup>10</sup> under the Modern system of analysis and abstraction in addition to his drawing abilities. This is not a simple process of recording, but a conscious representation of a complex reality into selected images, in which "each person brings his or her own memory, fantasy and prior experience which influence how and what they see."<sup>11</sup>

In these sketches we see emphasis on the urban fabric and the architectural objects. Architectural elements and vocabularies are also highly regarded, but there is no attempt to distinguish certain types as related to a building or usage other than the well known hypostyle Mosque type<sup>12</sup>. This is, I believe, due to two reasons: First because the

10- Rasem Badran obtain his architectural education in Darmstadt University in west Germany between 1964 and 1970, and worked there for two years before coming to Amman to set his private office in 1972.

11- William L. Porter. "Representations and realities" in Places /V4, no..2. p.2.

12- By type I refer here to : Hancock. "By 'type' we refer to culturally rooted form-function analogues which, like the Greek temple ..., have become formulas imbued by the general culture with a durable and important content." [p.70]. And to the Editorial, "Type can be perceived as the abstracted manifestation of a building concept which is then modified by the given constrains of site and program." [p.60] both in The Harvard Architecture Review.5.(1986). However, for more detailed study about the type see; Anthony Vidler. " The Idea of Type: The Transformation of the Academic Ideal, 1750-1830." Opposition 8 (spring 1977-8) MIT Press. pp.95-115.



traditional architecture of that area has little to offer as a well established type other than the mosque and the simple courtyard house. This is most evident in the palace reception hall which is modeled on the Qa'a type (fig.28), an idea taken from traditional houses in Cairo.<sup>13</sup> Second this project - the palace as administrative building- is a different and new type of building which has no exact correspondence in the traditional architecture especially in Najd region. However, another explanation might be that Badran does not regard the idea of type important, which shows in his functional zoning approach to solve the basic plan organization, another influence of his functionalistic education in Germany.

The design proposal shows the transformations of the selected precedents. These precedents were, based on the architect's decisions, adapted, adjusted and modified to fit the project and site conditions, and to maintain compatibility with the architect's principles stated in the hard core of this research programme.

The site is in the heart of old Riyadh (fig.6).<sup>14</sup> It consists of an old fortress - the "Musmak" - with a rich vernacular architectural character (fig.7 ), and is adjacent to the old commercial area. The overall organization of the site seeks to emphasize the strong relation between the three buildings - the palace, the mosque, and the cultural center.

<sup>13</sup>- The Qa'a type is a central covered hall of the urban houses in Mamluk Cairo and from there it was spread into other places like Jerusalem and Damascus. "As early as the tenth century we find the arrangement of the reception area and the living rooms of the house replaced by the *Qa'a*, or reception hall, but all the characteristics of the prototype are retained. The *Qa'a* has a central area called the *dorqa'a*, which serves as a main crush-hall, with the customary *iwans* leading off it. The *dorqa'a* is in fact a covered courtyard. ....The ceiling of the *dorqa'a* is raised high above the rest of the house, and is surmounted by a wooden lantern." Hassan Fathy. *The Arab House in the Urban Setting: Past, Present and Future*. Longman, London (1972)p.3.

For detailed study of the Qa'a see: Jean-Claude Garcin, et al. *Palais et Maisons du Caire. Époque Mamelouke*. (1982) pp.75-91. Also: Paneria, P & Noweir. "Le Caire, Geometries et Centralités." in *Les Cahiers de la Recherche Architectural*. No 20/21 (1987)pp.26-37.

<sup>14</sup>- " What is now the center of Riyadh comprised almost the entire city in 1930. It was a provincial town of adobe structures enclosed by a wall." Ali Shuaibi and Saleh al-Hathloul." The Justice Palace District, Riyadh" in *The Aga Khan Program publications, Designing in Islamic Cultures 4*. (1984). p.37.

This is done using urban squares defined by the buildings and a wall-arcade running along the streets' edges of the site linking the three buildings together (figs.8,9,10). Thus an impression of a tight urban fabric resembling the traditional Najdi architectural environment is achieved.

The idea of the wall is derived from the Musmak fortress nearby, but it is used as a metaphor and a principle for urban and visual composition. The wall gives a unifying character for the whole complex, and avoids an otherwise monumental impression of free-standing buildings. Furthermore, the wall creates a transitional auxiliary space between the buildings and the street which facilitates commercial and social activities, thus promoting connection with the surroundings.

The architect emphasized the important relationship between the mosque and the palace, a traditional Islamic ideal which appeals to the Saudi government. "This we designed," Badran says, "in terms of the historical relationship between the mosque and the ruler's palace, which were always placed together to show that the mosque was the source of legislation and the ruler's inspiration"<sup>15</sup>. This relationship was made using a courtyard, ceremonial urban square between the two buildings with the help of an arcade, and by an axial visual relationship between the entrances of both.

The palace is conceived as an internal body and external envelope (fig.10), an idea influenced by the traditional Palaces and forts, and has resemblance in the Musmak fortress. The outer envelope follows the streets edges and relates to the surrounding environment. The internal configuration has two orientations: the main block following the street direction, and another block parallel to the mosque edge (fig.26).

The main block is centered around the central royal reception hall (fig.22), which is treated as a covered courtyard or 'Qaa', a traditional type from Cairo (fig.28). The hall is surrounded by an open space to emphasize its importance and to bring light to the internal space. The Hall is two stores high with a clearstory and arcade along its four

---

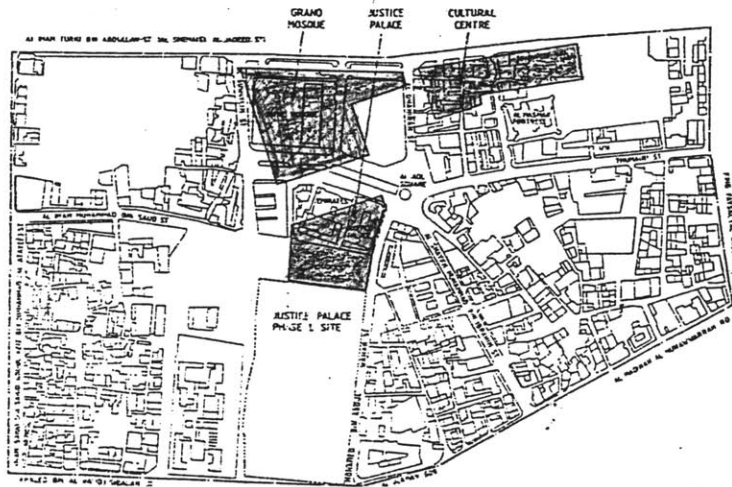
<sup>15</sup>-Rasem Badran. *Theories and Principles of Design*, Aga Khan Symposium.p.159.

ground level sides giving a courtyard impression. The arcade openings are covered with wooden panels, another traditional gesture (fig.20). The other spaces are arranged around open courtyards.

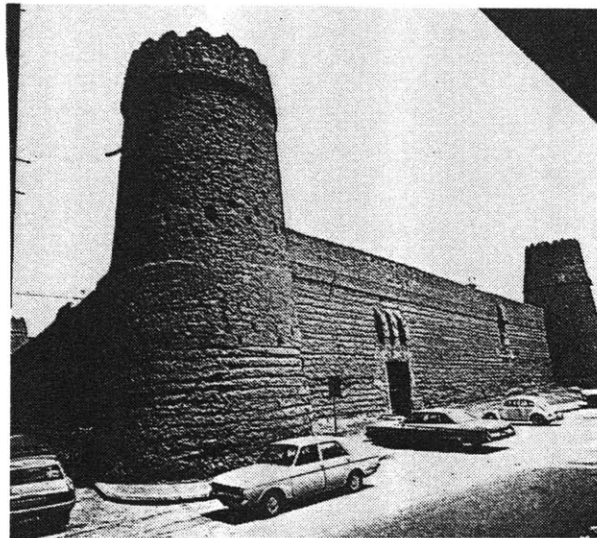
The Entrances are modeled on a traditional fort's gate: a grand opening with double wall (fig.20), leads to an open courtyard (fig.23). The external elevations (fig.21) are mostly solid with small openings echoing the fortress and other Najdi vernacular architecture, which gives very few clues about the internal spaces or functions. Badran used the vertical slots and the small triangular openings to give a local character, this is done without any transformation or change.

Badran opted to use modern concrete systems rather than the traditional building techniques. Nevertheless, to enhance the traditional image he applied wooden beams as a false ceiling in the important spaces, evoking Najdi traditional roofing systems, as in the royal hall (fig.22). The concrete columns and beams arcades are modeled on the old shapes of wooden and brick ones regardless of their new material and construction.

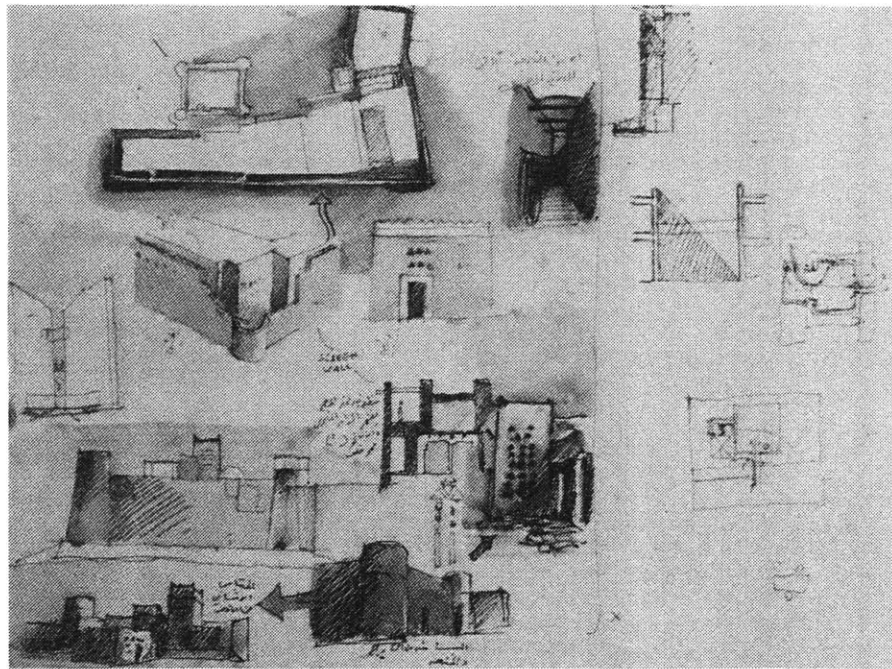
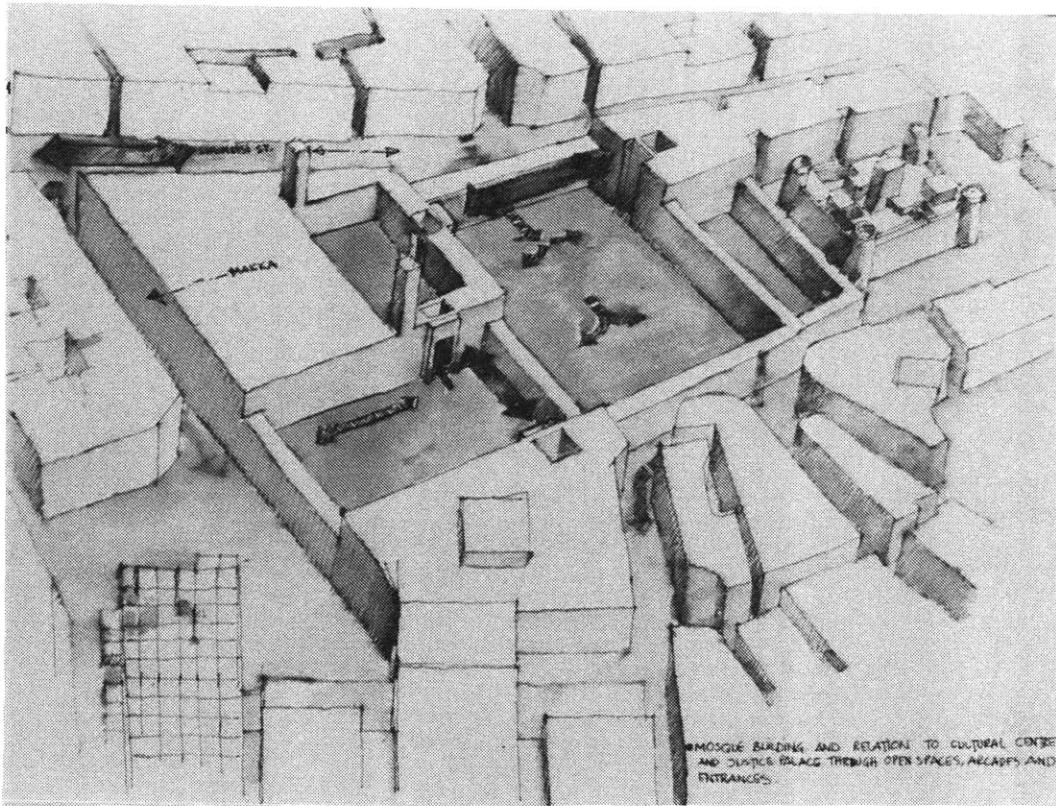
This attitude towards modern material, expression and technology, where the new is concealed under a traditional skin for the sake of an "appropriate" character, raises the issue of right balance between the old and new, the tradition and modern.



**Fig.6** Qasr al-Houk area in downtown Riyadh.  
(The shaded areas are the project proposed site)

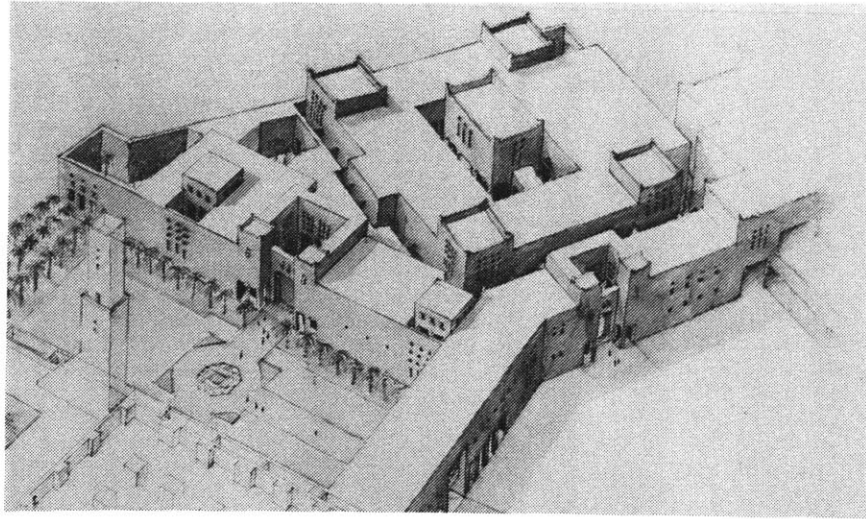


**Fig.7** The Musmak Fortress in Riyadh.

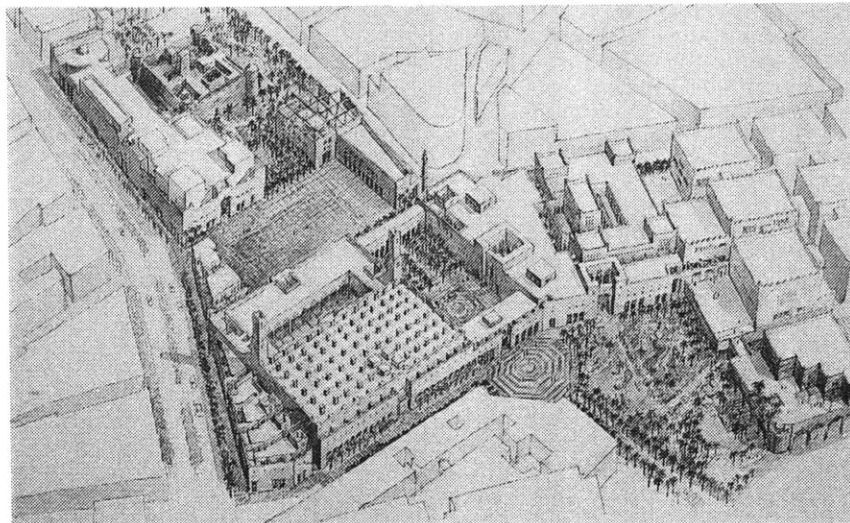


**Fig.8** The massing urban organization showing the three buildings: the palace, the mosque and the cultural center.

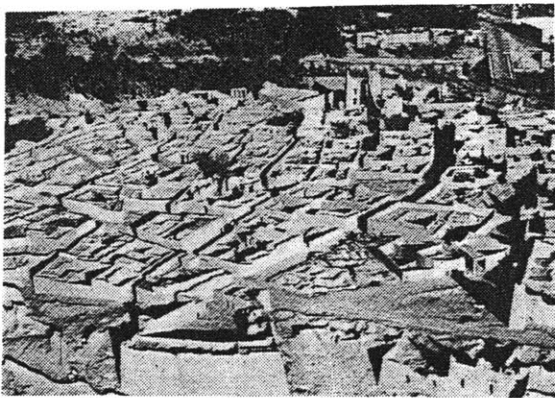
**Fig.9** Analytical design sketches.



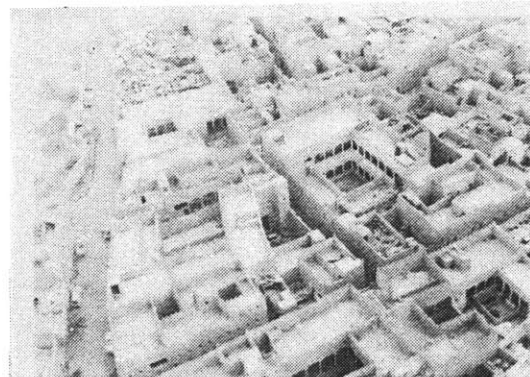
**Fig.10** Sketch areal view of the palace building.



**Fig.11** The overall organization of the three



**Fig.12** Old Darriya.



**Fig.13** The traditional fabric of old Riyadh.

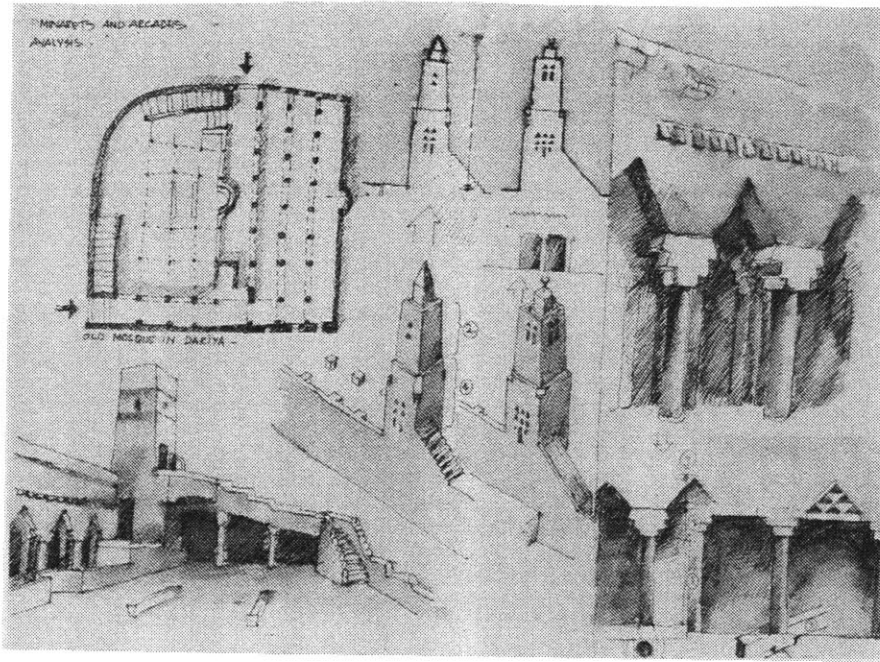


Fig.14 Analytical sketches of Darriyya mosque.

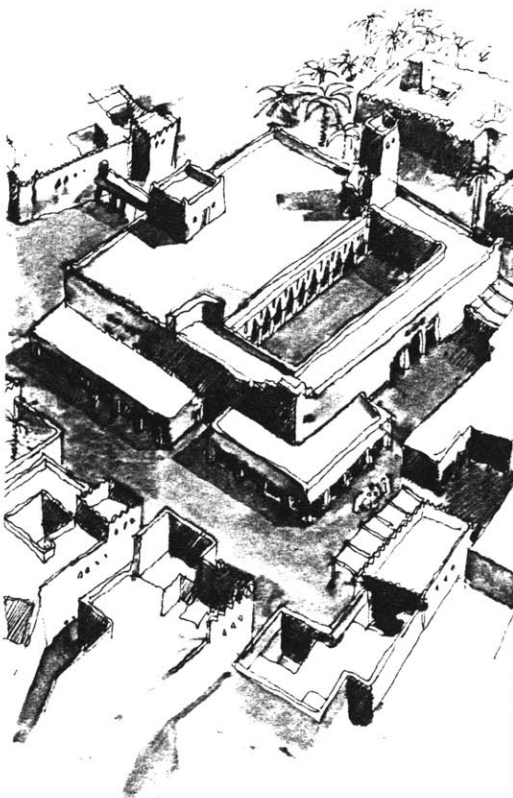


Fig.15 Old Jima mosque, Riyadh.

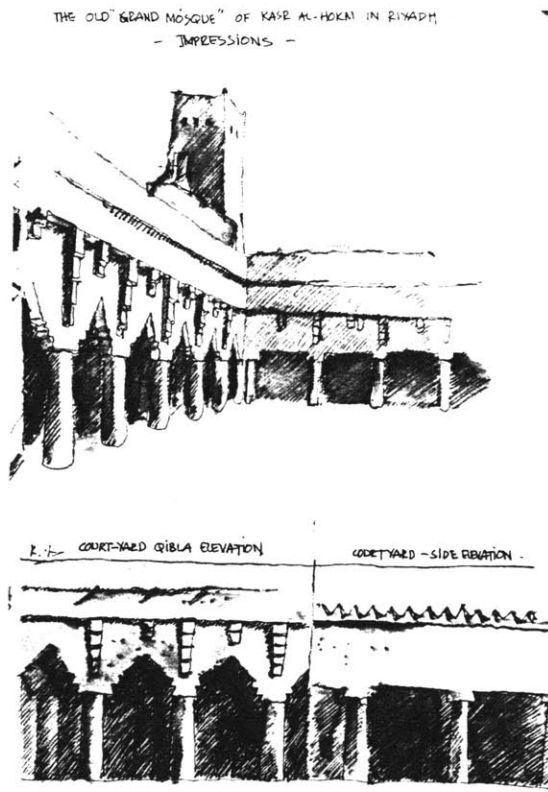


Fig.16 Old Jima mosque, Riyadh.

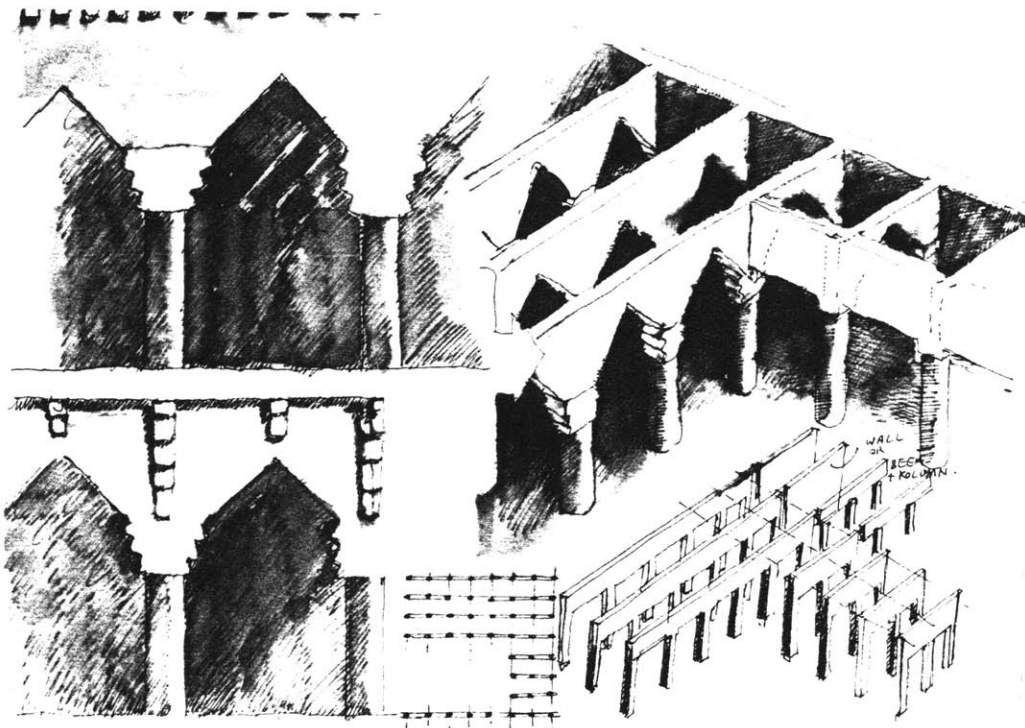


Fig.17 Analytical studies on Darriyya mosque.

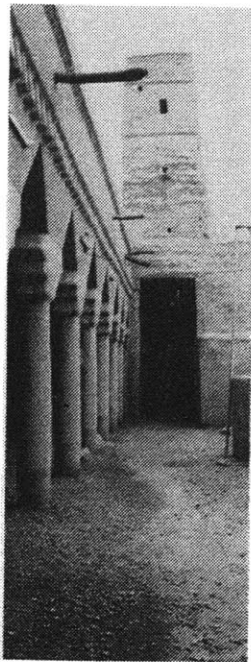


Fig.18 Old mosque of Darriyya.

