Places of Public Gathering in Islam
Places of Public Gathering in Islam

Proceedings of Seminar Five
in the series
Architectural Transformations in the Islamic World
Held in Amman, Jordan
May 4–7, 1980
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His Highness the Aga Khan

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Cover Illustration  The cover illustrates the principal seminar division into three types of public buildings—educational, recreational and institutional. Clockwise from top: model of Yarmouk University in Jordan, by Kenzo Tange and Urtec (photo courtesy R. Nijem); model of University of Biskra in Algeria, by Walter Netsch and Skidmore, Owings and Merrill (photo: J. Hedrich/Hedrich-Blessing); aerial view of model for a resort hotel in M'diq, Morocco by Abdeslem Faraoui and Patrice de Mazières (photo: L. Fargeot); model of the Cultural Centre complex in Riyadh proposed by the Albiní Studio—from left to right; the pedestrian square and car park; reception palace; regional and municipal administration building (photo: A. Ballo)


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<th>Country</th>
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<td>Architect</td>
<td>EGYPT</td>
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<td>Member, Award Steering Committee.</td>
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<td>Chairman, Capital Development Authority.</td>
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<td>Former Director, National Engineering</td>
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<td>Highways Board; and other economic</td>
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<td>development activities in Pakistan.</td>
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Introduction

Hasan-Uddin Khan

Five seminars have been held prior to the first Award in October 1980. Their objectives were to establish contact with professionals, institutions and governments; to survey the contemporary built environment in the Islamic world; and to create a heightened awareness of its problems and solutions. Through these dialogues, there also emerged a conceptual base upon which the present Award and all future Awards could grow. The Proceedings of each seminar have been published; this fifth volume completes the first cycle of the ongoing survey of contemporary architectural transformations within the Islamic world.

Previous seminars considered the inherent qualities of Islamic architecture, their role in contemporary design and their importance in creating images of identity. They looked at specific ideas and examples related to the conservation and reuse of individual buildings and areas; at the processes, problems and solutions of low-income mass housing; and now at large-scale, architect-designed environments for public use as reflections of societal aspirations.

Construction of large-scale complexes abounds in countries which are undergoing rapid economic and demographic change. This is even more true of countries which have recently gained or regained their independence. Architecture not only houses new or expanding activities, but also serves as the image of a political and social entity. Buildings which most often serve this dual utilitarian and symbolic role are those for public use: universities, sports centres, housing schemes, museums, commercial centres and airports.

The seminar held in Amman, Jordan dealt with a variety of such complexes and explored several of the background issues which shape them. Three general categories of public places were considered: places of an educational nature; places for recreational and tourist use; and commercial and institutional places. The presentation of these public buildings, in general medium to large-scale projects, helped to highlight possible design solutions and to illustrate their acceptability to decision makers.

Historically, the majority of Muslim settlements reflected a holistic integration of functions within the urban form. Contemporary towns and cities, however, have tended to develop specialized complexes. While several types were identified for the purposes of the seminar, such typologies should be seen only as a method of investigation and not as a preference. It is important that the location and role of that most characteristic public place, the mosque, be maintained within each type.

The discussions of building examples tackled two basic problems in our societies: Islam and change. The renewed understanding of Islam and its relationship to contemporary political and economic realities will give rise to the Muslim architecture of the future. Underlying all discussions of public buildings was the larger question of the future shape of Muslim societies. It is the response of these societies to political, economic and social change, and their renewed understanding of Islam as a dynamic faith and a way of life, that will give rise to their future architecture. The present buildings or projects or complexes can be seen as signposts to be used as models only if suitable.

It is interesting to note that many of the complexes discussed were hybrids which have developed on a base of regional architectural language. Such is the case with those created for Saudi Arabia and the Gulf states, and so too were the examples from North Africa and Pakistan. Perhaps the new architecture for Muslims will of necessity be one of regional eco-cultural zones, not one based on a nationalistic interpretation of commonplace architectural idioms. Such a concept is only theoretical direction; only time will reveal the reality.

Few of the issues discussed in Amman were unique to the Muslim world. Their wide applicability raised the question of whether specific regional solutions would be of value elsewhere. The deliberations of this seminar as well as of the previous seminars have shown that there is an increasing awareness and focus on the built environment of the Islamic world by its inhabitants and by outsiders. Undoubtedly, part of this awareness is due to its increasing economic and political role. But the East-West and North-South dialogues also represent a new phase in intellectual exchange. This exchange, both in theory and in practice, can perhaps bring about the articulation of a new architectural theory and vocabulary. This could provide continuity for Muslims dispersed all over the world, and provide important links between the wide variety of responses to climatic, sociological, technological and political change.

Common grounds are being discovered and contradictions are becoming apparent. Our quest, which renews this sharing and these searches, continues the momentum of tradition and of the recent past into the dawning fifteenth century of Islam. We can look forward to the development of some relevant and important directions toward a new and appropriate architecture.

Seminar Place and Structure

His Royal Highness Crown Prince Hassan of Jordan attended the housing seminar in Jakarta, and invited the Award to hold a seminar in Jordan. When the subject of public places was selected by the Steering Committee, it was felt that Amman would provide a suitable setting for the fifth seminar. It is a city which is rapidly expanding, and one in which many new buildings for public use are being planned and built. Amman is also geographically central to the Muslim world, and provided the Award with the opportunity to hold a seminar in the Arab heartland of Islam.

The seminar was structured around six formal sessions, commencing with a formal opening ceremony which included speeches by His Majesty King Hussein of Jordan and His Highness the Aga Khan. The stage for discussions was set by Dean Porter and Mr. Ardan. Case studies of different types of public places were then presented, and three smaller workshops
followed with reports to the seminar. In the final session, participants summarized their concerns and ideas both for the Award and for directions toward an architecture for Muslims.

Between some of the formal sessions, the local architectural profession hosted the participants on a site visit to some recent buildings for public use in Amman. This gave the participants, many of whom were unfamiliar with Jordan, a chance to experience the new emerging architecture firsthand. The participants also continued discussions at informal meetings and presentations, which often extended into the early hours of the morning. Particularly noteworthy were a series of individual slide presentations. All this substantially increased the value and excitement of the meetings.

As is our custom, the sequence of discussions has been altered and edited for these Proceedings so that they may be more useful to the reader.

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A Note of Thanks

We acknowledge with heartfelt thanks the role played by His Royal Highness Crown Prince Hassan and his office in facilitating the success of the seminar. We would also like to record our appreciation to the Royal Scientific Society of Jordan and to the Minister and Department of Tourism and the Department of Antiquities for their support. We add a special note of appreciation to engineer Raif Nijem of Yarmouk University for all his support, assistance, advice and site visit arrangements, in his capacity as local convenor of the seminar.

I wish to commend Linda Safran, General Editor of this series on Architectural Transformations in the Islamic World, for her diligence and painstaking care spent in making the fifth Proceedings readable, useful and interesting. I also thank Portia Steele for her thoroughness and cheer in preparing difficult transcriptions and final typings. The seminars and Proceedings would not have been possible without the fine back-up of every member of the Philadelphia and Geneva office teams.
Opening Remarks

His Majesty King Hussein

The opportunity to receive Their Highnesses the Aga Khan and Begum in Jordan is a great pleasure for us all. The guidance which His Highness is giving to the aesthetic and practical aspects of Islamic architecture is in every way worthy of the widespread support and interest it is receiving, and the understanding it deserves.

I have closely followed the work of the Aga Khan Award, as it was relayed to me by my brother the Crown Prince. In this first year of the fifteenth century of the hijra I feel that the impact of this Award is of special significance. We in Jordan have just hosted the third Balad Al Sham Conference, which sought to identify the historical, cultural, social and economic common ground between the Arab and Muslim nations of this area. The Balad Al Sham Conference has much in common with the work of the Aga Khan Award, in that it brings together the common heritage which the people of this area share.

We live in the historic centre of the Muslim world, and are keenly aware of the need to associate our sense of identity with the best that Islamic history and tradition have to offer. The plans for the present are to seek innovation in a world beset by an expedient tendency to imitate blindly. We are conscious of our aesthetic heritage and of the need for its practical manifestation. The architectural wonders of the Muslim world compel us to influence and, wherever possible, to curb the unbridled development that is so often the product of declining aesthetic taste. It is our fervent hope that the activity of the Award can earn the respect of the architectural and engineering community, in the Muslim world and in the world as a whole.

Jordan, a non-oil producing developing country, has contributed know-how to the region through the skills of its 700,000 citizens who work in the oil-producing developing countries. Oil has provided many jobs for our people, whose remittances in the 1970s were heavily invested in construction and in the purchase of real estate. We are self-critical enough to realize that in the last two decades, such developments have forced us to witness the harmful impact of unguided construction on the environment. We hope that the 1980s and '90s will bring more deliberate planning, aimed at linking our construction requirements with the rich Arab and Muslim character and tradition it should seek to reflect.

With these opening remarks, let me wish the seminar success. The able chairmanship of His Highness the Aga Khan and the very fact of the Aga Khan Award for Architecture truly embodies a respect for art, for tradition and for the task of preserving and creating beauty in our lives.
Opening Remarks

His Highness the Aga Khan

I would like to begin by thanking His Majesty King Hussein for honouring us by opening our seminar. His participation clearly illustrates Jordan's concern for the evolution of Islamic architecture. I wish to welcome His Majesty most warmly, and to express our great pleasure at this opportunity to hold the fifth seminar of the Aga Khan Award for Architecture in the Hashemite Kingdom of Jordan.

Jordan's active interest in our subject is also manifested in the participation and continuing efforts of His Royal Highness Crown Prince Hassan. He also joined us during the spring of 1979 in Jakarta for our discussions on the vital subject of housing. It is at his suggestion and invitation that this seminar is being held here in Amman. I therefore express my sincere gratitude to His Royal Highness.

Whatever efforts the Award may make to provide a new direction and sense of purpose to the future environment of the Islamic world, it cannot achieve substantial or long-term results unless the governments and people identify and implement the changes they desire. In most of the Muslim world governments are the principal builders. I am thus especially grateful to His Majesty King Hussein for giving his support to this seminar and its objectives; I hope this example will be widely followed. The words which His Majesty spoke at the opening of the National Consultative Council on April 29 of this year are greatly encouraging:

...we are daily running against challenges of contemporary industrial civilization which threaten our cultural identity and confront us with the obligations of work and development... all Jordan's institutions need renovation and development—but renovation which respects continuity and is true to our roots and heritage while at the same time triggering forces of progress and action in the State and Society.

Progress can only be achieved by the will and concerted effort of the Islamic world as a whole. It is a source of encouragement and satisfaction that an international agency such as UNESCO should have organized a successful seminar on conservation in Lahore recently, and that the President of Pakistan supported it wholeheartedly and opened the ceremony itself. The international symposium on Islamic architecture held earlier this year at King Faisal University in Dammam, Saudi Arabia, is another effort which deserves praise and support.

This is the last, and in a sense the culmination, of five seminars organized to examine the issues and establish the criteria for the first Aga Khan Award for Architecture. The seminars have convened in a number of cities in the Muslim world. It is appropriate that this one, dealing with public buildings and spaces, should be held in Amman. Jordan is an Arab country rich in Islamic history, heritage and archeological sites. It has made commendable efforts to preserve Petra, the desert castles and other renowned monuments. In contrast, we cannot help but note the striking amount of new construction going on around us in Amman. Over the last few years Amman has tripled in geographic area and doubled in population. To the architects and scholars gathered here for the seminar, this building boom can only serve to emphasize the urgency of our present endeavours.

The Aga Khan Award for Architecture is concerned with the present and future expression of modern Islam. Nearly all Muslim countries in the thrones of development are encountering the challenges which we will be considering at the seminar, and the few that are not are unlikely to escape. Jordan has earned an enviable reputation for the steps it has taken in grappling with these issues; an example is its carefully planned science and technology policy aimed at rational economic development. It is also appropriate that this particular seminar, which deals in part with educational facilities, should be held in Jordan. This country has long been a centre for higher education in the Arab world; it possesses the experience, the institutions and the potential to realize the objectives which will be discussed in the forthcoming sessions.

I have been concerned with the quality of the physical environment in Islam since 1957, when I succeeded my grandfather as Imam of the Ismaili community. Though comparatively small, the community is widely scattered and therefore exposed to an unusually broad cross-section of social, political and cultural influences. My office has required that I become involved in many aspects of development, especially in Africa and Asia. I have been personally engaged in a number of building programmes, from small schools or rural health clinics to large regional hospitals and teaching centres. I have therefore had the opportunity to experience the dilemma facing Islamic architecture today.

The rapid pace of urbanization and the dramatic increase in wealth in some Muslim countries have provided us with an opportunity and, even more, a responsibility. In a desire to respond quickly and effectively to tremendous social demands and pressures, our tendency has been to import ideas and technologies without considering their suitability to the needs of our people. We must adopt only that which is valid and reject that which is inappropriate. To absorb foreign architectural expression without careful thought or analysis could lead to grave and irreversible cultural alienation. We are in danger of losing that vital sense of continuity with the past without which I believe we can have no real future.

Much damage has indeed been done, but it is not too late to check the erosion of our environment, to turn in new directions and work toward a future we can all be proud of. That is why I initiated the Aga Khan Award for Architecture three years ago. I decided that an Award programme offering substantial incentives for outstanding work, based on a serious intellectual examination of the issues and recognizing the contributions of all involved in the building process, could do much to stimulate true excellence in Islamic architecture. I believe that the response to the first Award has justified this conviction.

Almost two hundred projects have been nominated for the Award. These represent some thirty countries from Morocco to
Indonesia, and include a wide variety of building types—from single houses to huge multi-use complexes. They reveal considerable variation in materials and design approaches in response to local and regional conditions. Many of them are of great interest and sensitivity. Considered cumulatively, they seem to demonstrate that the Spirit of Islam is not irrevocably lost to the modern environment. The Master Jury, many of whose members are here today, will be making the final selections in July, and the first presentation ceremony will be held this autumn. This encouraging start is only a beginning. The Award programme will continue, with a new series of awards every three years, and the intellectual effort on which it is based will continue with it. We shall continue to hold seminars; teaching programmes are being established in universities; and we are working to produce exhibits, books and other publications as the programme gathers strength and momentum. The presence here today of so many distinguished participants and the welcome we have received in Amman make me feel that we are truly launched on a far-reaching cooperative adventure.

The previous seminars have dealt with topics of concern to all of us. At the first seminar we considered the crises attending urbanization in the Muslim world, and established that there was a strong desire, among traditionalists and modernists alike, to protect and revitalize the cultural context in our built environment. The second seminar, held in Istanbul under the title “Conservation as Cultural Survival,” had as its theme the preservation of historic and traditional environments. We concluded that success in conservation depends on public education and enlightened planning policies that focus on harmony between the old and the new, and on finding viable functional and economic roles for old buildings.

Seminar Three in Jakarta was concerned with housing, one of the most complex development questions for modern Islam. We discussed the essential nature of the Islamic home and questioned how this nature could be incorporated into different approaches, from artisanal (using local resources and unskilled labour) to industrialized techniques. The fourth seminar met in Fez and dealt with symbols and signs in Islamic architecture. We tried to identify those symbols that could claim universal validity across the Muslim world, and we asked how to ensure that our new buildings have the appropriate symbolic content. This issue is central to any definition of Islamic architecture, the search for which lies at the core of the Award.

We have found no simple or infallible answers, but we have made progress in all our areas of study. We have discovered priorities and approaches that will help us evaluate the architecture of contemporary Islam and point directions for the future. Identity and human scale, environmental integrity, suitability and cost-effectiveness are of prime importance. The buildings in use and the reaction of those who live and work in them have been subject to close scrutiny in the Award process. Every nominated project with a serious chance of winning has been examined on site by technical review teams charged with reporting on these issues. We believe that no other award programme has made such a major effort to document architectural achievement from the user’s viewpoint. The documentation itself will constitute a unique historical record of contemporary architecture in the Muslim world. Once the Awards have been announced this wealth of information will be available to scholars and practitioners alike. The major projects will also be published in book form, as will the Proceedings of past and future seminars.

Today we begin a search for form, as we look at public buildings and spaces in Islam. We are very conscious of the role that such buildings play in our lives. Major public buildings and spaces are often large, easily identifiable and have considerable symbolic and physical presence within the environment. They are generally designed to last, and may involve a substantial commitment of public funds. Their design therefore constitutes an important demonstration of the architectural and planning principles that lie at the heart of the Award programme.

Public buildings, more than any other building type, are a major force in creating taste in a given locality or country. They are complicated structures which combine diverse functions and services in a single complex. They may be technologically sophisticated, and can often be designed to meet stringent performance standards. Architectural excellence in this area will thus demand much more than formal brilliance of conception or limited functional success. Buildings which fulfill a major public role are the result of many people’s labours. They may involve government departments, developers and financiers, specialized consultants, as well as the architect, engineer and contractor. They may require a design/build relationship and they often necessitate inputs from a wide range of professional disciplines. Public buildings are therefore paradigms of the team approach.

For these reasons, we have structured the seminar to include case studies of projects from the points of view of the decision makers in the building process, representing stages from initial conception to final occupancy and use. Educational, recreational and institutional/commercial cases will be introduced and discussed by eminent scholars and practitioners. In small workshops we will have the opportunity to discuss these ideas in detail, and to broaden the scope and implications of the specific issues raised during the seminar sessions.

I would like to conclude by reemphasizing my belief that the continuation and evolution of Islamic cultural and architectural traditions are of vital concern to all Muslims. They should concern international cultural institutions and above all the governments of Muslim countries. We wholeheartedly welcome the efforts of all those contributing toward this common goal. I would like to thank His Majesty and His Royal Highness once again for their personal participation in our efforts, and to welcome all of the distinguished participants to the seminar. I hope that our endeavours here will be another step toward the creation of an environment which we can recognize as an expression of our heritage and of our faith in the future.
This brief talk is an excursion in thought to correspond with the geographic and topical excursion of our previous four seminars. From an initial seminar which opened up the topic of Islamic architecture we went to Istanbul for a discussion of conservation, to Jakarta for housing, to Fez for symbolism, and finally here, to Amman, for "The Search for Form: Places of Public Gathering in Islam." For the purposes of this introduction (and somewhat accidentally) I speak as an occidentally-trained architect and educator with responsibilities for the architectural education of many from the Islamic world. Mr. Ardalan, who will present a position paper, speaks both orientally and occidentally—a distinct advantage. Had there been time, we might have heard the entire Award Steering Committee speak, for perceptions are plural and there is a great variety and richness of interpretation. My intent is to look back at the previous seminars. Mr. Ardalan will look forward, his own thinking reflected in three of his projects. He will set the stage for the case studies presented by some of our distinguished participants. At the end of the seminar we shall return to more general questions about Islamic architecture. We shall also hope to illuminate issues and suggest criteria by which the Aga Khan Award may be given.

At the first seminar we confronted what some have called "architectural outrage" in the Islamic world, and the domain in which to begin our search for appropriate architecture became clearer. Architecture could be seen as a sort of mediator of Islam— as idea, as society and as symbol. Together these represent some of the most important themes in the relationship between architecture and culture. The next three seminars recapitulated these themes in different ways with their successive emphases on conservation, housing and symbolism.

Islam as idea suggested principles which could guide the architectural hand and
mind. Geometry—the cosmos revealed—could take architectural form, and the sense of the interior would be emphasized. Equality would prohibit dominance of single elements, would guarantee every man a place and would suggest symmetry and repetition as governing principles. Surface treatment would dematerialize buildings through decoration and the denial of icon and idol. Continuity would prevent the unhelpful Western distinction between net and gross, or between "use" and circulation spaces. Privacy would require separation, articulation and differentiation of areas and passages. Axial visual access could be selectively admitted or denied, and integration with nature would be required.

Islam as society suggested that architecture provide a field for actual and potential action. Insofar as people were poor, architecture should support their strivings, however modest their means. Insofar as the place of women was changing, architecture should facilitate that change. Insofar as the faith required prayer, architecture should make that possible.

To show architecture as a field for action, housing proved an especially provocative subject. The kampong projects in Jakarta were visually modest. With energies generated largely from within the kampongs themselves, aid was solicited from the government and the World Bank for community improvement. A system of administrative and development guidelines was worked out to permit environmental improvements. It is this system of rules which governs the relationship of people to their environment. While it is crude now, it has the potential to be modified and improved to take account of much more subtle factors than simply the improvement of the footpaths and waste disposal systems.

In housing areas where there are people of modest means, architectural intervention is
better governed by regulations and technical assistance than by specific physical forms. But can regulation be specific enough to deal with both the qualitative aspects of the environment and its practical arrangements? Can regulation facilitate subtle as well as necessarily crude environmental adaptation? And can regulation permit the achievement of that great prize: identity with and in the world?

Islam as symbol suggested that architecture could make assertions about relationships among people in time and space. Important distinctions should be understood here. Asserting the imperial past through new and major complexes is very different from reusing the formal elements or properties of historical complexes. Asserting the vernacular past as a contemporary solution to housing, in order to express nostalgia or dictate the distribution of power in a society, is very different from attempting to find a new and appropriate order in modest and locale-specific ways of building. Asserting an architectural vocabulary known primarily to a professional elite, and which extends a conversation carried on by them while having little or nothing to do with those who use or experience the building, is very different from a search for form which can serve as a vehicle for architectural learning and self-discovery. The exportation of architectural types valid for one group, to areas where such types are climatically wrong or stylistically inappropriate, is very different from using such architectural elements in ways well adapted to the locale and society.