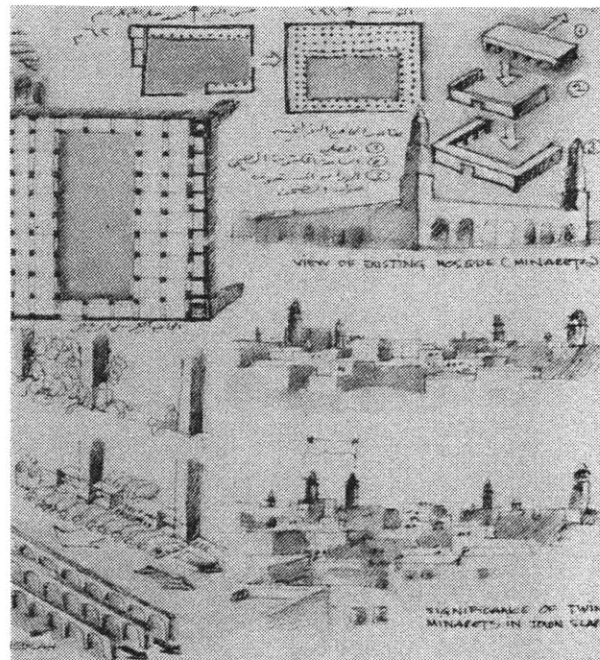
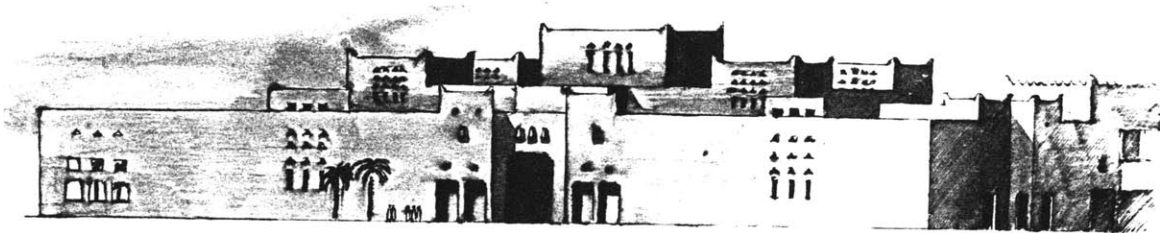
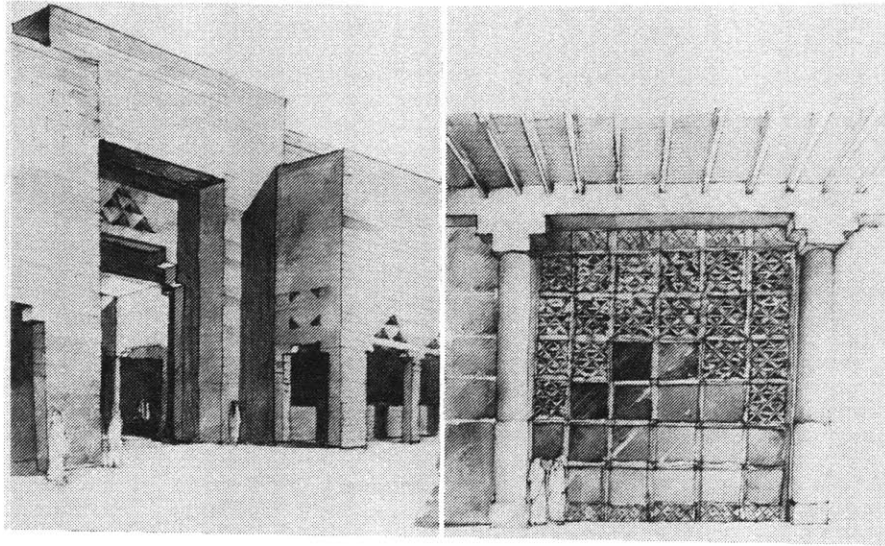


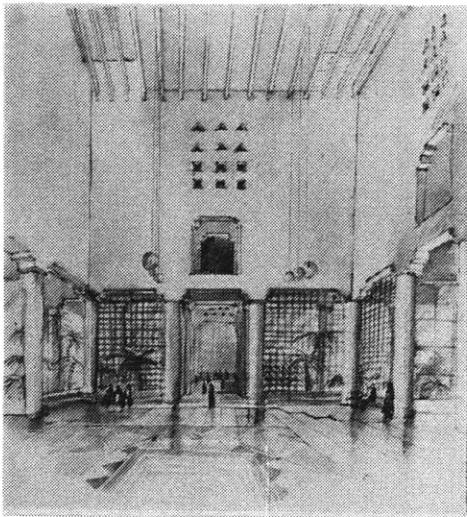
Fig.19 Analytical sketches



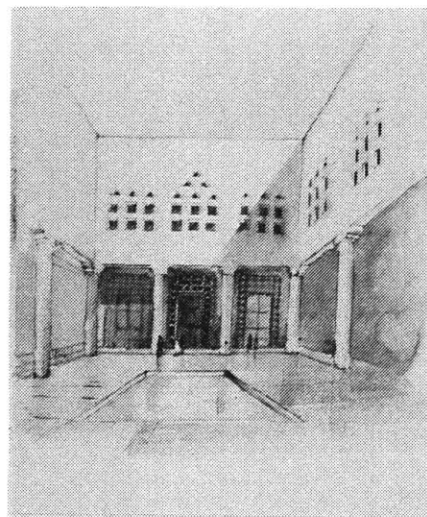
**Fig.20** Qasr al-Houkm gate.



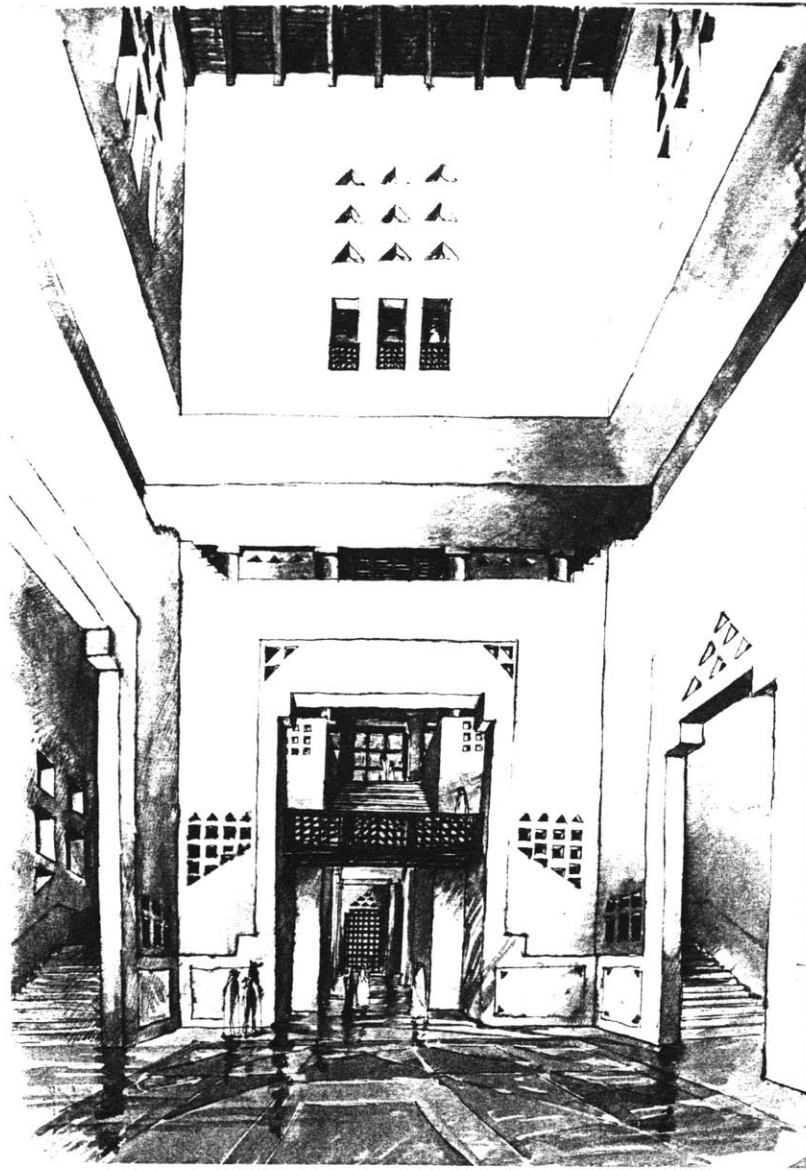
**Fig.21** Street elevation of Qasr al-Houkm.



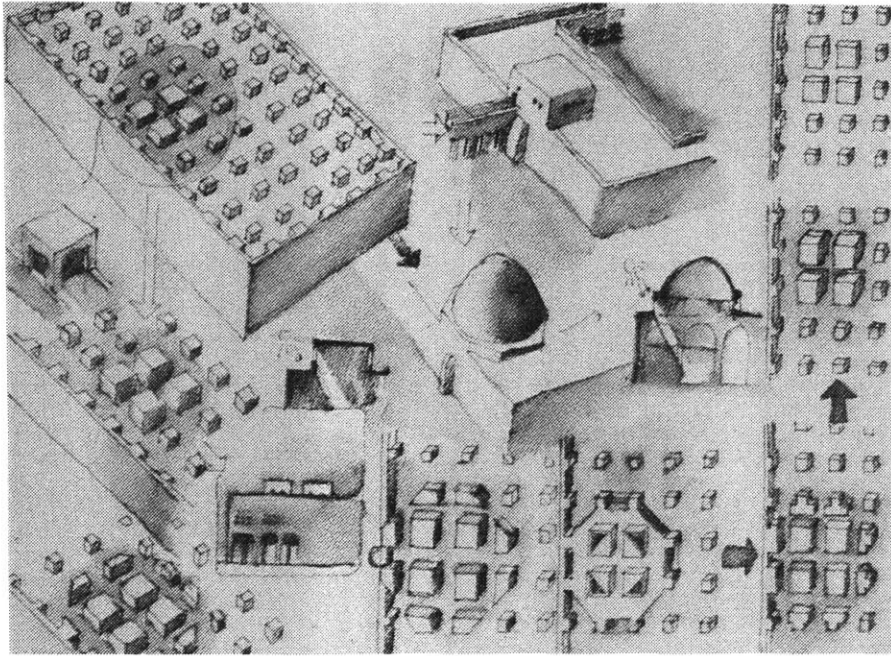
**Fig.22** The royal reception hall.



**Fig.23** Entrance courtyard.



**Fig.24** Main entrance hall.



**Fig.25** Analytical studies.

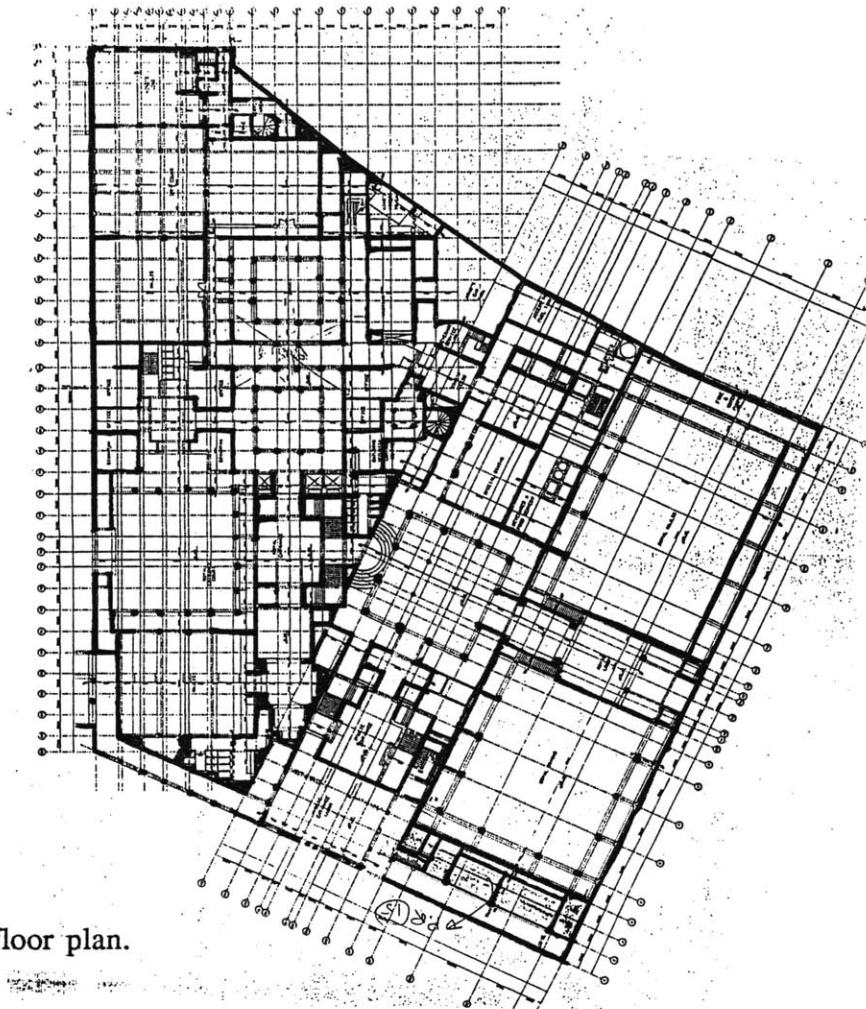


Fig.26 Ground floor plan.

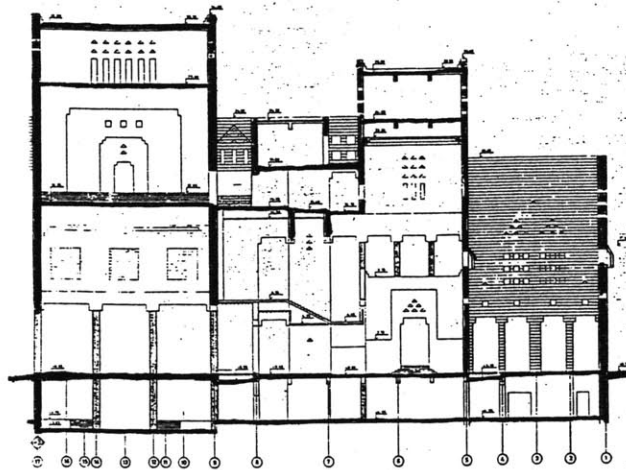


Fig.27 Section.

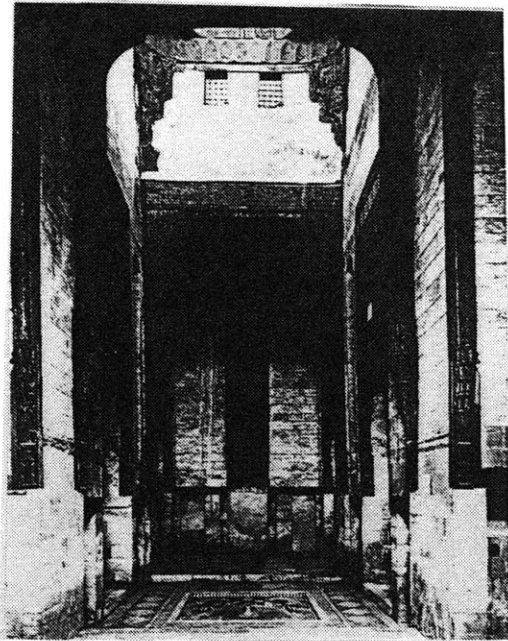
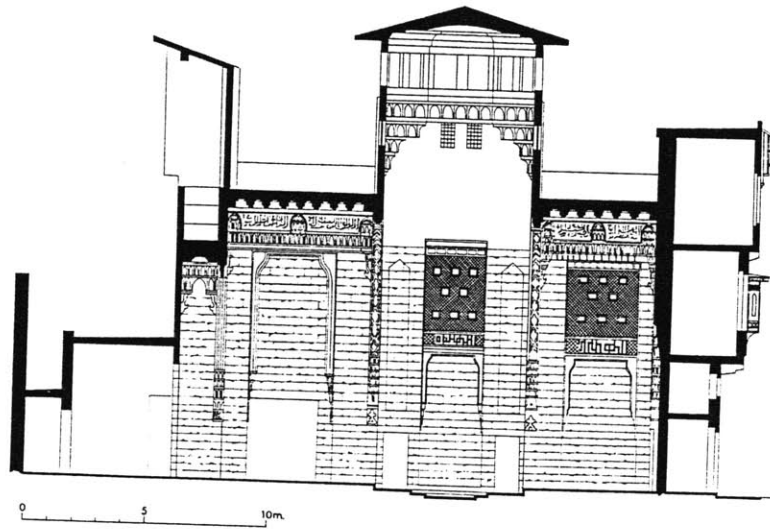


PLANCHE XXV

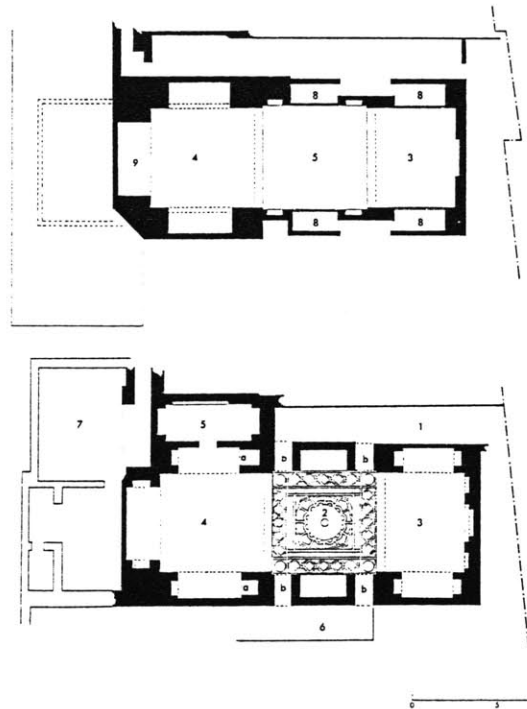


Fig.28 Example of Qa'a.  
Qa'a Uthman Kathuda, Cairo.

## Architecture Research Programme II

### The Ministry of Foreign Affairs in Riyadh, Saudia Arabia.

Architect: Henning Larsen.

The project is intended to house the enlarged offices of the Ministry of Foreign Affairs which was previously in Jeddah. The building, built in 1984, is conceived to act as a symbol, " a front door to the Kingdom,"<sup>1</sup> in addition to its diplomatic bureaucratic and ceremonial functions. Through this architectural research programme, I will discuss Henning Larsen's Project, which won the international competition in 1979, and subsequently got built in 1984.<sup>2</sup>

The hard core of this research programme comprises Larsen's basic assumptions about architecture. To him, architecture is a perceptive art. " [Architecture] though composed of abstract elements, is concrete. It is purely physical, and can be perceived both with our sense of touch and sight."<sup>3</sup> Larsen conceived that it "consists of the same elements as music, namely, a form, a pause, a rhythm: the way in which form and space are linked together."<sup>4</sup>

His previous works reflect the main characteristics of Larsen's designs. His Hoje Taastrup Secondary School in Denmark (fig.29) presents his prime interest in internal spaces, pure geometric forms and the quality of light. The School consists of four

1- In the "Aga Khan Awards 1986 Technical Report", review summary of the Ministry of Foreign Affairs, Riyadh. by William Curtis. (Quoted from the competition program)p.1.

2- The architectural competition was organized in June 1979, with the help of Union Internationale des architectes (UIA). 11 designers were invited. Larsen was chosen in early 1980, and after certain changes on the original design the actual building started in 1982 and ended 1984. for full information see: Ibid.p.5,6.

3- Henning Larsen. "On Architecture." in Living Architecture no.4 (1984) p.100.

4- Ibid. p100.

square units grouped around a central common area. Each unit is arranged around a small internal space of double volume. The focus of the school, a sunken canteen in the center, overlooks the open courtyard.<sup>5</sup>

A similar approach can be seen in his project for Trondheim University in Norway (fig.30), where the focus on internal space and simple geometric forms are characteristic of this design. However, here the scale of the project and necessity for future expansion required a more complex system. Larsen made use of two prevalent theories about universities: To cope with future expansion and flexibility, he used "the theory of structuralistic building forms, where a modular grid and basic building type allow freedom in altering the size and location of partitions and technical facilities."<sup>6</sup> The other theory is that of the city university. His design as a result, was "a dense 'city,' consisting of three-story blocks, surrounding relatively small courtyards with glass-roofed streets between them, reminiscent of the century-old shopping archades in Milan and London."<sup>7</sup> Here we find that the internal spaces developed as covered streets and the idea of geometric units was modified to fit the structuralist system.

Although architecture is viewed to be a perceptive art of forms, spaces and rhythm, a Modernist conception, nevertheless, Larsen believes that this perception is not universal, but rather culturally related. "Both the feeling that creates the notion and the feeling in those who experienced it, are culturally determined. Throughout time an incredibly varied wealth of experience has been created, built up over the fundamental elements; tone, pause and rhythm, or form, space and rhythm."<sup>8</sup>

Hence, on a conceptual level, it is culture that defines qualities of form and space, and what experiences are desirable. Different cultures acquire different architecture because

---

5- Editor. "Denmark. School Arranged Around a Cheerfully Canopied Central Court." in Architecture, AIA Journal (August 1983) p.114 -117.

6- Editor. "Norway. Campus Organized Around a Series of Tall, Glazed Interior 'Streets'." in Architecture, AIA Journal (August 1983) p.174.

7- Ibid. p.174.

8- Ibid. p.100.

they have different priorities concerning the qualities of form and space. " In Greece, the dominant interest was form. ... In the great epochs of Islam, it is the inner space that dominates form," to mention but two examples of different architectures.

Upon dealing with the Ministry of Foreign Affairs Larsen had to encounter new realities and a relatively different cultural context. Larsen developed his approach in response to the client's objective: a building that is "a contemporary symbol of Islamic Ideals which acknowledges the architectural tradition of Riyadh."<sup>9</sup> To cope with the new situation Larsen held on to his initial conception of architecture as perceptive art, and modified the cultural qualities and priorities of space and form.

By bringing the cultural conception and qualities to architecture, Larsen's intention was " to reflect Islamic culture in the global cultural currents" in a building that "reflects those traditions, at the same time referring to an international idiom."<sup>10</sup> Islamic culture in general is considered the determinant of his contemporary design. How can this be done? Larsen's proposal was to ask " Is it possible to interpret and transform the physical manifestations of oriental architectural elements into a contemporary idiom along the lines of the requirements and development of the Islamic cultural pattern?"<sup>11</sup> To achieve the cultural dimension in architecture he referred to Islamic tradition as a source for inspiration and interpretation; this source for Larsen was not bound to any historical period, place, or region. We find that his design has references to different places and historical periods: Riyadh, Aleppo, Isfahan, Istanbul, India and Spain, references to Mugol monuments, vernacular architecture, fortresses, bazaars, urban complexes and general references.

This free movement in space and in geography of the traditional Islamic culture in general raise the following question: How is one to choose and select out of this unlimited source? " Given that architectural meaning depends on the existence of such

---

9- "Aga Khan Awards 1986 Technical Report." William Curtis. (Quoted from the competition program) p.5.

10- Henning Larsen. " Ministry of Foreign Affairs Building in Riyadh." Architecture and urbanism (Dec. 1986) p.20.

11-Ibid.p.20.



preestablished types," Alan Colquhoun argued that, "there are two ways in which we can interpret these types as operating in the creation of buildings or cities. Either they can be seen as the invariable forms which underlie the infinitely varied forms of actual individual buildings ( in this case they approximate the notion of archetype, or original type), or alternatively, they can be seen as historical survivals which have come down to us in a fragmented form but whose meaning does not depend on their having been organized in a particular time."<sup>12</sup>

Larsen's view is more related to the first idea of type as an underlying structure; the tradition as generic principles and organizing rules for design, that is culturally rooted and timeless. This implies a look at the new design as a continuity of the cultural tradition by recalling the original principles: " The objective of this building [ the Ministry of Foreign Affairs ] is to carry on the historical continuity and to create complexity and variation through a deliberate architectural elaboration of the traditional Islamic elements."<sup>13</sup>

Larsen views the traditional architecture of the Islamic culture as the source of precedents. These precedents help to formulate principles, basic elements and rules for design. This conception is reinforced by rejecting rival theories and views. Theories which consider the traditional precedents as forms and images full of meaning and available for reuse as communicative signs, are rejected. By accepting this vision of tradition Larsen's position also implies rejecting un-modified universal modern models of architecture. These rejections are the negative heuristic of this research programme. The negative heuristic directed the architect's research into a defined realm by excluding other alternatives. Thus, the selection of precedents is bound by a well-defined method of general reading rather than by locale or style.

Larsen's position can be attributed to the fact that Larsen is affiliated with the modern movement, especially Aalto and his approach to design. This Larsen stated clearly,

12- Alan Colquhoun in. *Essays in Architectural Criticism: Modern Architecture and Historical Change*. Opposition books, MIT Press, Cambridge MA (1981).p.15.

13- Henning Larsen. " Lessons from the Orient." in *Diadlos*, 10 ( Dec.1983 ) p.102.

saying: " I consider myself belonging to a Norse tradition. My predecessors are people like Asplund and Aalto."<sup>14</sup> This affiliation thus affects his way of looking to tradition as underlying principles of cultural types, an idea not too far from Aalto. It also influences his tendency towards the use of puritanical forms, with interest in quality of light, space and geometry. This approach implies a focus on the rules and geometry of spaces and their senses more than the communicative power of the forms and their meanings.<sup>15</sup>

The positive heuristic of this architectural research programme facilitated the process of deducing and understanding the traditional principles and exploring ways for their interpretation. It is extremely hard, if not impossible, with this approach which seeks general rules and basics principles to conduct a complete on-site research that can cover the whole Islamic tradition, or even part of it. For this Ministry of Foreign Affairs design Larsen, therefore, depended mainly on previous works and studies dealing with this topic.

Larsen's main references were books about Islamic architecture. I speculate that a book like Architecture of The Islamic World edited by George Michell was one of the main sources from which Larsen acquired his knowledge. This is evident from the use of the same terms such as a "hidden architecture,"<sup>16</sup> and other concepts such as complete

14- Celani, Maria. " Space and Light: Interview with Henning Larsen." Spazio e Societa, vol. 9, no.34 ( June 1986 ) p.8.

15- " In conversation of interviews published in various journals, Larsen has described his approach to architecture, which is essentially sensorial and perceptive. .. The play of natural light, handled by the architect, is the vehicle for his tactile perception of space." Ibid. p.8. And in the same interview he said;" I think that the use of a number of different textures could interfere with the study of space and light. This may seem Puritanical. I love the old Danish churches, all white inside, with wooden pews and floors." Ibid.p.9.

16- Ernst Grube in the introduction of this book under the title "What is Islamic Architecture?" stated that: "At all times and in all regions of the Muslim world we can find 'hidden architecture'- that is, architecture that truly exists, not when seen as a monument or symbol visible to all and from all sides, but only when entered, penetrated and experienced from within.' *Architecture of the Islamic World*. p.11. This is compared to Larsen's statement in Diadalos " This type of complex architecture is called 'hidden architecture'. It is not experienced as an isolated object, but will reveal itself only when one

generalization without referring to any specific building, place or era, the concentration on the interior, the courtyard as the main living space, the closed undesigned facade, and so on.

Larsen, thus, developed conception and rules, principles, elements and relationships considered them reflective of traditional Islamic culture and architecture. This process is part of the interpretation and design thinking, and it is important to see its manifestation in the artefactual design. However, this process is not affected only by the architect's point of view, intentions, and background, but also by the available knowledge and resources about the subject ( the books about Islamic architecture and their approach in this case ), and the design project itself ( type of building, its program, its site, and its place ).

To Larsen there are several principles and 'mental images' that are characteristics of the Islamic architecture:

I- There is "the clearly defined interior as opposed to the exterior....This is seen in the layout of the characteristics Islamic house."<sup>17</sup>

II- The exterior is mostly closed with no major openings, and little importance, if any, is given to the facade. This is partly because, Larsen thinks, of the harsh climate, and partly because " the anonymity of the facade is another requirement of the Islam ideology, a warning against manifestations of power and wealth through gaudy buildings."<sup>18</sup>

III- Importance is placed on the courtyard in the Islamic house which is " the private sphere in contrast to the throbbing, public life of the city. In the more wealthy houses the courtyard becomes a garden, reflecting the Islamic dream of paradise."<sup>19</sup>

ventures inside." In " Lessons from the Orient ". Diados, 10 ( Dec.1983 ) p.97..

17- Larsen. Diados.p.95.

18- Ibid.p.95.

19- Larsen. Diados.p.95.

IV- In a highly dense urban context the houses are multi-storied and grouped together around a semi-public courtyard.

V- " The Islamic town can be viewed as a compact structure with a continuity of closed and open spaces."<sup>20</sup>

VI- The urban structures and monuments are joined and integrated in an 'urban complex', where " the impression of the limit, size and functions of the individual building is thus blurred."<sup>21</sup> These complexes are not recognized from outside as an objects, but are experienced from inside. The ambiguity of these complexes thus is twofold; one cannot distinguish the function, type or usage of the building from outside unless one get into its internal spaces. The other is that the buildings are joined so that they conceal the boundaries and limits of the individual building.

VII- " The basic cell of the urban structure is the dome-covered square space element which, when linked in clusters, forms the bazaar, mosques, caravanserais, etc."<sup>22</sup>

VIII- " The dominant element of the urban structure is the bazaars with which all city functions are connected. The bazaars must be considered as the city's commercial spaces, but at the same time the center of physical , functional and socio-cultural contexts."<sup>23</sup> Therefore the street space or "souq" is considered the main cultural experience.

IX- " The bazaar street often leads into one big central square which is the hub of markets and various temporary public activities."<sup>24</sup>

Larsen believes these mental images and basic notions of urban space types to be the

---

20- Ibid.p.97.

21- Ibid.p.97.

22- bid.p.97.

23- Ibid.p.97.

24- bied.p.97.

characteristics of the Islamic urban architecture, and to work as guidelines for his Ministry design.

The Ministry of Foreign Affairs building is located in an urban site, "2 kms. northwest of what remains of old Riyadh...In the immediate vicinity, the scale is defined by structures of no distinction about 4 storeys high."<sup>25</sup> The area has dispersed buildings of governmental and business functions.

The building (fig.32) is a big 'urban complex,' a free-standing object sets over a podium , (which houses a basement parking garage). The main idea is inspired by the block of urban structure with closed exterior and a well-defined and elaborate interior (Larsen's rule I).

The basic organization (fig.35) follows the idea of an 'urban complex' of bazaars, central space and urban squares ( Larsen's rules VII, VIII, IX ). The plan (fig.33) is geometrically modeled on the well-known four-quadrant square of Mogul monuments plan, but adjusted and modified to fit the site conditions. " In a brilliant adaptation of the plan to his triangular site, Larsen discarded one of the quadrants, moved the central space inside the remaining triangle of the 'streets', and in the process changed its octagonal shape to suit the new location."<sup>26</sup> By this Larsen created a single axis for the main entrance.

The remaining three quadrants are conceived to house the three main functions of the ministry" The [ first ] section for the Foreign Minister, the [ second ] section for politics and economics, and the [ third ] section for administration...[ and ]...the circular forms contain the more public functions of the ministry."<sup>27</sup>This shows the modern functional

---

25- Curtis. " Aga Khan Technical report." p.2.

26- Abel, Chris. "Riyadh Angles; Larsen's Hybrid Masterpiece" The Architectural Review # 1061 (July 1985) p.30.

27- Larsen. " 11 Entries for the Headquarters of the Ministry of Foreign Affairs." UIA, 1981. [quotation from: Sikander Khan. *In Search of a Direction in the Contemporary Architecture of Arabia* . MIT -S.M.Arch.S Thesis 1988,p.200].

approach in zoning that influences Larsen's design thinking.

The external facades (figs.34,41) are 'anonymous' with a minimum number of openings following Larsen's perception of Islamic facade ( Rule II ). However the entrance facade is more articulated with a large opening and finely ornamented door. Two circular masses flanking the entrance (fig.40) are located to stress the symmetry of the entrance axis and echoing the traditional fortress towers, an indirect reference to the Musmak fortress in Riyadh.

The main space in this building is the central covered-courtyard (which has been compared by Chris Abel to the five-star hotels' atrium). This isosceles triangle (figs.37,38,39) serves as the main public and reception space. The triangular geometry of this space " brings to mind the central lobby of the East building of the National Gallery of Art in Washington, by I. M. Pei."<sup>28</sup> However, the comparison does not go beyond the similarity in the geometry of the plan.

The openings of the four-story walls of the central space are kept to the minimum (fig.37). Except for the arcade on the ground floor and a portal opening at the center of each wall, few small-square openings exist. The main impression recalls the fortress architecture of thick solid walls. The roof is suspended from the walls leaving a gap between the two to allow for indirect light. This way of handling the roof where the joint between the walls and the ceiling is articulated by a thin strip of light, was compared by Abel with Le Corbusier's Chapel of Ronchamp, an evident source of Larsen's 'Modernist' influences.

The main circulation artery in the Ministry of Foreign Affairs building is the internal three-corner corridor (fig.42). Three 'streets' run parallel to the central triangle. These three-story high 'street' corridors are Larsen's interpretation of the traditional bazaars. References to the Isfahan, Istanbul and Aleppo bazaars can be found in this design. As traditional bazaars, these 'street' corridors are covered by barrel vault with a top light. Another traditional element in these 'street' corridors is the use of connecting bridges

---

28. Abel. AR # 1061. p.34.

over the street. This idea is inspired by the traditional residential and vernacular architecture in most of the Islamic traditional cities.

The street corridors meet in three octagonal internal spaces (fig.35). Each space is three-stories high covered with a copula, with a central top light and a fountain. Each space is conceived as the center of one of the three main sections of the building. This idea is a resemblance of what Larsen called the "highly dense urban context" where the multi-story houses are grouped "around a semi-public courtyard" (Larsen's rule IV).

A channel of water connecting the different fountains runs along the central axis of the street corridors was proposed in the original design, but later on substituted by a floor pattern marking this channel axis (fig.42). This idea of water channel is derived from two references, the Mogul architecture especially the palaces, and the Al-Hambra palace in Spain.

Even though the internal street corridor has a traditional bazaar reference it "is not the first time that Larsen has made the idea of the internal street a main focus of a building. It was also the major unifying theme of his design for the university at Trondheim, in Norway (fig.31)."<sup>29</sup>

Each of the three main sections of the building is formulated as a three courtyard units. These nine courtyards (fig.35) are conceived as the focus of the office spaces, providing light, shade and an image reflecting a "dream of paradise." These "courtyards have been designed from three main types: the cross garden, the fountain garden [and] the water design garden."<sup>30</sup>

The "sculptural quality which finally overrides all other impressions and memories"<sup>31</sup> can be attributed to Larsen's interest in space and light as a result of regarding

---

29- Abel. AR.p.34.

30- Larsen. Diadalos. p.101.

31- Abel. AR. P.34.

architecture as "essentially sensorial and perceptive," where "the play of natural light handled by the architect, is the vehicle for his tactile perception of space."<sup>32</sup> This interest in the effect of light on surfaces and spaces is one of the main focuses of Larsen's designs. He said about this: " In all my buildings, interiors or exteriors, there's an interplay of light and space. Space and light are paramount. This, I think, stems from the fact that in northerly countries daylight is scarce and we have to husband the little we have very carefully, always keeping contact with the sun."<sup>33</sup> This is why we found that Larsen was against applying extensive ornaments in the interiors though he mentioned the ornaments as one of the main characteristics of the traditional Islamic architecture. The interior ornaments are made by " an Iraqi, Waddad Faris, and his team of Morrocan craftsmen who were brought in at a much later date by the client to add what they thought was missing from the building, 'ornamentation'."<sup>34</sup>

I think a duality between the monumental and vernacular architecture was apparently affected this design. In the exterior, while we found that Larsen had tried to achieve the image of a fortress a reference to the vernacular architecture through the " anonymity" of the facade, the tower-like corners and the small openings, we found that monumental elements and ideas were used, such as the platform, the imposing volume as a free-standing object, and the symmetry of the facades. The same thing applies to the interior organization and spaces. The plan organization follows the monumental Mogul plans while trying to reflect a miniature of an urban complex with bazaars and squares. Is this a direct result of a simplified and general approach towards Islamic architecture indifferent of its diversity and variety, or a reflection of the fact that such a building type has no correspondence in the traditional architecture?

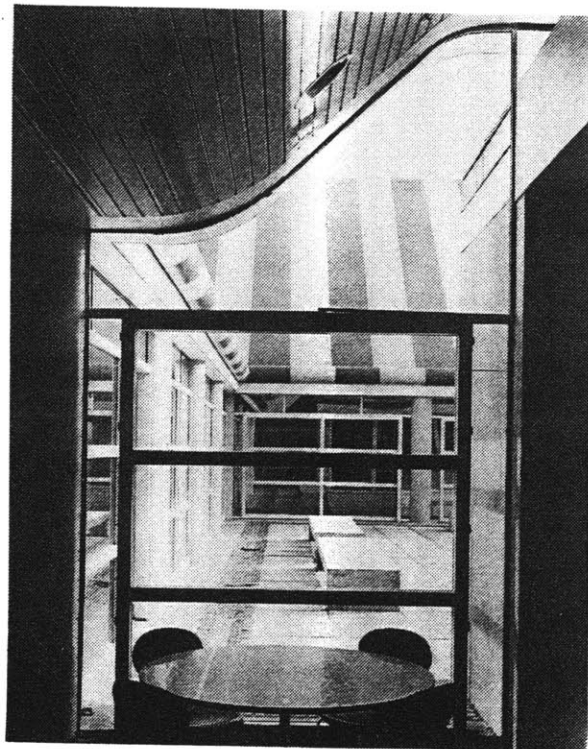
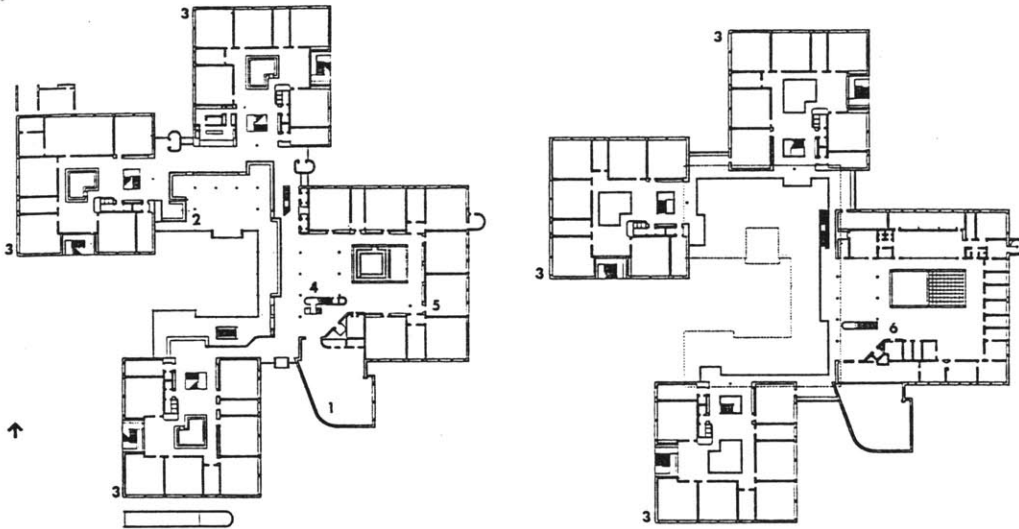
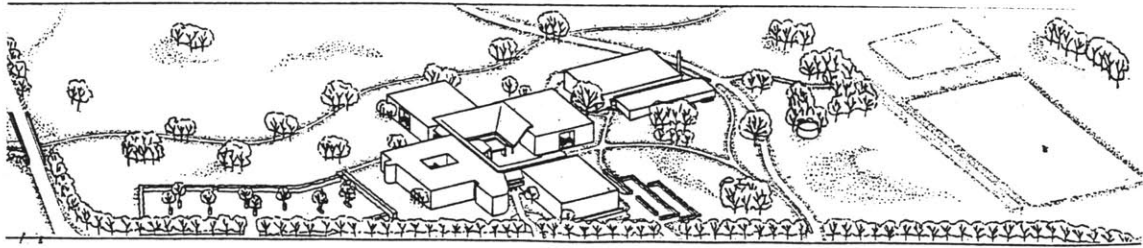
---

32- Larsen. Interview. Celani, Maria. " Space and Light: Interview with Henning Larsen." Spazio e Società, vol. 9, no.34 ( June 1986 ) p.8.

33- Ibid. p.9.

34- Sikander Khan. MIT Thesis. p.224.





**Fig.29** Hoje Taastrup Secondary School, Denmark.

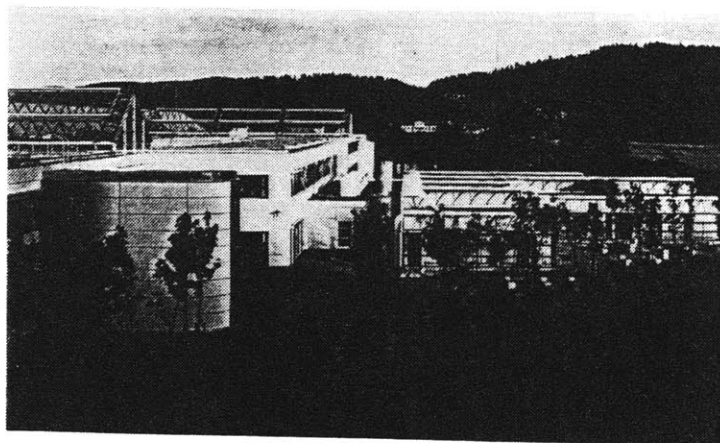
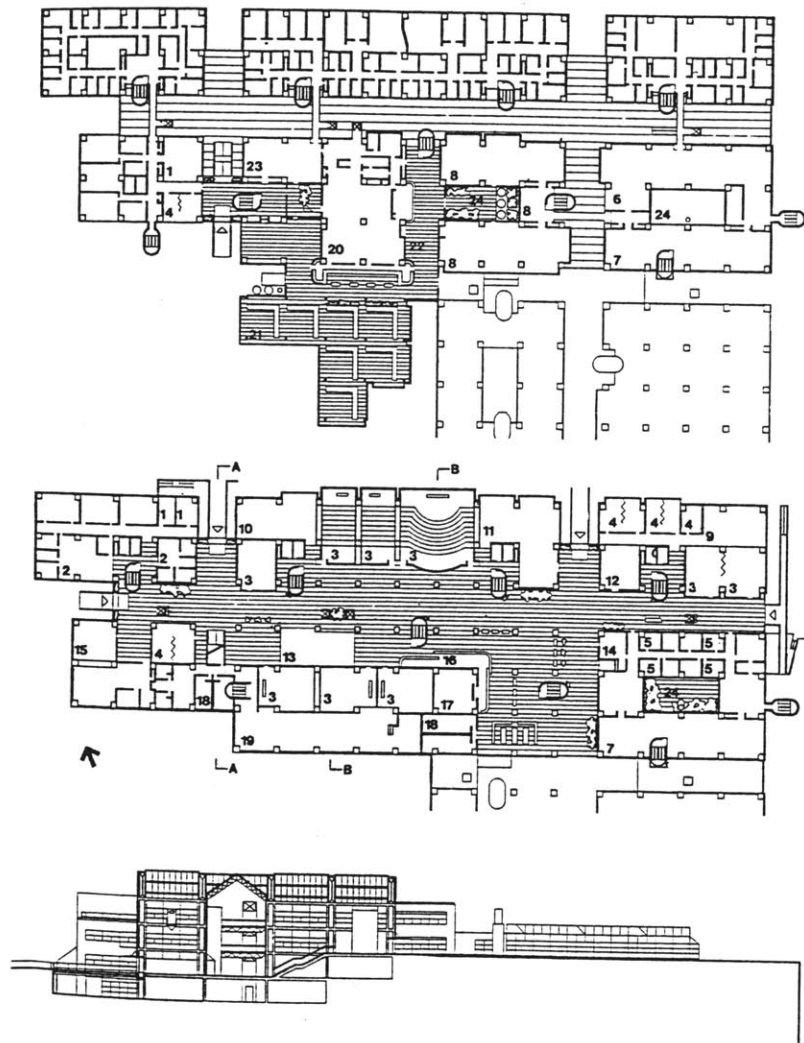
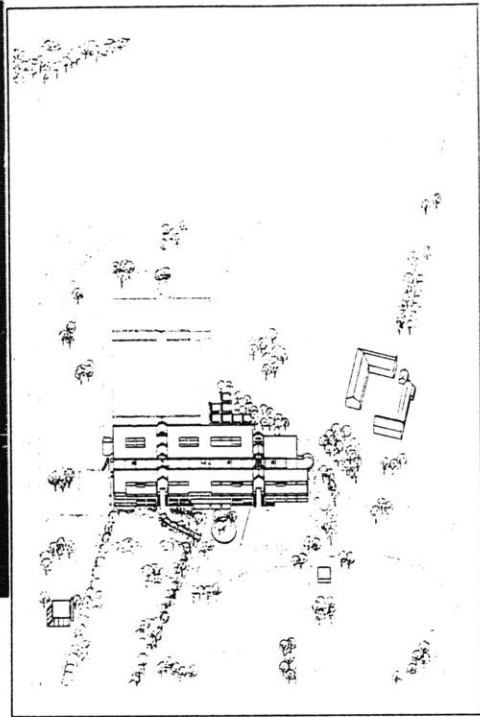
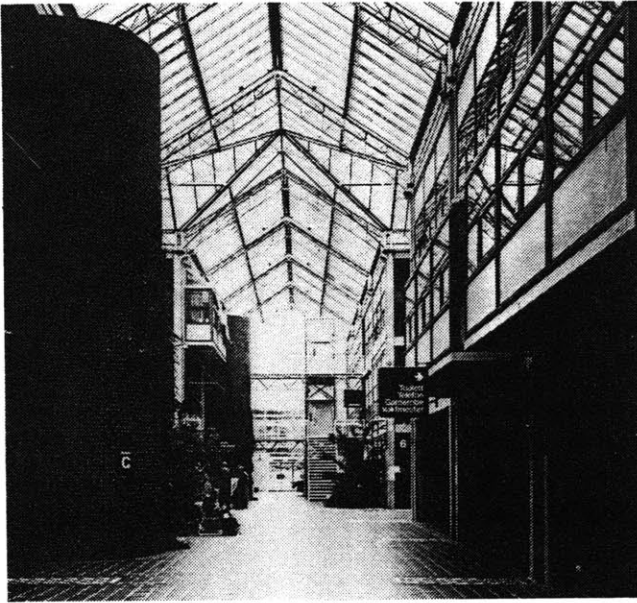
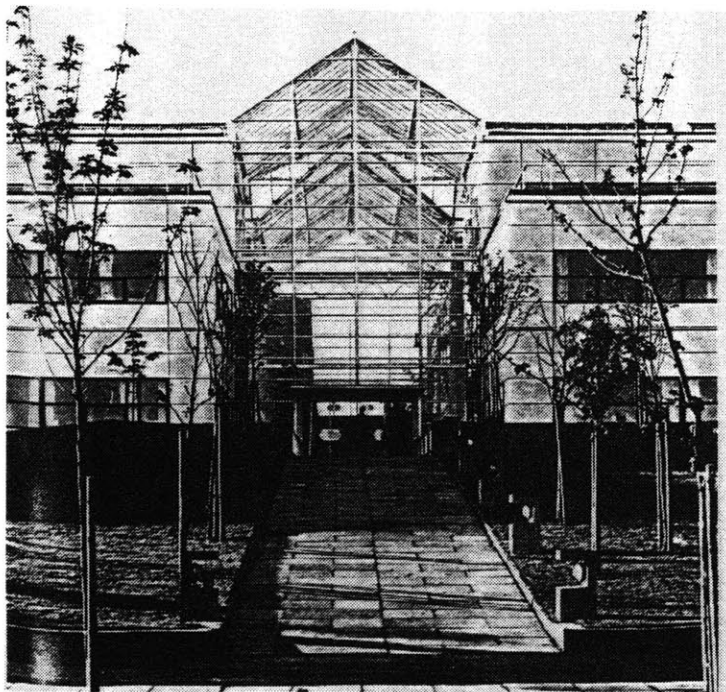


Fig.30 Trondheim University in Norway.



*The campus is a crisp and highly integrated glass and metal 'city.'*

**Fig.31** Trondheim University in Norway.



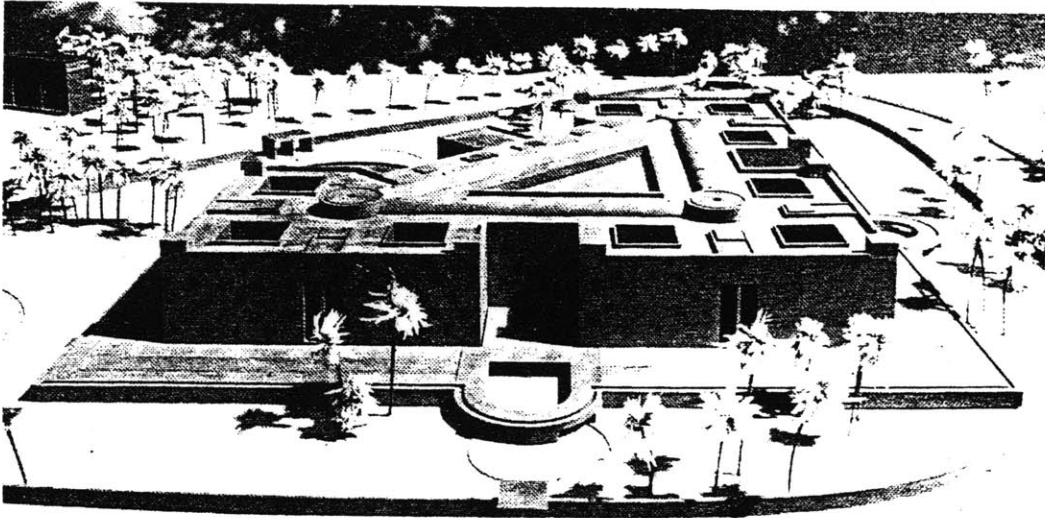


Fig.32 Model MOFA showing the massing and the platform.

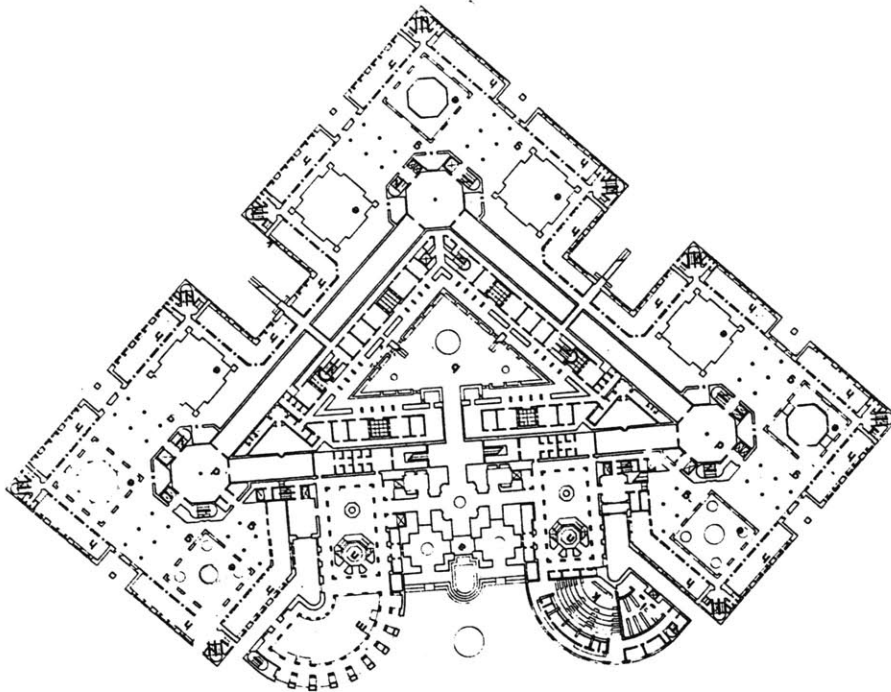
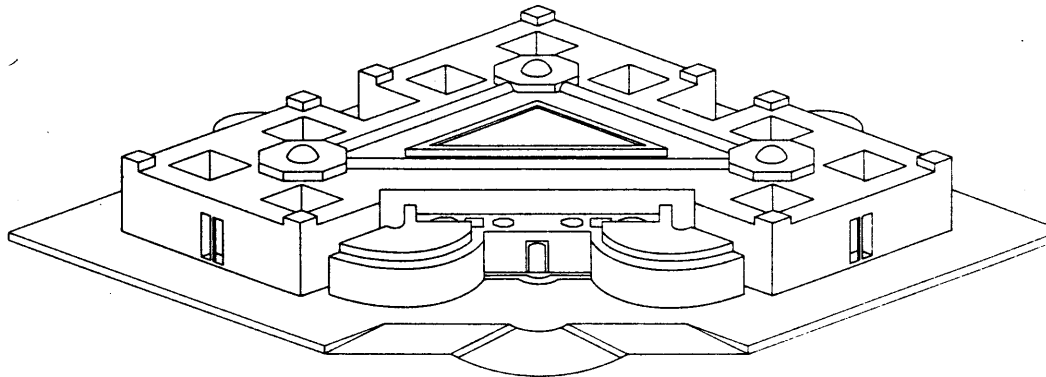
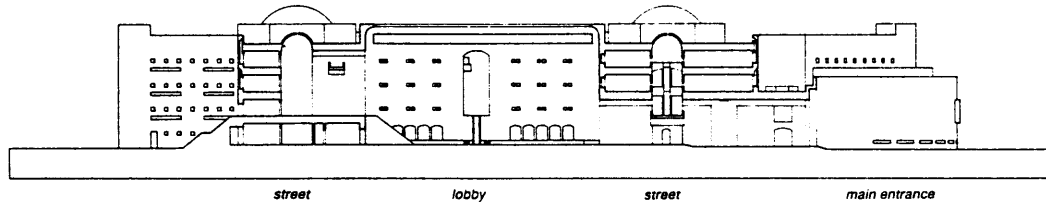


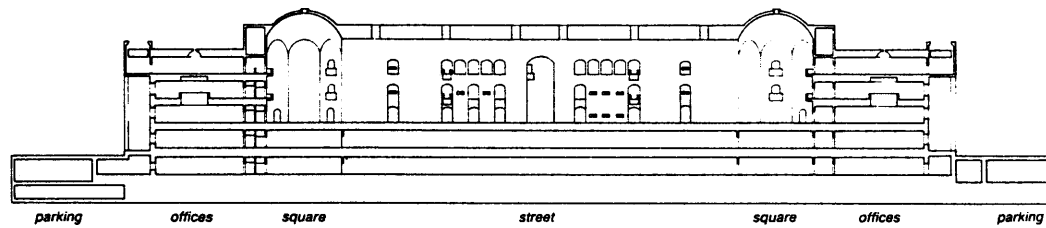
Fig.33 Ground floor plan



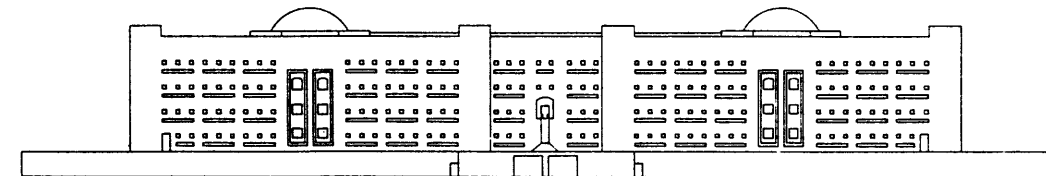
An isometric view of the aggregate building volumes



EAST WEST SECTION

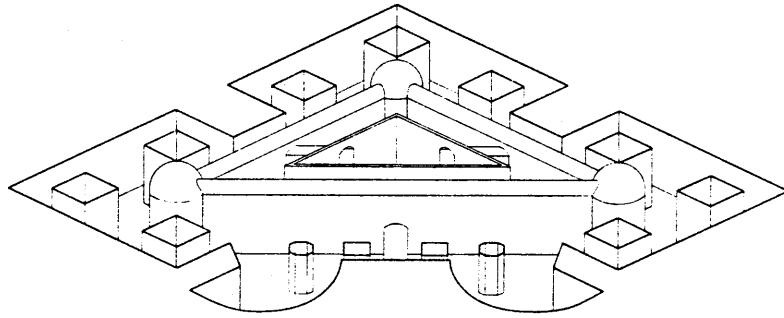


NORTH SOUTH SECTION

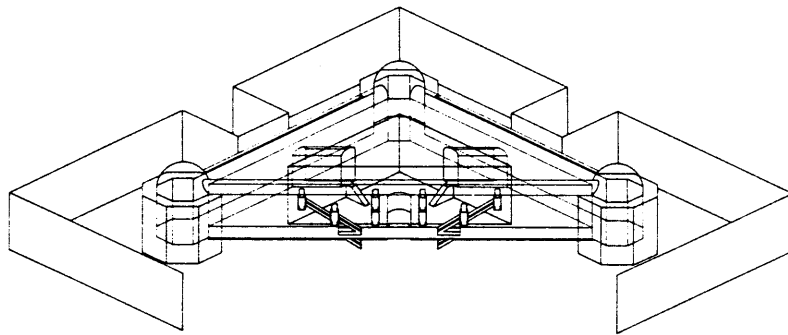


EAST ELEVATION

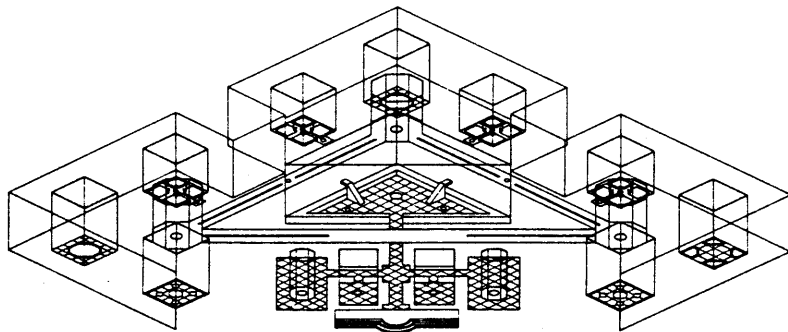
Fig.34 Isometric, sections and elevation.