Where does the search for modern form begin? To take one example, water has always been a vital part of life. How can architects transform its life—giving essence in ways that match the extraordinary treatment it received in Kashmar? Is the search for form authentic, or even evident, in a Polynesian-style village of shops for an international hotel? In the nearby arena? Or in their juxtaposition? Is there a modern minaret? Should the search be made in the heroic or in the apparently vernacular style? Do answers lie in the careful restoration of still-extant monuments like Chehel Sotun, the Ali Qapu or the Masjid-i Shah? Will these efforts give rise to skilled craftsmen who will adorn modern buildings as they once adorned the buildings of the past? Are there ways to find robust reuses for existing buildings?

I think that careful conservation and the sensitive reuse of forms are absolutely crucial to the development of an Islamic architecture. Their role is not to symbolize Islam by themselves, but to receive evolutions of meaning, to nourish those evolutions from the roots of the past. Meaning is primarily a contemporary phenomenon, and cultural definitions must be constantly revised in the light of new experience or else meaning cannot be interpreted. One of the fascinating characteristics of architectural form is its ability to survive changes in meaning. Indeed, the forms that seem the strongest may be those most able to shed old meanings and carry new ones. The use of architectural form precedents, therefore, need not imply a re-assertion of past values and meanings; it may instead reveal society’s understanding of itself as a complex and intricate interpenetration of history and contemporary life.

The search for form in architecture is to some a lifelong quest. I believe that all of us here are part of that quest, one which binds us together from many parts of the world. In a recent speech at the Architectural League in New York, His Highness the Aga Khan said of architecture:

I can think of no human art form which exercises such a permanent influence over our lives. The architect can inspire us, overawe us, charm us, bring the immensity of space to bear upon us to underline our insignificance or, on the contrary, shrink space to a point where we become the pivotal figure in a restricted universe. This is indeed the exercise of power, a power which has a deep and permanent impact on every aspect of our lives, on our relations with each other and on our attitudes toward this world and the universe around us.

That power of the architect is mediated through society. Architects (and others who shape environments) set the conditions for use, for perception and for reflection which are necessary, though not sufficient, to create architectural form.

Form is a function of the individuals and groups in a society, as well as of its buildings. Form results from an individual’s purpose, knowledge and familiarity with local circumstances, and from the interaction between the individual and the spaces in which his life is played out. One person’s temple of love may be another’s celebration of power and affluence. For some, the most important aspects of a place are what it might accommodate or become. For another, the same place may have a nostalgic rather than a practical aspect, because it reminds him of other regions in his experience or imagination. Tourists may not be aware of the dynamic qualities of an environment resulting from recent changes, or the subtly supportive qualities of a place which contains ele-

Isfahan, Iran: detail of the Chehel Sotun
Photo: W Porter
ments changing at different rates, providing stability and change at the same time. The habitué may “read” his or her city in terms of what is going on there, a perception accessible only through clues invisible to the newcomer who is dependent on more obvious visual features. Architects have been likened more to newcomers and tourists than to residents, because their actions often seem better for those who pass through than for those who would shape and enrich a way of life by being “of” a place.

For the contemporary world, significant form can enhance society’s practical nature by housing its activities appropriately. It can also facilitate the awareness and redefinition of culture, by providing eloquent vehicles for the communication of meaning and symbolic expression.

In foreign cultures the people may speak a language unknown to the architect; their ways of life and of doing business may be unfamiliar. The social philosophy of the culture and that of the architect may differ substantially; they may not even be on the same team! Alienation seems increasingly to be institutionalized, as groups who conceive, design, finance, build and approve become more autonomous and distant from each other. We are sure to learn more about this issue in the course of the seminar, as persons from many sides of the table will be invited to present their views.

I have spoken of the force and character of Islamic architecture in its emergence as idea, as society and as symbol. I have discussed the search for form, the role of the architect and the difficulties imposed by cultural distance and fragmentation of the design process. We shall witness the search through the eyes of a number of architects, as communicated in their various case studies and presentations. We shall hear professionals speak of their understandings of the past, of other cultures and of the enduring values of architecture. Do these cases represent or
Places of Public Gathering

Nader Ardalan

Framework

The generic term “places of public gathering” can be applied to all locales in human settlements which are outside the private and personal territorial domains of the citizens. In traditional Islamic cultures this would include the public gardens, pathways, streets, covered streets such as bazaars and sāqs and other traditional places of commerce, as well as places of the institutions of the society together with their urban contexts. In contemporary times we must add airports, railroad stations, sport stadiums, etc., to our roster of public gathering places.

Patterns of compact, monolithic and continuous development are observable in the majority of the Islamic settlements of North Africa, the Middle East, central Asia and India. These patterns are as much an outgrowth of ecological adaptation to the environment as they are a reflection of cultural attitudes to place-making. The term “placemaking” is used here to define conceptual approaches to the location and creation of architectural buildings, their urban context and the larger city form.

History of Islamic Cities

An ancient and elaborate symbolism for the location and design of Islamic cities has persisted through the centuries and in the midst of secular change. Mecca, Baghdad, Mashhad and Isfahan, to name only a few, are important examples of metaphoric urban creations in Islam which exhibit strong symbolic messages.

The cosmology of major Islamic cities has traditionally followed certain ideas and rituals. These ideas have included an appreciation of astral conjunctions, animal sacrifices, geomancy, orientation of the city to the cardinal directions, geometry, compact and contiguous planning, recognition of sacred geography and the symbolic disposition of the various parts of the city. The Friday mosque and the place of government were symbolically placed at the centre of the city in concentric planning concepts, or at the top or head of the town in anthropomorphic plans, which relate to the slope of the land and the natural flow of water. Within these ideal plans, the public places of gathering were situated in an orderly and mutually self-supporting manner according to a hierarchy, commencing with the major elements of the city centre and continuing to the minor nodes of residential districts.

Recent History

Recent rapid change has transformed the cities of Islam, and urban chaos has been the major legacy. To bring order out of this chaos, it is necessary to know something about the social and philosophical structure of the past. If we understand the reasons for past senses of urban integration, we may better comprehend the forces that have created the present segregation of parts, and brought decay to once wholesome and vital places of activity and public pride. With this understanding it may be possible to direct the future forces of change in a more constructive direction.

The two case studies which follow illustrate the traditional cities of Iran during the Islamic period; they are also cities which experience cataclysmic changes in the twentieth century. We will focus on the centres of Hamadan and Shiraz.

Hamadan and Shiraz Bazaars

Hamadan is a provincial town in the northwestern region of Iran, lying at one of the major passes through the Zagros mountain range. Until the twentieth century it was a major stop along the east–west silk route, but its origins and importance reach deep into ancient Sasanian history. It was in Hamadan that the city of seven concentric walls known as Ecbatana was built upon a prominent hillock.

As a significant trading town and customs post on the Iranian frontier, Hamadan developed a sizable bazaar and innumerable caravanserais. It was a pleasant place, amid abundant poplar trees and gardens. However, this rich town fabric and active centre was doomed. In the 1930s, as an act symbolic of social and political change, the central government superimposed a radial road plan on the city. This succeeded in destroying the unity of the bazaar, obliterating a portion of the Friday Mosque and even intruding upon the ancient archeological remains of Ecbatana. A similar pattern of “modernization” was carried out systematically in most urban settlements in Iran. At the time, this was genuinely felt to be consistent with progressive change.

In time, the new roads allowed greater cover access and became the most economically active places of commerce. Civic buildings, squares, fountains and public parks became associated with this new town pattern. Yet the traditional fabric remained, and continued to cater to the modest needs of the masses in both economical and psychological terms.

Over the past forty years, the once noteworthy bazaar has fallen into a state of disrepair due to a lack of economic vitality. The great caravanserais have been converted to warehouses, the bazaars to wholesaling. A serious breakdown in the process of self–maintenance is strongly in evidence. As a consequence, a most important cultural and environmental heritage is today on the verge of complete extinction.

In contrast to the crumbling bazaars of Hamadan, the Grand Vakil bazaar of Shiraz has somehow survived this historic surgery. Although the intentions of the central authority were very much the same and the destruction of the traditional fabric just as blatant, the Shiraz bazaar managed to survive. In recent years it has undergone a rehabilitation programme that may once again restore its value as a place of public gathering. Reasons for this resilience may include the ongoing economic exchange between the nomadic Qashghai and the settled Shirazi; the presence of the important Shiite shrine.
precinct of Shah Cheragh; the Persepolis tourist trade spinoff; and the particular attention paid the city in recent years within the national hierarchy.

The bazaars of Hamadan, Shiraz and of every other major town in Iran are fighting a life and death struggle for survival. The acts of modernization seem only to have hurried the rate of their demise. Should this death and decay be viewed as part of a natural cycle of social and environmental transformation, and therefore inspire no sense of alarm? Or is the potential loss of the bazaars symptomatic of a non-adaptive disease pervading contemporary decision making, and therefore a great cause for concern?

Ideas of Progress

What are the reasons for the drastic decay and negative transformation of these traditional environments? The answers are complex and deep-rooted and not fully apparent. Valid areas of investigation may include the study of the morphology of notions of progress; new images of development associated with contemporary notions of progress; and the loss of the traditional languages of architecture.

In Islamic cultures, the progress of individuals, families and communities has historically been measured in terms of both metaphysical and material growth. Koranic reference to these simultaneous realities are numerous, with an obvious emphasis on spiritual progress as a laudable life goal. However, since the industrial revolution in the Occident, inordinate emphasis has been placed on the material and personal ego satisfaction of the individual. This is coupled with a concomitant motivation toward equating life fulfillment with increasingly homocentric concerns of material consumption.

In light of the many world surveys and projections of enormous human population expansion, world resource depletion, food insufficiencies, debilitating effects of environmental pollution and increasing social strife, humanity just cannot afford the price tag of materialism as the primary life goal. The concept of an ever-expanding pie that would allow an equal slice to each new entry into the marketplace has proved invalid in the face of modern realities. A reassessment of more wholesome and sustaining motivations regarding progress is necessary.

In this reassessment it is important to remember that Islam has always encouraged a very practical approach to life, based on a pragmatic view of phenomenal reality. This pragmatism has been complemented by a strong conviction related to the spiritual quest of all humanity. The ethereal world, known through intuition and the creative intellect and understood through transcendent logic, has therefore developed as a simultaneous reality. Islam promotes a “middle way” (ṣurat-āl-mustaṣaqlm) which develops cognition and action through a balanced sense of the phenomenal, as understood through reason, and the ethereal, understood through transcendent intuition. Totality, from the Muslim world view encompasses both the material and the metaphysical.

Contemporary visions of progress entirely deny or find little room for this balanced approximation of reality. Yet today’s most advanced subatomic physicists tend to agree with Islam’s organic and complementary view of life’s primary principles of operation. Ironically, most of mankind’s ancient traditions have been based upon the same “indeterminate” nature of reality.

Images of Development

The images associated with the recent progressive development in most of the world, and particularly in the resource-plenty countries of the Islamic world, have tended to exhibit strong anti-ecological and theological tendencies. As if compelled by a Promethean desire for self-
annihilation, the “ideal cities” of the twentieth century have been highly energy consumptive and wasteful. The concept of the megalopolis, the dispersed city images of the “Ville Radiance” of Le Corbusier and the sealed glass towers of Mies van der Rohe have created false ideas of form, totally alien to the ecological and cultural constraints of this spaceship earth. 

Granted that many of these “ideal” conceptions were mistakenly transmitted to life zones not originally receptive to their use, it is important to acknowledge that even in Western Europe and America these “ideal” forms are under serious debate today.¹⁵

Until the 1960s the level of global development had not reached such a threshold of ecological turbulence. The total interrelatedness of world cultures was still not so consciously sensed, and an energy conservation ethic had not yet evolved for the new policy makers of this global village.¹⁶

Today, the energy ethic is beginning to be enunciated and slowly understood, although few tangible images of this new attitude exist. In a world programmed for “package deals,” there are few “energy ethic packages.” The few that do exist are in their infancy; they lack the maturity of the “full life” wishes of humanity which balance process with form. There is not yet a language of the aesthetics of energy conservation in city planning, urban design or architecture.

While many of our contemporary ills may be explained by an overemphasis on materialism and the use of irrelevant models of development, it cannot be denied that the majority of humanity now desires these “golden calves.” So appealingly have the marketplace and the media promulgated certain views and products that the materialistic and so-called pragmatic ideas of progress dominate both societal action and political need for visible demonstrations of advancement. Therefore, although it is impossible to demolish all the glass skyscrapers in the deserts of the Middle East, it is possible to indicate their limitations and commence a transitional period of doing with less. Greater understanding, through experi-

mental means and clear demonstration projects, must be acquired for the energy-conscious age of the future.¹⁷

In this new consciousness, it is not enough to create energy-conserving containers while leaving the contents (the users, the people) in a state of frustration or with a sense of backwardness or second-class citizenship. It is necessary to develop transitional strategies which accommodate the impulse toward development while allowing time to integrate and transform these impulses into more constructive and relevant manifestations.

Most Islamic countries can boast a real treasury of insight and wisdom which, if tapped, might resolve many of the dilemmas of architectural “misfits.” This treasury consists of the traditional cultural values and indigenous settlements of Islam, including the ways of its people, its cultural institutions and its adaptive ideas of placemaking.

No more than two generations separate most contemporary Muslims from their energy-conscious past. This means that, in physical fact, both the architectural and paternal grandfathers of this consciousness exist. The centuries-old adaptive strategies inherent in these “cultural grandfathers,” if observed for their principles and not for their styles, can reap rich harvests of appropriate strategies to help anticipate the needs of tomorrow. They can also yield both a sense of personal and local pride through the promotion of a regional sense of identity, and the psychological benefits of continuity in the face of rapid change.

The Traditional Languages of Architecture

In terms of building technology and materials, the most advanced modern thinking is concerned with “passive design” in

Fez, Morocco: garden of a traditional courtyard house

Photo: W. Porter
buildings; the study of indigenous architecture is considered an essential foundation for this field. The traditional massive buildings in the hot arid zones of the Middle East, for instance, had long ago perfected the art of building with less waste while creating suitable standards of environmental comfort. The concepts of compact town planning; the courtyard plans of buildings; construction with thick insulating walls; the natural channeling of cooling breezes through the use of shadow and water; and the common language of Islamic art expressed through the symbolic use of geometry, calligraphy and colour are just some of the outstanding achievements of traditional Islamic placemaking. Their common-sense validity defies any temporal boundary; these underlying principles of adaptive design are as correct today as when they evolved centuries ago. They are indeed the first principles of any valid design and construction process in areas with comparable climates and value systems.

It is ironic but true that most recently-built communities and buildings in the Muslim world are not based upon the language of their traditional architecture, nor upon the symbolic images of growth and progress associated with Islam. Is it any wonder that our contemporary settlements tend to be ignoble places of alienation to their inhabitants, incapable of inspiring respect in either the local citizenry or in that of other cultures?

In identifying some of the principal issues of concern within the seminar topic “Places of Public Gathering in Islam,” we have provided some structure by dividing the subject matter into three groups. These three are: places of education; places of leisure and recreation; and places of civic and commercial activities. Some placemaking activities may feel equally at home in more than one functional category. A problem of distribution also arises, for the third category (civic and commercial activities) encompasses many more items than the first two. Nevertheless, it is typology of function which is at issue here, along with the lessons for future action which can be elicited from their careful study.

My investigation reviews the traditional attitudes and environmental characteristics of each functional type, and their transformations in recent history; it also makes some observations about the effectiveness and appropriateness of these transformations in accommodating Islamic life aims and regional, ecological and cultural constraints. The study is brief, and its intent is only to provoke discussion about certain salient issues of concern.

**Places of Education**

The traditional places of education in Islam have been the home, the craft guilds, the madrasa, the mosque and the khāngah. The master/disciple system of education, featuring a strong one-to-one relationship between teacher and student, dominated the transfer of experiential knowledge. Work and study, practice and theory were combined in a matter-of-fact manner which facilitated practical learning. There was maximum correlation between information needs and task accomplishment, resulting in greater efficiency. Thus the small children of the Islamic world produce most of the crafts, and have done so for centuries. Masters and upper-level apprentices and craftsmen are therefore free to focus their abilities on more meaningful endeavours that deal with higher planes of creative imagination.

We come now to that other dimension of traditional education, where the infusion of symbolic and metaphysical considerations into the created artifact was as important as the functional dictates. This metaphysical instruction need not have come from the teachings of the mosque or the madrasa, for the very way of life of the traditional craftsman was highly metaphysical and cosmic. The traditional craftsman, mason and architect created his works without a full consciousness of the metaphorical language of his art. As most communication was verbal and visual, very few records of this process have survived. Yet we can learn about the process by observing the “survivors” of the great modern “holocaust.” The tanners and leathermakers of Fez still craft their marvelous pointed slippers, a form as usable as it is beautiful, while the Nubian masons in upper Egypt attain the same imperfect perfection from their mud buildings.

The principle of master/disciple has long existed in both the Occident and the
Orient as a primary form of education. It is still exercised today, although contemporary educational systems in the hyperindustrial nations utilize it in a secondary manner, even then applying it to menial, mechanical tasks. Modern higher education avoids this direct system of knowledge transfer. Only in the rarefied postdoctoral levels can one still have the privilege of learning by direct observation of a master. Mass education, it has been held, moulds only a partial, specialized individual, who lacks a deep understanding of a holistic approach to the human experience.

The traditional places of education centered around rooms, porches, courtyards, spaces adjoining a bazaar and enclosed gardens. The theological schools and mosques certainly elevated the quality of the learning environment, but they were basically repetitions of similar spaces experienced in the home. In summary, then, the traditional place of education has long been one integrated with the social fabric; in spatial terms, it has consisted of small rooms around a courtyard space; and the method of instruction was a master/disciple system, in which the knowledge transferred depended as much upon the personal observations of the conveyor (the teacher) as upon the information conveyed.

Current opinion, however, views the role of education in an entirely different mould, and relates to completely different goals and needs. The social liberation of women in society has created new attitudes toward education which have profoundly altered the traditional system of knowledge transfer. Therefore, in sharp contrast to the past, the contemporary model of the isolated, socially segregated campus has developed, complete with factory-like multipurpose instruction halls. The system of knowledge transfer has taken the form of impersonal books, television monitors and "alien" instructors who rarely have occasion to know their students as individuals, and vice versa.

It can of course be argued that educational systems relevant to so-called underdeveloped or craft-oriented societies differ from those required by hyperindustrialized societies. This cannot be denied, but one wonders whether this trend is a healthy one, and whether it can answer world needs in the year 2000 when there will be six billion inhabitants, more than half of school age. Also, I question whether there has to be such a sharp break with past forms of education in both mode and place of instruction. Can alternative strategies be tailored to meet the sociocultural constraints of different nations while allowing a continuity of past, present and future?
Places of Leisure/Recreation

As leisure activities become an increasingly necessary respite for the common man in an industrialized and urbanized world, new emphasis is being accorded sports, amusement, recreation and tourism in the form of appropriate places for these activities.

Sports Centres

In contrast with the places of education, for which specific historical precedents clearly exist, the category of spectator sports has opened new architectural domains in the twentieth century. This is especially true in the Islamic world. The main reason for this change has been the advent of mass spectator sports, where it is not uncommon for one hundred thousand or more persons to spend three or four hours watching various kinds of competitive sports. The paradigmatic places of spectator sports are the venues of Olympic and regional sporting events. In direct connection with these periodic events and with recent world-wide interest in competitive sports are the local sports stadia associated with schools, colleges and municipalities. These are viewed as sources of personal health, competitive drive and national pride, in addition to their potential for new business and employment opportunities. In terms of land use and activity generation in Muslim cities, sports centres have not yet found a real sense of place. As vast segregated plots surrounded by chain link fences, they await integration into the urban fabric. If they are of recent vintage, they are usually situated far out on the city periphery. If older, they may have been overgrown by metropolitan congestion.

Muslim cultures have spawned many indigenous sports, but these have tended to be primarily of a personal or limited group nature. In modern Iran the zurkhaneh or “House of Strength” survives as a vestige of a warrior past in which individual acts of strength and self-growth were encouraged. While history records polo playing in the vast Maidan-i Shah in Safavid Isfahan, it was then a royal sport limited in popular participation.

As symbolic places for national rallies, or conversely as places of protestation, sports centres may take on political connotations and raise issues of public security, safety and access. Decisions about their placement and design are therefore difficult for the client (usually the government), the professional and the builder. One thing is for certain, however: since sports centres periodically generate vast traffic jams, they evoke questions about real value in terms of energy and resource commitment.

Public Parks

Public parks have existed in local communities, towns or regions for some time. In the temperate climates of the West, parks sometimes occupy more than twenty percent of a town’s land use. However, their introduction into the fabric of Islamic urban settlements was quite recent. In most hot and arid Muslim cities, less than one percent of the total land surface has ever been utilized as public green space. Instead, the promotion of private open space has been the common practice. When settlements were smaller and nature more accessible, the need for proximity to nature was fulfilled daily by private courtyard gardens or by the great paradise gardens of the aristocracy. Many of the latter have now been turned into public gardens, such as the Bâgh-i-fin in Kashan and the Chehel Sotun in Isfahan.

The traditional paradise gardens in Persia and other hot arid climates were relatively small, and carefully scaled to the local availability of water. By comparison, the urban parks in the West—such as Regent Park in London and Central Park in New York—are significantly larger in scale.

Tehran, Iran: Shafaq Park, designed by Kamran Diba
Photo M. Niamir
commensurate with their more temperate ecological environments. The gardens of Versailles, historically modeled after the Persian gardens, show an even more startling difference in scale.\textsuperscript{27}

With increasing urbanization, many Muslim city populations now exceed one million. The growing need for public green spaces has recently been sensed. While the ecology will not support large green areas and the government bureaucracy is not fully geared for their maintenance, there is a desperate need for some "green lungs" to enable the congested cities to breathe once again. Public green areas may prove effective in micrometeorological change: if properly designed and disposed throughout the city, they serve as shaded channels for cooling local breezes.

While public green and shaded spaces are a necessary addition to urban life, their survival and maintenance is fragile and a matter of great difficulty in most hot arid environments. The public park appears to be an indispensable corollary to apartment living, but this pattern is totally alien to most Muslim countries. Statistically, the indigenous private courtyard house can accommodate the same population density as a medium-rise apartment block, if careful measures of light availability and space separation are observed. Why, then, has this traditional adaptive mode of housing been sacrificed for an alien form, ill suited both to Muslim personal life and to the ecology of the typical Islamic environment?

Places of public recreation and amusement have often been associated with parks and green spaces in the West. These places may be zoological parks, amusement centres, public fairgrounds, restaurants and other such facilities; all of these have recently been introduced into the Islamic urban fabric. Since land prices are high in the existing city centres and most of the land there is already developed, new places of recreation have tended to be on the outskirts of cities. Consequently, access to them is often difficult for the masses.

Tourism

Concluding this category are the places of tourism, including hotels, motels and resorts related to the sea, rivers, plains and mountains. Tourism has become a major world industry, and package tours related to specific points of interest have gained such momentum as to override national boundaries and ethnic limitations. Due to the attractive incomes that this industry brings to a country and the sense of prestige it affords the local community, Muslim countries have paid much attention to this new phenomenon. Its benefits are tangible and well-known, but its disadvantages demand equal consideration; insensitive mishandling may have serious ramifications.

If not properly orchestrated, tourism tends to be "trendy" and not of a continuous, sustaining economic nature. Certain local economies can rise and fall at a mercurial rate if they are dependent on local political stability. The recent history of Beirut is an important lesson in this respect. The unsophisticated tourist (which refers to the majority of the breed) is on a minimum time and money budget. He therefore tends to reduce the quality of local crafts and folk art by his vulgar buying patterns and tastes. Furthermore, where there is a native community adjacent to tourist developments there is a tendency toward dehumanization of these indigenous people, because of the constantly changing observers who come in and out of their lives. As "museum pieces" or as pseudo-Williamsburg natives they live unreal lives, giving unreal "messages" and artifacts to the curious and unreal tourist. It can be argued, however, that the cultural value of several ancient monuments has been preserved due to the tourist trade; Abu Simbel in Egypt is an example of this.

It is important that tourism reinforce real and sustaining values, such as enhancement of the natural environment; preservation of culturally significant monuments and places; integration with the local socioeconomic fabric and growth potential of the region; real support of local crafts by a demand for high quality; and, most important, promotion of more genuine and meaningful human interactions.

Places of Civic and Commercial Activity

This category represents a most complex and varied array of public places. It addresses the civic places of government and municipal offices, mosques, libraries, museums, auditoriums and transportation centres, including bus, rail and air terminals. Commercial functions such as shopping, services, business offices and both light and heavy manufacturing also fall within this domain.

While most of these public functions have historic precedents in traditional Islamic cities, the fact of vastly increased scale makes the problems confronting planners and clients unique to our times. The issues become even more complex when related to capital cities, where scale, the pace of urban population growth and the presence of a transitory population of foreign dignitaries, business men and tourists make for further complications.

A sense of unity among this multiplicity of activities is an appropriate goal. We will better understand the possible means to this end if we survey the traditional Islamic cities, where a strong ordering of diverse parts was characteristic. The unifying element which linked the disparate parts of a city together was often the bazaar or sīq. Through a system of linear and grid pathways that were often covered, the bazaar network created the madinas and casbahs of traditional Muslim cities. Here, within a compact space and a highly imageable framework of pedestrian scale, many functions had been included. To use an anatomical metaphor, the madinas included all of the vital organs of the city body.

A review of traditional city centres shows how strikingly small these civic and commercial areas were. Another characteristic
was the paucity of public places, particularly government offices, in comparison with the numerous edifices which reflect the vastly expanded role of central government in most Muslim countries today. A third quality is the increasingly specialized modern usage of space, in contrast to the efficient multi-use of space in traditional times. A case in point was the caravanserai, which served not only as a transient place for overnight stay, but also as a warehouse, a place of public entertainment and, on certain occasions, a place for the enactment of religious passion plays and funerary rites.

Setting the underlying theme of the madinas were the Friday Mosque, the tombs of local saints and numerous smaller mosques. The proximity of these holy places to more secular places of activity was a direct reflection of the total integration of traditional society. Today, however, the madinas and bazaars have become the vacated, decaying places for poor and wholesale merchandise. The most prosperous retail shops have moved to the “new town” or to the car-accessible streets of the modern quarters.

 Artificial surgery to alleviate the problems in the bazaars has resulted in one of two outcomes. Either the physical structure has been altered radically by the introduction of traffic which it cannot sustain, as in Fez, or it has become a luxurious sort of Disneyland, as in Isfahan’s Shah ’Abbas Hotel and bazaar renovations. While the bazaar and the entire madina remain important public places of gathering, which need only to be resuscitated to serve today’s city centres with real value, very few successful examples of this necessary revitalization can be found.

If the traditional precedents for civic and commercial places were the bazaars and madinas, what can be done to accommodate today’s vastly increased demands for space and altered functional needs? The patterns of urban chaos observed in most Muslim cities cannot be the answer. In most of these, civic functions are scattered in the city as each new government agency attempts to accommodate its growing staff in newly rented or built spaces. Changes in governments, together with the growth and transformation of ministries, are so rapid that even newly designed municipal buildings are either too small or too large upon completion.

A planning strategy employed recently in master plans for many new Muslim cities is the creation of new civic centres in underdeveloped lands within the metropolitan areas. With the emergence of this “pocket” development, other constituent parts of the society have apparently also lobbied for their own enclaves. The net result of any newly created master plan is a series of enclaves for specific functions, connected by vast transportation networks consisting of over and underpasses and eight-lane highways. What the observer cannot find is any perception of order at a human, pedestrian scale; all that is evident at the human level is traffic congestion and long delays between destinations.

Commercial activity in these new master plans is organized around office towers, parking garages and commercial malls or streets characterized by varying degrees of design effectiveness. Meanwhile, the momentum of unplanned local commercial growth in most resource-rich Muslim cities is “boom town” in character, and jarringly chaotic as a result.

Municipalities and planners may admonish that “you have to break a few eggs if you are going to make an omelet.” Sadly, the metaphor is hardly apt, for people are more than eggs and cities are not omelets. While the economy is prosperous, many activities that cannot be coordinated work at cross purposes. No matter how hard one tries, certain creations of urban value require time for conception and broad-based participation to assure their success. The annual growth rate in most of these capital cities averages five to seven percent, with the population nearly doubling.
every decade. The demand on civic and commercial places is so great and so dynamic that planning has been unable to keep pace with the market with any degree of physical or environmental success.

In the less economically dynamic Muslim cities, the urbanization rate has been lower, but the apparent psychological need for the same “images of development” evident in the capital cities is still felt. In the name of “development,” therefore, broad streets are cut through old urban fabrics, although these streets are ecologically ill-fitting and remain empty of vehicular traffic; harsh, hot squares are created where carefully-planted pansies struggle to survive the noon sun; tin-clad veneers of “modernism” wallpaper those mud structures that have survived the bulldozers’ blades. Meanwhile, the segregated development patterns spurred on by speculation, personal thrusts for power and a totally un-Islamic will toward ostentatious display rip these formerly sleepy towns into piecemeal places of comic tragedy. An important paradox is faced here: the sensed need for governments to display advancement, contrasted with the inevitable disruption and alienation which the advancements bring.

warehousing, vast military arsenals, oil depots, even the large residential ghettos of the future. They are also far distant from the existing towns, sometimes by thirty to forty kilometres. Connected to the existing metropolitan areas by expensive but empty super–highways and at times by rapid rail transit, airports are bound to be the true generators of future urban growth.

It is a well known fact that the airport road is a good speculative market place. Regardless of limited–access highway restrictions and adjacent land management legislations, future airports, more than any other urban determinant, will influence the disintegration of Muslim cities. Unless creatively and satisfactorily integrated with the city fabric, its industry, farm land and realistic near and far future growth potential, hundreds of billions of dollars will be wrongly spent on the construction of that newest symbol of development, the international airport.

Three Case Studies

This seminar is oriented toward a case study method of learning from projects recently undertaken in Muslim countries for public places of gathering. It is hoped that a frank exchange of information among clients, users, professionals and builders would make it possible to identify more appropriate strategies for achieving a higher–quality built environment in the Muslim world. My opening remarks have been conceived as a model of the dialogue approach to identifying principal issues of concern. The three case studies which follow each relate to one of our three main sub–topics within the general issue

Airports

The most cataclysmic impact on the urban scene has been that new creation of the twentieth century: the airport. Originally planned for propeller craft requiring small runways, and used only as a place of transportation transfer, the older airports of Muslim cities are now overrun by urban growth and congestion. There is an apparent need for construction of new airports in most cities, particularly since the advent of the jumbo jet.

Huge in size and different in nature from their relatively innocuous forefathers, airports today are not only transfer points from ground to air transport, but places of duty–free manufacturing and assembly, visitor accommodations, entertainment,
of Places of Public Gathering: places for education, for recreation and for institutional implementation.

**Iran Centre for Management Studies**

The first case study is a place of education. The project is the Iran Centre for Management Studies, located in Tehran and completed in 1972 with the collaboration of the local business community, the central government and Harvard Business School. The main issue here was the potential modern utility of the traditional principles and language of architecture. In particular, the project investigated the appropriateness of the madrasa form for the contemporary needs of a business school, in which middle management students would reside within the complex.

In the Centre for Management Studies, the special conception of a positive space system is the principal organizing model. The courtyard and garden were the two main forms used, while the concept of space creation and linkage followed theories identified in *The Sense of Unity.*

**Tehran Centre for Sports**

This complex developed in several stages, commencing in 1967 and reaching completion in time for the Asian Games held in Tehran in 1974. The main topic of investigation here was the use of intermediate technology. The project was undertaken in close conjunction with the Ministry of Housing and Urban Development, the Physical Education Organization, the consultants and a series of construction organizations.

*Khargush Dareh,* or "Rabbit Valley," was a barren alluvial fan formation lying some ten kilometres from the western edge of Tehran. The project for the sports centre entailed the creation there of a 100,000 seat stadium as the initial part of a complex that would eventually include a 20,000 seat velodrome, a 2,000 seat multi-purpose hall, a 4,000 seat Olympic swimming pool, a communications centre and several smaller halls, in addition to parking areas.

*Iran Centre for Management Studies, in the foothills of the Aborz Mountains west of Tehran*  
*view of the entrance hall and detail of some*  
*Photos: N. Ardalan*
From a study of the constraints of technology, time, economy and overall planning considerations, it was decided that an earthen stadium would be the most appropriate solution. Approximately four million cubic metres of earth were excavated from the valley floor, and compacted in thirty-centimetre layers using available road building equipment and local contracting know-how. The earthen stadium was also conceived as a dam for a man-made lake which was developed in the resultant excavated valley. A water channel from the nearby river was diverted to fill the lake, which was also augmented by deep wells. The lake was used as a reservoir to irrigate by gravity a man-made pine forest of 165 hectares.

The park environment which was created provided a refreshing microclimate, a respite from the harsh surrounding plains, while simultaneously creating an appropriate place for other activities. The earthen forms of the stadium were repeated in the velodrome and in the plinths upon which the great halls were placed. The earthen beams, decorated with intricate patterns of the sand-coloured brick indigenous to Iran, created a unity within a diversity of functions built in several phases over many years.

**Tehran Centre for the Celebration of Music**

The major issue addressed by this civic place of culture designed in 1977 was the potential of a project to generate urban reintegration and rehabilitation.

An international centre for traditional and symphonic music was to be created in downtown Tehran. The site existed as a vast excavation, therefore allowing a 600-car garage space to be placed below ground level; its rooftop was to be transformed into an urban garden. Within this garden, the great pearly cone of the symphonic hall would gently ascend through a series of landscaped terraces and flowering arbors.
Through a potential system of interlinked pedestrian pathways, the music centre could bring together the nearby gardens of the City Theatre, Roudaki Hall and the Polytechnic campus, resulting in an even larger and more significant urban place of culture and education. This reintegration would also allow an upgrading of the existing city tissue, which consisted of modest yet elegant brick townhouses of the 1930s which were beginning to fall into economic blight and disrepair. The design of the Centre for Music was based upon two concepts: providing Tehran residents with a much needed urban green space, and bringing into being, with a minimum investment of capital energy and social disturbance, a unique cultural quarter comparable to any in the world.

Reference Notes

2 Nader Ardalan and Laleh Bakhtiar, The Sense of Unity (Chicago, 1973)
3 See ACE (Nader Ardalan, consultant), Al Masjid al-Haram (Tehran, 1976); Ardalan and Bakhtiar, op cit; and K. A. C Creswell, Early Muslim Architecture (Oxford, 1969 and New York, 1976)
4 See Ira Lapidus, Muslim Cities in the Later Middle Ages (Cambridge, Mass, 1967) and Paul Lamp, Cities and Planning in the Ancient Near East (New York, 1968)
5 I. Bighari, Bazaars of Iran (Tehran, 1977)
10 Ali, op cit
12 F. Capra, The Tao of Physics (New York, 1977)
13 See Yoshitsugo Iwatsuo, The Key Philosophical Concepts of Sufism and Taoism (Keio University, 1966) and Toward a Philosophy of Zen Buddhism (Tehran and London, 1977)
14 See abstracts from the International Symposium on Islamic Architecture and Urbanism in Ekistics 47, No 200 (Jan–Feb 1980)
15 Peter Blake, Form Follows Fiasco: Why Modern Architecture Hasn’t Worked (Boston, 1977).
17 Ernest F. Schumacher, Small is Beautiful: Economics as if People Mattered (New York, 1973)
19 Ardalan and Bakhtiar, op cit.
In the built environment, a public building does four important things: it stands as a landmark, it transmits a message, it performs a function and it fulfills a need. The designer shapes the performance of the building by creating its visual expression, organizing the use of its spaces and articulating its programmatic requirements. But in the end, it is user response that spells the difference between success and failure. As a landmark, the building must generate a sense of pride, the message it conveys must be comprehensible to be understood, its functions must be coherent to be efficiently discharged and the need it fulfills must be one which the population actually feels.

The process of modernization has created a growing alienation between the users of public buildings and the procedures by which the buildings are provided. In essence, the provision of these facilities has become programmatic routine. Their function tends to satisfy a bureaucratic interpretation of the public’s need, their location within the urban fabric is based upon specified planning standards and their architectural form has become standardized. These tendencies can be found in all countries, as government has assumed a broader range of responsibilities and replaced the religious authorities, community associations and charitable individuals who traditionally provided such public facilities as places of worship, schools, hospitals, parks and fountains.

In the West, the institutionalization of public facilities began in the late eighteenth century, and was essentially completed by about 1900. In the Middle East and other Islamic areas, this process began later and is still occurring to some extent. Western countries developed building prototypes suited to their institutions and culture as part of this institutionalization process. Most developing countries, including Islamic ones, have adopted these Western prototypes or adaptations of them, either as a result of the direct influence of colonial governments or as part of the process of technology transfer from more to less advanced countries.

The extent to which these imported building types have satisfactorily met the needs of their users has lately been subjected to a growing scrutiny. Some of their deficiencies are obvious, such as their unsuitability to local climatic conditions and disregard for such prime requirements as the provision of communal prayer areas in certain public building types. Other deficiencies are more subtle, insofar as they relate to the user’s perception of the public building and his willingness to make full use of the services housed there. This relationship between user and building is complicated by the cultural stratification of societies whose populations present a full range from illiterate to highly educated, from traditional to modern. The manner in which public services are offered may thus be understood by some strata and not by others. Furthermore, Islamic cultures are highly dynamic. Education and modernization are altering traditional concepts, in particular those affecting social and geographic mobility as well as the use of space within the neighbourhood and city. These changes in turn affect the relationship between the user and the many public services provided by government.

This paper argues that the widespread use of Western prototypes for public buildings has to some extent prevented their full and proper use by the population they are intended to serve. The institutional factors which led to the selection of Western models in the delivery of public services are examined and the consequences for the indigenous building process analyzed. Finally, a critical evaluation of the adequacy of selected public building standards leads to suggestions for the revitalization of the participation of users in the design process.

Changing Roles in the Supply of Public Services in the Near East and North Africa

Institutional Evolution

The modernization of the region’s institutions started in the early nineteenth century as traditional trade relationships with Europe were transformed. The advantages of the Western model were clearly demonstrated by the profusion of inexpensive manufactured goods that flooded the eastern Mediterranean area, as well as by the military superiority of the European powers. A few countries launched major institutional and economic reforms in order to compete with the West. Others succumbed to European colonialism. Still others, though able to retain their independence, became increasingly subject to the economic dominance of the West. In any event, Western institutions, whether adopted willingly or imposed by force, proliferated throughout the region, starting with a reorganization of the central administration.

Development programmes, regardless of when they were initiated or under what circumstances, entailed fundamental changes in the role, functions and operations of the State. The necessity to muster resources and technical capabilities on an unprecedented scale mandated the establishment of an administrative framework capable of implementing these programmes. The traditional concerns of the diwân al-sultana—the army, the collection of taxes, the appointment of high officials and the administration of the public treasury—proved totally inadequate in a world dominated by modern industrial powers.

Inevitably, the process of economic development led to increasingly centralized decision making in the provision of public services, and gradual expansion of government functions through new, specialized line ministries and executive departments. The sequence and scope of this State takeover of the service functions traditionally provided by community associations, kin groups and wealthy citizens was dictated by the path and rate of development and by the nature and urgency of the problems encountered, rather than by ideological considerations or resource availability.

The transfer of responsibility from the private to the public sector and the concomitant decline in the role of community associations can be traced back to the economic impact of the West, the early
Changing Roles and Procedures in the Design of Public Buildings

attempts at modernization and specific colonial policies. It was spurred by three convergent forces.

First were the resource requirements of economic development. The infrastructure needed to support production activities increased in complexity at an unprecedented rate, as technological innovations rendered older facilities functionally obsolete while still physically sound. The human resources needed for the development effort required a panoply of educational facilities to provide skilled manpower.

Second were the political exigencies created by the development process itself. Development opened avenues for upward mobility based on new factors: the acquisition of skills and knowledge required by the modern economic sector. Islamic social principles of equity demanded that the means to acquire these skills be made available to as wide a spectrum of the population as possible.

Third was the welfare function of the Islamic State. It is, by law, the responsibility of the State to supply basic needs to those unable to secure them on the open market. The definition of what constitutes "basic needs" expanded beyond medieval concepts of mere sustenance to encompass an array of goods and services once thought of as privileges but today recognized as fundamental rights.

The emerging bureaucracies either incorporated older institutions or paralleled them. In both cases the result was the same. The ascendency of the State undermined the role of the community groups and associations which had formed the basis of the traditional structure of society. These associations were extremely diverse and offered the population a full range of participation in their activities. Some were formal, like guilds, others informal, like groupings of relatives, friends and neighbours. They could be geographically defined, like the administrative 'arafa, shiakha, hāra, khīta or mahalla, or undefined, like Sufi associations. Some were restricted by lineage, like the ashrāf, while others had looser membership criteria, like provincial affiliations. Their common feature was a clear economic, social or religious bond which permitted a complete identification of the individual with the group. People belonged to one or several of the associations and defined their roles, rights and responsibilities accordingly.

Erosion of this social structure resulted from changes in the outlook and way of life of the local elites, a natural consequence of constant exposure to the Western world. Colonialism accelerated this trend, as economic and political domination created an incentive for emulation, and even vehement nationalism could not altogether prevent ambivalent attitudes. Traditional community associations were thus deprived of elite leadership, patronage and protection. Physical dysfunction became evident as new patterns of urban expansion followed Western design standards and were totally unrelated to the traditional Islamic urban fabric organized around khītas, hāras and sāqs.

The final disintegration of the community associations occurred mainly as a result of the expansion of the State bureaucratic machinery, which gradually took over their administrative, fiscal and regulatory functions. Government came to regulate all key services through licensing, taxation and pricing policies. The expansion of governmental functions through line ministries and executive departments terminated the public service role of the awqāf, and dealt a severe blow to similar functions undertaken by community associations. Their roles became sharply limited, although they continued to build and administer mosques, zāwiyas, kuttābs and various charities.