*The principal elements of the building complex*



*The triangular street and the octagonal junction towers*



*The open, recreational spaces and courtyards*

**Fig.35 Basic spatial organizations.**

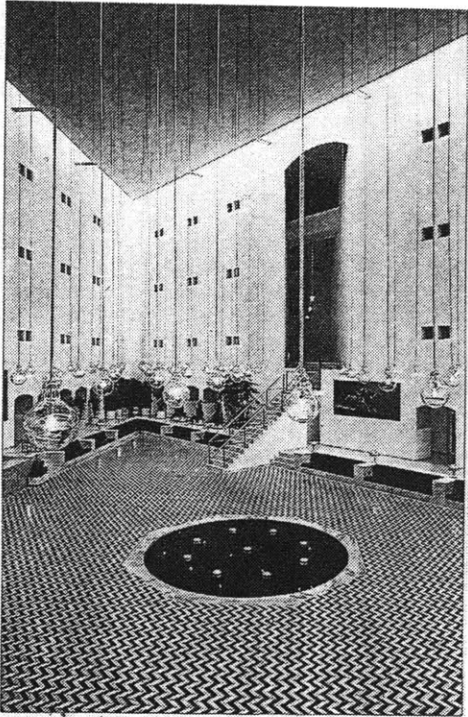


Fig.37 Central atrium space.

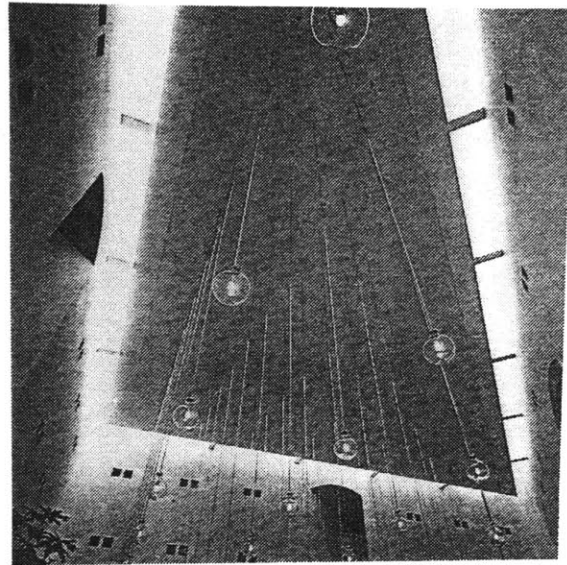


Fig.38 Central atrium space.

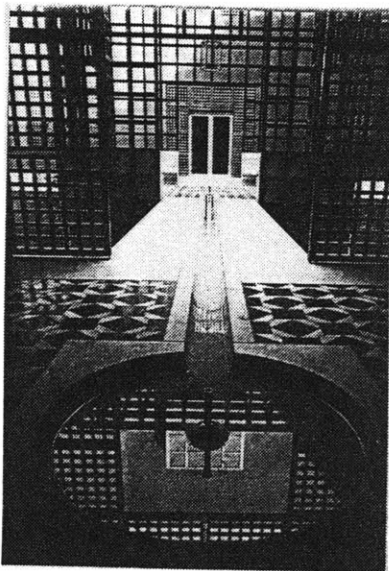


Fig.36 One of the Courtyards showing the wooden mashrabiya.

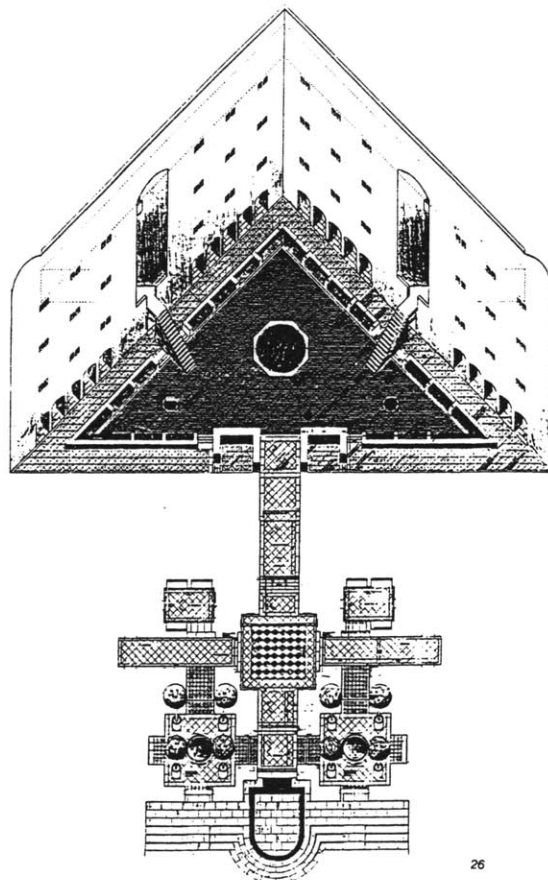
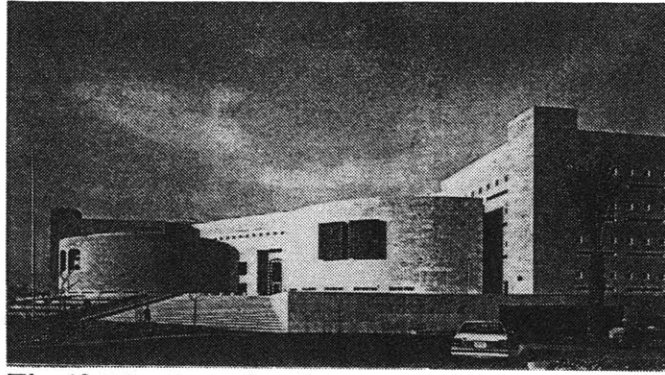
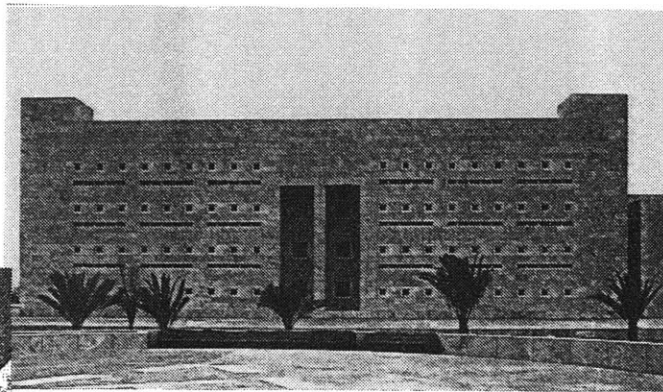


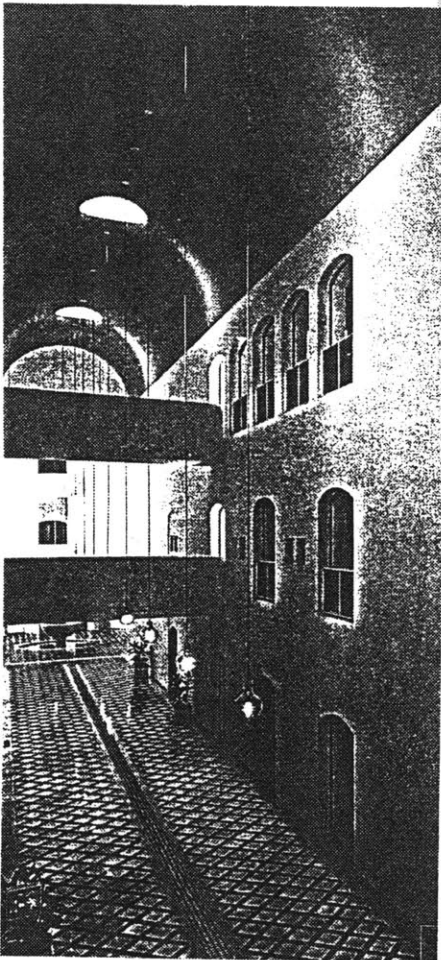
Fig.39 Central atrium space.



**Fig.40** The front facade.



**Fig.41** Side facade.



**Fig.42** Internal street corridor.



Fig.43 Internal spatial configurations.

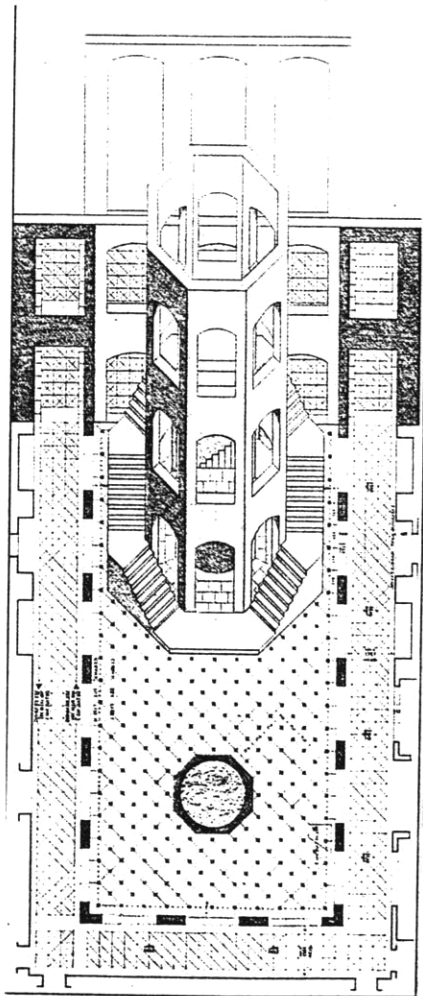
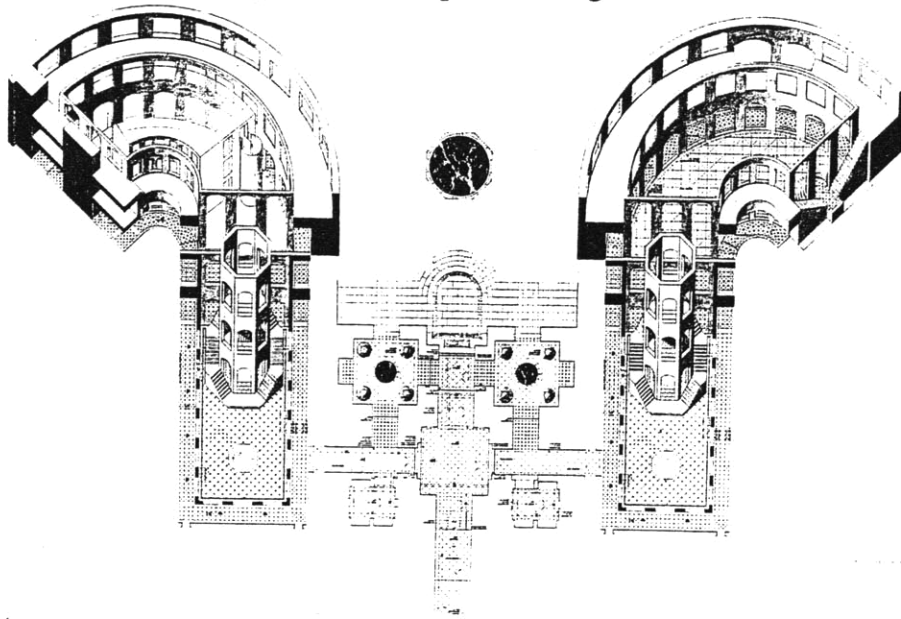


Fig.44 Internal spatial configurations.

## Architectural Research Programme III

### The Presidential Palace in Bagdad, Iraq

Architect: Rasem Badran.

In 1987 the Iraqi government announced an international competition for the design of a new presidential palace in Bagdad. The competition called for the construction of a complex to accommodate presidential offices, ceremonial facilities and a secretariat. This architectural research programme focuses on the project (fig.45) submitted by architect Rasem Badran.<sup>1</sup>

The hardcore of this architectural research programme is comprised of the basic assumptions behind Badran's architectural approach. Badran intended to relate architecture to place and culture. On one level, architecture is considered as a cultural artifact, a manifestation of social and cultural norms. "I believe architecture to be the mirror of society in all its aspects and a historical document that is hard to forge."<sup>2</sup> Subsequently, the new architectural work is to be relevant to the society and culture. "I hope that the design...will represent an improvement...in the direction of reestablishing harmony between today's Islamic society and its architecture."<sup>3</sup>

On another level, Badran regarded architecture to be closely related to the special characteristics attributed to place<sup>4</sup> and environment. This implies, on a theoretical level, that design should take into consideration those inherent characteristics that make

1- It is worth mentioning here that for the competition the project is in a preliminary design stage.

2- Rasem Badran. "The Jamea Mosque, Qasr Al-Houkm" *Albenaa* 36, p.4 [ English translation].

3- Rasem Badran. The Aga Khan Program for Islamic Architecture Symposium (1987), Cambridge MA (1988) p.159.

4- Place has acquired so many meanings in the architectural literature; however, it refers here to Iraq as a geographical and historical region.

up a coherent character of a place.

This cultural concern and place-related architecture can be obtained through different architectural approaches. Searching for an appropriate way to achieve his goal, Badran referred to the past as a source of inspiration and references for the new architectural work.

This approach was developed, as we have seen in the Riyadh project, as a contextual architectural approach in conformity with the design conditions. However, in the project for the presidential palace in Bagdad the circumstances are different.

Though it has a strong regional, geographical and political identity, Iraq has historical and cultural connections that transcend its regional boundaries. Iraq also has a pre-Islamic historical heritage as significant and as recognizable as the Islamic traditional one. How is one to decide to which past one should refer? What criteria can be used for selection in order to cope with these circumstances?

Badran dealt with this problem of selection by defining two realms to which one refers. On the one hand, the cultural heritage is considered a source for precedents: "[to] make use of the cultural heritage of a society and still meet the requirements of the contemporary life"<sup>5</sup> This notion of "cultural heritage" acquired different meanings in the Arab-Islamic world. For Badran, in this project, the "cultural heritage" refers to the general Arab-Islamic culture, with emphasis on the local Iraqi tradition. Because it is assumed to be the authentic manifestation of the culture, the selection of precedents is bound to the local and Arab-Islamic traditional architecture. Thus, we see in this project for the palace in Bagdad references from traditional Iraqi architecture as well as from different Arab-Islamic countries. For example figure ..... shows the Abbasid palaces of Samarra and Ukhaidir in Iraq, the Qairawan mosque in Tunisia and the Dome of the Rock in Jerusalem as design references.

---

<sup>5</sup>-Badran, Rasem. "Historical References and contemporary Design" *Theories and Principles of Design in the Architecture of the Islamic Societies*, The Aga Khan Program for Islamic Architecture Symposium (1987), Cambridge MA (1988) p.149.

On the other hand, an interest was to relate the new work to its place, or geographical and climatic region. Thus, Badran perceived the new work as a continuation of the accumulated building tradition of this locale. This accumulated tradition reflects the historical wisdom of dealing with the climatic, geographical, and environmental aspects, and the use of available building materials and techniques. Therefore, we find in this project historical references from Iraq of the pre-Islamic, as well as, Islamic period: the ziggurat, the Babylonian palaces, and vernacular urban architecture (figs.55,59,60).

In his work for the competition of the State Mosque in Bagdad, which was similar to this competition, Badran took the same cultural bound and local architectural approach. "Our aim is to create an Arab Islamic complex: Unmistakably Iraqi, unmistakably contemporary, and understandable to anyone, educated and unsophisticated alike, from whatever part of the world he may come."<sup>6</sup> This expresses the architect's attempt to achieve balance between his dual interest in the general Arab-Islamic culture, and the local Iraqi characteristics.

Hence, the process of selection is confined to two realms of historical inquiry: place related precedents and culturally-rooted precedents. But how is one to choose from the diverse amount of precedents within these geographical and historical contexts? Badran had to contend with a proliferation of references and choices through different interpretations. One approach is concerned with the general typological and elemental principles and ideas and the other focused on the symbolic and iconographic qualities of the precedents and their association with the culture.

The selection from the Arab-Islamic tradition is confined to monuments and 'masterpieces'. The focus is on the typological principles and spatial organizations as general rules for design; however, architectural elements and forms were interpreted and used for their iconographic and symbolic qualities to represent the different Arab

---

6- Rasem Badran. " Regenerative Approaches to Mosque design: Competition for State Mosque, Bagdad." the architects statements. Mimar 11 (Jan.- March 1984) p.52.

regions in selected areas of the project. This idea of symbolic elements was a direct request from the client to provide the building with quotations from the Arab-Islamic world. The same request was mentioned in the previous competition for the State Mosque in Bagdad: " The State Mosque is of such magnitude and importance that it should reflect in certain spaces to be selected by the competitor, and confined to those spaces, certain stylistic features from such Islamic countries as Egypt, Morocco, Syria, etc."<sup>7</sup> Thus what they have asked for are quotations that symbolize the different regions and countries.

Badran's main emphasis was in relating his work to the local culture. As a result, the major references and inspirations were derived from the Iraqi traditional heritage, both monumental and vernacular. The intention was to deduce the underlying principles and design rules as well as the elements and forms that make up an architectural vocabulary, for its symbolic and visual qualities. References therefore, from the round city of Bagdad ( fig.48), the Ukhaidir palace, the Samarra palace (fig.52), Khan Murjan (fig.47), and traditional Iraqi houses (figs.52)<sup>8</sup> were used in this project. Sometimes the same reference was used both for form-space rules of organization and for its visual and symbolic merits, as in the case of Ukhaidir palace.

The place-grounded precedents, the historical tradition of building in Iraq, mainly vernacular architecture, were used to infer principles and basic relationships of climatic adaptations, use of material, landscaping character, topographical and site modifications, and the architectural elements of local character. Therefore, precedents were chosen for both their visual qualities and the accumulated wisdom of dealing with the environment. For example, Badran's use of brick as a building material in this project is an indication of this place-grounded selection. The same idea was used in his previous work for the State Mosque in Bagdad. Relative to that project, Badran said: "The fired brick which is a local building material was adopted in both structural work and the cladding. Because it dictated regional formal characteristics by its very nature, it

---

7- Mimar editors. " Regenerative Approaches to Mosque design: Competition for State Mosque, Bagdad." From the competition statements. Mimar 11 (Jan.- March 1984) p.46.

8- The references for the Bagdadi traditional houses are less important and less articulated at this point, because it will appear in the detailing stages of the project.

too formed an element of continuity between contemporary architecture and regional building traditions."<sup>9</sup>

This multiplicity of interpretations and diversity of references is defined and controlled by the rejection of opposing approaches, and rival architectural research programmes. In this regard, rejecting the Modern architecture as an alien, imported architecture, with no sensitivity to place or culture serves as negative heuristic for this research program. Badran said: "we hope the final outcome will demonstrate the advantages of the local architectural heritage over foreign imports that have made the Arab Muslim isolated from his own surrounding."<sup>10</sup> This implies the rejection of all imported theories and architectural forms that are not culturally-rooted or locally developed.

While the negative heuristic defined and limited the selection of precedents within the desirable domains, the positive heuristic, in contrast, directed the programme toward exploring the potentials of acceptable references, and facilitated their interpretation. In this respect, the interpretation process and obtaining the appropriate knowledge about the historical precedents at hand are essential tools for design decisions.

Badran developed his own means of studying and interpreting the precedents. Books, photos, site visits and experiences in previous works all comprise important sources for historical information and facilitate the interpretation process. This historical information is usually interpreted and analyzed in a series of sketches and diagrams. So, sketching was used as a prime tool, "a heuristic device,"<sup>11</sup> for analyzing and interpreting the precedents.

In Badran's sketches we find different levels of interpretation and analysis: the abstract

9-Rasem Badran."Historical References and Contemporary Design." The Aga Khan Program for Islamic Architecture Symposium (1987) p.153.

10- Ibid.p.159.

11- Peter Rowe in his book *Design Thinking* defined the term heuristic as: " In short, heuristic is a term that is applied to specific problem-structuring devices ranging from explicit decision rules of type discussed earlier to a wide variety of analogies, analogs, and models. It is also applied to general kinds of procedures for guiding the search for solutions." p.75.

geometric order, the spatial types, the general organizations, the architectural elements, the visual compositions, the symbolic forms, the details and so forth. These different readings depend primarily on the architect's intention and the problem at hand.

Badran interpreted the Abbasid round city of Bagdad on different levels. Figure (46) shows the plan of the old city of Bagdad as published in Hoag's Islamic Architecture, one of the most available references for such historical information. In Figure (48) Bagdad had interpreted the plan as a circle inside a square. (It is worth noting here that the site is square ). The same north orientation was kept in his plan as in Hoag's so the emphasis was on the 45 degrees axes, and the center. At the intersection of the 45 axes with the circle, Badran emphasized the four gates of Bagdad. The center of the circle is highlighted by the mosque-palace complex tilted 45 degrees to face Mecca. The rest of the city is represented as a continuous fabric of urban structure with courtyards (not drawn in Hoag's plan), organized as circular rings around the center, with radial streets. In figure (48) the same city is analyzed on a different scale, studying the gates as a sequence of urban spaces.

In figure (55) the ziggurat was analyzed as a relationship between the form, the ground and the water providing a principle ground-object relationship and massing configuration, as well as an image of the natural Iraqi environment with water and palm trees.

In figure (59) traditional Bagdad urban houses were studied as spatial organizations of social relationships. Thus we find studies for the relationships of different private and public spaces: entrance, courtyard, riwaq and internal spaces of different floor levels. Courtyards also were studied as environmental devices for ventilation, shading and lighting. Sections through the courtyards present Badran's interest in the visual quality and decorative elements of the internal courtyard facades.

In figure (52) different architectural monuments from the Arab-Islamic world, such as the Dome of the Rock, the Samarra and Qairawan mosques, the Ukhaidir palace, the

palace in Samarra, were analyzed for their basic organization, axuality, centrality and space-mass relationships. Although detailed information was available about these monuments, the architect chose to interpret them as abstract and general relationships.

It is apparent in figures (56,61) that the elevational images and openings of al-Ukhaidir palace were depicted and analyzed to provide the vocabulary for architectural expression. Emphasis was placed on the towers, the small openings, the pointed arches and the brick work. The same process was applied to diverse references from the Arab-Islamic world which were analyzed to deduce the character of that region in order to be used in certain confined places.

The wind towers of Iraq and the Gulf area (fig.62) were studied for their functional use as ventilation shafts, and as aesthetic and visual elements. The al-Hambra domes, Khan Murjan and other buildings were interpreted as structural roofing systems of ribs, vaults and beams. This structural reading of the building is an influence of Badran's early modernist education.

As we have seen in these sketches, the process of studying and analyzing the precedents is not a historic documentation of the elements, it is an evaluative selection and interpretation of these precedents so as to be ready in the most effective way for implementation and transformation within design decisions.

The design proposal shows the transformation of the selected and interpreted precedents. These precedents were, by the architect's decision, abstracted and modified to fit the project circumstances. The use of historical precedents in this design can be perceived as two levels of employment. On the first level the rules and abstract principles were used in an abstract way. Thus, there was no need for direct reference to the original precedents as in the case of the Dome of the Rock, the Qairawan mosque and Samarra palace. On the other level, elements, ideas and forms were derived directly from distinguished references and dependent on their association with their origins, for example the Ukhaidir elevation, the round city of Bagdad and vernacular residential streets.



The site is a suburban, undeveloped flat area. The layout organization (fig.49) follows two ideas. In figures (48,50,51) the project is conceived on two levels, first as a city, and second as an urban block within a larger suggested urban fabric. The site plan (fig.45) is therefore an outcome of the square organization which follows the site edges, and the circular form recalls the plan of old Bagdad. This is achieved by emphasizing the corners of the square to give the idea of a block and thus to allow for urban street space through future extensions. Badran saw this project as an opportunity to suggest guidelines and initiate a new extension in this area. As for the idea of a city, the central portion of the streets' edges from two sides followed the circular plan which shaped also the edge of the artificial lake suggested on the North-Eastern side of the site.