With national independence came a determined effort to embark on large-scale development programmes. Forceful State intervention and the transfer of Western technology were deemed crucial in bridging the economic development gap. The use of imported Western institutional models met with varying degrees of success, but in any case they hampered a possible revitalization of traditional community associations. These were left to redefine their roles and coexist as well as they could. The imperatives of development today dictate an expanding scope for
government action in the provision and delivery of public services. In light of this, it is difficult to envisage the role of community associations extending beyond the provision of specific personal services, mutual aid and charities.

Sources of Public Building Prototypes

In expanding the public service functions of the State, Muslim countries have looked to the West for physical standards, building models and organizational frameworks. This demanded planners, architects and engineers capable of designing new types of facilities, contractors capable of undertaking large-scale projects involving new building techniques and administrators capable of managing a new functional apparatus.

The adoption of a prototypical plan for institutional buildings has certain clear advantages. It permits the development of functional spaces interrelated to ensure efficient utilization. Moreover, the limited range of uses for each space, the uniformity of usage regardless of where the building is situated and the need to build a large number of buildings with similar, if not identical, programmes are pervasive arguments for the standardization of design norms. For example, in European countries where the central government
had assumed responsibility for education and had established uniform curricula, school buildings were rapidly standardized. The size of the school, its location within the community and its plan and elevations had to conform to national norms.

The standardization of other public building types occurred more slowly, but was also essentially complete by the end of the nineteenth century. Their design was determined largely by technological and economic factors. Hospitals were shaped not only by considerations of medical care but by construction costs and ease of maintenance. Public housing embodied hygienic norms of ventilation and space per resident, as well as budget constraints that required a dense grouping of four to six-story walk-up blocks. In most instances, adherence to bureaucratic norms dictated the plans and the selection of specific building materials and gave little leeway to designers to search for more innovative solutions.

The extent to which the public building types that evolved in Europe were satisfactory solutions has been the subject of some debate. In spite of their stylistic modernization in the last few decades, their programmatic durability seems to indicate that they have adequately met institutional needs. The minimal involvement of users in their design has been chiefly symptomatic of social structures that have rarely stressed the participation and collective responsibility of communal groups since the centralizing of government functions started to gain strength after the fifteenth century. It was thus accepted that the provision of new public services, and the extension of governmental responsibilities to include community facilities previously provided by religious and charitable institutions, would take place in what had become an expected "governmental style" characterized by centralized decision making and little concern for user participation.

Though the standardized European public building prototypes may have been suitable for their indigenous conditions, at least insofar as they were part of a stylistic and institutional tradition, their transplantation to the Islamic countries of the Near East and North Africa was culturally traumatic.

### User Needs in the Design of Public Buildings

State control meant equal access to services. It also meant that the process by which these services were provided and administered, as well as the standards for their physical plant, were formulated by government and could be altered at any time in the public interest. While services had traditionally been provided to fulfill a need commonly defined by provider and user, the relationship between people and public services was henceforth regulated by the statutes of administrative law.

The government replaced the users as the "client" for whom public buildings were produced by an array of architects, engineers, builders and procurement contractors. The staff providing the services became government employees, while users were categorized as general, prospective or actual beneficiaries. This classification offered little guidance to the providers of public facilities, be they ministry officials or design professionals, since users rarely constituted a homogeneous group. As an added complication, Islamic societies are today in a highly dynamic phase of their evolution. The process of modernization has complicated the economic stratification common to all countries by superimposing sharp differences between the educated and the illiterate, urban and rural populations, men and women, and modern and traditional occupations. This is reflected at all levels of society. The best indicator of this dynamism is a growing generation gap in attitudes and lifestyles, which has overshadowed the ancient cultural gaps between social classes.

The implications of these trends for the programming and design of public buildings are evident. User attitudes toward public facilities differ among various segments of the population. Therefore the adoption of uniform standards for service areas, building prototypes and building plans is totally inappropriate. The concept of social space for men and women provides a dramatic example of these differences in all three categories of standards.

The service areas of schools, mother and child clinics and welfare centers used by women are markedly smaller than those of comparable facilities for men. In the more traditional Islamic countries and among less educated, older urban women in general, there is a marked reluctance to venture alone out of the immediate neighborhood. Recent experience has shown that facilities for women fail to reach the outer bounds of their targeted service area where it extends beyond the maximum distance a woman is willing to walk alone. Inadequate public transportation and the inability to keep facilities open at times of day when male family members can accompany their womenfolk have compounded the problem. The siting of public facilities must therefore take these attitudes into consideration, rather than following the more usual international criteria based on an efficiency formula for maximizing utilization ratios and minimizing construction and operation costs per unit of population served.

Building prototypes accommodating various facilities, particularly multi-service centers offering a broad range of social services to all segments of a population, have had uneven success. Modeled after European examples which have demonstrated the economy of sharing expensive facilities, they have failed to recognize the deeply ingrained reluctance to come into contact with members of the opposite sex in unfamiliar surroundings. Separate facilities, from schools to health and social service centers, are still required for certain social strata, even though mixed facilities may be acceptable for others.

Building plans must also recognize the desire for a separation of men from women, or families from single youths, in common areas. Thus, separate waiting rooms may be required in clinics, hospitals and facilities such as railroad and bus
stations which are used by all social strata. It is worth noting that common waiting areas have been readily accepted in airport terminals, which until the large-scale interregional labour movements of the 1970s were used primarily by the more affluent and better educated. Where only one waiting area is provided, it is not uncommon to find a de facto segregation of the common space, with men congregating at one end and women at the other.

In general, considerable re-programming of Western prototypes for service facilities is required. This does not seem to be easily comprehended either by Western-trained designers or by the technocrats of national and international agencies which provide funding. Moreover, the programming and design effort must recognize that

Changing Nature of the Commissioning and Building Process

The Institutionalization of the Contract System of Labour Recruitment

Paralleling the case of mi‘mār officers whose functions were taken over by the ministries of public works, trade guilds—the most formal of all community associations—proved unable to supply government with the manpower needed to execute large-scale and technically sophisticated projects. By the end of the nineteenth century, colonial administrations unwilling to tolerate a labour market regulated by non-codified rules had already decreed the abolishment of the guild system. The disappearance of geographic and labour recruitment monopolies changed the complexion of the building trades. Persons were now free to enter and practice any trade, and clients were free to select the mu'allim to supervise the construction work and recruit whatever workers were needed without resorting to the intermediary guild sheikhs.

The disappearance of a regulated labour market led to the emergence of the contract system of labour recruitment. Contractors replaced guild sheikhs as suppliers of construction labour, and formed a class of foremen and trade bosses in the different job activities. These contractors were middlemen, supplying large foreign or local employers with the labour they needed. As such they were very different from the guild sheikhs they replaced, few of whom were able to adjust their role to fit the new conditions and become contractors.

Without the protective institutional framework of the guild system, only a severe labour shortage could prevent the exploitation of workers. Until the past decade, when ambitious development projects created a labour shortage on the regional scale, demographic pressure and rural–urban migration had saturated the construction industry with a pool of unskilled labourers ready to work for minimal wages. No esprit corporatif could survive under these conditions, and no institution developed to replace the guilds.

The contract system effectively cut off labour engaged in the building trades from the client (public or private) and the designer (foreign or local), both of whom found it far more expedient to deal with contractors. Small-scale developers can still secure building materials and deal directly with an array of individual skilled workers and craftsmen operating in the locality. However, since even for simple residential construction no fewer than ten different trades are involved, for any project of significant scale this process quickly reaches unmanageable proportions.

Commissioning Procedures and the Adoption of the Bidding System

The dissolution of the guilds and the institutionalization of the contract system of labour recruitment led to the adoption of the competitive bidding system for the award of public works. Engineering and contracting firms developed to undertake the larger contracts for both government and the private sector, including construction of public buildings and public works. Foreign dominance of the field during colonial times was a natural extension of foreign control over the financial and land
markets and the technical professions. Dissolution of the colonial empires brought an end to open discrimination against native professionals and entrepreneurs, and permitted the emergence of large local firms which have adopted Western bidding, management and construction techniques. Thus, the duality which pervades the whole economy extends to the construction sector, where large-scale enterprises with modern machinery and equipment contrast sharply with small-scale builders relying mainly on manual methods of construction.

*Impacts of Standardized Building Types*

The decision to use Western building prototypes for the public facilities required by efforts to modernize and become more economically competitive with Europe was to have significant consequences for the processes of design and building construction.

One important consequence was the abandonment of local architectural traditions. Some of the governmental service functions that were adopted in emulation of European countries had no easily traceable indigenous style; they represented the importation of a new technology or of functions which in the Near East and North Africa had never become sufficiently institutionalized to generate a specific architectural form. Transportation terminals, factories and communications centres are example of the first category, while the second includes hospitals, para-medical and welfare centres and government offices. Therefore, foreign designs were adopted in the absence of an appropriate indigenous building type. This is perfectly understandable, particularly since these functions were frequently introduced into the region by colonial governments or by foreign concessionaires.

Other governmental functions, however, particularly schools and housing, had a long indigenous architectural tradition which was systematically discarded in the modernization effort. There seems to have
been little justification, for example, for using European school prototypes rather than a type of building derived from the traditional madrasa. One-story classrooms disposed around a courtyard would not only have ensured an easily understood continuity in style, but also would have been better suited to local climatic conditions and would have allowed the use of local construction materials and labour.

A second consequence was the gradual disappearance of traditional building skills. The very modernity of European building types, the building materials employed and the ways in which they were assembled were sufficiently alien to the local building industry to reduce its participation in the construction effort to a minimum. The reliance on skilled foreign construction workers—chiefly Italians, Greeks and Maltese—to undertake the masonry and stucco work, the plumbing and electrical work and the carpentry and finishing, relegated local labourers to menial tasks. This was exacerbated by the favouritism which colonial administrations and concessionary companies showed to contractors from their own country. In addition, the very scale of government construction projects discriminated against local contractors, whose small scale of operation, lack of education and inadequate financing excluded them from competitive bidding procedures. Large foreign firms were thus again at an advantage wherever governments adopted the more efficient bidding procedures used in the West.

The local construction industry languished as government contracts were denied them and the better private sector buildings increasingly emulated new European fashions. Traditional skills were lost within one generation or so, as skills better suited to the new building types being constructed had to be learned by local labourers.

A third consequence was a growing Westernization in the design profession. Architects, engineers, planners and other professionals studied Western models and entered their profession imbued with ideas and precepts which inevitably promoted the use of Western building types that were quickly becoming the symbols of progress. The young professional found himself in a position somewhat analogous to that of the traditional building craftsman. He had to perform as a professional judged by Western standards if he wanted to compete with the foreign firms that had cornered the more lucrative public and private building contracts. Thus in the 1930s a number of highly competent and competitive designers started to emerge; their very success was due to their ability to design in the international style.

The rapid growth of this group, whose scope of activity expanded with their country’s independence, has done little to promote the development of Islamic contemporary architecture, as their views are strongly permeated by international influences. They are, in fact, largely indistinguishable from their colleagues the world over. They follow the dictates of the same architectural schools of thought, emulate the same masters, share an identical preoccupation with architecture as “built form.” Much of the work of these designers has clearly responded to the Western taste of the minority of the population from which their wealthier and more sophisticated clients are drawn, and for whom they design modern luxury housing, hotels, office buildings and government ministries. However, they have generally been no more able than their Western counterparts to respond to the needs of the majority of the population, whose lifestyle is still imbued with traditional values.

The Adoption of New Programmatic and Design Standards

The spatial organization of the Islamic city reflects social and institutional structures based on well-defined groups sharing a common interest in a specific geographical area—khitta, hara or suq. The failure of Western observers to recognize this relationship is amply demonstrated by their persistent description of the Islamic city as lacking order, resembling a rabbit warren or consisting of a confused jumble of narrow alleyways. In planning, as in architecture, the European model was
deemed superior and new districts that started to be laid out in the nineteenth century introduced unfamiliar features to the region: wide streets to accommodate vehicular traffic, the rectilinear street plan and the free-standing structure. These became the physical planning norms accepted by local professionals and government officials alike. Though undoubtedly suited to the evolving tastes of a Westernized elite, they failed to take into account the traditional lifestyles of the majority of the urban population.

The design standards used in public housing projects illustrate the lack of sensitivity to user needs. The wide streets have been planned to accommodate nonexistent automobile traffic. Hot and dusty, they do not provide the shade required for comfortable pedestrian usage, and their unnecessary width quickly becomes an ad hoc refuse dump. The walk-up apartment blocks are closely modeled after those of European public housing projects. These accommodations are ill-suited to the traditional keeping of poultry and small domestic animals, which are a main source of protein for the poor. Moreover, their corridors and stairwells do not fit traditional notions of individual responsibility for communal space, their usage leads to tenant conflicts, they are not maintained or kept clean and they deteriorate rapidly.

The planning standards that have shaped large government projects have consistently ignored the fact that a majority of the population still prefers a spatial organization that fosters community interaction. The sharp contrast which exists between the planned developments and the informal settlements clearly reveals the continuance of a traditional organization of space, one that is meaningful and well-adapted to the lifestyle and priorities of the largest and most rapidly growing segment of the urban population. Thus the spontaneous division of large settlements into small, identifiable groupings of streets and buildings provides an intimate human scale and creates social neighbourhoods responsive to overriding concerns for privacy, the social space of different population groups and community cohesion.
In spite of the lack of public services, the atmosphere prevailing in settlement areas where the environment is shaped to respond to user needs contrasts sharply with the sterile atmosphere of large-scale public housing projects based on intensive design standards. It should be noted that although recognizable expressions of traditional building configurations, such as courtyards, appear in these settlements, there is little effort to recreate traditional architecture either in the use of materials or in design motifs. On the contrary, given a choice there is a marked preference for what is perceived as urban, functional and modern, such as concrete, cement or fired brick instead of mud, and slab roofs instead of domes.

The Reintegration of Users in the Design Process

User participation in the design process is vital to the successful delivery of public services. Local needs, concerns and lifestyles must be taken into careful account and the use of unsuitable, unfamiliar building styles and programmes avoided. Current development programmes in the Islamic countries emphasize the adoption of Western technology without its cultural and social forms. The sheer scale of investment in public works usually entails
a continued reliance on large Western professional and contracting firms which have the technical and financial capacity to undertake the volume of work involved. This conflicts with the desire to revitalize indigenous cultural traditions and to decrease the dominance of foreign influences. Spurred by the attractiveness of high technology solutions to technocratic elites and by the marketing of technology irrespective of need, suitability or cost, governments often undertake very large public investments without adequate consideration of alternative solutions that are more in keeping with indigenous skills, resources or traditions.

An extensive reliance on skilled foreign technicians and labourers is not in the best interest of the host country except on a temporary basis. In an effort to counteract this unhealthy one-way relationship, governments now require the formation of joint ventures in which foreign firms associate with local partners. However, there is still little critical evaluation of standards, and large projects continue to be constructed with little consideration for local conditions.

In the area of housing, the inability of most governments to provide a sufficient number of units has resulted in the proliferation of informal settlements where the user has considerable latitude in shaping his environment. In these situations, public investment tends to follow development rather than determine it. In public buildings, on the other hand, the relationship between user and physical space is predicated on rigid standards rather than on the expressed needs of users.

While there may be some rationale for not involving users in the appraisal of design solutions, their non-participation in the identification of needs—a trend which grew out of the dynamics of the development process—should be deplored. Lack of information all too often results in legitimate needs being ignored. Lack of sensitivity makes it easy to dismiss issues as being unimportant. Lack of concern leads to regarding negative social impacts as “unavoidable” costs.
The indifference of users toward public buildings provided by government, and considered as belonging to government, is well known. It breeds abuse and vandalism and creates an unjustifiable drain on resources for maintenance. An alien landmark cannot promote community identification, and the message it conveys will not be understood. A building whose functions do not serve the community’s needs and respond to its priorities will fail to be adequately utilized.

It is clear that a revitalization of the participation of users in the design process is essential. This will require the involvement of the ministries responsible for programmatic decisions and of the designers of public facilities, in addition to the users themselves. Yet experience in most countries has shown that it is difficult to convince government bureaucracies to relinquish their prerogatives and pay more than lip service to broadening the participatory process in decision making. The current administrative decentralization policy in most countries of the region reflects principles of centralized planning and decentralized implementation through a hierarchy of governmental administrative bodies, rather than an intent to involve the local level in the decision making process.

Local authorities have been delegated powers to administer directly or participate in the administration of public utilities and services. However, their actions are subject to central review and approval, and their activities burdened by cumbersome bureaucratic procedures. Furthermore, local authorities generally lack adequate professional and technical personnel, budget appropriations or both, and have little choice but to continue to rely on central government for the planning and design of public buildings.

An important objective of decentralization is to involve citizen councils in the administration of local affairs. However, it is often difficult for these councils to fulfill their intended function. Most users or beneficiaries have little understanding of administrative law and limited ability to deal with an impersonal bureaucratic machinery except through the familiar patronage system. Under these conditions, citizen participation tends to be unrepresentative when mandatory, and inadequate when voluntary.

Designers may be able to play a catalytic role in the development of a more sensitive approach to the delivery of public services. Their current inability to fulfill this role is due largely to the nature of the education they have received. Whether obtained in their home universities or abroad, the professional training of planners, architects and landscape architects has not only stressed Western solutions but has relegated the Islamic tradition in art and architecture to history courses. Little attention is paid to the social and economic determinants of design, and the studio problems given to students assume educated, Westernized, sophisticated clients. Although successful in training professionals to compete with Westerners on their own terms, this pedagogical philosophy has effectively cut off Muslim professionals from their own culture and stylistic background. It is therefore not surprising that an interest in their own culture is almost invariably manifested in a superficial use of traditional forms, rather than in a search for solutions responsive to lifestyles and concepts of private and social space that are still very much influenced by Islamic traditions.

Certain themes are recurrent. Outer shells using such pseudo-Islamic motifs as pointed arches, domes and mashrabiyas barely disguise floor plans of Western inspiration. At times, the sole justification for this approach is the desire to express nationalistic sentiments. Similarly, elaborate Islamic decorations are thought to be symbolically appropriate for buildings with religious functions, or for those somehow associated with Islam—a Ministry of Waqfs, for example. Conversely, there is a pervasive tendency to enrobe in the Western style buildings that are intended to house functions that are strongly influenced by sociocultural traditions—housing or education, for example.

If this misinterpretation of what is “Islamic” in architecture is to be remedied, professional curricula will have to undergo major reforms. Architectural history courses must stress the social, cultural and ecological factors that gave rise to specific architectural forms, rather than treating these forms as a purely plastic art. The evolution of institutions and their influence on the spatial organization of cities must be understood. The growing body of socio-anthropological work currently being undertaken by the universities of the region must be integrated in professional education, both to increase the sensitivity of young designers to the varied lifestyles of the population and to equip them to formulate solutions that will better fulfill the needs of their users.

The professional’s influence in promoting designs that are appropriate to indigenous conditions can be significant. As a designer, he can demonstrate that there are better solutions than to reproduce building types originally developed in a totally different context. As a member of his country’s educated elite, he will participate in the determination of standards used for public buildings. As the local partner of international architectural and engineering firms undertaking projects in his country, he can make known to foreign consultants the needs peculiar to his country and, through his informed participation, help ensure better solutions.

The process of economic development entails constant innovation. The introduction of unfamiliar concepts and designs is bound to be controversial, as it implies some degree of disruption of existing attitudes and organizations. Communication must be established between designers and users if public buildings, particularly those involving functional, technological or organizational innovations, are to be successfully integrated into the structure of the Islamic community.

Professionals, rather than bureaucrats, should take on the responsibility of ascertaining user needs and desires and incorporating them into the design process. The
ability to show that local concerns have been considered is the first step toward acceptance, satisfaction and identification with the buildings. The demonstration to users of the usefulness and usability of new building types is the single most important factor in overcoming the innate fears, expressed opposition and secret apprehension that are so easily generated by the process of modernization. Independently or as local associates of foreign partners, professionals in their roles as practitioners, officials, advisors or consultants must demonstrate that the value of the Islamic cultural heritage is of substantive, not merely symbolic, importance.

Note

"Changing Roles and Procedures in the Design of Public Buildings" was co-authored by Mona Serageldin and François Vigier, and presented at the Amman seminar by Dr. Serageldin.

Khartoum, Sudan: the Hotel Araak in an unlikely juxtaposition to the Rhadew Abbas mosque

Photo: D. Kuban/Aga Khan Awards
Educational Buildings

Case Study:
The University of Blida in Algeria

Walter Netsch

Form, Shelter and Aesthetics

Shelter has always been architectonic. The forces of energy are utilized to withstand the elements (rain, wind, sand, cold, hot, dry) and to withstand gravity (external loads, people and animal loads, food and fire supply). The nature of the available building materials (boughs, trees, leaves, loam, clay, brick, bark or fabric) is also critical. All of these intuitively understood materials, processes or forces have shaped shelter decisions. The precision with which these elements were refined, emphasized or cherished was evidenced in form and established style or character. The nature of materials, the natural laws and the scale of man's activity yielded a variety of orders, disciplines and forms. Many of these are reflected today in notations of form, in geometries expressing form and in art. Baked brick and palm tree structures have specific orders and forms. Wood forms vary with tree size and character; hides and fabrics shape tent structures; stone and brick begin to isolate forms into sophisticated enclosures, often reflecting and incorporating the patterns and character of primal shelter.

Signs and symbols are also an intimate part of man's interaction with shelter, imparting a special significance or identification. The aesthetic pleasures of form, sign and symbol reach different levels of dominance in different cultures, refined by a combination of ethical or moral attitudes that selectively give special credence in particular cultures.

Historically, man's concept of his place in the universe, his physical struggle in his special location and his rituals and religion shape and define his artifacts. Whether we think of Western cultures such as Celtic, Greek or Roman; of the Middle Eastern Syrian, Egyptian, Hebraic or Muslim cultures; or of the Eastern Buddhist, Brahmin or Shinto cultures, we recognize consonances within each culture as well as differences among them.

Technology, whether conceived in the West or the East, has added an acculturation burden to our concepts of form and vocabulary. Materials, techniques and combinations no longer spring directly from nature, natural laws or man's individual capacity and intuition. The aesthetics of technology have been impacted on once primitive forms of shelter, in both use of materials and content of form.

We seek to identify those primal situations which will establish both tradition and form for a particular locality. We seek to identify those signs and symbols inherent in a culture or in the aspirations of that culture, the latter a concept impossible without technology. We seek recognition once again of man's faith, and recognition that shelter—shelter for living, work, education, religion, etc.—has direct meaning in everyday life and to a nation as a whole.

Signs, symbols and materials, then, are used by societies, artists, engineers and
scientists to reflect the dominant interpretations of a culture at a particular moment in time. Those interpretations—from the Grand Mosque of Kairouan in Tunis, the Alhambra in Spain, the Katsura Palace in Kyoto, the Red Mosque in Lahore, Chartres in France and the Air Force Academy Chapel in the United States—all seek to extrapolate the forces and attitudes of a specific society. It is therefore essential that a society be recognized for its unique as well as its universal character. An artist can expect cultural confrontation to result from different concepts of form, shape, character and use. The artists of today must interpret the present in terms of today, yesterday and, if they desire, tomorrow. The primal as well as the sophisticated forms of pre-technological society lend an inspiration and vocabulary for today, and societies still rooted in the past provide a contemporary example of primal decisions.

For Skidmore, Owings and Merrill, Algeria provided a very special sense of place. It is a new nation, harshly conceived through “a savage war for peace,” a nation with historic ties to Muslim, Berber and Western cultures. Its people and products demonstrate the entire spectrum from primitive to the most advanced scientific and technological needs and products; the national charter seeks both Algerianization and Arabization. While a nation so young and growing would hope that enduring forms would naturally arise, the gestation period of such images is long. After peace the country had only thirty architects. The government sought help worldwide, from Brazil, France, Sweden, Germany, Switzerland, Italy, Russia, the United States, Romania and Poland. The individual searches for appropriate architectural forms for this new society had many interpretive sources. It is always possible to discard some forms of the past by edict, but aesthetically these issues change and evolve slowly, never returning to their original states of conception.

I myself have searched not in technology nor in a specific culture for an organizing base. Like any artist, my original searches are aesthetic, not intellectual; intuitive, not historical; but influenced by time and personal place. A recognition that technology was too diverse and impersonal in the cultural and intuitive sense made me search for a contemporary vocabulary. This vocabulary should have uses in individual cultures or aesthetic situations and, if properly applied, should evoke character, forms and symbols capable of appreciation. The results are not necessarily constant for all cultures, but the underlying order gives the viewer a perceivable vision of his own time and place, his own purpose and enjoyment. Geometry or the organization of form exist in all shelter, but the interpretation of form and geometry is a unique cultural expression.

My personal choice of aesthetic system, Field Theory, is not a rigid discipline or a formal stylistic base. Rather, it is a contemporary search for proportional patterns, scales and forms that can be logically incorporated into shelter. These forms are abstract and highly personal, but they are still responses to the culture and society in which they exist. They still interpret a synthesis of the forces that shape man and his place in terms of urban and physical form.

Blida—Search for Form in an Algerian University

The design of a college campus—that is, the goals, programme, master plan, individual building design and construction documents—provides the ingredients of a solution to the demand for education in an expanding population. However, the evolution of educational institutions has varied in different countries and different cultures. Historically in the West the university merged with the fabric of the town, coexisting in harmony with tradition, reflecting the community in its

University of Blida, Algeria site plan

Photo: Skidmore, Owings and Merrill
residential, communal and religious life. With the rise of technology, the technical laboratory used in educational and medical research displaced the university as the traditional academic centre of the town. New academic units were dispersed in specialized enclaves in the surrounding areas. Integration of the new with the existing town fabric varies with the physical topography, natural land and water forms, transportation systems and routes. Oxford and Cambridge in England and Tübingen and Freiburg in Germany are two examples. Modern universities built “from scratch” primarily reflect the demands of the overwhelming specifics of science and technology, and these demands contrast with the traditional urban patterns.

In the United States, some universities were established on the European city models. The land grant colleges in the U.S.A., supported by federal grants, established the central mall design with dispersed structures for academic disciplines, surrounded by housing and the smaller non–urban community. This pattern is a formal interpretation of the city centre as “University.” However, as the demands in technology, science and health required extensive additional academic space, separate unrelated enclaves were developed.

When approaching the design of a university in another culture, it is my belief that one must put aside the traditions and patterns that comprise one’s own aesthetic palette. By this I do not mean that one negates personal response to the art of architecture; rather, one intuits those responses to the unique situations of a new culture. The development of the design for Algeria’s University of Baida, plus the Cité Universitaire (student housing) and the Centre Hospitalo–Universitaire de Baida, demanded fresh attitudes. Three primary factors developed into many sub–factors that enlarged and informed the design.

1) The institutions were to reflect the goals and aspirations of Algeria, a new democratic socialist republic whose freedom had been hard won in a savage revolution.
2) The institution as well as the country achieved these freedoms based upon a rich heritage dominated by the Muslim ethic.
3) The new nation, desiring modern facilities, hoped for solutions reflecting Algerian goals, while recognizing the limited resources in relation to nationwide demands in housing, industry, health and education.

Our commission included not only a comprehensive master plan and the design of individual facilities, but the creation of the academic programme, curriculum design and the selection of major equipment. Such a commission required knowledge of the academic goals established nationally, as well as intimate knowledge of student–faculty needs at the one–to–one level. The design, under the direction of the Ministry of Higher Education and Scientific Research, evolved in response to unique demands in the educational environment. The programme calls for students in vocational, preprofessional and doctoral fields, and recognizes current capabilities in construction techniques and available materials. The sense of place and space
that is specifically Algerian and Mediterranean must contrast with a consideration of the impact of growth and form that will occur through academic enrichment over time. Consideration of the planning goals of the local community and the national master plan, and the desire for a beautiful and unique solution for Blida both attempt to anticipate the future within the realities of the present.

A comprehensive programme in the humanities, technology and sciences is planned for the University. Its offerings will include law, economics, architecture; mechanical, aeronautical and acoustical engineering; and physics, chemistry, biology, agriculture and medicine. Housing is planned for 8000 of the 10,000 students, in three enclaves: one next to the University, one in a new area of growth in the city of Blida and one adjacent to the old city.

The University, teaching hospital and housing areas represent approximately 2500 square metres. Certain construction criteria were agreed upon:
- local materials—low strength concrete (3500 psi) in seismic areas
- locally-produced concrete blocks and plaster
- wood windows and single-strength glass
- minimal incorporation of elevators
- airconditioning only where absolutely required
- use of natural ventilation and sun control
- emphasis on local flora and fauna (Blida, also called the City of Roses, is in the rich agricultural Maghreb)

University comprises six individual areas, each pedestrian-oriented, each with an individual focus. Located in the foothills of the Atlas Mountains at the edge of the Mitidja Plain, the land slopes at five percent. This gradient approximates a hill town of modest incline, allowing vistas over the valley and to the mountains.

The three professional areas—humanities, technology and science—form three radial
spokes on the uphill slope, converging on the perpendicularly radial university for preprofessional and vocational programmes which ring the library, a central focus of the major university centre. This centre is bisected by a bus–transit route for students and the public, a major part of the city’s public transportation system. The library is linked by a covered bridge to the major social space, a covered cultural centre with a centrally positioned coffeehouse. Radiating from this plaza, similar to a şāq, are six walkways incorporating specific activities: conference and assembly; dining; religious centre; music, theatre and dance; and services such as mail, dry cleaning and laundry, pharmaceutical supplies and student academic services such as the bursar, etc. Central administration, sports, supply and maintenance, as well as the Agricultural College and Teaching Hospital, complete the complex. Fitting into the interstices of the plan is a cité for 2000, a commune for agriculture and a local supply centre for the surrounding communities which are part of the existing expanded Blida. Already, housing for SONATRACH (Société Nationale de Transport de Carbo–Hydrates) borders an uphill site. The University, like the town, is a series of communities but with different foci.

The architecture of the University continues the city’s sense of small and large centres, like the transition from house to street to town. Each discipline offers the opportunity for a garden–oriented cluster incorporating a specialized library, faculty offices, administration, special classrooms and laboratories, if required. These “discipline clusters” ring about a central cluster of shared classrooms and amphitheatres. These, in turn, are disposed around their own gardens. To further interaction, interdisciplinary centres were created, one each in the humanities, science and technology.

Walkways to each area are covered with plastic and with vines. A coffeehouse is situated at the interstices of the plan. Other walks are lined with windbreak trees, pine or cedar on one side and flowering or fruit trees on the other. Each of the planted areas, whether interior courtyards or exterior squares, has its own scale and colours. To enhance this aesthetic, the squares are painted yellow, pink, blue or green, and the buildings are painted different colours on each façade. Skeletal building structures and seismic walls are painted a contrasting colour. The interior courtyard gardens and staircases have special ceramic tiles which follow the colour schemes.

Natural topography dominates the plan. Existing olive groves remain and adjoin the new areas. A central garden provides natural shelter; a grove of ficus surrounds the library and provides traditional climatic cover to the Enseignement Général
area. The roofed central garden, though made of local steel sections bolted together, provides a special place for formal or informal student assembly. Dining, in contrast, is separated into distinct individual halls for scale, comfort and convenience, with native Algerian rugs hanging from the sky-lit ceiling to provide acoustical balance.

The description belies the series of geometric orders that underlies the design. As in traditional Muslim architecture, each component is part of the whole. As a holistic aesthetic, the geometry of the total plan, each building, each unit, each garden is a variation of the basic geometry. This was made possible by adhering to the original concepts and goals, searching for unique national qualities and apprehending the culturally rich forms that come from the Muslim ethic and the past. Upon completion, one will see not a large, formal geometric form, but a variety of elements held together by an underlying geometric order, one created especially for the University, another for the Cité and another for the Teaching Hospital.

A mature designer brings a vocabulary, a personal commitment and a moral attitude to a project. The client brings the special demands of his needs, and the country brings the culture and the mystique. The University of Blida reflects this combined effort, enhanced by the rich overlay of Muslim tradition in form, materials and geometry. There was a conscious effort to look forward and reinterpret, rather than merely adopt old forms or contemporary aesthetic clichés. The buildings have a combination of the prosaic mixed with purpose and scale, coming together in celebration and cooperation, yet individual. The University resembles a stūq in a garden more than any other form. Each academic unit functions as a visual gateway or domicile for a specific discipline.

The enrichment of colour and palette and the restrictions of materials have, in essence, been complementary. The design experience has been revealing and enlarging, forcing personal reevaluations, different senses of awareness and, one hopes, a beautiful pattern for growth and change.

Blida—Search for Form in an Algerian Teaching Hospital

The Teaching Hospital at Blida is a self-contained addition to the University, almost equal in size to the parent organization. While aesthetically compatible with the initial project, it uses individualized elements of vocabulary such as curved forms, hollow concrete blocks, a simple structure and a sloping site. It is unique because hospital design in general, in the
Third World in particular and in the Arab world specifically, demands unique solutions.

This design yielded the opportunity to display enrichment of the Field Theory aesthetic, in which a combination of component units to fit individual hospital projects and unique units following specific patient or service functions have been designed within a geometric pattern. This permits both proper area use and individual expression of function, thus achieving scale and community for a hospital of 750 beds with a projected capacity of two thousand outpatients daily. It is important to understand that in the Third World the introduction of medical services is complicated by historical precedents, by the tremendous need and by conflicting cultural habits. For example, a major effort has been undertaken in preventive medicine in the area of obstetrics and gynecology, combining the latest procedures with the modern training of midwives, and keeping in mind the heavy demand for the pharmaceutical and programmatic needs of doctors, students and patients.

The Hospital at Blida is designed in nine major components for inpatient and outpatient care. The outpatients have access to all individual clinics that function as both inpatient and outpatient diagnostic units adjacent to the pharmacy and the laboratories. This diagnostic service element is a buffer between the outpatient and inpatient area, which consists of hospital bed units, surgical and obstetrical units and emergency room suites. The remaining unit which services patients contains administrative offices and a primarily diagnostic dental clinic.

A realistic combination of high and low technology has been used in this project, providing an approach for up-to-date services by doctors and surgeons with only modest utilization of airconditioning and technical conveyances (e.g. elevators). This further allows building forms to achieve their own natural relationships as programmatic structures, without requiring excessive maintenance or infrastructure.
costs. Two special patient areas, infectious diseases and psychiatry, become mini-models of the hospital complex as a whole, utilizing forms developed in the major palette but scaled to the specific uses and needs of the two specialties.

The characteristics of the façade are highly evocative of the Algerian climate, both in the solidity and mass of the window portion and in the passageways and gardens. The principal garden provides a comfortable social environment for the inpatient visiting procedure, one much appreciated by family members during the long hours of waiting. Care has to be taken in the treatment of bed patients if contemporary medicine is to function within the definition of Muslim order, allowing technology and doctors to service patients sufficiently and still allow separation of the family as required. This has been accomplished in the bed units while still retaining a variety of features: central nursing stations; access and privacy; outside walls for toilets to avoid technical demands for hundreds of exhaust fans; access ramps to allow for emergency mobility between bed patients and surgery during electrical outages; and care in food and services distribution that provides for economy and consolidation on the one hand, and human participation on the other.

The architectural characteristics of the Hospital, like the main University, allow for the use of the main accessways as sentry points, a formal physical event that has been a part of the Arabic compound for centuries. However, the University and the Hospital do not deliberately repeat traditional forms such as pointed arches, etc., to establish their place in the cultural continuum. The physical presence and scale of the pedestrian orientation are uniquely responsive to the Algerian Arabic culture and should foster a positive local response.

Not since the Mughal Empire has a conscious geometric order been used in civic design on such a large scale. The University and the Hospital at Bída are equally large in size (300,000 square
metres each, with the Cité at 100,000 square metres), yet the geometry, the scale, the variations in function and community are related. While still remaining unique to each area, they are identifiable as a single whole. It is evident that it was not our intention to design the Blida complexes in an international or postmodern style for world-wide acceptance; rather, we sought contemporary images in the basic roots of the culture, as evidenced in form, materials, scale, humanity and geometry.

Field Theory: Specific Uses in Algeria

Field Theory geometry has been used in all Algerian projects to date, and shows the diversified uses of this aesthetic system. The geometric principles are best explained in a more simple project, the Cité Universitaire. This is a student housing project brought down to the scale of the two-person room around an informal coffee or tearoom. Prevailing cultural attitudes toward privacy, congregation and social activities, etc., are reflected in the varying sizes and uses of the buildings. The issues of climate, community and topography are all considered within the aesthetic as well as the social and economic programmes. The thoroughness with which this is done is reflected in the almost iconic character of the working drawings. The building programme maintains the use of local materials and crafts, the utilization of untrained labour and the minimization of machines and maintenance. A sense of community is thus reflected in the various individual designs. No attempt has been made to develop a prototypical building; rather, we have tried to add a concept of living to a variety of building shapes and sizes which relate to the character of the land, to the content of the buildings and to the city or neighbourhood. The diagrams show this evolution as process and as resolution.

Note

An exhibit of photographic material pertaining to the University of Blida was prepared for the Amman seminar. At the completion of the conference it was presented at the local architectural school.

University of Blida, Algeria: housing for students. Diversity of residential types generated from the initial conceptual order of living programmes

Diagramme: Skidmore, Owings and Merrill
Background to Yarmouk University

Raif Nijem

Introduction

In order to accommodate the growing number of qualified students seeking higher education, a Royal Decree issued on June 1, 1975 established Yarmouk University as Jordan's second university. It is located in the Governorate of Irbid in the northern part of the country. The Decree came about as a result of the desire of the Jordanian people to increase higher education opportunities for the growing number of students who receive General Secondary Education Certificates every year. Yarmouk University, together with Jordan University in Amman and other institutions of higher education in Jordan, should be able to accommodate the majority of those students.

Objectives

Yarmouk University was established with the following four objectives: 1) Increasing opportunities for higher and university education for the growing number of eligible students; 2) Providing Jordan with the specialized and well-trained manpower needed for its economic and social development; 3) Creating a modern scientific, technological and cultural nucleus capable of conducting research and making new discoveries needed for progress and development; and 4) Providing Jordan and the Arab World with technical, scientific, vocational and administrative expertise and personnel.

The establishment of a new university with such major objectives is no easy task. It requires careful and enlightened planning, unstinting effort and a constructive scientific outlook. It also requires the benefit of experience gained from past efforts, such as the establishment of Jordan University, as well as recourse to the objectives, principles and philosophies which have guided university education in the last quarter of the twentieth century.

The objectives of Yarmouk University are the comprehensive development of the country, the elevation of both individuals and society, the preparation of future leaders and the fulfillment of the aspirations of the Arab people. Yarmouk hopes it will succeed in spreading education, science and decent human values by means of its persistent search for truth with freedom, dignity and responsibility.

Implementation

A Royal Commission was appointed to implement the Decree establishing Yarmouk University. The Commission in turn appointed a General Technical Committee to help assess the faculties and fields of specialization which Jordan requires for the process of modernization and development. The Committee attempted to determine future needs through consultation with appropriate specialists in the National Planning Council, the Ministry of Education, the University of Jordan and the Royal Scientific Society. Their report consisted of general guidelines related to the stages of establishment of the University. It was hoped that these guidelines would serve as a basis for more detailed studies and for the architectural designs of the Master Plan.

The guidelines were as follows:

1) The University should concentrate on areas of science and technology as a means of achieving its basic objectives.
2) The general planning and design of the University must reflect and portray Arabic and Islamic culture; be characterized by originality and creativity; serve the functional needs of each unit of the University; serve the relational needs among the various units and faculties of the University; and provide the possibility of future vertical and horizontal expansion.
3) The University should adopt a policy of centralized legislation and decentralized implementation. This will give the academic departments sufficient freedom at the decision making and executive levels. An atmosphere like this will undoubtedly deepen commitment and encourage positive attitudes toward creativity and university improvement.

4) There should be as few faculties as possible, since the academic department is the basic unit in the administrative structure of the University.
5) The optimal eventual student enrollment at the University should be approximately 20,000.
6) The number of students in each class unit (section) must not exceed forty, thereby ensuring an effective teaching situation.
7) The ratio of students to faculty should be 20:1; of faculty members to technical staff, 2:1; of administrative staff to faculty members, 1:1.
8) Faculty, administrative staff and students should be provided with adequate housing, with the provision that student boarding facilities should accommodate no fewer than fifty percent of the total number of students.
9) A central library should serve all facilities, with a total number of 500,000 volumes expandable to one million volumes. There should be specialized reading rooms established in the various faculties; these would house reference works, periodicals and books on loan from the central library.
10) The University would be open to all sectors of society and would adopt the policy of education-for-life, enabling people from different walks of life to enroll in courses, develop their skills and improve their qualifications.
11) Opportunities must be provided for athletic and social activities.
12) Technical sub-committees must be formed to determine educational specifications for each faculty and department. Five faculties are suggested: the Faculty of Science and Arts, Faculty of Engineering, Faculty of Medical Sciences, Faculty of Agriculture and Veterinary Medicine and Deanship of Research and Graduate Studies.

After the submission of the Committee's report to the Royal Commission, an Engineering Office was established, a University President appointed and some administrative directors and employees named. The Engineering Office is considered a major administrative department.
in the organizational skeleton of the University. Its Director reports to the President, and the President reports to the Royal Commission.

Academic Stages

The Master Plan for Yarmouk University will be implemented in phases parallel to the school's financial capabilities. Very few universities in the world had heretofore been constructed in accordance with a plan prepared specifically to fulfill a country's real academic needs, and to meet its technological, statistical and environmental conditions in harmony with the cultural heritage of the community and the region.

To ensure appropriate implementation of the scheme and to organize the work of the Engineering Office without jeopardizing the academic plan, the following academic stages were adopted:

Primary Stage, 1976–1977
The intake was 420 students, distributed in six departments in the Faculty of Science and Arts.

Intermediate Stage, 1977–1984
The total capacity during this stage shall not exceed 6,000 students, distributed in eighteen departments in the Faculty of Science and Arts and the Faculty of Engineering.

Advanced Stage, Commencing 1984
The total capacity will be 20,000 students, distributed in all departments upon completion of all faculties.

The Primary and Intermediate stages are located on a temporary site with an area of 110 acres. The Advanced stage will be at the permanent campus, which has an area of 2600 acres, making it one of the largest university campuses in the world. After the completion of construction at the permanent campus, the temporary site will be used as a community college associated with the University.