The basic massing organization follows the Bagdad model, where the project is conceived as a central block with peripheral structures surrounding the center (fig.51). "The planning of Bagdad during al-Mansur era was a circular city with a mosque and palace ( Dar al-Khilafa ) at the center surrounded by layers of ring-like residential and commercial urban fabric connected by radial streets," Badran argued, and "this reflects the social and political structure of a relationship between the leader and the people."<sup>12</sup> Thus, on a conceptual level, an analogy to this model is achieved by breaking down the program requirements into four main sections which were conceived as layers around a central area. The central area is occupied by the main reception and ceremonial court, then the president's offices form the first layer, the diplomatic affairs and reception facilities the second layer, while the outer layer is designed to accommodate the secretariat and bureaucratic offices.

As for the built form, the first three sections, the reception hall, the presidential offices and the reception facilities, were conceived as one structure to symbolize the palace building, while the outer layer is considered the surrounding urban fabric (fig.54). In order to highlight this relationship between center and periphery Badran chose to rotate the palace, the central building, 45 degrees to face Mecca, while the outer part follows

---

12- Rasem Badran. the report for the Presidency Palace in Bagdad. [ in Arabic].p.4.

the northerly site orientation. This idea of juxtaposing the central part and the surrounding structures is derived from two references: one is the general conception that in the Islamic city the urban fabric follows the site conditions while the mosque as a center is always oriented towards Mecca. The second reference is the historical plan of old Bagdad where the central Mosque and Dar al-Khilafa palace were oriented towards Mecca, as contrasted to the rest of the urban fabric. It is worth noting that in the early design sketches of this project Badran proposed the same central complex of mosque and palace as in Bagdad, but later on the mosque was replaced by a small hypostyle hall attached to the palace.

This was not the first time, however, that Badran used this idea of breaking down the project into two juxtaposed parts to achieve an urban context evoking the traditional towns. In his previous work for the State Mosque competition (fig.64) he had used the same idea: " To counteract the colossal impression these requirements would make we decided to provide an urban texture and character to the project. Such an approach would also help to make up for the building's isolation. We used the building required for the mosque's ancillary functions to provide a composition that approximated that of a city. The complex was conceived as an urban cluster."<sup>13</sup>

The palace proper (figs.54,52) is organized as a central hall surrounded by two layers of rooms which open into courtyards, a spatial organization recalling the Abbasid palaces in Iraq with one significant alteration the covering of the courtyard to serve as the main hall. The central hall is distinguished and emphasized by another rotation of the inner square plan so as to produce an octagonal plan (fig.58); the left over spaces are designed, in addition to their function as structural supports, to serve as towers for lighting and ventilation (fig.62), an idea taken from the vernacular residential architecture in Iraq and the Gulf area.

The roofing system (figs.52,58) for the central hall was designed following different

---

13- Badran."Historical References and contemporary Design." Theories and Principles of Design in the Architecture of the Islamic Societies, Aga Khan Symposium (1987).p.151.

ideas and references. It is conceived as a double layered dome, the structural elements are beams and ribs and recall al-Hambra ribbed domes while at the same time making use of Khan Murjan vaulting system (fig.47) where the arched beams allow for lighting through side openings. This manipulation of structural elements for aesthetic purposes has its historical references, but it is also an influence of Badran's initial modernist education and design thinking.

The project had seven gates, named and symbolically directed towards the different Arab countries and regions, as Bagdad gate, Mecca gate, Bilad al-Sham gate, Morocco gate, etc. This idea of gates named for the directions in which they lead is well known in the Islamic cities as in Jerusalem, Cairo and Bagdad. In the circular city of Bagdad there were four gates. "The four gates, halfway between the cardinal points and surmounted by four golden-domed audience chambers, looked out on a major directions of the empire: the Khorassan gate toward the northeast, the Kufa gate toward Mecca and the southwest, the Shami gate toward Byzantium and the northwest, and the Basra gate toward India and the southeast."<sup>14</sup>

Badran enhances the relation of the gates with the countries and regions from which they took their names by designing each gate to reflect the country or region to which it orients. Thus we find the Egypt gate with spaces and images recalling Mamluk architecture in Cairo, Moroccan architecture in the Morocco gate, and so forth (fig.53).

The internal corridors and pathways are designed so as to approximate the traditional vernacular and urban streets of Bagdad with second floor projections, Mushrabyyas, covered alleys, decorative brick work and so on. This is apparently shown in figures (60,63).

The artificial lake and landscaping is meant to give the impression of the Iraqi environment (fig.55). The architectural image is derived from the Abbasid monuments emphasizing the fortress palace image of circular towers and small slit-openings (fig.56). The project is designed as three layers in a stepped pyramidal composition

---

14- John D. Hoag. " Islamic Architecture." Academy Edition, London (1977),p.34.

(fig.57). This inevitably recalls the ziggurat historical buildings, especially from the lake side where the palace central building sets on a platform, a sloping earth mound resembling the ziggurat base (figs.54,55).

The same element of platform was used also in the Bagdad State Mosque competition (fig 64). However, in this project, a more integrated relationship is achieved between the building and the ground because the platform is confined to the palace proper leaving the surrounding structures accessible from the street level.

This project, although reflecting a genuine attempt to balance the local particularity and the Arab-Islamic general culture, has nonetheless raised two problems: By using a complex diversity of precedents it creates the problem of synthesis, of integrating different elements from different sources together in one project. And secondly, the confusion in the external image between the Islamic palace and the ziggurat temple raises the question of form and meaning.

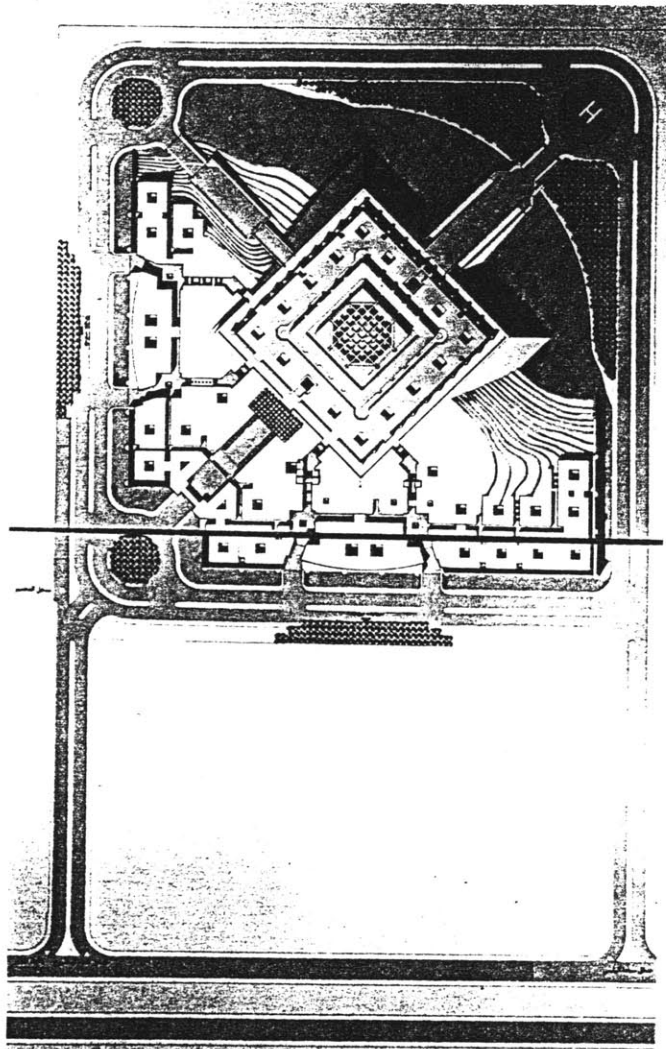


Fig.45 The Presidential Palace, site plan.

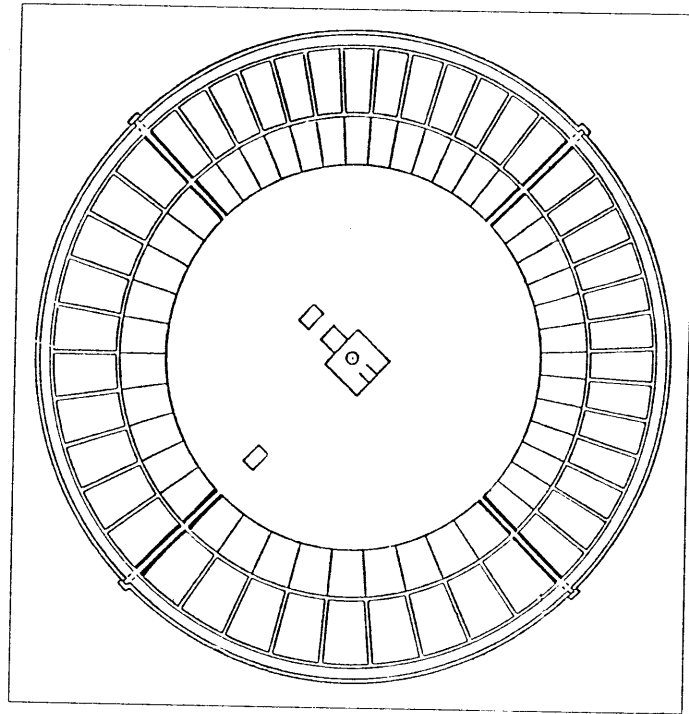


Fig.46 Bagdad, plan of al-Mansur's round city, 762-766. (Hoag)

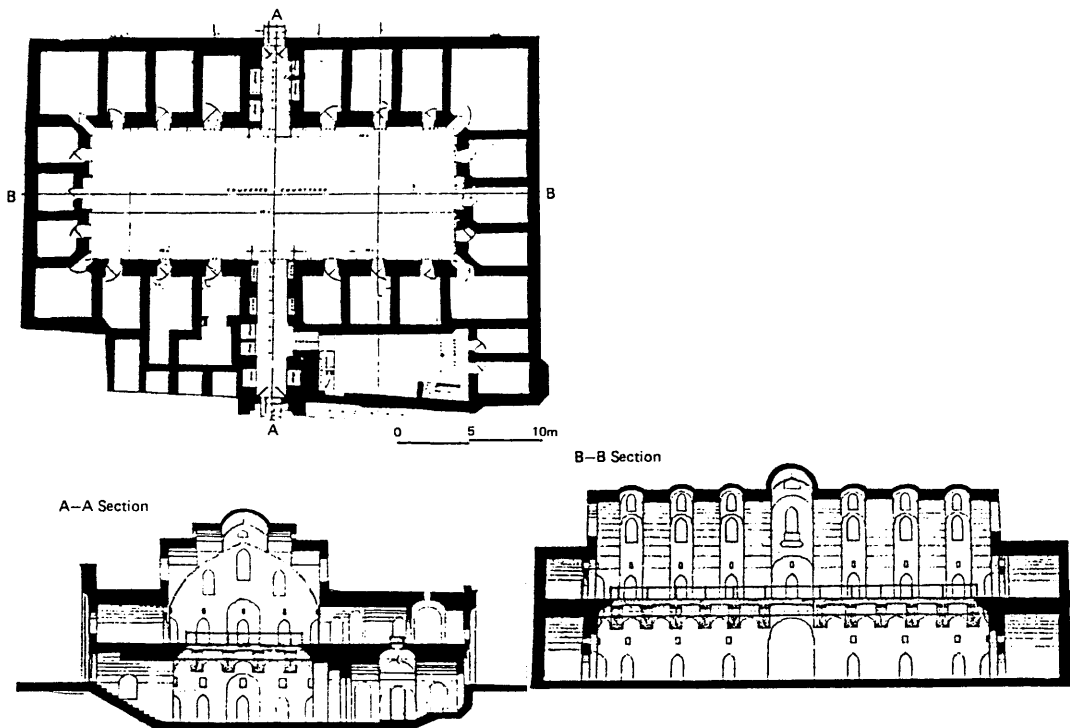
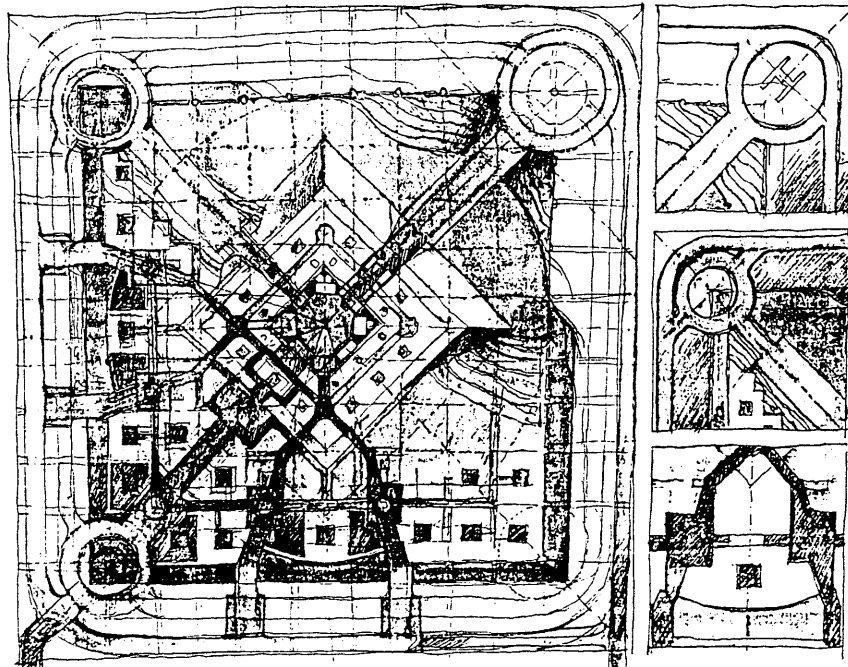


Fig.47 Khan Murjan 1356, plan and sections.





دوسرے المذنبہ المذنبہ معرکہ و المذنبہ  
المذنبہ المذنبہ معرکہ و المذنبہ

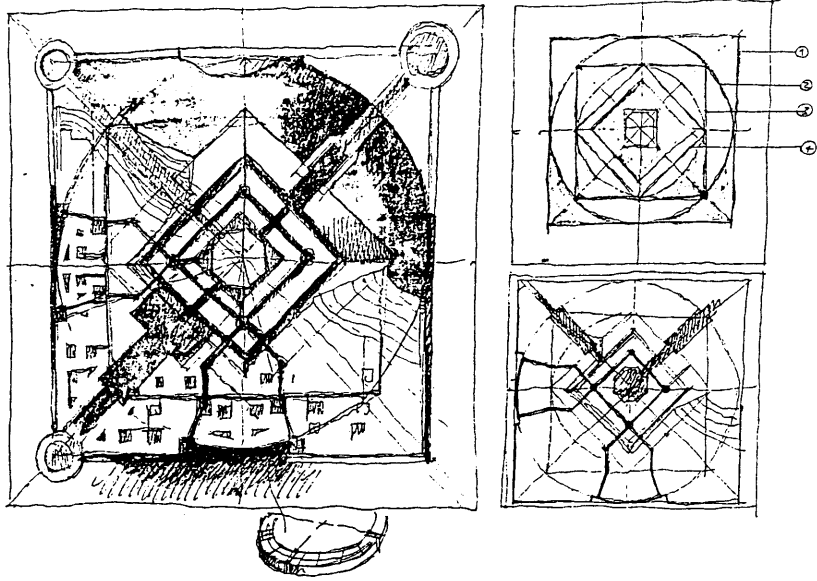


Fig.49 Design sketches, site plan and its basic geometry.



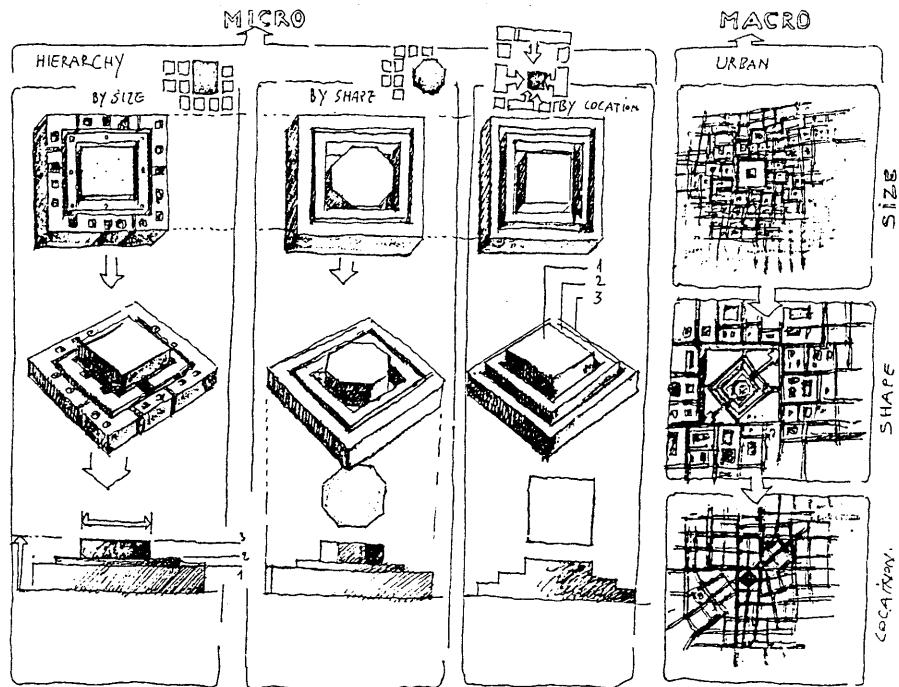


Fig.50 Basic organization and the idea of a city.

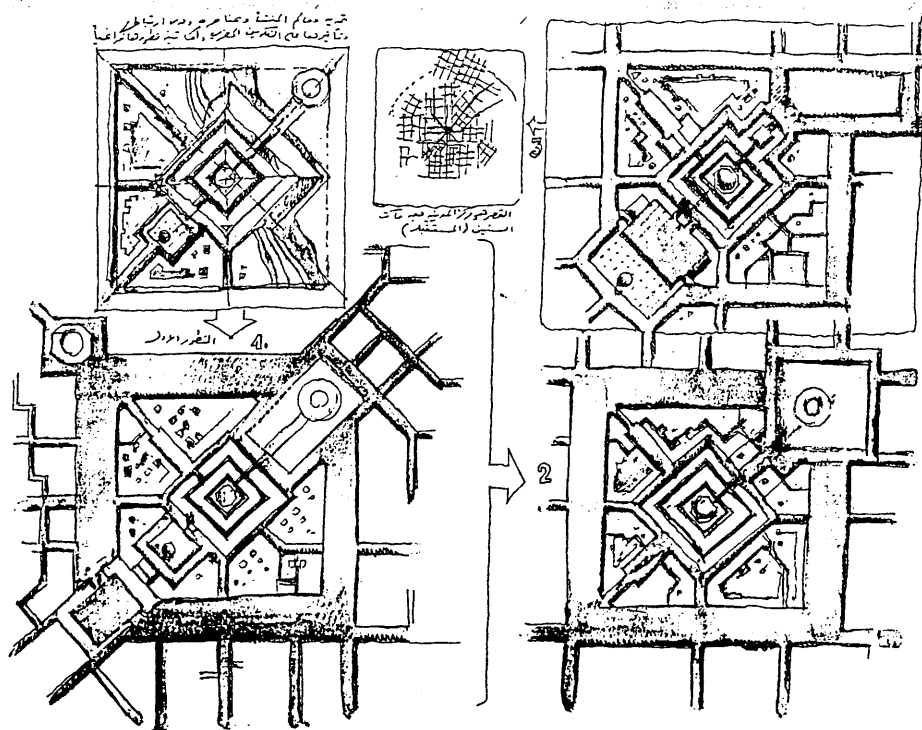


Fig.51 Design alternatives of the central building.

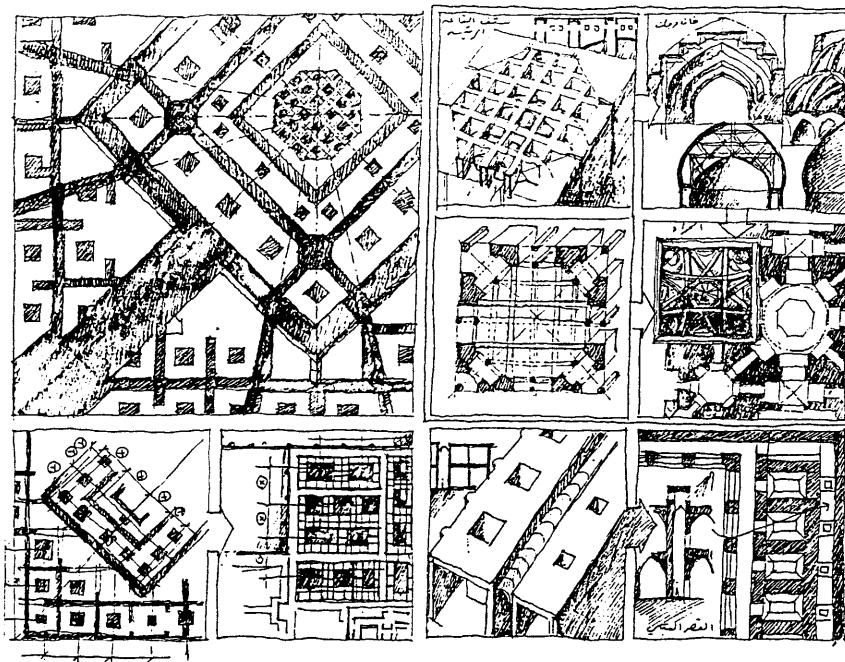
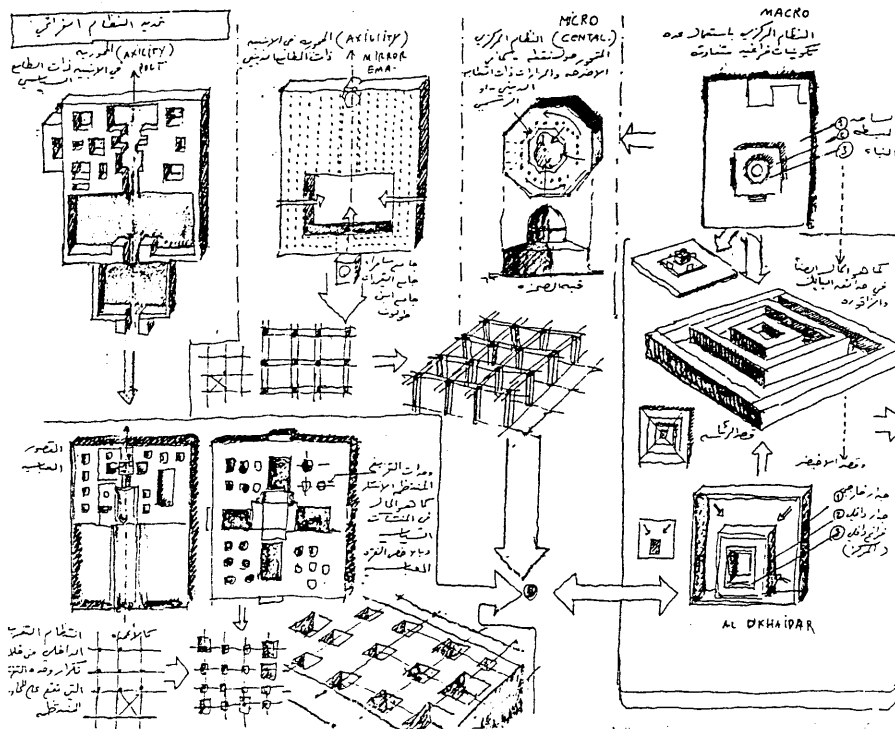


Fig.52 Analytical studies.

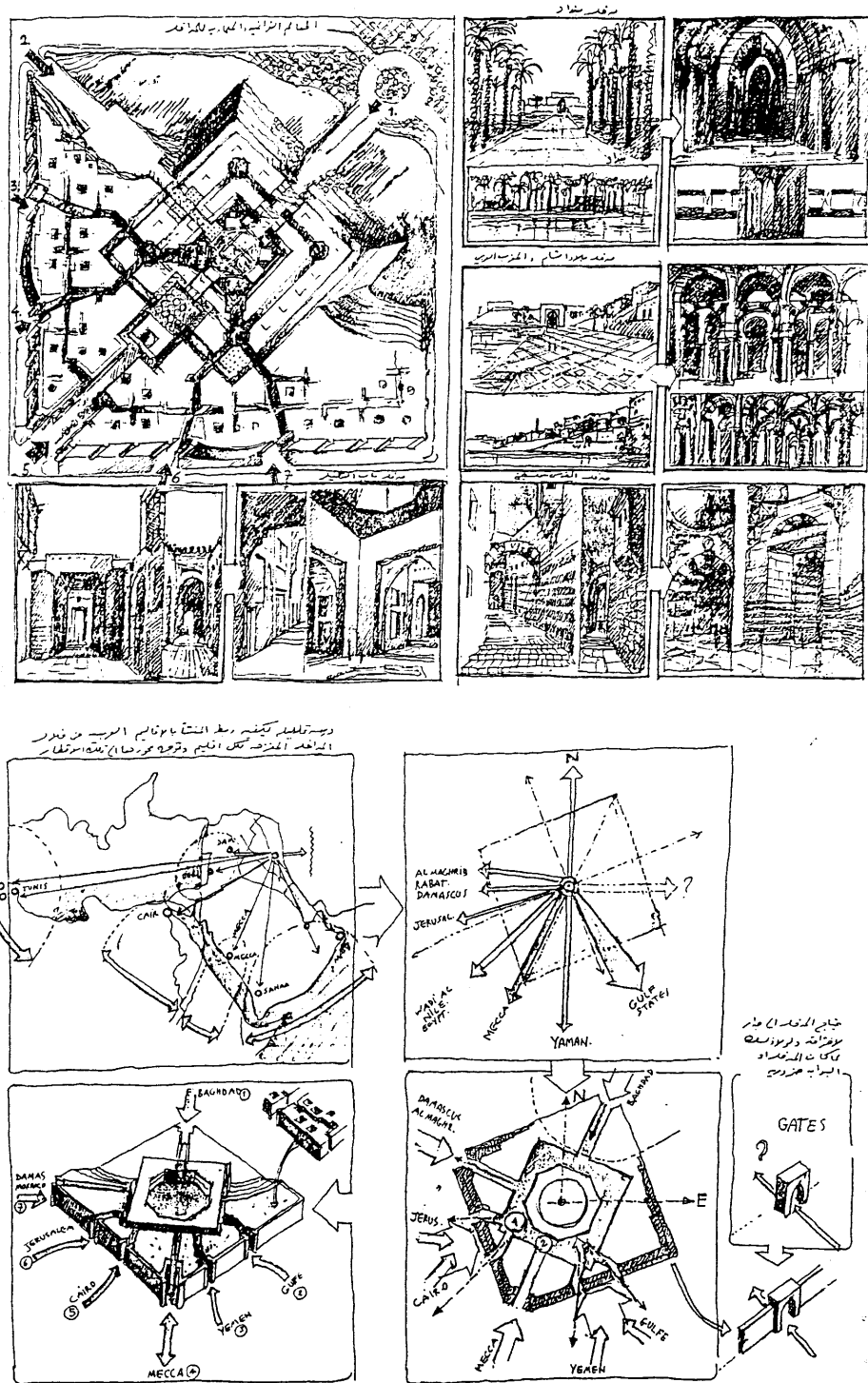


Fig.53 Design studies for the palace gates.

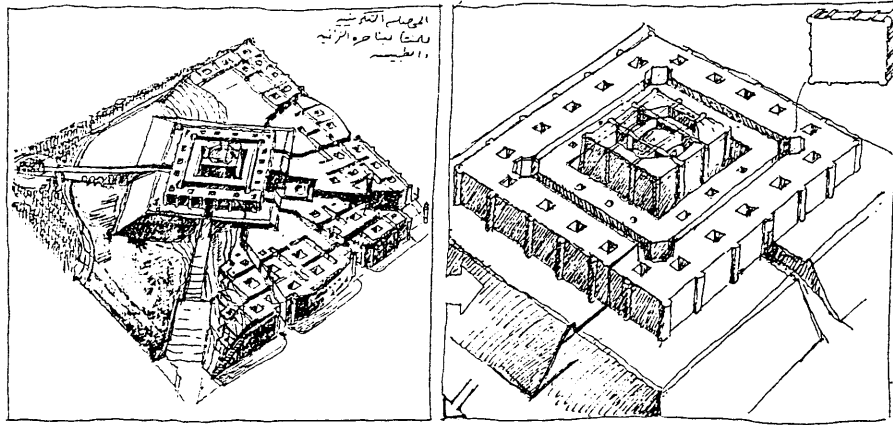


Fig.54 Isometrics for the whole project and the palace building.

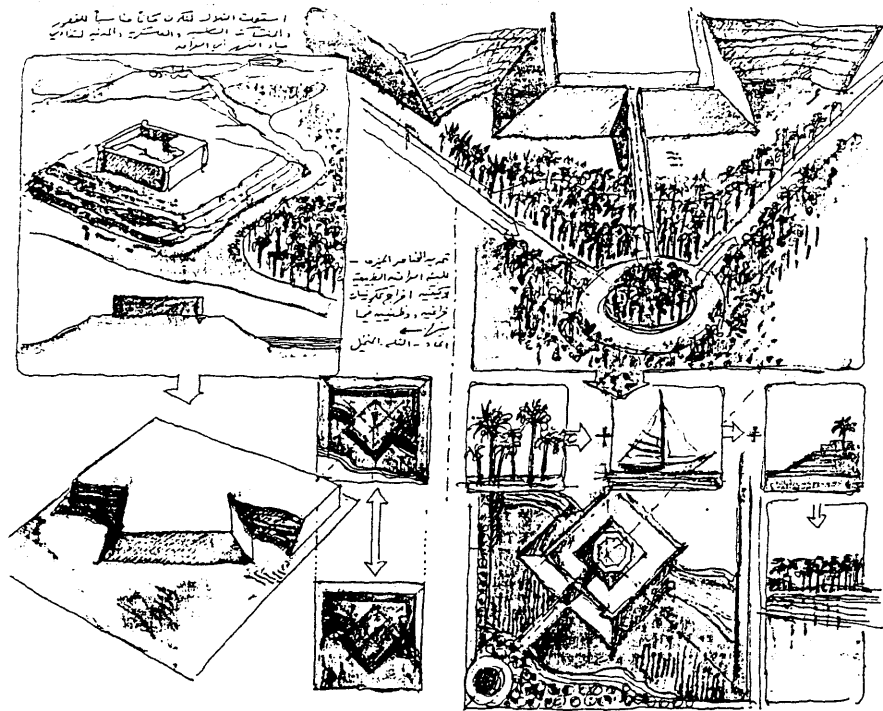


Fig.55 Design studies of Iraqi landscape.

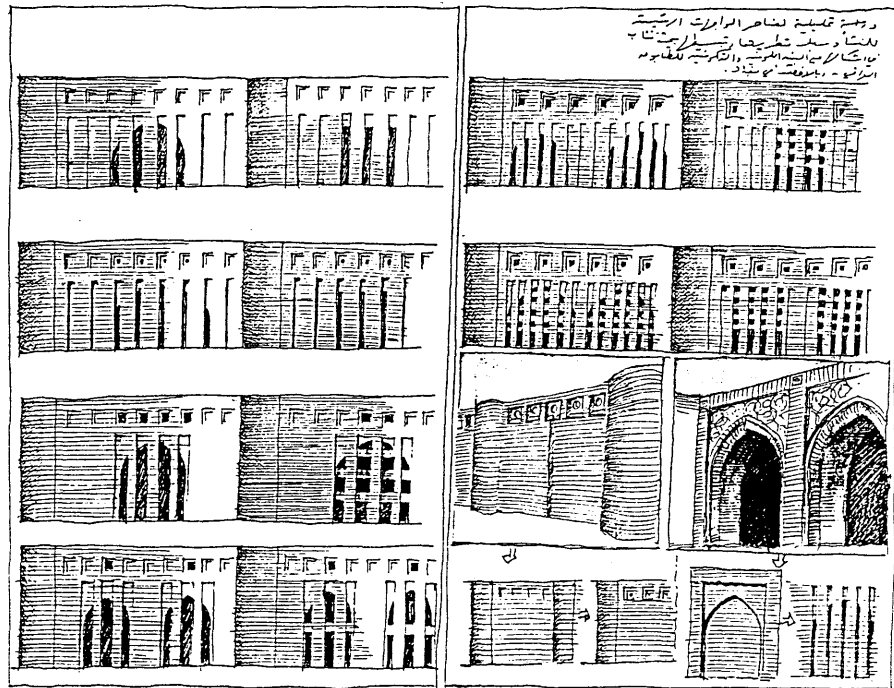


Fig.56 Analytical studies of traditional facades, Abbasid.

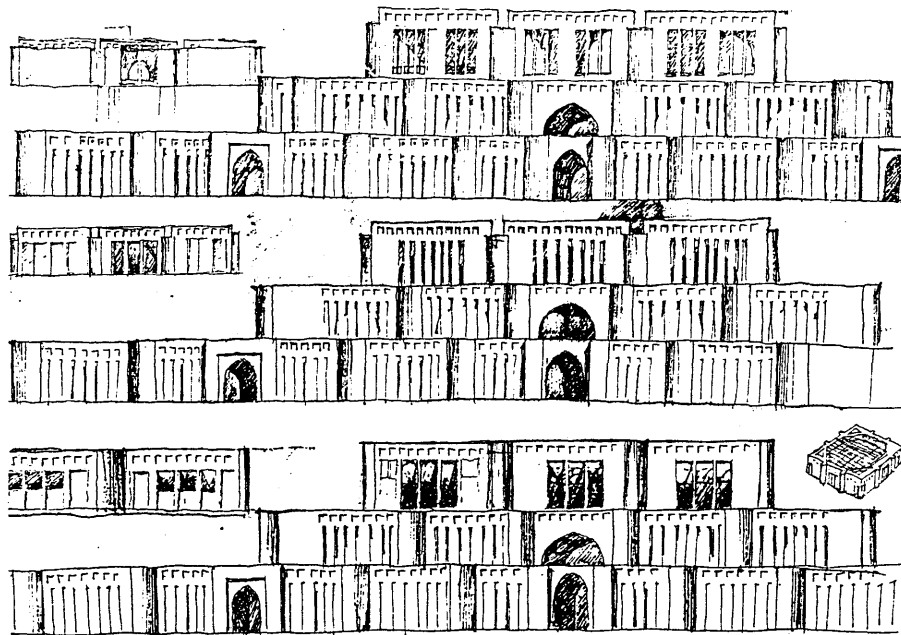


Fig.57 The external facades of the project.

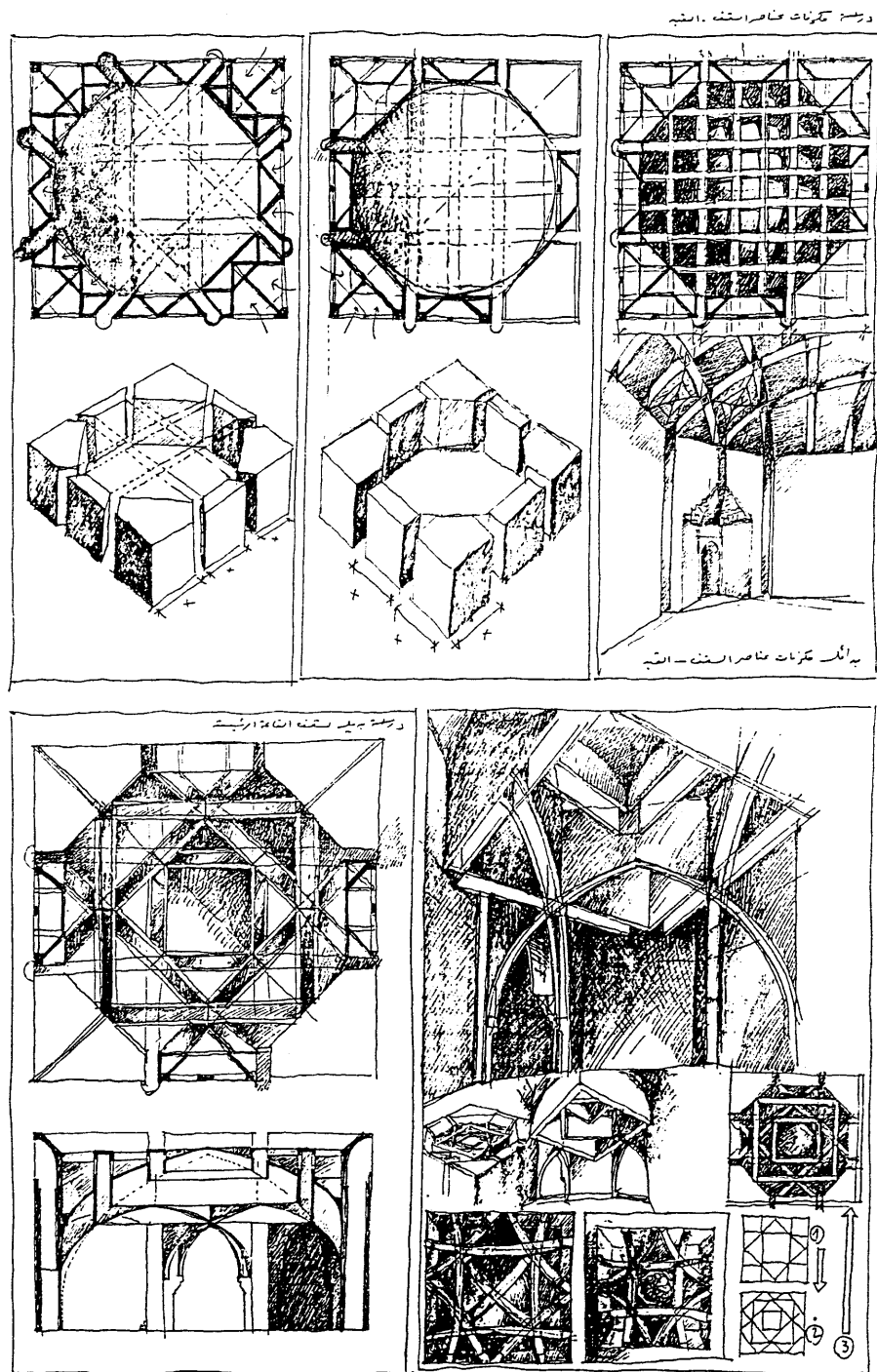


Fig.58 Design studies for the central hall dome.

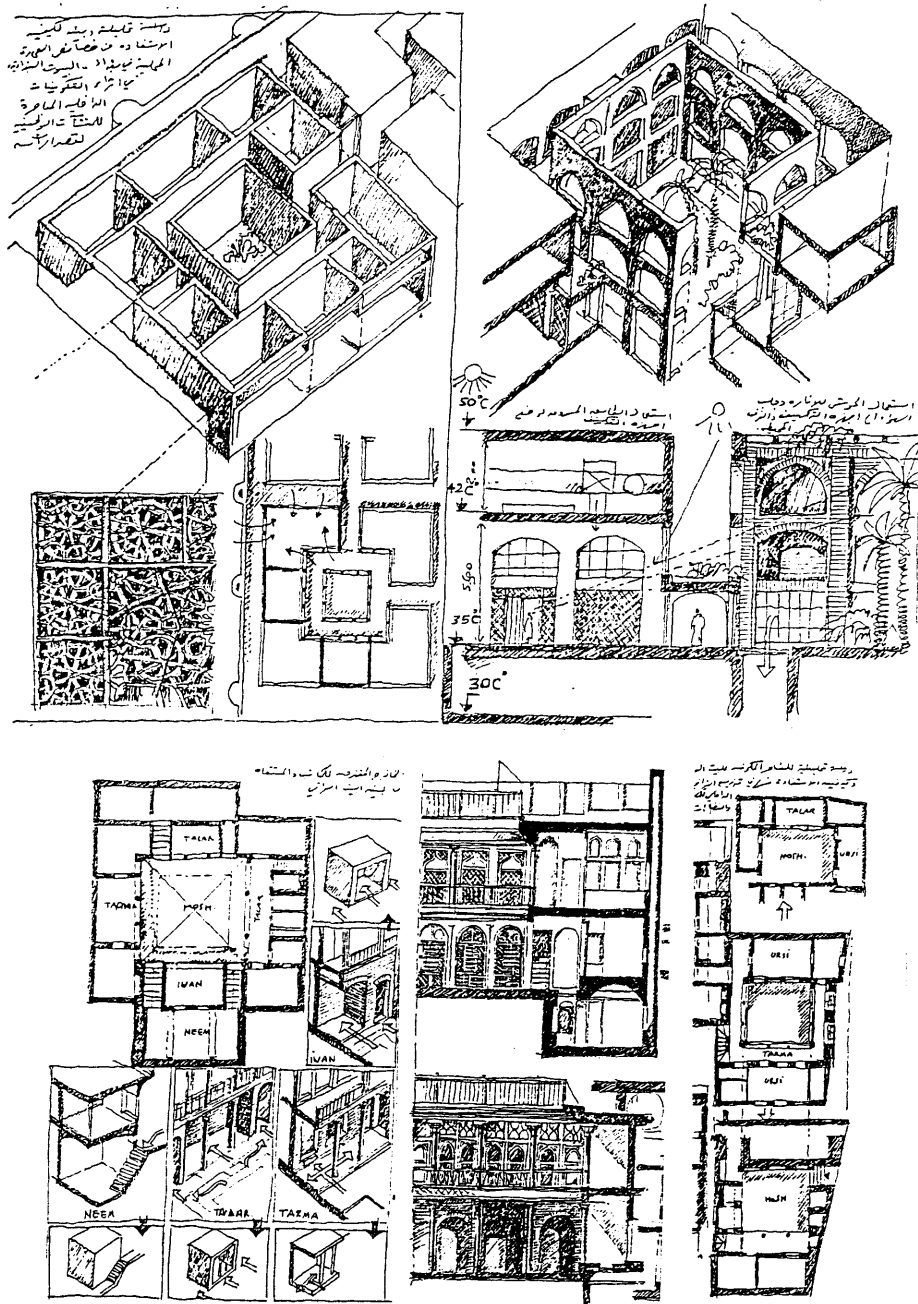


Fig.59 Analytical studies of traditional Bagdadi houses.

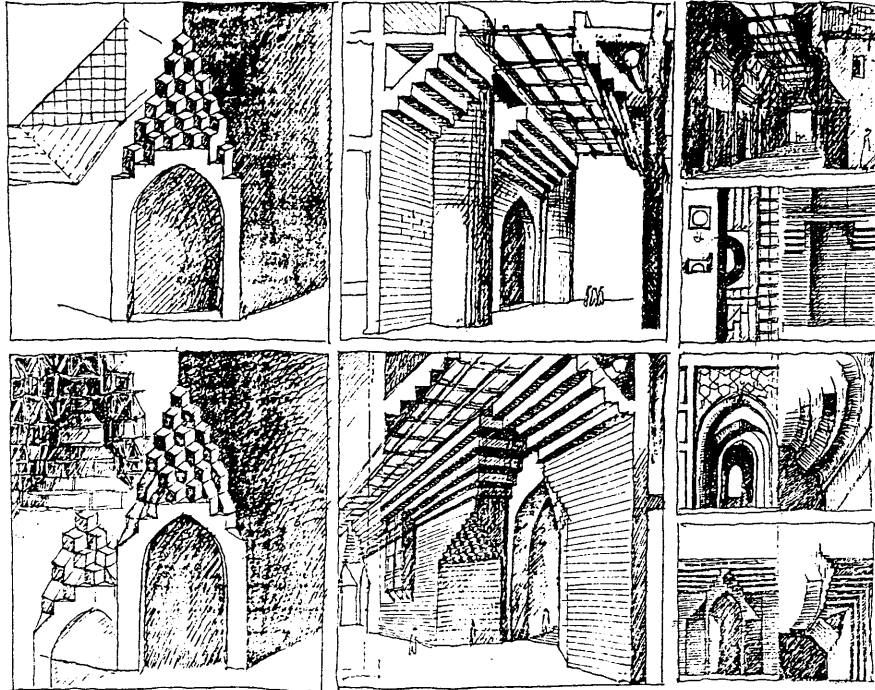


Fig.60 Analytical and design studies for traditional Baghdadi urban streets.

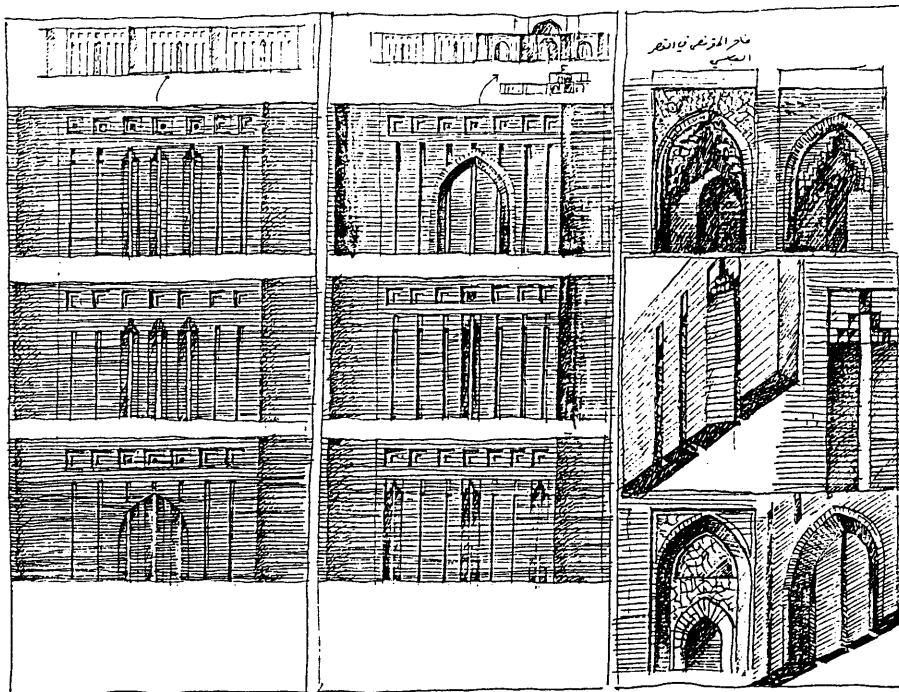


Fig.61 Analytical studies of traditional openings, Abbasid.



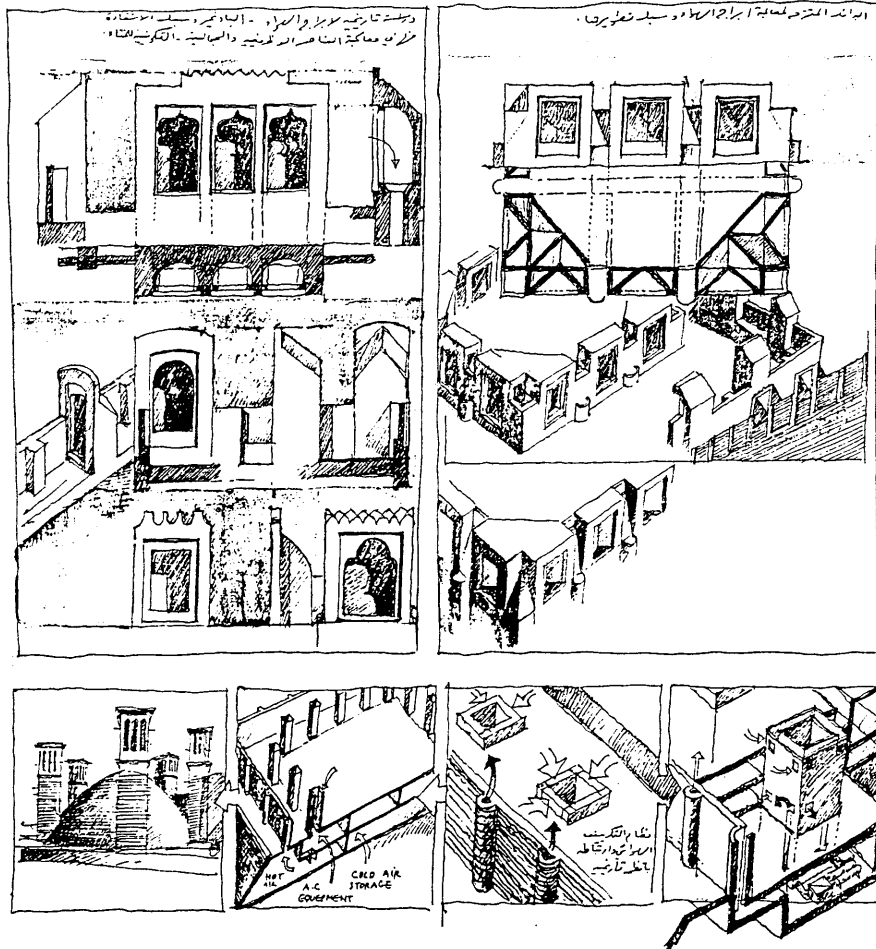


Fig.62 Analytical studies of wind towers.

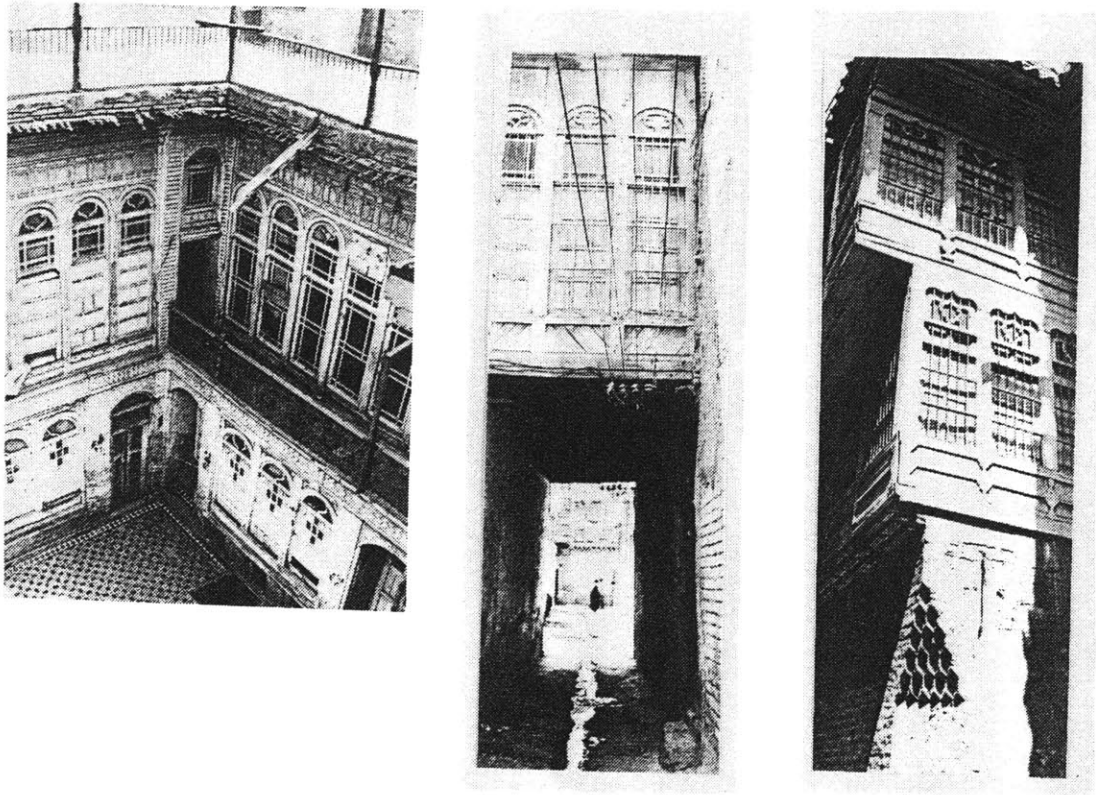
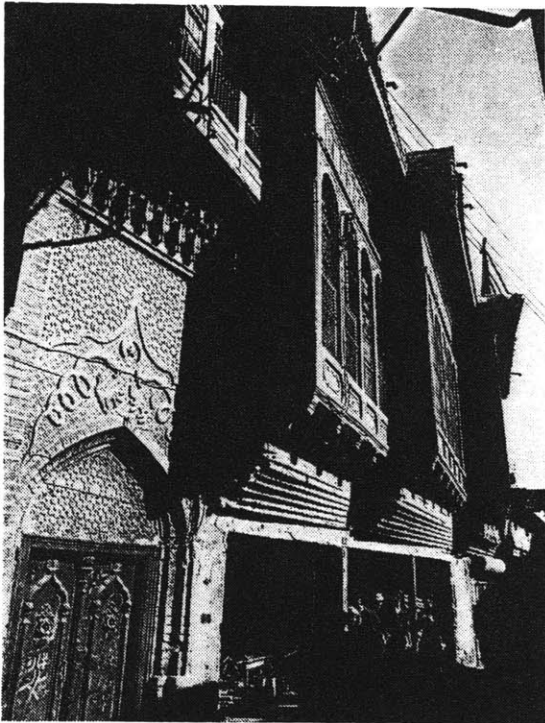


Fig.63 Views from traditional Bagdadi houses.