The Master Plan for the University

Master planning is a relatively new innovation in the field of initiating and implementing ambitious enterprises, including universities. The Master Plan serves as a guideline; it shows the relationships between different premises, facilities and buildings; it helps in phasing the construction of the project. Not many universities follow a Master Plan. Most live by improvisation, working without a general framework to guide their steps. Yarmouk University is proud of the fact that it is one of the few universities in the Middle East, if not the world, to possess such a comprehensive plan. Yarmouk's insistence on a Master Plan for its building is an offshoot of its deep-held conviction that all programmes and activities should be well formulated. Such a plan is also a helpful tool for evaluation and control of activities.

Systematic steps were undertaken by Yarmouk University authorities and the Engineering Office in the preparation of the Master Plan. First was a complete topographical survey for the entire campus and surrounding roads, showing contour lines for each one metre elevation. This was prepared to a scale of 1/200 by a local surveying firm. The site dimensions are 7.50 kms. in length by 1.50 km. in width; the total area is about 2600 acres.

A number of bore holes were drilled in different locations inside the campus, and proper laboratory soil tests performed by a specialized local firm. Soil profiles were prepared, showing detailed lithologic description, gradation tests, moisture content and aterberg limits, and the soil bearing capacity was determined. In addition, meteorological data for the past ten years were collected from the official local authorities. These data included wind pressure, temperature, relative humidity and rainfall.

Finally, an architect's brief for the Master Plan was prepared. It comprised 237 pages, and required ten months of specialized committee interaction and review for completion. The brief detailed the scope of work and space schedule for every element inside the campus. It is a testimony to the oft-cited statement that man is the prime mover in development, creativity and innovation. Jordanian minds were behind the planning and implementation of Yarmouk University at every stage. However, we did not ignore the expertise of many distinguished guests and visitors to our campus. Many sources were tapped and many made themselves available for suggestions and advice. Thus Yarmouk is a result of aggressive interaction between the University and many other universities, institutions and organizations. Such intellectual interdependence among academic institutions is inescapable and essential in the last quarter of this century.

Master Plan Competition

In June 1976, an advertisement in international and local magazines and newspapers alerted consulting firms to the upcoming competition for a Yarmouk University Master Plan. The firms were allowed a two-month period to submit their applications, and a total of 175 applications were received. A Technical Committee, composed of representatives from European and Arabic universities and the World Bank, in addition to the President of Yarmouk University and the Director of the Engineering Office, was charged with evaluation of the applications. Factors taken into consideration in the evaluations were compiled in tables by the Engineering Office, and contained information taken from the applications; the staff, categorization and financial status of a firm, and qualifications of its key personnel; and the experience of the firm in similar projects in Arab countries, in the Middle East and internationally. A firm might be eliminated due to a lack of information or for legal reasons, such as boycott.

After concentrated scrutiny and evaluation, fifteen of the applicant consulting
firms were invited to attend a seminar at the Engineering Office. There they were provided with the following documents: a topographical plan for the University campus to a scale of 1/200; a geographical plan for the University site and the surrounding towns and villages; meteorological data for the last ten years; the soil investigation report; the architect’s brief; and general conditions of contract which were suggested by University officials and consultants.

The documents were explained and questions answered. The fifteen competing consultants were taken on a tour to acquaint them with Yarmouk University’s site conditions. It was agreed that they would submit their technical and financial proposals, together with a tentative planning concept in harmony with the local environment and the Islamic heritage, within ten weeks.

Technical and financial proposals and preliminary planning concepts were eventually submitted by fourteen of the consulting firms, one being unable to meet the deadline for submission due to prior engagement with other clients. Late in 1976 the applicants were judged by the Technical Committee on the following criteria:

Criteria for Architectural Concepts
- Adherence to the Terms of Reference
- Architectural expression, including human scale, variety and visual interest
- Regional expression and identity
- Response to environmental conditions
- Use of local materials and feasibility of their application
- Landscaping concept
- Harmony with Islamic principles

Criteria for Structural Concepts
- Study of infrastructure requirements
- Definition of the structural design principles
- Method, speed and economy of execution
- Study of electro-mechanical services, including energy conservation
- Flexibility of design and potential for expansion

Other Criteria
- Organization chart
- Design period
- Design team
- Financial status of the firm
- Proposed remunerations

Decision of the Technical Committee

The Committee recommended the firm of Kenzo Tange and Urtec for the preparation of the Master Plan of Yarmouk University. The recommendation was based on Tange’s convincing concept and technical capability, despite the fact that the fees demanded in their proposal were not the lowest. When the Royal Commission approved the recommendation, the firm was required to develop, modify and refine the tentative concept in accordance with the client’s desires. Kenzo Tange and Urtec were flexible and ingenious in their approach to the requirements and constraints of the project, and they were responsive to the ideas and desires of the University. The resultant Master Plan was refined and amended several times in accordance with the advice of presidents, Deans, and professors whom the University invited as guests. Advice offered by specialized expatriates and local planners was also respectfully considered. The President of the University and the Engineering Office worked as one team for coordination and decision making during the two years required for the Master Plan to reach its final impressive form.

There were many reasons for the selection of the Tange Master Plan. I list them here without allowing myself the privilege of commenting.

1) The impressive form and organization of the scheme
2) The monumental character of the University
3) The rhythms and spaces between buildings
4) Easy interrelation between the different elements
5) The social spine connects the University with the neighbourhood community. This emphasizes its role in community development through such social facilities as the Islamic cultural centre, mosque, museum and civic centre, and also through technical services such as the computer centre. The Sports City is another aspect of integration with the community.

6) Simplicity of the architectural system and spatial organization is based on a succession of courtyards, in keeping with the main current of Islamic tradition.

7) Easy circulation in different directions avoids traffic jams.

8) Easy horizontal and vertical expansion.

9) Adopting low-rise buildings (three floors) to avoid the utilization of electrical lifts, which create complications and difficulties of energy and maintenance.

10) Economy in time and money which will be achieved by implementation of this Master Plan. This is epitomized by the construction of academic buildings with a modern precast system, and utilization of industrialized local materials.

11) For conservation of traditional energy, solar energy will be utilized in the most comprehensive manner possible.

12) Incorporation of Islamic principles.

Islamic Principles to be Implemented in the Yarmouk University Design

The Islamic environment and Islamic principles were considered integral components of the Master Plan. We felt strongly that the designer of the University should be familiar with such concepts and should be able to incorporate them harmoniously into the architectural plans. The essence of Islamic culture is seen in its basic principles and spiritual conception more than in the application of traditional artistic forms. The aesthetic considerations and surface decorations which have characterized most Islamic edifices over the different centuries should not be considered the major characteristics of Islamic architecture. There is no doubt that the glorious Koran is the main source of any Islamic principles. I have selected some verses from the Koran from which we can derive some Islamic principles to be adopted by Muslim architects and planners.

Al-‘Esra’ 27

In the name of Allah, the Beneficent, the Merciful, squander not thy wealth, the squanderers were ever brothers of the devils.

The principle here is that Islamic buildings should not be luxurious. All the luxurious phenomena which govern most old Islamic edifices and many modern buildings conflict with this principle.

Ashu’ra’ 128, 129

In the name of Allah, the Beneficent, the Merciful. Build ye on every high place a monument for vain delight? And seek ye out strongholds, that haply ye may last forever?

Here I recall a short story about a ruler in
Andalusia called Al–Naser, who wanted to build a palace called al–Zahra' using gold and expensive construction materials. He listened to the judge, Al Mu'thber Ben Abdul Rahman, who recited from Al–Zukhruf 33, 35:

In the name of Allah, the Beneficent, the Merciful, And were it not that mankind would have become one community (through love of riches), we might well have appointed, for those who disbelieve in the Beneficent, roofs of silver for their houses and stairs (of silver) whereby to mount, And for their houses doors (of silver) and couches of silver whereon to recline, And ornaments of gold. Yet all that would have been but a provision of the life of the World. And the Hereafter with your Lord would have been for those who keep from evil.

When Al–Naser heard these verses he at once gave orders to change the dome from gold to mud.

Al–Baqarah 143

In the name of Allah, the Beneficent, the Merciful, Thus we have appointed you a middle nation, that ye may be witnesses against mankind and that the messenger may be a witness against you.

Al–Furqan 67

In the name of Allah, the Beneficent, the Merciful, And those who, when they spend, are neither prodigal nor grudging, and there is ever a firm station between the two.

From these two verses we can derive the principle of modern living and moderate expenditure.

Al–Nure 27

In the name of Allah, the Beneficent, the Merciful, O ye who believe! Enter not houses other than your own without first announcing your presence and invoking peace upon the folk thereof. That is better for you, that ye may be heedful.

From this verse we see the importance of privacy.

Al–An'am 165

In the name of Allah, the Beneficent, the Merciful, He it is who hath placed you as viceroy of the earth and hath exalted some of you in rank above others, that He may try you by (the test of) that which He hath given you. Lo! Thy Lord is swift in persecution, and Lo! He is forgiving, merciful.

This verse signifies both equity in dealing and different standards of living.

Al–Tawbah 109

In the name of Allah, the Beneficent, the Merciful, Is he who founded his building upon duty to Allah and His good pleasure better; or he who founded his building on the brink of a crumbling, overhanging precipice so that it toppled with him into the fire of hell? Allah guideth not wrongdoing folk.

The principle extracted from this verse is that religious ceremonies should be given proper consideration when designing public buildings.

The main principles to be derived from the Koran and adopted in architectural design are simplicity, moderate social life, equity in public life, privacy, respecting religious ceremonies and proper maintenance.

These Islamic principles are only examples, and many more could be extracted through concentrated research work undertaken by specialists with a knowledge of jurisprudence. The additional technical and architectural criteria applied in the preparation of the Yarmouk University Master Plan were in harmony with the local environment, culture, customs, climate and needs. These important concepts and embodiments of Islamic thought will lead to integration between the University and the community.
Background

In 1951 the Government of Pakistan established the University of Karachi. The construction of a well-equipped modern university is an expensive venture, but the government recognized the importance of higher education and launched a building programme in spite of the expense. The site was a flat plot of 1200 acres, northeast of the city and eight miles from its centre. A team of French architects was commissioned to develop the layout of the University and to design its individual buildings. The services of Michel Ecochard were secured through the courtesy of the United Nations, those of Mssrs. Riboulet and Thurnauer through the French Technical Assistance Board.

The building programme is designed to accommodate some seven thousand students in Faculties of Arts, Islamic Learning, Sciences, Business and Public Administration, Education and Law. Housing will be available on campus for one thousand students, in addition to staff and servant housing and an international hostel. Other services include an administration building, auditorium, library, museum, mosque, teachers' club and guest house, student union, infirmary and a number of athletic facilities. A north-south road forms the principal axis and divides the campus in two, with general buildings to the east and student housing and sports facilities to the west.
Design Principles and Implementation

The classrooms and major University buildings should be centrally located, and thereby in easy contact with all campus residents. Staff and service personnel, who have family lives independent of the University, should be able to maintain an autonomous lifestyle within campus confines. Protection will be required against the sometimes harsh climate to ensure comfort and favourable working conditions. This will necessitate a certain orientation of buildings and shading mechanisms (vertical and horizontal brise-soleil). Only the laboratories will be airconditioned.

Green spaces and footpaths will make circulation and integration of buildings and areas of campus easy and pleasant. A variety of gardens, with lawns, shrubs and pools, also serves to inhibit soil erosion and provide shade.

The project offers great flexibility, both in the dimensions of the general scheme and the rapidity of its execution. The faculties have been subdivided into several buildings, permitting construction by degrees and subsequent enlargement without endangering the whole University fabric.

Although the architecture of the buildings will express modern teaching and scientific requirements, Karachi University will reflect the influence of traditional and local environmental conditions. Its gardens in particular will evoke Mughal landscaping conceptions. In the best Mughal traditions, water will be employed as a decorative element, materials will be contrasted and open spaces cleverly disposed. Respectful emulation of the traditional artistic spirit will result in the creation of an atmosphere that is not international, but uniquely subcontinental.

Note

1 Based on the work of the Planning Committee of Karachi University (1956)
The Jordan University campus is divided theoretically into three horizontal zones, corresponding to the residential (upper), academic (middle), and social (lower) campuses. A hypothetical "academic axis" divides the campus vertically; the resulting halves represent differential growth areas for the School of Arts and the School of Sciences. At the "academic core," along the axis, are the fine arts and humanities, disciplines shared by both Arts and Sciences derivatives. Academic service buildings, such as the library, language labs and the teaching museum also fall along the academic core.

The residential upper campus contains student dormitories and associated recreational facilities, in addition to faculty and staff housing. The academic middle campus contains classrooms, laboratories and lecture halls, as well as academic clubs and small lounge areas. The size and scattering of the few social spaces in this area encourage students to venture beyond their particular schools. Finally, the lower social campus boasts the student union, administration buildings, social clubs and restaurants, the museum, mosque and hospital, and outdoor sports facilities. The buildings which are open to public use, such as the National Deposit library and the museum, are located in this part of the campus. A hotel and conference centre originally planned for the lower campus has, for restrictive social reasons, been converted to a women's dormitory.

Outline of the Jordan University campus showing horizontal division into residential, academic and social zones, and vertical division along an academic axis. The School of Arts will grow differentially to the left of the axis, the School of Sciences to the right; shared facilities straddle the axis.

Diagramme: A. Doany
I. Serafetdin

I would like to address my comments to the things that were left unsaid in the presentations we have heard. Perhaps my remarks will complement and round out the picture of what institutions of higher education should be like in Muslim countries today. We have been looking at buildings, but one should not forget that education is, fundamentally, a process that involves people. It is not the building but what goes on in it that spells out the success or failure of an enterprise. Accordingly, I think it particularly relevant at this stage to look back at the character of the traditional Islamic universities and compare this to the character of contemporary universities. Out of this brief comparison may come some guidelines, or perhaps the criteria which may aid in identifying points of strength in architectural schemes for education.

One point I would like to mention is that the mosque was central in the traditional Islamic university largely because the university was dealing mostly with Sharia and the law. If that religious function has been somewhat marginalized in the role that it plays in modern universities, we should not forget that the mosque has a very major social function today. This social function is reflected in different buildings, sometimes referred to as campus life centres, which provide a focus for social interactions within the universities. Whether these indeed need to be isolated from the mosque, and the mosque turned into a religious monument or a central landmark within an architectural scheme, is a question I leave unresolved for now.

University life is what concerns me, and what I felt was missing in the presentations on educational complexes. University life has three components: the life of the students, the life of the teachers and the interaction between student and teacher life. In the old times the students had a sort of commitment to the university. They usually came from afar, stayed on campus and educated themselves over a long period of time. With the presence today of regional university campuses and large numbers of people living off campus, this may no longer be true. Whereas enrollments were formerly small and identification between classmates possible, today’s very large enrollments frequently make this difficult. Student interaction used to be extremely strong; conflicting bonds exist today, and it is weak. Student organizations tended to be all-inclusive; they were affiliative, and had few layers. Today they tend to be exclusive and have many layers, with some associations for political purposes, some associations for professional purposes and the like. Some very real differences have taken place between traditional and modern universities; it would not be fair to yearn for a return to the past without adequately reflecting on the meaning of these changes and the demands they place on the architecture which should serve them.

The same differences apply to teacher life. They were previously committed to the university completely, but today they are partially committed—they serve on many boards, they consult outside, they have to do research, they have other activities. Teachers used to reside on campus; now many of them live off campus. Their numbers were few and now large; relationships between teachers used to be very rigid and structured, while now they tend to be much more fluid and sometimes even absent. Teachers move from university to university with great ease, which they did not do in the past. Again we have a series of differences that are worth a good look in deciding, for example, such questions as the location of faculty housing, the location of faculty offices, the relationship of those offices to student facilities and the like.

As for the core of the pedagogic process itself, the student/teacher interaction, this too used to be completely different. In effect traditional education was customized, with each student learning up to his level of ability; today we have much more of an assembly-line operation. It is geared toward previously specified standards and norms, whereas the earlier one was looser—students learned various subjects from various people, then moved away to learn from other people in other places. The motivation for learning was different—not so much of today’s seeking satisfaction in the job market as learning a career and learning for itself. It seems to me that the concrete interpretation of these kinds of changes should be the main function of architectural design for universities.

I would suggest the following basic tenets for the design of universities. A first step is to identify how these three functions (student life, teacher life and student/teacher interaction) are conceived in the Muslim societies of today, and in particular wherever the project is being considered. This fundamental definition must go into the architect’s brief.

Secondly, one should define criteria that would both guide the design and help judge alternatives. The key criterion is whether a given design nurtures the desired pattern of social interaction, or whether it makes it difficult to happen in the first place. Beyond that point a use of architectural vocabulary is fine, but it should not supersed the earlier point. After all, one does not use words in a sentence simply because they are nice, if they do not also make good sense in that sentence. I think the same is true of architectural vocabulary—choosing the right expression and the right location will definitely enhance the architectural statement, but using an architectural element that has a nice ring somewhere else, without adequate concern for whether it is really suitable, yields artificiality at best.

Finally, I would suggest that, out of concern for the people who inhabit these buildings and for the functions within them, perhaps we should avoid our predilection for large-scale unified geometric designs. Let these large-scale designs grow out of a micro-analysis of each part related to an analysis of its function and relations. One courtyard may be six modules wide, the next may be eleven and another seven, depending on the nature of each specific part. They should not all look the same simply because such a configuration looks elegant on a large-scale plan. After all, the magnificent urban environments of great.
Islamic cities were seldom designed on the basis of geometric grids.

Ardalan

I have a shopping list of concerns, and perhaps I shall just read them without commenting about which might be better alternatives for discussion. What I am primarily concerned with, and this extends from Mr. Serageldin’s comment about the role of the university as social catalyst and social integrator, is that our societies in the Islamic world have adopted more or less categorically the campus plan—the idea of the segregated, isolated place of education. Traditionally our places of education were integrated into the cities. The arguments normally advanced for placing the campus in a place removed from the city centre or from nearby cities include security, the availability of land and the economic ramifications of interpolating such large plots into the cities today. However, these can be countered by arguments that question whether we can afford to move some of the greatest and most precious aspects of our investment so far away from the cities.

Should we remove from the cities the benefits which universities and new life and economic generation bring? For instance, libraries and auditoriums can serve a community in addition to serving the university. And is there a need to keep creating campus housing when the cities have old housing quarters that are crumbling? This housing could be restored and reused for student inhabitants. Is the campus plan supposed to be a segregated place in which students can be nurtured in hibernation under controlled conditions? Is this socially successful and politically viable? I think Mr. Serageldin’s questions of student-to-student, faculty-to-faculty and student-to-faculty relations can be supplemented by a fourth important issue: the university-to-society relationship. How much more one could learn and be tempered and formed by society if one were within society, rather than removed from it on a university campus.

Another point deals with the idea of compact university planning versus semi-dispersed or totally dispersed isolated building design. Of the projects presented, some have been compact and some so vastly dispersed that I doubt whether any environmental arguments could support such a type. Certainly most of the projects we have seen are in areas in which the climate would encourage greater compactness of planning. But somehow we seem to feel that compact plans may not be sufficiently progressive-looking. This is an area which deserves further discussion.

My third point concerns energy conservation in design. I saw very few proposed building projects which were really energy-conscious, and this is a whole domain that certainly deserves more attention. My final comment questions modes of realization. Appropriate technology should be used, the idea of local material resource usage is sound, but can one truly build a university from the idea of a master plan? Does the master plan in today’s dynamically changing world really make sense? What part of the work has to be done by consultants, what are the project review systems that are really operable and what lessons can we learn from the bureaucratic system of undertaking the consultant selection? For any given project, we should critically ask whether the ends meet the primary criteria which were established.

Stambouli

After listening to today’s expositions on universities throughout the Muslim world, I feel as a sociologist somehow puzzled and a bit skeptical. I am concerned about the harmony and adaptation of such educational spaces in the societies for which they have been designed. It is as though we feel torn and hesitant between two basic forms of educational space: what I call the primordial or the classic one, and the one we are witnessing nowadays and for which I have no adjectives as yet. The classic Arab-Muslim university is a space defined by such notions as totality and unity, and where education, religious life and social life are interlinked and the whole related to the heart of the city and to its global symbolism. The universities we are building in our countries today seem to be in a very uncertain situation. The users of these modern institutions, both students and professors, usually think they are situated in a very alien space. They are far away from the cities, as though excluded from day to day life and from city life. It is curious that academic space is designed as a tool of control and seclusion of the student community, more than conceived as a space to stimulate contact, relationships, communication, friendship and the rise of a real student community.

I have seen many universities in our countries where space is basically out-oriented, none inner-oriented. A series of corridors often leads either to the classrooms or to outside the campus, and when a courtyard has been designed and implemented it may be closed from the public for years and years. Eager as we are to renew our historical and civilizational identity and to articulate it harmoniously and in a modern way, we are still far away from inventing successful educational spaces and forms.

Netsch

Our sense of scale has to be evaluated in terms of past, present and future. Many college campuses which we now see engulfed in the American urban fabric were not intended to be. The American population has nearly doubled since I was in high school. Sometimes it is a case of the community growing up around the campus, as well as the campus growing up around the community. The problem of campus-community integration has been touched on and is important for two reasons. One is the scale of the campus. It is one thing to integrate two or three thousand students easily into an urban fabric. It is another to incorporate ten
thousand and certainly twenty thousand without upsetting a delicate balance which has been cultivated over a long time.

The reason for the scale of the campus is the desire to solve a human social problem. Many people reaching a certain age want to be educated, and now. In other words, the instant campus is part of this problem. Public policy requirements that universities all be built immediately are a significant problem. Years ago I proposed a temporary campus for the University of Illinois, suggesting that we build a temporary campus and live with it for ten years, learning and building and learning again. Well, that simply appalled everybody; the politicians and fire department and the whole community could not accept such a fluid programme. They wanted to build a campus which they could then go home and forget about.

It takes a very special kind of plan to allow for little incidental changes at the scale of our educational planning. If we could decrease the scale of educational planning, erecting building by building as needed, a whole aesthetic framework would be formed naturally. We have to try to learn how to identify certain important aspects of educational planning today: the scale of the university, its ability to interact physically and socially with the community, and the enormous problems and pressure that students face in trying to absorb the new language of higher education in a relatively short period of time.

Soedjatmoko

I enjoyed listening to and seeing the various concepts in educational planning which were presented today. It is very easy to lose oneself in flights of creative imagination, but the presentations also left me with a profound sense of disturbance. In all the conversation and explanations and expositions about these buildings, I had the sense that no one was talking about people. What kind of people should these beautiful buildings produce? I had a sense, both because of location and because of the almost monumental scale of the enterprises, of the creation of an enclave. An enclave in the setting of the general poverty in the Third World might well create the very type of people we should get away from—that is, arrogant and insensitive technocrats.

More and more in the Third World, universities are beginning to respond to the need to interact much more systematically and consistently with the social realities of situations in which they find themselves. This response includes building community and social services into the curriculum. The real problem is to what extent these buildings are going to be conducive to an Islamic response to the problems of our societies, especially to the problems of poverty and social disparity. It is not enough, although it is certainly very pleasing, to see attempts being made to include traditional Islamic concepts of space and design and ornamentation into buildings. But these will not create an Islamic response to the problems we face. This can only be acquired by much deeper involvement and familiarity and understanding of the social problems that lie at the centre of the state of underdevelopment. By the very nature of the building complexes under discussion this became very questionable in my mind.

The problem goes beyond the builder's response to the terms of reference given him by the client. It goes beyond even the questions of what educational purposes are to be served by these buildings. The heart of the problem in the Islamic world is whether the Islamic people and cultures and nations are capable of providing a different civilizational alternative to modern Western society. Are the Islamic nations going to be able to gain control over science and technology, which have now run away, moved ahead with a dynamic of their own well outside the control of our civilization? Will they be able to bring science and technology to serve the social and moral goals of Islamic society? It would seem to me that answers to those questions cannot be obtained by limiting our discussions to the extent to which Islamic motifs have been incorporated into building design.

There is another problem, and it is not fair to the designers to blame them entirely for what I sense to be the inadequacy of the presentations. This problem is the client, and the inadequacies of the client's perception in giving his commission to the architect. I have no particular prescriptions or suggestions to give to the architects, because I think the problem is a wider one. We have to look at the role of the institutions of higher learning in Islamic societies if a broader civilizational sense, and ask if the Muslim world is capable of developing a modern civilization expressive of the moral and social commitments of Islam.

Bokhari

A dilemma of almost all new universities in the Middle East is that although they are designed and built largely in communities which have a substantial number of illiterates, they are usually isolated. King Abdulaziz University is no exception. The university could be playing a very important role as the cultural, educational and philosophical centre of its community— which is the way it should be in the Third World, in the Arab Islamic countries and elsewhere.

The university is really the heart, the brains and the conscience of its community. We have tried at King Abdulaziz University to realize this, explaining it to our consultants from the very beginning. The consultants put the concept into very elaborate documents, but the master plan was a disaster—it fences the University in and fences the city out. Despite its wealth of resources, its faculty and students, its laboratories and everything else, it is inaccessible to people coming from outside the University. I am not questioning here the merits of this particular master plan. What I wonder is whether we are really talking about Islamic architecture in the psychological sense, in the social as well as in the physical sense. Most of what I have
seen in the way of university design in the Muslim world, including what was presented here today, does not come close to the aspirations of the adjacent communities in either the social or psychological or physical sense.

Haider

Some thoughts on the nature of the university in the contemporary Islamic context:

"Can those who know not (ever) equal those who know?"

—Koran

Six interactive roles of a university in an Islamic nation:
1) University as a bearer of meaning—the link between man and God via īmān (faith), tadhīq (actualization), tadabbur (meditation), tafakkur (contemplation, speculation)
2) University as a fountain and treasure of knowledge (dār al-ulūm)
3) University as a synthesizer of collective identity
4) University as a system (facilitator) of human growth and development: knowledge, skill, social interaction
5) University as a forum for mutually supportive, complementary and competing ideas
6) University as a guide and servant of society: intellectual, operational, problem-solving, anticipating/projecting

Erickson

I think the root problem is deeper than architecture or planning. I think this is partially because—and I am always surprised at this—the Middle East has accepted not only the physical forms of buildings from the West, but also the ideas, the institutions and the organizations, which I think they should challenge. The campus plan was created in America, and it was created there for a very good reason. At that period in American history the various arts and sciences were gradually being fragmented into very specialized areas of knowledge, and in order to deal with these areas the institutions of learning were doing likewise. The campus gradually became a collection of buildings which taught disciplines that had little to do with one another, except for occasional student crossover. Symbolically the campus represented the dissociation of aspects of knowledge. This is in complete contradiction to what Islam teaches—that is, the interrelation of all fields and the totality of knowledge. We tried to bring these areas together in some North American universities, but it is very difficult when the university is itself divided into segregated faculties.

It is necessary to challenge that concept of a university. Islam does not have to accept the pattern that has come from America. It does not have to say that in order to study one discipline one must have a
distinct faculty and an organization for it. The basis of the university programme is questioning what role the university is to play in social formation. What are the students going to have when they come out of the university? If it is going to be a total view of the world, an entirely different approach must be made.

We must start there, with long-term university objectives, because in the area of planning and architecture we only do as we are told. If the concerns are evaluated anew then many other solutions are to be found, as many others existed in the past. The earliest universities in the West were total universities, insofar as they were just rooms rented in the city. In the English system, the Oxford system of colleges, the university was conceived in the total sense of the living environment: the disciplines were taught within an area, and the student experienced the total life of the university. I think these are the things that the Muslim world has to start with, and not take carte blanche an idea that we are even trying to move away from in North America. We have found that the separation, the fragmentation in North American thinking has caused problems in universities, in cities, in everything else. Why should Islam adopt this when its philosophy and religion are totally against it?

The high professional standard visible in the Algerian university presented by Mr. Netch was expressive of a good discipline, of a high standard of architectural appreciation. But it is seriously lacking in sensitivity to the environment. That lack could be overcome by just giving the subject a bit more significance and much more appreciation. I can see a partnership between the client and the consultant, so I am not going to put the blame on the consultant. The client role involves much more than handing out a brief for a small programme. It extends beyond architectural terms, and deals with the whole attitude toward the project. Of course we are delving into national planning when we consider appropriate design for universities. The consultant himself, while presenting detailed studies of an analytical nature, has not bothered to give enough time and research to the comparative study of traditional environments. He has not made enough surveys to qualify him to present a study worthy of the scope of the project.

We are dealing with the Islamic environment and Islamic architecture. There is no adequate shortcut for giving a project an Islamic feeling. These Algerian buildings lack the intimacy, the feeling, the relationship of walls to windows, the status of the gates and even the overall planning characteristic of Islamic complexes. Education could help a great deal in developing appropriate design. The whole educational process in architecture is changing now, and students of architecture, with their surveys and their appreciation of the environment and their record-keeping, could help the clients to be better prepared. They could help the consultants become more sensitive.

In Yarmouk University we have a great opportunity to do something really worthy of the landscape. So we have building clusters, and I am not opposed to clusters. But the cluster should have scale, should have feeling, should have the skyline, should have involvement, should have an understanding of the geography and its setting. I think we could have a happier integration of the building with the en-
All of these patterns are changing now, and have been changing for about twenty years. The University of Paris has had an increase in the number of students, and we now find a campus model developing all around Paris. An American university on the Paris model, Yale University in New Haven, now has difficult problems with its surrounding community. It needs to expand in the traditional way, by buying land, but the community feels that this is not a good thing because the University thereby becomes more excluded from the city. There are problems in the West, and the West is not showing any new or convincing patterns of university development. New solutions must be sought everywhere.

The Muslim population increase is much higher than in the West, so we can think of some solutions which could not be thought of elsewhere. We can and should link university planning to town planning. We also have considerations in education planning not found in the West—the climate, for example, may be a formidable constraint. The Islamic countries are generally hot, and it is unpleasant to go outside a building into the sun. If university buildings are scattered, a most unpleasant environment may result. Perhaps we can make a list of such considerations as a way of proposing new criteria for the design of universities in Islamic countries.

**Abdulac**

When we look at university models in the West, either modern or old, we find several patterns—there is no unique pattern. One of these, perhaps the oldest, is the Cambridge or Oxford pattern. Another is the Paris pattern. Perhaps in the beginning Paris was like Oxford, with self-contained colleges, but it has been evolving historically and until some twenty years ago was a model of scattered buildings. The faculty buildings, auditoriums, student housing, student dining hall were all scattered in one area of the city. That was the most enjoyable area in the city, because there was substantial interconnection between the university and the community. A third university model is the American campus pattern.

**Faghilh**

We are facing a state of affairs in which the clients basically have the awareness and the will to respect their heritage and their culture in new buildings. Unfortunately, the architectural results are far from being sensitive responses to this awareness. How do we explain the gap between intentions and resulting forms? We have to look back at the architectural practice which embodies, to a large degree, the reason for this failure. Whether we admit it or not, the university designs we have seen stem from the tradition of Modern Architecture with a capital
M. This "modern" is a language based on a utopian concept of scale. This is the main objection, because the resulting edifices fail to fit into existing street patterns. They have immense surfaces which look very nice on paper, but in reality they constitute an uncontrollable urban land bloc incapable of inspiring general social interaction.

The architectural vocabulary which reflects the spirit of a society cannot but be deeply committed to the city, its street pattern, its scale, the hierarchy of its monuments and the different typologies of public places. Although I agree that programmes given by clients are questionable because of their utopian size and scale, I believe that those who are responsible for design must make a real break with value-free, internationally accepted forms. Whether geometric or not, they do not always make our architecture Islamic. Attention should be given to the deep structures of architecture, not to superficial effects. Physical structures which are deeply rooted in history are permanent structures, usable for changing institutions and functions. Our task is to reach a level in architecture where buildings will no longer be consumable objects doomed to obsolescence, but remain as meaningful parts of our culture.

Al–Hariri

I have a lot of sympathy for the consultants and clients who have come before the seminar with their projects. I have even greater sympathy for the architects, because I think the problem does not lie entirely on their side—a lot of it lies on the side of the clients.

Architects and consultants today are requested to "reflect and portray Arabic and Islamic culture." What we are doing is throwing the ball in their corner and saying "you do it." We cannot blame Western architects for not designing for an Arabic or Islamic culture—we don't know how to do it ourselves! We have not defined what it is to create architecture in an Arabic or Islamic fashion. In brief, I think the problem is that we continue to accept buildings which are designed from the *thur* (outer dimension) instead of the *batan* (inner dimension), which is the proper Islamic concept.
Educational Workshop

I. Serageldin, rapporteur

The working group on educational facilities emerged with two approaches: 1) The definition of a singular idealized concept of the Islamic university as a starting point for formulating and/or assessing real-world projects; and 2) Starting with the existing communities and their aspirations, and using these to define the parameters of a design process which would therefore be rooted in both experience and idea. Although an interesting effort to define the ideal construct was made, the second approach was the one deemed most appropriate to the capabilities of the workshop.

Islam and Society

Islam, to Muslims, is more than a religion. It is an all-encompassing culture and a way of life. Islam defines a certain set of interrelationships between the members of a community; it is therefore an extremely powerful social force which interacts with local, regional, geographic and ethnic imperatives and traditions to shape the character and identity of a community.

Islam and Architecture

From this perception of Islam and society, two general points emerge. First, although Islam has a universal and all-pervasive essence, there is and has to be tremendous diversity in the socioeconomic and cultural expressions of Muslim societies. Hence, any search for a single set of universal criteria applicable from Morocco to Indonesia is bound to fail. Such a search will either yield a limited number of very general criteria devoid of operational content, or will founder against the rock of geographic particularism. This point needs to be stressed. Classical architectural training usually defines architectural “styles” by the presence of a certain homogeneous concrete expression. This approach brings a totally inadequate set of tools to the phenomenon of the “Islamicity” of buildings. This is like bringing a yardstick to measure the temperature of a room. There is nothing wrong with the yardstick per se; on the contrary, it is an extremely useful and essential tool, but no matter how precise it is, it is not the appropriate tool for measuring temperature.

The second important point is that the essence of defining the architect’s brief in a Muslim environment is the desired process of social interaction expected to take place in that building or group of buildings. This concern with people and community must precede concern for the programmatic definition of spaces and areas.

Good Architecture: Muslim and non-Muslim

Some of the most important characteristics of good design are universal—that is, they are shared equally between good Muslim and non-Muslim architecture. These include such things as respect for the environment, integration with surroundings, efficient functioning, cost-effectiveness, beauty, etc. There is no point in belabouring a sterile debate as to whether these features are Muslim or non-Muslim; let us turn instead to those additional features or criteria which are uniquely Muslim. These can sometimes be very few indeed. Some of them are fairly universal in the Muslim world, for instance those which cut across state and regional boundaries; others are more locally specific. Of the former, we may cite the respect for privacy and the nurturing of the sense of community. The respect for a human scale is another, albeit derivative, feature.

Additional features must emanate from a careful assessment of the conditions and locale of the specific project under consideration. In order to define these project-specific criteria or features, the following sequential approach is suggested: 1) Define the nature of the process that is to take place in the building(s); 2) Define the set of desired interpersonal (social) interactions implicit in, or at least consonant with, the process. These should reflect the aspirations and concerns of the ultimate users; 3) The scope of the project, its location and the target population should then be identified and policy issues raised if these call into question any of the fundamental questions raised in (1) and (2) above; 4) A conceptual framework for the building would emerge from this understanding. Here questions of the appropriate level of compactness/dispersal, high versus low-rise, density, etc. could be articulated; 5) The programming and design processes would then proceed normally, with due care being given to balancing efficiency and aesthetics.

On Architectural Vocabulary

In making any architectural statement, the designer calls upon a vocabulary drawn from his or her experience and from the tradition of the culture in which the design is being executed. A careful study of the architectural heritage of the Muslim peoples yields a rich harvest of powerful elements which lend themselves to modern use.

We should, however, warn against excessive concern being devoted to the articulation of this vocabulary, lest it be misconstrued as a prescriptive stifling orthodoxy of “the style.” Architects should be encouraged to use the elements of such a vocabulary sparingly and with discrimination; a powerful statement does not require the use of every word in every sentence.

Educational Facilities

Turning to educational facilities, the suggested approach can be applied with ease. For convenience, the workshop limited discussion to universities, although the process can be extended to other levels and types of educational institutions. There are four key elements to a university: student life, teacher life, student/teacher interaction and relationship of the
university community to the surrounding community. These four define the nature of the academic community and the pedagogic process to be housed in the proposed educational facilities. Judgments on other aspects of the project, such as the size of the campus, the locations of student and faculty housing, the compactness/dispersal of the units, density, etc., can be made more intelligently in light of these perceptions.

In most cases, however, these thoughts are not clear in the minds of either decision makers or users. Sometimes the architect has to act as catalyst and even as interpreter, in order to help the sponsoring client (decision maker) and the ultimate users more clearly define their wishes and aspirations. This process sometimes reveals divergences of viewpoint that need to be reconciled before the work can proceed further.

The importance of linking the university to the neighbouring community is dictated by a set of imperatives in the Muslim world today:
1) In a poor world thirsting for knowledge and change, the university cannot be the refuge of the privileged.
2) University communities are both catalysts for and the cutting edges of change in rapidly evolving societies. Thus they have a societal role to play beyond their purely educational functions.
3) Universities in the Muslim world should seek to recapture the holistic vision of knowledge and skills which is prevalent today. Such a vision calls for a two-way communication with the real world surrounding the university.
4) In lesser developed countries the universities imply a substantial investment of national resources. They should serve broader segments of the community than that lucky stratum which has successfully completed twelve years of formal education and entered the ranks of university students.

While the above may indicate a strong preference for locating universities within urban centres, we recognize that this is not always possible, even with the imaginative reuse of old buildings in town. The availability and/or cost of land are frequently insurmountable obstacles to the siting of a building. Yet it is important to underline that when economic costs are being assessed, they should be weighed against the social costs of physically separating the university from the community.

Appropriate campuses for different sets of social interactions must have different spatial configurations. It is difficult to succeed in such a design task without a deep sympathetic understanding of the historical patterns characteristic of Muslim societies in the past, and of the conditions and aspirations of Muslim societies today. One element can be highlighted as an example: the role of the mosque. In most traditional Islamic universities the mosque was central to university life, with teaching frequently taking place within it. Today the mosque retains only its religious function; its social function has been taken over by new facilities physically divorced from it, which are variously referred to as "campus life centres," "student life centres," etc. Is this physical divorce of functions either necessary or desired?

**Toward Some Criteria**

Each project is unique, but one can still identify some general guidelines to help architects and clients define a pertinent brief and choose among competing design alternatives. High on the list will be those guidelines which are general in character and could be shared by good university designs in both Muslim and non-Muslim environments. Design efforts should be cost-conscious, built upon a very careful assessment of all the factors that affect the overall efficiency and cost effectiveness of a new university campus. Most prominent among these would be detailed review of the programme and a careful survey of the area requirements; control of balance areas to minimize the gross to net area ratio; ensuring the simplicity of the buildings, thereby decreasing capital as well as operation and maintenance costs; careful appraisal of the volumetric aspects of the building(s), a frequently overlooked factor which weighs heavily on the operation and maintenance costs; and review of utilization factors to make proper use of each square metre of space allocated for academic areas.

Beyond these, it is clear that a campus should relate to and respect the physical environment, whether natural or man-made. It should also respect the traditional architectural character, not demean it by a mindless replication of details. It should emphasize that the essential character of university campus life revolves around interpersonal interaction at the pedestrian level. The perception of space should therefore be personal, protected and controlled. Spaces should also be designed to create personal comfort and convenience with minimum reliance on mechanical ventilation and cooling, in spite of the highly demanding climatic and physical environments which frequently characterize Muslim countries.

Associated university functions should be clearly interrelated, and campus life should be enhanced by the proximity of student residences, faculty housing and academic areas. Such proximity would not only enrich the academic environment, but would also minimize personal travel, isolation and discomfort while emphasizing the concept of community.

These design ideas immediately imply more compact university plans than those already developed for new campuses in Muslim countries. It would be possible to reflect compactness in a variety of ways, but Muslim campuses would be well served by emulating the organic and non-rectilinear character of most traditional Islamic urban environments. Many of the principles that guide the creation of the organic, human character of medieval Islamic urban environments—with their private and semi-private courtyards, clustered housing and meandering narrow streets—are being rediscovered and adopted. Such spatial articulations, as well as other features which act as passive environmental modifiers, are valuable...
means of nurturing desirable social interaction. They are increasingly recognized, valued and adopted in the West, as well as in the Muslim countries themselves.

The dimension of time should not be overlooked. Designs for new campuses should reflect a quest for logical, phased development, a pattern that could ensure a properly functioning academic environment prior to the full completion of the construction programme. The need for developing a campus life centre (whether integrated with the mosque or distinct from it) at an early stage, and tying academic and residential buildings to it, becomes self-evident.

The question of time phasing raises two related issues. First, the concept of a master plan should not be interpreted in terms of a fixed "grand design." Such a vision would be totally inappropriate in the context of rapidly evolving conditions. What is optimal is a series of orchestrated action plans within the general course charted by the master plan, which remains an evolving, living document. Second, flexibility should be paramount in the minds of today's designers. The future is bound to dictate many new imperatives, whether technological, societal, organizational or pedagogic.

Among the societal imperatives which must be addressed is the changing role of women, and corresponding changes in the level and content of their participation in university life. These changes will have an impact on all aspects of university design, from campus location to student housing to academic facilities.

New designs should also assess alternative building technologies which include the use of local resources, with a view to choosing the most suitable building system for each part of the university community. These appropriate technologies, when combined with relevant architectural designs that emphasize passive environmental modifiers, should produce a more functional campus and more interesting architectural and urban design concepts and treatments which would also be economical to operate and maintain.