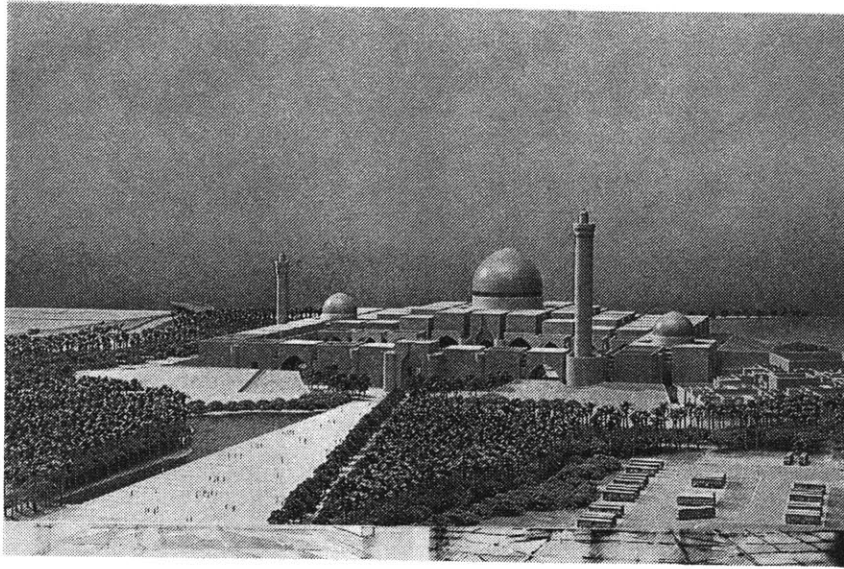
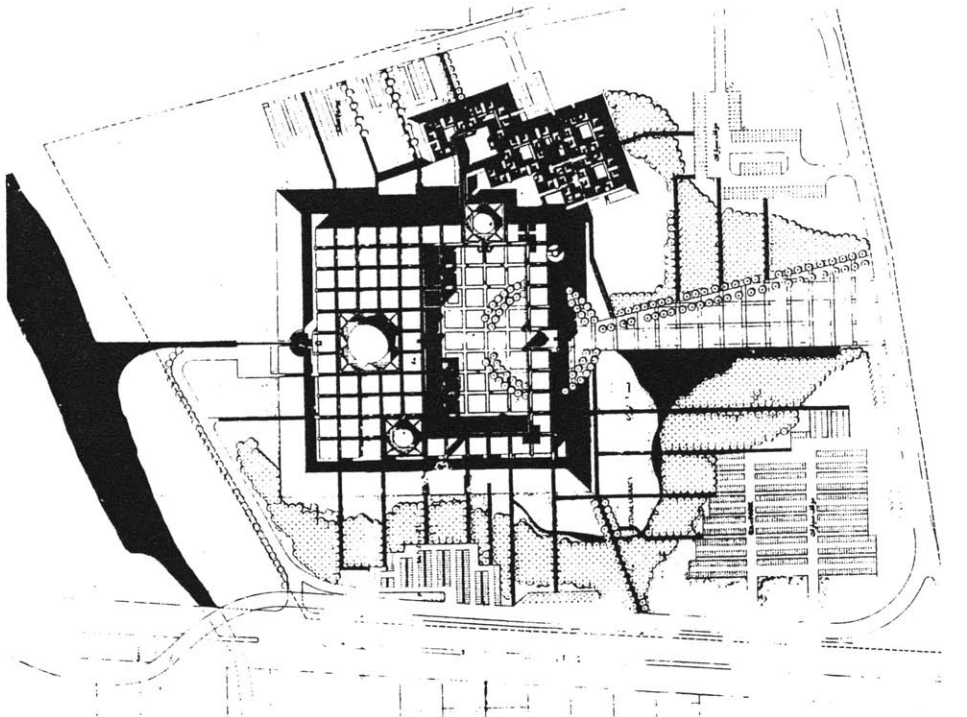


Fig.64 Badran's project for the State Mosque competition, Bagdad.



**CRITICAL SYNTHESIS**

So far, each research programme has been presented as an architectural approach towards culture and place. Each research programme claims a different rationale through which the use of precedents is justified and defined. The common denominator among the three programmes is a rejection both of literal copies of traditional works and direct importation of universal models of modernity. However, they have demonstrated substantial differences in the definition, understanding, and utilization of tradition. It is helpful here to portray the three research programmes as follows: The two Riyadh projects as two extremes; Badran's Qasr al-Houkm reflecting the confined local contextual, and Larsen's MOFA representing the general and abstract approach. While the Bagdad research programme, the presidential palace, can be viewed as exploring the territory between the two extremes, trying to achieve balance between the local particular and the general.

In this section a critical review of the three research programmes is mobilized through the three operational questions of selection, interpretation and transformation. My main argument is that each project manifests a complex consequence of contextual circumstances and design conditions. It is not my intention to construct one single model against which all programmes and projects can be examined, but rather an attempt on internal discussion of each programme which reveals the critical issues and yet acknowledges the specifics of each case. Of crucial importance to my research is to unveil the different stands towards the issues under discussion.

## **I- THE SELECTION.**

The central concern of this part is to determine on what bases selection is to be grounded: This brings to light issues related to the theoretical position of each research programme:

- The definition of culture and place, the particularity of the local versus the generality of

Arab-Islamic culture.

- The issue of form and meaning, the question of displacement of forms and principles across time, geography and type, and the fixity and changeability of meaning.
- The question of abstract rules versus detailed forms.
- The cross-cultural approach; the question of dealing with other cultures and the appropriate method and knowledge.
- The influence of design circumstances and 'external history' on the process of selection.

In the first research programme, Qasr al-Houkm Riyadh, Badran opted for a local contextual approach. Najdi region was conceived as the cultural context for his design. The local vernacular tradition of Najdi architecture is considered the manifestation of that local culture and, thus, the source of references.

This approach focuses on local characteristics as a means for a close relationship between architecture and cultural and social norms. It also acknowledges the local adaptations due to climate, geography, topography and available building material. By virtue of its locality, the selected precedents are directly associated with the conventional cultural and symbolic meanings.

For example, contrary to the general conception that the mihrab of a hypostyle mosque is always topped by a dome, the Saudi mosques have no domes. Thus the mosque of the Qasr al-Houkm project was designed following this local convention, Badran recognized that: "Because in this region domes are associated solely with tombs and mausolea, we did not use a dome in our mosque design, but replaced it with light effects over the mihrab."<sup>1</sup> This manifests the advantages of paying attention to the local cultural variations, thus distinguishing symbolic associations of forms which might differ from one place to another within the same culture, and from time to time even in the same place. But this approach, while it acknowledges the difference in meaning from place to place, assumes stability and fixity of meaning over time within

---

1- Badran. Aga Khan Symposium. p.159.

the same place.

Even though it facilitates intimate connections with the culture, this local approach excludes other important architectural principles that transcend regional boundaries. On a conceptual level, it assumes a complete autonomy for the region which, even if obtainable in the past, is unrealistic today. But one might argue for the desirability of this autonomy from an architect's point of view or the client's intentions. Furthermore, in this regard, architecture is conceived as totally dependent on local context; thus acknowledging no connections with the general Islamic culture.

The local contextual approach might provide the desired identity and national pride, but if taken to the extreme it increases the eccentricity of the local culture as opposed to other cultures and nations. It confines the selection process within the local tradition so it facilitates a profound understanding of the limited precedents, but at the same time it limits creative variety, and denies cross-cultural exchange. The focus on details and elements to provide the local character overwhelms the selection process and thus masks the principles and holistic vision of the tradition.

The strong cultural affinity with the tradition limits the transformation, in order to keep a recognizable connection between the new work and the traditional precedent. Thus, although transformation is bound to cultural conditions, it ought to function differently in different places. In a place like Najd, one might argue for the appropriateness of an incremental small step transformation rather than abrupt changes.

At this point I choose to discuss the third research programme rather than the second in order to compare Badran's two approaches to the different places; Riyadh and Bagdad. In the Presidential palace in Bagdad, Badran's approach was to conform with culture and place. Culture is conceived here to extend beyond the regional limits to the general Arab-Islamic culture, and place refers to the Iraqi region, thus giving different dimensions to "cultural area" and "place": The Arab-Islamic tradition as a cultural domain, and the local Iraqi region as a historical building tradition in that locale.

On a conceptual level, this assumes a certain level of cultural coherence in the Arab-Islamic world, that allows for moving freely within its domain. In this case Badran considered the monumental architecture of the Arab-Islamic world to be the manifestation of this cultural link. This implies that the principles and rules impeded in these works transcend its historical context and locale, thus making it valid to displace and reuse these rules in a different context. This requires that there is a shared meaning within the Arab-Islamic culture so that it allows for this displacement of forms.

At the same time this position acknowledges the particularity of the local sub-cultural variations, and the climatic, technical and geographical adaptations of the Iraqi region. The local references, both monumental and vernacular, from pre-Islamic, as well as, Islamic traditional architecture, assumes continuity of accumulated building tradition in this locale. The place-rooted selection is conceived on two levels: On one hand, general principles, geometric orders, spatial organizations and typological conceptions, on the other, elements, architectonic forms and architectural vocabulary with symbolic and cultural association.

By accepting the particularity of the local region and allowing for general cultural connections this approach acknowledges two levels of form associations. There are some forms that acquired shared meanings within the general culture and there are others that are specific to their place. However, this entails establishing a rigorous criterion for selecting precedents. Arbitrary selection can be observed in many instances, despite the attempt to find a common ground for these precedents. For example, we find references to the Dome of the Rock, the Qairawan mosque, the al-Hambra palace from different places, historical periods and functions.

By referring to a distinguished monumental precedent from pre-Islamic heritage to reflect the place, it is important to realize its cultural and symbolic associations. This problem faced Badran in dealing with the Babylonian ziggurat as a precedent. Badran had used the sloping mound of the ziggurat in his project for the State Mosque in Bagdad, which was intended to give reference to the Iraqi region as a place-grounded



precedent. "The idea of using the sloping earth mound, the ziggurat base, to reduce the scale of the building introduced an image and symbolic meaning that was out of keeping with the religious meaning of a mosque because of the ziggurat's connection with temples and idols."<sup>2</sup> This indicates that forms might acquire symbolic association regardless of the architect's original intentions and interpretation. This means that it is extremely important to understand the symbolic association of forms in a society or their potential to become symbols. Can we devoid an architectural form from its symbolic or socio-cultural associations in order to use it freely and independently of its original ties, values and meanings? By doing so we may be proposing that these values are no longer operative and the continuity we are achieving is the imagery harmony of the physical environment.

Another crucial aspect of this general and particular approach is how to synthesis the different precedents and references selected out of this wide domain. Badran used two strategies to solve this problem: the use of one local building material and local architectural vocabulary for the images, and the city as a unifying theme for different, or sometimes heterogeneous elements.

Let us pause here to ask; **Why did Badran use a confined local approach in Riyadh and acknowledge local and general culture in Bagdad?**

While Bagdad has a significant local architectural tradition, Badran opted for the general Islamic tradition in addition to the local heritage. In contrast, in Riyadh where the local architectural tradition although distinguished, was vernacular and less satisfying compared to the Iraqi one, Badran dwelt on the contextual approach where the references were local.

One explanation is based on the intentions behind the project, the client's intentions and competition statements. The Iraqi government had proposed so many large projects in the seventies and eighties to modernized Bagdad and to give it a national identity. As a result of their engagement in the war against Iran, the Iraqi government wanted to

---

2- Badran. Aga Khan Symposium. p.155.

establish itself as a leader in the Arab-Islamic world. This ambition to attain leadership of the Arab-Islamic world was the motive behind the two main projects in the eighties, the State Mosque of Bagdad and the Presidential Palace. In the state mosque competition this can be deduced from the statement of the competition: "The State Mosque is of such magnitude and importance that it should reflect in certain spaces to be selected by the competitor, and confined to those spaces, certain stylistic features from such Islamic countries as Egypt, Morocco, Syria, etc."<sup>3</sup> The same request was repeated in the Presidential palace competition. As a result the project asked for something to transcend its local boundaries, and revive the old historical importance of Bagdad.

In the case of Riyadh the intentions were different. The Saudi government expressed no interest in extending the project connections beyond its boundaries, since there is no need for claiming Arab leadership through architecture, because they can claim their leadership by merits of control over Mecca and Medina the most holy places for Moslems. But the Saudi government intended to establish Riyadh as the capital and center for the Kingdom. The traditional competition and confrontation between the Najdi region and the Hijaz region was and still overwhelms internal affairs. The Hijazis used to claim power over the two holy cities of Mecca and Medina in addition to Jeddah, the important port on the Red Sea, and often extended their power to other regions of the Arabian Peninsula specially with the help of the Ottomans. On the other hand the Najdi region, with its capital Riyadh, is the homeland of the Saudi dynasty and the Wahabi doctrine. By the establishment of the kingdom, the whole area became under the Saudi control, yet it was crucial for them to establish Riyadh their historical center as the cultural and political center of the Kingdom. With this concern, it was important for them to promote Najdi character, and to project the image of ideal Islam associated with the Wahabi doctrine.

Prince Salman Ibn Abdul Aziz the governor of Riyadh province and the chairman of the high commission for the development of Riyadh the one responsible for this project and

---

3- Mimar editors. " Regenerative Approaches to Mosque design: Competition for State Mosque, Bagdad." From the competition statements. Mimar 11 (Jan.- March 1984) p.46.

the like hinted to their association with Riyadh, He said: "*Riyadh also was the glorious capital of the second Saudi State since the times of Imam Turki Bin Abdallah Bin Mohamed Bin Saud in the year 1240 A.H. (1819). During this period Diraiyah was the seat of Government for the first Saudi State. Today it became part of the city of Riyadh. No wonder then when Riyadh becomes the sign of our pride and the indication of our renaissance, and the smiling and radiant facade of our dear and beloved Kingdom.*"<sup>4</sup>

Another explanation stands for the site of the project itself and its surrounding context. The site of the Riyadh project is an urban downtown, with a traditional Musmak fortress not too far from the old Riyadh residential vernacular area. This surrounding, and the site circumstances, place and dictate some kind of contextuality and locality. In contrast, the Presidential Palace project was proposed outside the city of Bagdad in a new undeveloped area where no immediate influences of context existed, thus allowing for freedom of choice and character.

A third factor emerges from comparing the two cultures or places. The Iraqi region, geographically and politically, was a more open area with different cross-cultural exchanges and openness. There is, as a result, tolerance for external influences and different references, while the Najdi region, historically and geographically, was a relatively autonomous area with less external influences which contributed to their sense of self-centeredness. Consequently, to conform to the conservative society and cultural conditions of the Najdi region it is more likely to dwell on locality.

This is not to say that the architect has no command over his work; it is rather intended to show the diverse factors that influence the design and to understand the rationale behind certain design decisions. It is also an indication of the importance of place as a complex consequence of cultural and geographical interactions that affects the design through contextual adaptations and modifications.

---

4- Salman Ibn Abdul Aziz. "The Riyadh of my Hart." An introduction to *RIYADH: The City of The Future*. King Saud University Press- Riyadh(1986).

The third research programme is concerned with the cultural qualities of form and space. Larsen believes that architecture is a perceptive art of forms and spaces, but its experience and qualities are culturally determined. So for the Ministry of Foreign Affairs in Riyadh, Larsen chose to refer to the Islamic culture in general as the bases for cultural dimensions of design. Larsen considered the general principles and basic rules of Islamic architecture as reflecting the cultural characteristics and distinguishing Islamic architecture from other cultures and architectures. These characteristics, Larsen believes, are manifested in the urban architecture of the Islamic town.

This position assumes a certain level of homogeneity within the Islamic culture regardless of particular geographical locale and time. Islam as a religion is believed to be the common denominator for cultural bonds. Culture is taken to link places as far as Morocco and India. Moreover, this cultural coherence and subsequently its characteristics are timeless as it occurs over and over again regardless of historical consequences. Thus, this justifies its reuse today to give the cultural quality for the new architecture work, and cultural continuity.

By virtue of being oriented towards the general principles and rules, this approach avoids the direct imitation of forms and traditions. But, it is too general to acknowledge the sub-cultural specifics: the local variations and geographical adaptations. By this also Larsen detached the typological principles from its historical context and social values to be rules that transcend time and society.

As Chris Abel argued, Larsen did not refer to the local tradition of Najd: *"The goal Henning Larsen set for himself in his winning design... is an ambitious reinterpretation of Islamic architectural traditions. Given the fact that Larsen's main problem has been to adapt those traditions to the needs of a large modern bureaucracy, it was understandable that he would have to look beyond any purely local architecture in search of more complex building types and forms as suitable material for inspiration. Due respect is in fact paid to the indigenous buildings' of the Nejd, but these are the least convincing of any of Larsen's extraordinarily diverse range of references."*<sup>5</sup> This is a rather direct corollary to his general conception about Islamic

architecture that pays no attention to the local tradition.

Although this general approach facilitates fresh innovations and creative transformations of the cultural tradition, its very nature of abstract and reductive generalization discriminates against the details, the diversity of alternatives of the same cultural principle which is historically and regionally bounded.

By this Larsen suggested that these abstract characteristics are sufficient to give the cultural quality for the work, thus failing to recognize the iconographic and symbolic qualities of the architectural forms. Its abstraction might appeal to intellectuals, but never approximate the local people, thus making it remote from its immediate context.

Is it Larsen's modernist affiliation that resulted in this general abstract approach to Islamic architecture and culture? This might hold some truth especially concerning the symbolic meanings of the forms. Although his work in Denmark and Norway does not incorporate the symbolic dimension of the forms, it acknowledges the local characteristics of Norse tradition.

Is it because Larsen is an outsider that his understanding of the Islamic culture and architecture is by its very nature bound to be but general and on an abstract level? Is it an inherent characteristic of any cross-cultural work to dwell on the general level of cultural understanding, because its intricate details are inaccessible? If so, in designing for other cultures is it sufficient to come to grips with that culture just to know its general principles in an abstract way?

How deep our understanding of the culture should be in order to be able to design appropriately for that culture? One might think of exploring other alternatives and strategies for cultural understanding. It is rather interesting to see in other disciplines outside architecture different approaches for the same problem of cultural understanding. For example in anthropology, Clifford Geertz suggested in his book the

---

5- Chris Abel. AR. 1985.p.30.

Interpretation of Cultures a methodology to approach other cultures by introducing the concept of culture as a context, and the anthropological studies as an interpretive description in search for meaning rather than scientific inquiry in search for laws.

*"The concept of culture I espouse, ... is essentially a semiotic one. Believing, with Max Weber, that man is an animal suspended in webs of significance he himself has spun, I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning."*<sup>6</sup>

*"So, there are three characteristics of ethnographic description: it is interpretive; what it is interpretive of is the flow of social discourse; and the interpreting involved consists in trying to rescue the "said" of such discourse from its perishing occasions and fix it in perusable terms....But there is, in addition, a fourth characteristic of such description.....: it is microscopic. This is not to say that there are no large-scale anthropological interpretations of whole societies, civilizations, world events, and so on. ... It is merely to say that the anthropologist characteristically approaches such broader interpretations and more abstract analyses from the direction of exceedingly extended acquaintances with extremely small matters."*<sup>7</sup> Is there a possibility to modify and adapt this method as an other alternative for the cross-cultural architectural enterprise?

One cannot deny the importance of cross-cultural exchange and the fresh innovative look it provides to the tradition by virtue of distancing oneself from the subject and its emotional connections, but it should be channeled in a way to avoid sweeping generalizations and thin understanding. Another problem is that it can not but read the other culture through its original cultural lenses, screens and perspective. "I feel it's impossible to escape one's origins, and wherever one builds, the results will always be something bound up with one's roots. And this is important to me."<sup>8</sup> But how much it affects the person is dependent on his own consciousness, awareness and

6- Clifford Geertz. *The Interpretation of Cultures*. Basic Books, Inc. New York (1973) p.5.

7- Ibid.p.21.

8- Larsen. *Space and Light*. p.9.

understanding of the other culture.

Can we escape our cultural prejudices, which might sometimes result in misreading the other tradition and culture? The work of Venturi in Bagdad in The State Mosque is evident of this case, where his Las Vegas experiences and way of reading architecture as commercial signs is applied to the Islamic tradition as a collection of ornaments and symbolic domes. It is crucial to regulate this process of cultural exchange, to define what to accept and what to reject. May be one should reassess the role of international competitions and their results. One can think of providing more regulations into such competitions, where the local and the foreign firms work together in order to bridge the cultural gap and yet sustain "critical distance," to use Edward Said's term.

I speculate that another factor in this issue of general approach is the books, studies and information available to architects about Islamic culture and architecture. Since it is the first time that Larsen came in contact with the Islamic culture it was natural to seek knowledge from references and available studies about the subject. These references by nature present and depict different visions and aspects of Islamic culture, but the most known and authoritative ones are general and simplistic, and these seem to be the texts which influenced Larsen's own idea about Islamic culture and architecture. As a result of this general conception, selection was indifferent to places and historical periods.

The process of selection, therefore, is grounded in different theoretical positions. Each position is developed according to the architect's intentions and the problem at hand, but as we have seen, it is also influenced by other factors: locale, building type, the project context, the available information, the architect's career involvement, experience and knowledge and the client's interests. The last point is apparent in this anecdote about the Bagdad State Mosque competition. In the competition for the State Mosque in Bagdad Badran was working for the first time in Iraq. He said about this experience:

*"When we began our work we had little knowledge of the architectural heritage of Iraq. Our familiarity with it was more or less limited to structures such as Mesopotamian Ziggurats and Abbasid monuments like the great mosque at Samarra."*

*Badran continued saying " the client was extremely helpful in introducing us to examples of the Iraqi Islamic heritage including the madrasa al-Mustansiriyya, the Khan Murjan, and other buildings that represented the monumentality they were seeking."*<sup>9</sup> This anecdote unveils the interaction and influence of the client on the process of selection and the importance of knowledge for the selection.

## II- INTERPRETATION.

Interpretation is a crucial part in design methods. It deals with two main concerns: what knowledge is needed, and what method is required to understand the subject at hand. Different issues stand out in this regard:

- The question of source of knowledge and the availability of studies.
- The issue of historical data and interpretive knowledge.
- The issue of private and public meaning, social cultural meaning and the designer's personal reading.
- The issue of appropriate method and the question of whole and parts; detailed specifics and general organizations.

In Riyadh, Badran's method was to study, analyze and interpret the traditional heritage by direct experience and first-hand study of the environment. The analytical sketches demonstrate the way he interpreted the tradition. The basic tools are line drawings depicting the urban fabric, space-form relationships, spatial organizations, views, structural systems, external images, openings, decorative elements, and the climatic devices and adaptations to light, shade, ventilation, and heat.

I think Badran should be credited for his comprehensive inquiry of the local context which facilitates a profound understanding of the local environment in a detailed level, thus avoiding the reductive information of the books and references. This close examination allows for understanding the social interaction with the architectural form and space, their symbolic meanings and their local modifications of climate, customs, material, structure and techniques. However, total engagement in a detail analyses

---

<sup>9</sup>- Rasem Badran. Aga Khan Symposium. p.151.



resulted in masking the wholistic structure, the organizing principles. Badran used an analytical method which implies that architecture is conceived as an elemental combination that can be understood through breaking it down into its components, and geometric structures. This is a direct influence of his modernist education. By this method one thus can reuse and interpret these elements and organizations by changing their relationships; their syntactic structure.

By referring directly to the context for analysis and study Badran is denying the importance of the historical studies for design interpretation. Is he suggesting that interpretive knowledge cannot be obtained without direct experience and contact with the subject? Are we witnessing a new shift in the architectural profession towards a research oriented practice? Or is it because of the scarcity in researches and availability of data that Badran chose to get direct information?

For Larsen, the basic rules and principles that make up the "Islamic architecture" were the qualities of form and space that is preconceived as a common denominator between the immense body of traditional architecture all over the Islamic world. This, he believed constituted the underlying structure and cultural rules that manifest themselves in so many ways and forms. While Badran in Riyadh is exclusively involved in details and parts, we find that Larsen is totally dependent on the 'whole', the general rules and organizing structures.

How is one to study these rules of cultural production? Larsen's method, gained through the general references to Islamic architecture, from the basic books and studies which deal with this topic, thus proposes that historical data are open for different interpretations and many readings. It furthermore suggests that for interpretive knowledge there is no need to directly experience the subject.

By accepting the idea of basic rules and general principles as laws for cultural production, it is important to examine these principles that are characteristics of Islamic architecture. Larsen's principles and rules solely pertain to the qualities of space and its

experience: the courtyard space, the emphasis on interior spaces and anonymity of the facade and the urban spaces: the souqs, the market place, the main square, the semi-private space and the monuments and urban complexes which are un-distinguished architectural forms and internally experienced through their internal spaces. This discriminates against other interpretations and readings of the tradition as architectural forms, symbols, ornamentation and so forth.

The focus on the spatial qualities is attributed to many factors that affect Larsen's interpretations. It is because of his interest in space as a modernist adherent. As we have seen in his previous work in Norway and Denmark the main focus was on the interior spaces; it is also influenced by the severe weather of the Nordic environment. It is also a natural corollary of Larsen's belief that what distinguishes Islamic culture from other cultures is its focus on internal space. "In the great epochs of Islam, it is the inner space that dominates form."<sup>10</sup>

To what extent is it helpful that a certain notion about the whole culture regardless of its historical place and diversity dictates one kind of architectural concern that is characteristic of the Islam and Islamic architecture but undermines other alternatives and readings as non-Islamic? This is a problem of reference books and resources, which stress one point of view and disregard other visions of the same subject.

One has to be critical towards the sources from which he obtains information. The underlying message of some studies, or their hidden agenda, is to present Islam and consequently Islamic culture as opposed to Europe. What is Islamic is in complete opposition to what is Western. This is evidently true in Architecture of the Islamic world, edited by George Michell, where the main thesis is to put Islamic architecture as the antithesis of western architecture. "Islamic architecture at its best, and at its most 'Islamic', is truly a negation of architecture as conceived in Europe."<sup>11</sup>

This very conception which is based on the assumption that one is a complete negation

---

10- Larsen. Living architecture.p.100.

11- Grobe. *Architecture of the Islamic World*.p.13.

of the other violates Larsen's initial intention of bridging the gap between tradition and the modern: "[To] reflect those traditions, at the same time referring to an international idiom."<sup>12</sup> I wonder how a good architect like Larsen with good intentions got trapped into this thin conception about tradition. Is it the hegemony of these studies that claim coercive authority over anybody who wants to seek knowledge about this field?

One has to ask would it matter for an interpretive knowledge if the historical study is bad or good? If interpretation is making intelligible meaning out of the historical data, then if something is historically not true does it mean that its interpretation is not valid? One of these misconceptions, that is not totally true, is Larsen's interpretation of Islamic architecture as internally oriented, thus there is no facade such as exists in the West. If one looked at Yemeni architecture, Mamluk architecture and Ottoman architecture one can see an elaborate articulation of facade designs addressing the street, very much similar to what is in the West. Not only this, but the lesser importance given to the facade in the traditional environment is bound to the context within which the building is conceived. The urban fabric of the old cities was a major factor in this regard. This is historically not true, but what about interpretation? Its purpose is not to provide historical information, but fiction, in a sense that its "something made", and imagination. The interpretation is dependent on the designer's personal reading, but what relation should exist between the architect's personal reading and the public understanding and meaning of the interpreted data?

To my mind, it is not the tradition per se that we seek, but how effective this tradition is in solving the current problems at hand, and in appealing to the culture and people. Therefore, the validity of any new interpretation is bound to its purpose and the problem it addresses. Larsen's conception about the anonymity of the Islamic facade as one of the characteristics of Islamic architecture, is of no help, nor compatible with the task at hand. The new building is intended to address the society and the street through its facade expression "front door to the Kingdom"<sup>13</sup>, especially when such a building

12-Henning Larsen. "Ministry of Foreign Affairs Building in Riyadh." in Architecture and urbanism (Dec. 1986) p.20.

13-From the Competition statement, quoted from: "Aga Khan Awards 1986 Technical Report," Review Summary of the Ministry of Foreign Affairs, Riyadh. by William Curtis. p.1.

is exclusive to a limited number of persons who can enjoy its interior luxurious spaces.

The focus on a space articulation and organization justifies Larsen's introverted architecture. This interpretation suggests that these space qualities are what count for the cultural continuity and thus observing these qualities and principles is sufficient to provide the Islamic character. This implies that beyond those qualities one is free to do whatever one wants. Although this allows for creative innovations, it results in an incompatible mixture of what ought to be Islamic and what can be freely manipulated.

Therefore, other than the spatial organization of the courtyards, souqs and central space, we find that Larsen's design is non-traditional. Its interior office spaces are modern; most of them even follow the open plan of modern architecture. The exterior form has to do with the neo-rational work of Italian architects more than with Islamic architecture or with the local environment.<sup>14</sup> The building-site relationship, the idea of a platform, is more to be found in Western architecture than in the Islamic tradition.

In the third research programme, the Presidential Palace Bagdad, Badran used his personal abilities of sketching in order to analyze and interpret the different references. He tried to benefit from both the direct experience of the subject with detailed analysis, and the indirect interpretation through books and references. General geometric relationships, spatial organizations as well as architectural elements, forms and images are interpreted in different sketches. The level of abstraction in these sketches depends on the precedent and the intention behind its use. Some examples are abstracted to just a geometric relationship, while in others the structural system was the goal of analysis and so forth. Thus different levels of understanding are obtained. So Badran achieved understanding of the details and parts and also the wholistic structure, i.e., the organizational and abstract principles.

The precedents from Iraq were mainly analyzed and studied in detail and as a result of direct contact with the subject. The wide scope of precedents from the Arab-Islamic

---

14- William Curtis said about the MOFA facades: " These facades are neo-Rationalist cliches of circa 1982 and do not integrate well with the other regionalist sensitivities of the building." Ibid. p.12.

tradition limited the exploration of these precedents to their general level, and are interpreted through historical studies of reference books.

I think the issue of interpretation and the importance of acquiring the relevant and appropriate knowledge about the tradition raise two crucial issues: The first is, how appropriate are our inherent skills and methods for understanding the cultural dimension of architecture? Are our ways of studying and analyzing architecture in conformity with the new conception of architecture as a cultural artifact? What changes and modifications are necessary for making up for the new task of interpreting the cultural production? Do we need to reconsider our methodologies to incorporate other methodologies from outside our discipline such as from anthropology, social sciences and so forth?

The second issue pertains to the problem of available studies on the Islamic culture and tradition. To what extent are these studies effective and relevant to mobilize the new task of deploying the tradition in modern designs? What role should the historian and the architect take in order to reinvestigate the tradition so as to cope with the current manifold demands and interests?

### **III-THE TRANSFORMATION.**

Transformation is another important dimension of the process of using tradition. It is the culmination and the final aim of the previous processes of selection and interpretation. In transformation one must deal with the following questions:

- The adaptation of precedents to the design context: the site conditions, the functional requirements, the building technology, the climatic considerations and so forth.
- The adaptation to cultural and social intentions: the architectural image and issue of monumentality, the public symbols and the private architectural vocabulary, and the new aspirations of the society; the contemporaneity of the work.

The three projects present different levels of transformations and responses to the above

considerations.

The project Qasr al-Houkm in Riyadh demonstrates the influence of local architectural tradition in limiting the transformation. It approximates rather too much the vernacular tradition so as to provide a direct link to the tradition, but it does not reflect present social and political aspirations. The external facade, for example, is too traditional especially with the use of decorative ornaments and crenellations. Nevertheless, the main idea of urban formation is interesting both as a conceptual idea and as an architectural solution.

The wall, as an urban and architectural mediator between the building and the street, was a successful utilization and transformation of a traditional fortress element into a contemporary element in conformance with the problem of addressing the street and the urban design of that particular context. This envelope frees the interior spaces from the external influences; thus it is formulated according to the internal typology and demands.

In Larsen's project for the Ministry of Foreign Affairs the elaborate and well articulated interior spaces are in complete contrast with the external poor and harsh facade. Larsen should be credited for his successful transformation of the interior spaces which are a real concealment of modern and traditional elements. But, except for the courtyards, it is paradoxical that the interior spaces of Larsen's MOFA resemble the external urban spaces, the souqs, the market place, the residential street, the semi-public square, rather than the inner spaces which he claimed to be the prime focus of Islamic architecture. The climatic considerations, and especially the specific interest in regulating the sun light are appropriate adaptations of the forms to the context. Larsen's design is also successful in reflecting the contemporaneity of the work, by virtue of its abstraction and non-decorative forms.

The Presidential Palace project in Bagdad presents a strategy for dealing with the suburban context by breaking down the building into different parts, thus creating an

impression of urban fabric. To what extent this is effective in influencing the future development is dependent on the planning strategies and the local convention.

It is rather confusing to see too many elements compiled in one project and especially when they are not coherent, e.g. the mixing of vernacular and monumental, Islamic and Babylonian, local and Arab-Islamic, architectural and natural and so on. Nevertheless, Badran's spatial organizations are a successful articulation and modification of different ideas into well structured and hierarchical spaces. But it is not convincing to emphasize the relationship between the central palace building and the surrounding secretariat by orienting the palace building towards Mecca, resembling the circular city of Bagdad. It is justified to find mosques facing Mecca as the orientation is an essential part of any mosque, and this was the case in the central mosque and Dar al-Khilafa complex in old circular city of Bagdad, which is not the case here.

The architectural image of the palace is designed to evoke the Abbasid palaces in Iraq but this impression is confused by the hierarchical three layers composition by which it resembles the ziggurat structures. Does it matter if the palace looks like an ancient temple? Should we discriminate in the monumental level between the image of power and the use of the building, so that we can appropriate the images and forms detached from their original associations?

In the three projects the central courtyard type has been transformed into a central covered hall to serve as the main hall as in Badran's projects in Riyadh and Bagdad, or the main lobby atrium as in the Ministry of Foreign Affairs. I think this is a logical and successful transformation in conformity with the change in living patterns from outdoor living spaces to indoor ones, especially with the advent of airconditioning systems.

The roofing system of the central hall in each of the three projects reflects the design approach towards technology. Badran's clever use of modern thinking of structural systems as well as bearing in mind the traditional examples to mobilize a successful

solution in Bagdad Presidential Palace, evoking the traditional designs yet modern is an appropriate transformation and response to the new material and technology. In contrast, his design for the Qasr al-Houkm central hall concealed the modern structure of the roof by a false ceiling of traditional wooden beams, thus refusing to acknowledge the possibility of fusing the two systems together.

In Larsen's project the central atrium is covered with a concrete slab separated from the walls so as to give a lighting gap between the two and thus defying any sense of structure (fig...).

*"Yet he could, if he had so wished, have exposed the attractive pattern of his triangulated structure of deep steel beams to view from below. Instead, the architect covered the whole thing with a plain white ceiling. This simple but effective device dramatically increases the visual mass of the roof, in direct contradiction of its apparent suspension from the walls, so that it seems almost to defy the laws of gravity."*<sup>15</sup>

But Larsen opted not to express the structural system of the roof, although we find in his project for Trondheim University in Norway that the structural system plays an important role visually and spatially. I think Larsen did not expose the structure because of his conception that a negation of structure is a prime principle of Islamic architecture. "In the inner space of the mosques, light sifts in through small openings, there is a dimness. The bright daylight of the outside world is dissolved in this space. Now and then, even the gravitational notion of up and down seems to dissolve, in that the slender columns seem no longer able to bear the heavy mass above. It appears almost as if the columns are hanging from the pediments."<sup>16</sup>

Is this another misconception influenced by the simplistic studies of Islamic architecture? These studies claim that Islamic architecture "aims at a visual negation of the reality of weight and the necessity of support. The various means by which the effect of weightlessness is created, the effect of unlimited space, of non-substantiality of walls, pillars, and vaults are all well known."<sup>17</sup>

---

15. Abel. *AR*.p.34.

16. Larsen. *Living Architecture*.p.101.



The three projects make use of the new material and technology. The traditional techniques is not an issue in the three research programmes. What is an issue here is whether the building should reflect its structural and technological logic and achievement, or not. But it is not by concealing the modern by traditional skin, as in Qasr al-Houkm, nor by ignoring the problem or masking its existence, as in MOFA, that the issue of modern technology can be advanced in our architecture. It is rather by exteriorisation, by fusing the modern and traditional as in the Bagdad Presidential Palace that new transformations and potentials are possible.

There is a paradox in the three projects between the monumental content and size of the building and the architect's intention to demonumentalize the building to approximate the human scale. In Qasr al-Houkm Badran chose to use the vernacular image and the wall as a means to hide the building and to give it human scale. The wall also worked to link the different buildings together and to create urban squares related to the buildings, so as not to be conceived as isolated objects.

In his work for Bagdad, Badran deployed the idea of breaking down the project requirements into two main parts: the central one is monumental and the surrounding is vernacular. This was also conceived as a generative element for future urban expansion, but the use of the same architectural image for both the central part and the surrounding structures defies the basic intention. Thus the project reflects an impression of one monumental complex. I think the lower surrounding structures should have followed a vernacular fragmented image if it is to work as guideline for initiating a traditional urban fabric.

For Larsen it was the anonymity and non-articulated facade and the image of a vernacular fortress that led him to demonumentalize the building. It is more than just the articulation of the facade that makes the monumentality. Its isolation as an object separated from its surrounding is emphasized by the use of the platform. Furthermore, the sense of distance is intensified by the setbacks and the frontal steps, all of this

---

17- Grube. *Architecture of the Islamic world*.p.13.

increasing its monumental impact but without conveying any message.

Is there a need for redefining the role of the monuments in the Islamic cities? What characteristics, and subsequently messages should be conveyed through public buildings to communicate with the people and become part of the cultural life instead of just a reflection of power?

It is interesting to note that the three projects have used an analogy to the city or an urban cluster as a vehicle to reflect traditional and cultural character. This is particularly obvious in the Presidential palace and the Ministry of Foreign Affairs. I think it is not a phenomenon confined to these projects; treating the project as a city is a common feature in most of the current works that claim Islamic identity. One wonders why is it necessary to turn the building into a miniature of a city as a means for achieving traditionality.

One can think of the problem of large-scale projects as one possibility for this attitude. Because one cannot find the traditional typology for such projects, to overcome the colossal scale and to respond to the complications and complexity of the new building requirements and yet maintain traditional appearance, architects tried to break down the building into a group of buildings resembling the traditional urban fabric.

I agree with Professor Grabar, the reader of this thesis, that the influence of Islamic studies, which were centered around the concept of the Islamic city is another factor behind this trend. Most of the time Islamic architecture was explored, investigated and represented as a special characteristics of the Islamic city. The reference books and studies about this subject are numerous: The Islamic City edited by R.B. Serjeant (Unesco, 1980), Besim Hakim. Arabic-Islamic Cities: Building and Planning Principles ( London;KPI, 1986), Saleh al-Hathloul. Tradition, Continuity and Change in the Physical Environment. (1981), The Islamic City: A Colloquium [ held at All Souls College, 1965.] ( Univ. of Penn. Press, 1970), The Islamic city: A Colloquium; Edited by Albert Hourani (London, Luzac, 1970), to mention but a very few.

In contrast to these ample studies about the city, other than the mosque hypostyle type and the four-Iwan type, little attention has been devoted to the different building typologies and spatial and architectural characteristics. Therefore, the architects who encounter new design problems are influenced by the available studies that affect their decisions. Once more I would like to stress the crucial role the historical and architectural studies on Islamic architecture are playing in steering the architectural inquiry, and subsequently design.

Another factor contributing to the city-oriented designs is the general conception (or misconception) about Islamic architecture. Islamic architecture is conceived often as discrete experiences and forms, thus inevitably leading to problem of synthesizing such a diverse set of fragments and heterogeneous elements. It is by using the notion of a city as a theme of collector; a collage of every thing, that this problem is overcome. This is evident in the Bagdad Presidential Palace where we find a variety of different elements compiled in a city-like design project. The same logic of combining discrete elements in a city or urban agglomeration can be observed in Larsen's design for the Ministry of Foreign Affairs, where the different "urban experiences": the souqs or bazaar streets, the private courtyards, the semi-public courts or semi-public squares, the central atrium or market place, the fountains evoking the al-Hambra, the bridges and vernacular images, and so forth.

I think this also has to do with the context within which the new buildings have been built. Most of the recent building activities have been concentrated either in modern suburbs or in new undeveloped areas around the cities. As a reaction to the immediate hostile or undistinguished context, the architects opted to create their own autonomous urban context within the site boundaries. Thus this entails a complex architectural formation which is usually obtained by analogy to a city or part of a city complex. This reflects the paradoxical dilemma of addressing the culture and yet allows for a retreat into introverted autonomous complexes isolated from their surroundings and from urban life. Projects like Badran's Presidential Palace in Bagdad or the Ministry of Foreign Affairs in Riyadh are introverted projects with rich urban internal experiences

that are exclusive to a small number of users and visitors and have nothing to offer for the people in the streets other than their image of power.

This method of compiling different and diverse elements in one project in order to reproduce and evoke the traditional environment is an indication of the current dilemma of traditionality and modern life. Are we retreating from the real street life with all its complicated and perplexing reality to live in romantic replicas of older epochs, towns and architecture? Aren't we creating isolated predicaments, autonomous "cultural islands" or 'museums' to live in ?

**REFLECTIONS**

## I

In discussing the three projects, I have separated the questions of selection, interpretation and transformation. Yet the issues raised by these questions are part of a larger concern. The projects reflect the critical situation of contemporary architecture in the Arab-Islamic world. Their differences in position and method are manifestations of the fact that there could be no "one appropriate solution" for the current dilemma of articulating cultural identity.

The complexity involved in the design decisions, and the response to contextual requirements, are far more complicated than what can be resolved through one single formula. As we have seen in the three projects, major differences are found even between two projects by the same architect, Badran's projects of Riyadh and Bagdad, and between two projects sharing the same locale, Qasr al-Houkm and MOFA in Riyadh. This, although a response to different design conditions, is an indication of dispute over defining tradition, culture and place in the Arab world.

Whereas Larsen, as an outsider, reflects a general understanding of Islamic culture as geographically and historically defined to set against the West, we find that Badran is alternating between adhering to locality and committing to Islamic cultural identity. These differences, however, are not limited to discussed cases, but rather are common to contemporary architecture production which reveals a general cultural confusion.

Nevertheless, the three projects present some commonalities. There is relative acceptance of the current situation, acknowledging its complexity and vagueness and working within its premise to articulate and explore potentials for grounding architecture on a cultural basis. Acknowledging the present complexity does not mean, however, that anything goes. It means accepting a certain degree of arbitrariness in the design process, but rules and limits are essential. The rejection both of literal copies of traditional works and direct importation of universal models of modernity is important

in this regard.

Within this general framework the three projects demonstrate a difference in positions over two fundamental issues. The first is the conception of cultural tradition. Larsen suggested a cultural continuity through referring to the underlying typological rules of spatial organization and composition, conceived as timeless and free of symbolic association. In contrast, Badran, in both cases but on different levels, acknowledged the organizational rules as well as the forms and elements with their symbolic and cultural association. The Presidential Palace in Bagdad is a good example of this double interest.

This issue of cultural tradition sheds light on the question of historical studies and their relation to design work. As we have seen, such study of tradition is crucial and is influenced by the available studies. It is, therefore, important to study, explore and disclose the different dimensions of tradition in order to cope with the current diverse interests. It seems that Badran's endeavors in Qasr al-Houkm presents a potential for a new understanding and a method of approaching the tradition in a more meaningful way than just relying on books.

The second issue is how to deal with modernity. This point is crucial if one wants to relate to the present time. Its critical role is problematic in the Arab world, because of its association with the West, and its apparent incompatibility with old methods, techniques and craftsmanship. But it is essential to stress that the question of contemporaneity is at the center of any serious search for identity. There is a need for a positive attitude towards modern potentials of material technology and methods.

We see in the three projects different ways of addressing the above issue despite the fact that they incorporate modern technology, materials and ideas. In the Presidential Palace one can recognize modernity in the design of the central hall and its roofing system, but the external image of the palace conceals any hint about its time and building technology. This could also be seen in Kasr al-Houkm in which Badran

attempts to incorporate modern material and techniques yet covered with traditional skin. Moreover, Larsen's external facade does not tell anything about its technology, yet it demands special notice by reflecting an abstract unconventional image.

At this point the issue of modernity invites the question of change. Architecture, in addition establishing continuity with the past, should act as an agent for change. In its ability to bring change architecture can participate in the public life and cultural discourse. Cultural identity is not obtained by the purity of cultural artifacts, but in maintaining the power to appropriate, incorporate and synthesize new changes within the cultural realm. Although change should not be radical and abrupt to avoid cultural rupture and alienation, it is important to incorporate visions of the future in our designs.

## II

This thesis is focused on close examination of the use of tradition as a means for cultural identity. Although it is limited to a select number of architectural works, this inquiry offered a context for discussing critical issues not limited to the specifics of the work under investigation, but rather central concerns of contemporary architecture in the Arab-Islamic world.

By presenting the three projects as research programmes, the theoretical positions and design logic of these projects reflect current attitudes and address problems that transcend their artifactual specifics. Their problematic definition of cultural framework is a true manifestation of the perplexing cultural situation in the Arab world today. The lack of common values and rules for design provoke diversity in conceiving tradition and defining its role in modern designs. Probing into tradition by exploring different ways to come to terms with culture is the key to approximate the desired identity. What is needed is to articulate methods and ways of conducting such a search. Thus the function of criticism at this junction is to explicitly discuss these methods in order to advance its argument and explore its potentials. It is no longer acceptable to regard design as an implicit and secretive processes of "creative activities" if we are to develop



an authentic and appropriate architectural works.

This process of exteriorization is the core of this intellectual endeavor. Methodologically, this thesis is grounded on the notion of 'design thinking' as a valid concept for understanding and discussing architecture. It implies a preconceived idea of design as a two inextricable parts; the theoretical arguments and the artifactual products. The methodology of architectural research programmes and the superimposed operational questions used in this inquiry explicitly articulated different design positions. Its rigor allowed for deeper understanding of the design rationale and, at the same time, acknowledged its arbitrariness.

However, it is natural and rather inevitable that any method by the very nature of focus on certain aspects can not exhaust any subject. The utilized method facilitates discussing the design 'internally', that is from the architectural discipline point of view, and its arguments and methods. Thus, the focus on the design method justifies the indifference to the status of the selected projects being built or not. Therefore, it does not escape the problem of screening, by which highlighting certain areas implies casting shadows on others. The methodology of research programme conceals the so called "external history", the influences and dimensions outside the realm of architecture are minimized in order to illuminate some aspects of the internal discourse. The external social, political and economic interactions with architectural work is crucial for understanding architecture and so is open for explorations and investigations by other methods and for different intentions.

However, there are other dimensions of the subject which can be covered using the same methodology. The fact that any research programme is problem-oriented facilitates and allows for more than one study and, thus, more than one research programme for the same object. The key point in this respect is what to consider as the hardcore of the research programme, its orientation and focus. For example, I intentionally chose to focus on the issue of using tradition and its methodological and theoretical problems, but it is still possible and important to consider the

contemporaneity and modernity of the designs. In this regard, the hardcore of the research programmes could be interpreted and oriented towards addressing the problem of modern changes, techniques, and aspirations. Likewise, a committed position to the external influences on architecture could extend and change the limits of the external-internal in order to include external issues in the hardcore of the research programme. Such inquiries are open for further exploration, and essential to advance architectural work in the Arab world and its search for a new and yet original identity.

**BIBLIOGRAPHY**

**Bibliography:****I-General**

- ✓ Abel, Chris. "Regional Transformations." in The Architectural Review #1077 (Nov.1986) pp.37-43.
- Anderson, Stanford. "Critical Conventionalism in Architecture." Assemblage #1 (1986) pp.7-24.
- "The Fiction of Function." Assemblage # 2 (1987) pp.19-31.
- Burckhardt, Titus. Art of Islam; Language and Meaning. World of Islam Festival Publishing Company Ltd.(1976).
- Cantacuzino, Sherban editor. Architecture in continuity; Building in the Islamic World Today. The AgaKhan Award for Architecture 1985, Aperture, NY.NY (1985).
- Colquhoun, Alan. Essays in Architectural Criticism: Modern Architecture and Historical Change. Opposition books, MIT Press, Cambridge MA (1981).
- Curtis, William. "Principle V Pastiche, Perspective on some recent classicism" in The Architectural Review #1050 (Aug.1984) pp.11-21.
- Frampton, Kenneth. Modern Architecture and the Critical Present. Architectural design Profile (1982).
- Grabar, Oleg. The Formation of Islamic Art. Yale University (1973).
- "From the Past into the Future: On Two Designs for State Mosques." in Architectural Record (June 1984) pp.150-151.
- Hancock, John. "Between History and Tradition: Notes towards a theory of precedent," in The Harvard Architectural Review.5, Rizzoli (1986) pp. 64-77.
- Jencks, Charles. The Language of Post-Modern Architecture. Academy Edition, London (Fifth revised enlarged edition 1987).

JCP Inc. Japan [ Planners, Architectes and Consulting Engineers]. Rusafa, Study on conservation and redevelopment of historical center of Bagdad city. Technical Report # 3A (Sep.1984).

----- Rusafa, Study on conservation and redevelopment of historical center of Bagdad city. Summary Report # 1 (Dec. 1984)

King, G R D. The Historical Mosques of Saudi Arabia. Longman, London (1986).

Klotz, Heinrich - Guest editor. Revision of the Modern. Architectural Design Profile (1985).

Kulterman, Udo. " Contemporary Arab Architecture; The Architects of Saudi Arabia." in Mimar 16, ( Apr.-Jun. 1985 )pp.42-53.

Rowe, Peter G. Design Thinking. MIT Press, Cambridge MA (1987).

Sevcenko, Margaret; Edirtor. Theories and Principles of Design in the Architecture of the Islamic Societies. Symposium (1987) The Aga Khan Program for Islamic Architecture , Cambridge MA (1988).

Vidler, Anthony. " The Idea of Type: The Transformation of the Academic Ideal, 1750-1830." in Opposition 8 (Spring 1977-8) MIT Press. pp.95-115.

## **II-Methodology**

Anderson, Stanford. "Architectural Design as a System of Research Programmes." in Design Studies, V#3 (July 1984) ,pp.146-150.

----- "Architectural Research Programmes in the Work of Le Corbusier." in Design Studies, V#3 (July 1984) ,pp.151-158.

Andreotti, Libero. "Conceptual and Artifactual Research Programmes in Louis I Kahn's Design of the Phillips Exeter Academy Library(1966-72)" in Design Studies, V#3, pp. 159-165.

Lakatos, Imre. The methodology of scientific Research Programmes. Cambridge University Press (1978).

Landau, Royston. "Notes on the concept of an architectural position." in AA File 1 (1982) p.111-114

Metallinou, Vasilika. "Regionalism as an Architectural Research Programme in the Work of Dimitris and Suzanna Antonakakis." in Design Studies, V#3, pp.166-174.

### **III-Rasem Badran's Work**

Al-Asad, Mohammed. The Works of an Arab Architect Rasem Badran (1970-1986)  
Unpublished paper.

Badran, Rasem. "Historical References and contemporary Design" in Theories and Principles of Design in the Architecture of the Islamic Societies. Symposium (1987)  
The Aga Khan Program for Islamic Architecture, Cambridge MA (1988).pp.149-159.

----- "The Jama Mosque, Qasr Al-Houkm." in Albenaa 36 (seep.1987)  
pp.74-80 [in Arabic].English translation pp.4-5.

----- "Chamber of Commerce And Industry in Dammam." in Albenaa 44  
Vol.8 (Dec.1988) pp.37-39 [in Arabic]. English Translation pp.14-15.

----- "Architect of the Issue: Rasem Badran from Jordan." in Albenna 23  
Vol 4 (June-Sep. 1985) pp.115-119.

Mimar editor. "Profile, Rasem Badran." in Mimar 25 (Sep.1987) pp.50-70.

Mimar editor. "Amman, Badran Wins Major Competition." in Mimar 16 (Apr.-  
Jun.1985) pp.12-14.

Sakr, Yasir. The Mosque Between Modernity and Tradition: A Study of Recent Designs of Mosque Architecture in the Muslim World. MIT -S.M.Arch.S Thesis 1987.

Personal meetings and unpublished materials of design competitions reports from Rasem Badran.

## VI- Henning Larsen's work.

Abel, Chris. "Riyadh Angles; Larsen's Hybrid Masterpiece" in The Architectural Review # 1061 (July 1985) pp.24-39.

Architecture, editor. " Denmark. School Arranged Around a Cheerfully Canopied Central Court." in Architecture, AIA Journal (August 1983) p.114 -117.

----- "Norway. Campus Organized Around a Series of Tall, Glazed Interior 'Streets'." in Architecture, AIA Journal (August 1983) p.174.

Celani, Maria. " Space and Light: Interview with Henning Larsen." in Spazio e Societa, #.34, vol. 9 ( June 1986 ) pp.6-17.

Curtis, William. "Ministry of Foriegn Affairs, Riyadh, Saudi Arabia." The Aga Khan Award for Architecture 1986. Technical review summary SAU. 563. pp.1-15.

Larsen, Henning. "Ministry of Foriegn Affairs Building in Riyadh." in Architecture and Urbanism #.195 (Dec.1986) pp.11-21.

----- " Lessons from the Orient." in Diadalos, # 10 ( Dec. 1983 ) pp.94-103.

----- " On Architecture." in Living Architecture # 4 ( 1984 ) pp.100-101.

Lund, Nils-Ole . "Danish Building That Is More Suitable in Saudi Arabia" in Architecture and Urbanism # 195 (Dec.1986) pp. 22-24.

Khan, Sikander. In Search of a Direction in the Contemporary Architecture of Arabia. MIT -S.M.Arch.S Thesis 1988.

Petersen, Steen Estvad. " The Ministry of Foriegn Affairs in Saudi Arabia." in Living Architecture, #.4 ( 1984 ) pp.102-129.