<table>
<thead>
<tr>
<th>STUDENT LIFE</th>
<th>Old (Traditional Muslim?)</th>
<th>New (Western?)</th>
<th>Desired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect Commitment to University</td>
<td>Very strong</td>
<td>Weak (alternatives)</td>
<td>?</td>
</tr>
<tr>
<td>Residence</td>
<td>On campus</td>
<td>On and off campus</td>
<td>?</td>
</tr>
<tr>
<td>Size of Group</td>
<td>Small</td>
<td>Very large</td>
<td>?</td>
</tr>
<tr>
<td>Student–Student Interaction</td>
<td>Very strong</td>
<td>Weak</td>
<td>?</td>
</tr>
<tr>
<td>Student Organizations</td>
<td>All-inclusive</td>
<td>Exclusive</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>Affiliative</td>
<td>Independent</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>Few layers</td>
<td>Many layers</td>
<td>?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEACHER LIFE</th>
<th>Old (Traditional Muslim?)</th>
<th>New (Western?)</th>
<th>Desired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect Commitment to University</td>
<td>Complete</td>
<td>Partial</td>
<td>?</td>
</tr>
<tr>
<td>Residence</td>
<td>On campus</td>
<td>Off campus</td>
<td>?</td>
</tr>
<tr>
<td>Numbers</td>
<td>Few</td>
<td>Many</td>
<td>?</td>
</tr>
<tr>
<td>Teacher–Teacher Interaction</td>
<td>Rigid/structured</td>
<td>Fluid or absent</td>
<td>?</td>
</tr>
<tr>
<td>Teacher Organization</td>
<td>Tight within schools</td>
<td>Loose</td>
<td>?</td>
</tr>
<tr>
<td>Exposure to Other Disciplines</td>
<td>Minimal or not applicable</td>
<td>Minimal (except in notable centres of excellence</td>
<td>?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STUDENT–TEACHER INTERACTION</th>
<th>Old (Traditional Muslim?)</th>
<th>New (Western?)</th>
<th>Desired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect On Macro teaching level</td>
<td>Customizing</td>
<td>Assembly line</td>
<td>?</td>
</tr>
<tr>
<td>On Micro teaching level</td>
<td>Hierarchical</td>
<td>Presumed looser</td>
<td>?</td>
</tr>
<tr>
<td>Pedagogic style</td>
<td>Apprentice/master</td>
<td>Formal norms/students</td>
<td>?</td>
</tr>
<tr>
<td>Purpose of teaching</td>
<td>Learning</td>
<td>Certification</td>
<td>?</td>
</tr>
<tr>
<td>Scope</td>
<td>Personal included</td>
<td>Seldom personal</td>
<td>?</td>
</tr>
<tr>
<td>Specificity</td>
<td>Specific pairing</td>
<td>Fragmented</td>
<td>?</td>
</tr>
<tr>
<td>Frequency of contact</td>
<td>Frequent</td>
<td>Infrequent</td>
<td>?</td>
</tr>
<tr>
<td>Articulation in space</td>
<td>Continuous common spaces, multiple scale</td>
<td>Organized, affiliation with space is lost</td>
<td>?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UNIVERSITY–COMMUNITY RELATIONS</th>
<th>Old (Traditional Muslim?)</th>
<th>New (Western?)</th>
<th>Desired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspect Proximity</td>
<td>Often close</td>
<td>Frequently out of town</td>
<td>?</td>
</tr>
<tr>
<td>Physical linking elements</td>
<td>The mosque</td>
<td>None</td>
<td>?</td>
</tr>
<tr>
<td>Service to community</td>
<td>Varies</td>
<td>Varies</td>
<td>?</td>
</tr>
</tbody>
</table>

A comparison of old and new educational institutions in the Muslim world, in terms of various aspects of university life. It is the task of the architect to work with the client and the users to determine the "desired" aspects of individual educational complexes.
Conclusion

In summary, design efforts for new campuses should carefully consider the five basic parameters of all university designs mentioned above: programme, balance areas, simplicity, volume and utilization. They should also address the choice of appropriate building technologies, operation and maintenance costs, micro-climate and landscaping and the need to emphasize a desired pattern of campus life. This last can be achieved through careful attention to non-academic buildings, student and faculty housing and the interlinkages between these and academic areas. It is primarily this latter feature which contains the seeds for producing an environment that is true to the spirit of Islam. This demanding set of tasks will require a high level of responsible judgment by clients, architects and builders alike. Within this triad the architects have a pivotal role. They must reaffirm their role as catalysts, interpreters and articulators of the client's brief. They must heed their consciences and ensure that proper attention is given to the needs and aspirations of the community they serve. Only then can the great potential of the architecture of Islam come to full flower in the Muslim societies of tomorrow.
Recreational and Tourist Complexes: An Overview

Yasmeen and Suhail Lari

Muslims were great travelers: discoverers of countries, organizers of empires, experienced traders. At the time of the birth of Islam, Mecca itself was entirely a commercial city, a centre of both trade and high finance which stood at the crossroads of routes connecting Yemen to Syria and Abyssinia to Iraq. It acted as a *haram* (sanctuary) to weary travelers who could come, rest and trade without fear of molestation.

As defined today, recreation tends to mean self-indulgent amusement. However, the history of Islam suggests a different connotation. Recreation was taken in the literal sense to signify "re-create," to refresh or rejuvenate oneself mentally and physically. Traditionally it has meant a journey into self-knowledge, removing oneself for spiritual transformation by retiring into a saint’s *khângah* or *zawiyâ*. Often outside the city walls, these were also considered abodes, sanctuaries and resting places for travelers. Recreation also meant leaving the crowded and often unsanitary environment of the city to avail oneself of the specially-created paradise gardens, where arrangements for amusements were often made.

The difference in meaning and attitude between recreation as self-indulgence and recreation as spiritual rejuvenation is not only a problem of old versus new interpretation; it is also the difference between the Third World and the technologically-advanced world. To the latter, affluence has brought new kinds of recreation directed toward purely personal pleasure, a kind of art for art’s sake. This is a luxury which we in the Third World cannot afford. Our great recreational gatherings are therefore linked with some functional or spiritual purpose. For example, the horse and cattle show in Lahore provides entertainment in the form of folk dances, musical bands, dancing camels and horses, but at the same time it fulfills the practical purpose of displaying the various horses, camels and cattle.

Other great happenings, like the *Mela Charaghân* (the fair of the lamps) held in the historic Shalimar gardens in Lahore, is linked with spiritual rebirth. It attracts great numbers of people on the birthday of the saint Madhu Lal Shah, whose name, a composite of a Muslim divine and a Hindu disciple, celebrates their becoming one. Similarly, the shrines of Sufis like Shah Baz Qalandar or Data Ganj Baksh are great spiritual centres which attract pilgrims in vast numbers at the time of the *urs* (anniversary), when *melas* (fairs) are held, passion plays are performed and many cultural activities take place.

**Pilgrimage Travel**

If one considers tourism in the world of Islam in the context of travel, the Muslim world was never at a standstill. One is struck by the extraordinary mobility of the people for the purposes of pilgrimage, trade, education and *jihad*. The reason for this movement can be traced back primarily to the position of Mecca in the
Islamic world. Of the five fundamental pillars of Islam imposed upon the faithful, the most powerful of motives for travel is the performance of hajj. Hajj literally means qasd (betaking oneself to a person or place); technically it signifies going at a particular time to Mecca to perform certain devotional acts required by Islam. The Ka‘ba is considered the first house of divine worship, and a pilgrimage to it is incumbent upon every Muslim who has the means to undertake the journey; performance of the hajj once in a lifetime is obligatory. Pilgrims come to Mecca from all over the Islamic world, and well-defined routes for pilgrim caravans became established. Later, shrines at the tombs of Sufis and saints who had become venerated and were attributed with baraka (divine power) also became centres of pilgrimage.

Mercantile Travel

Islam placed great emphasis on trading. In fact, the Muslim faith was initially spread along the caravan and sea routes. The route from Yemen to Syria supplied the West with Indian luxury goods and South Arabian frankincense; the overland caravan route led to Muslim Central Asia, while the traditional silk road led to China.

In the Islamic world, the wealth of the cities was dependent upon goods being brought and sent to distant corners of the earth, and traders traveled great distances. Ibn Battūta, who traveled from one end of the Islamic world to the other, describes the hardships faced by travelers.

The caravan sets out from Tabuk and pushes on speedily night and day, for fear of this wilderness. Halfway through is the valley of al-Khaidir, which might well be the valley of Hell (God preserve us from it). One year the pilgrims suffered severe distress in this place by reason of the samoom wind which blows there; their water supplies dried up, and the price of a drink of water rose to a thousand dinars. Both seller and buyer perished.

Describing his journey from Syria to Mecca, Ibn Battūta talks about the Pass of al-Sawan and about the desert, of which the saying goes: “He who enters it is lost, and he who leaves it is reborn.”

Educational Travel

Another compelling motive for travel was education. The Islamic religion places great emphasis on knowledge and learning. The acquisition of knowledge was made the standard for excellence, and was always spoken of in the highest terms of praise. This explains the insatiable thirst for knowledge evinced by the Muslims of long ago. As the holy Koran says, “The learned ones are the heirs of the prophets—they leave knowledge as their inheritance; he who inherits it inherits a great fortune” (B. 3:10). Anas relates that the Messenger of Allah said: “He who goes forth in search of knowledge is in the way of Allah till he returns.” Great centres of learning were therefore established in Baghdad and Cairo, Kufa and Cordoba, Samarkand, Khawarzum and Shiraz. High levels of scientific and mathematical sophistication were achieved, and great works in philosophy, logic, metaphysics and jurisprudence produced. Scholars and students undertook long journeys across great distances to sit at the feet of famous masters.

Ibn Jubayr, traveling in 578–581 Hijra, mentions the places for learning in various cities of the Islamic world. “The madrasas of Baghdad are so beautifully constructed that they vie with palaces in their beauty, and income from many estates has been endowed through waqf for their upkeep.”

Talking about the madrasas in Alexandria,
he says “scholars come from far and wide to study here, and each one is provided with a house and a wazifa.” Similarly, Ibn Baṭṭūṭa lists the names of scholars, notables and qadis of Cairo and Damascus whose lectures he attended. Among these were famous authorities on logic, metaphysics, grammar and jurisprudence. He also speaks of scholars who licensed him to give lectures.

**Imperial Travel**

Imperial courts were always on the move, and elaborate arrangements were made for their travels. During the time of the Safavids in Iran, the court would move between Isfahan and the Caspian coast or the mountains. The Mughal court and capital tended to be wherever it suited the emperor for the time being; Jehangir divided his time between Agra, Ajmer and Lahore. The journeys of the imperial court during the reign of Akbar are celebrated, and gardens were laid out at the established halting places between Delhi and Kashmir.

Emperor Aurangzeb spent a lifetime marching across South India, and Niccolao Manucchi, a Venetian gentleman of fortune, describes one such march accompanying him. From Manucchi’s account it is clear that all the pomp and grandeur of the court was maintained even in the temporary encampments. Tents were placed according to status, with sufficient space between the royal tents and those of the princes, nobles and generals; the tents of the rajahs and nobles, although high, must not be so high as those of the king. He relates, “It would be very lengthy to recount all the details of this march, the Mughals being extremely choice in such matters, overlooking no detail that could minister to their glory.”

**Accommodations for Travelers**

Supplementing the fair-goers, the pilgrims, the traders, the scholars and the imperial courts, the large armies of the mujahideen spreading the faith of Islam were always on the move. To cater to this enormous variety of travelers, a range of hostleries and stopping-places were established all over the Muslim world. Not only the caravanserais, khâns, hans and tekkiey were available, but also khângahs, ribats, zawiyyas and even madrasas and mosques. The emphasis on performance of the hajj and the importance of trade and traders in the Muslim world led to the construction of monumental caravanserais (and their urban equivalent, the khâns) along the well-organized trade and pilgrimage routes.

Whereas the caravanserais have rightly been called the “palaces of the road,” the khâns, together with the stâqs and the hammâms clustering around the congregational mosque, were the primary focal points of the urban landscape. Ibn Baṭṭūṭa, traveling from Damascus to Palestine, described the function of the caravanserais and the khâns. “At each of these stations there is a hostelry (fanduq) which they call ‘khân,’ where travelers alight with their beasts, and outside each khân is a public watering place and a shop at which he may buy what he requires for himself and his beast.”

According to Niccolao Manucchi, the Indian serais were similar.

These ‘serais’ are only intended for travellers; soldiers do not go into them. Each of them might hold from eight hundred to a thousand persons with their horses, camels and carriages, and some of them are even larger. They contain different rooms, halls and verandas, with trees inside the courtyard and

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*Fez, Morocco: merchant and beast unloading wares outside a fanduq*

*Photo: H-U Khan*
many provision shops, also separate abodes for women and men who arrange the rooms and beds for the travellers. They are like fortified places with their bastions and strong gates; most of them are built of stone or brick.

Almost all caravanserais present a square or rectangular walled exterior, with a single entrance which can be entered by a heavily laden beast. The central courtyard is enclosed by chambers to accommodate merchants with their servants, animals and merchandise. Water is provided for washing and for ritual ablutions. After the fourteenth century larger caravanserais were also provided with mills, bakeries and teashops; they gave the impression of small villages.

In Iran, particular attention was focused on the roads. A number of brick caravanserais were built by the Safavid shahs to facilitate travel on the pilgrimage route to Mashhad. Similarly, the Seljuks built up an entire network of caravanserais. The number of Seljuk caravanserais in Turkey is perhaps even greater than that in Iran. Although they followed the Iranian model, the Turkish examples were more richly decorated. Caravanserais were also built in great numbers in Mughal India. Niccolao Manucchi noted that for "the use of wayfarers, there are throughout the realms of the Mughal, on every route, many 'serais.'"

The urban equivalents of the caravanserais, known variously as khâns, qaysariya or funduqs, were the key elements of the market. These monumental strongrooms or warehouses were usually two or three floors high, and rectangular or square in plan with a single portal. The ground floor was originally used for stables, shops and large-scale storage, while the upper floors housed chambers for merchants which could also store their merchandise. All sizable towns had a central marketplace with a covered bazaar or sâq. Into this system of covered streets the khâns was built so that it occupied a prominent place in the centre of the city. Sometimes, as in the khâns of Ottoman Aleppo, shops were built into the ground floor. These provided the merchants lodging there with a conven-
areas with a small bazaar supplying necessities for the journey, were nearby. The martyrdom of Hazrat Hussain at Karbala and the growth of Shi'ism transformed Karbala, Najaf, Qum and Mashhad into major centres of pilgrimage. Tombs of Imams became venerated and attracted increasing numbers of pilgrims in search of blessings (baraka). Sufi shrines also became important religious loci, and each shrine contained some symbolic significance to which the pilgrims could relate.

Many tombs were blessed with baraka. According to Ibn Baţţūţa, it was well-known that miracles were effected at the mausoleum containing the grave of Hazrat Ali. Certain days and nights have special significance in Islam; special prayers are offered at these times, and it is customary to visit the sacred burial places. The cemetery became one of the most important parts of the city, a place for pilgrimages, meetings, revivals, even orgies, suggesting a whole range of relations to the dead.

Thus Ibn Jubayr spent the night at the graveyard of Qarafa in Cairo. According to him, "It is one of the wonders of the world, because in it are buried incalculable numbers of prophets, companions of the Prophet and men eminent for learning and religion. It also contains a number of mazars on which are built elegant and strong buildings." And Ibn Baţţūţa records that "by the tomb of Ibrahim Adham there is a fine religious house containing a water pool, and at which food is served to all comers. The people come to visit this conven at the night of mid-Shaban from all parts of Syria, and stay there for three nights."

Khângahs (khawaniq) abound in Muslim cities. Known by numerous other terms—tekke, buq'a (retreat), dargah (lodge), zawiya and ribat (monastic establishment and fortress)—the khângah served as a retreat for fakirs and dervishes and a hostel for travelers; it was also used for socio-religious functions. Khângahs consist of ceremonial halls, cells, kitchen, refectory, punishment cell, library, special quarters for the sheikh and a guest house. Normally the madrasa plan was employed, and the khângah and madrasa were often found side by side.

In the course of his travels, Ibn Baţţūţa stayed at a number of khângahs and hermitages managed with funds endowed through waqf. According to him the emirs vied with one another in the building and endowment of convents, mosques, religious houses, colleges and sanctuaries. Through the funds derived from the waqf, everyone who visited these places received hospitality: food was served to all, and free lodging was provided to travelers. Serais (purpose-built enclosures) were also constructed outside the imperial sepulchral gardens, and special accommodation facilities were provided to a considerable number of people who frequented those tombs. At the tomb of Jehangir there is first an outer serai where travelers could find shelter for the night in a series of alcoves around the walls. A tall gateway gives access to the inner garden which contains the tomb.

Special monumental caravanserais were sometimes built for use by the imperial courts. Examples built during the reign of the Safavid shahs included Mader-i Shah near Nantanz, Chah-i Siyah and Dhur; these were basically on the pattern of the caravanserai, but on a far more impressive scale.

The temporary encampments built by the Mughal emperors, when the imperial courts moved in the summer to cooler climates, took the form of gardens in which the tents could be pitched. As the halting places for court journeys became established, great gardens like the Wah Bagh and Rajauri were laid out. Wah Bagh was founded on a spring at the foot of a hill and was a place of considerable luxury, with a series of baths, proper heating and ample water supply. The garden became a more permanent dwelling place in its own right.
Paradise Gardens

Gardens which provided opportunities for physical recreation and entertainment have long had a special place in the Islamic world. The hostile environment and the harsh climate characteristic of the Muslim world encouraged the laying out of gardens. The gardens have traditionally been the places where fairs are held, and have also been gathering places for amusement and pleasure.

Ibn Battūţa talks about the island to the north of Old Cairo known as al-Rawda, the garden, which was a pleasure park and promenade containing many beautiful gardens. According to him the people of Cairo were fond of amusement and pleasure, and he witnessed a fête there which was held for al-Malik al-Basir’s recovery from a fracture. The gardens of al-Rawda are also mentioned by Ibn Jubayr and are frequently referred to in Arabic writings, especially in the Arabian Nights.

Such gardens were created as reflections of paradise on earth, and in essence were visions of the primordial garden which man lost through sin. Paradise gardens are found in similar form from Spain to Iran and from Central Asia to the Indian subcontinent. They developed primarily in Iran, and became a tradition which survived all invasions and political upheavals. While the Moorish gardens came to perfection in Granada, the Mughal gardens were most closely influenced by Persia.

The gardens were formally planned, with paths laid out geometrically; watercourses representing the four rivers of life divide the rectangular garden into four quadrants called chahar bagh (four gardens) which symbolize the meeting of humanity and God. Beside each of the watercourses is a straight line of trees, and quadrants may also be filled with trees and precisely planted shrubbery beds, all irrigated by the water channels. Special trees and flowers of all kinds were imported and planted in the gardens. The whole is surrounded by a wall to keep out the surrounding desert with its dust-laden winds, and to give privacy and protection. A striking characteristic of the paradise gardens is the way in which geometric symmetry is juxtaposed with freedom of plant growth.

The prototype of the paradise garden is flat, but waterfalls were introduced in Persia where the gardens stood on the sides of hills. Waterfalls were also employed in the gardens built in Kashmir by the Mughals. In the early gardens the level landscape dictated an almost two-dimensional form. As supplies of water improved, the patterns of watercourses became increasingly intricate. Narrow channels developed into wider canals and even into great tanks, as the Mughals discovered the cooling effect generated by large bodies of water. The single jet of the Persian garden multiplied into a hundred fountains at the Shalimar Bagh in Lahore.

A number of these paradise gardens delight us to this day. In addition to the Shalimar Gardens, the sepulchral gardens of the Taj Mahal, the tombs of Humayun and Jehangir, the gardens in the Lahore and Delhi Forts and the beautiful gardens in Kashmir are all surviving examples. It is clear that the lands of Islam have a rich heritage of buildings and gardens for tourism and recreation. It is also clear that buildings for tourism were never considered in isolation, especially in the cities where they were invariably part of a complex of many other activities. However, the architecture of the Islamic countries was profoundly affected by factors beyond any control, factors which swept away traditional cultural values and social institutions.

Western Influence

The advent of capitalism, militarism and mechanization, and the conquest of the world by Western science and technology, heralded the emergence of a new era. Western superiority was never seen as a matter of science or technology. It was total superiority. Livingstone, Manchester and the Bible went hand in hand. It was the acceptance of the total superiority of European culture, not force alone, that held non-Europeans in lengthy psychological and political subordination. It induced in the conqueror a sense of both inferiority and dependency, and their natural correlation—a belief in the inevitability, even the rightness of the Western rule.

The alienation of man from man so lamented in Western industrialized societies was nothing compared to the alienation of the colonizers from the colonized. The European was a temporary visitor to his
colonies, insulated from his subjects by physical, social and ideological distance and by an overwhelming gulf of power and custom. Mills’ History of India, full of contempt for almost every feature of Indian (both Hindu and Muslim) civilization, became a kind of manual for the British in India. In order to administer their vast empires, the Western imperial powers created, in the words of Macaulay, “a class who may be interpreters between us and the millions whom we govern—a class of persons Indian in blood and colour, but English in tastes, in opinions, in morals and intellect.” Through the widespread usage of English and setting up of anglicized schools and universities, young Indians acquired all the prejudices, axioms and ideals of their white colonizers; they became honourary Europeans. This highly anglicized new class which became increasingly influential in India bore the same feeling of contempt for their compatriots as did the British.

India was gradually drained of her human physical resources and was reduced to a land of incredible prostration. There was a profound disturbance of the whole social order: the culture withered, the arts collapsed and Indians either forgot, ignored or denigrated their heritage. Sir Syed Ahmed Khan, the first man to espouse the ideas which led to the creation of Pakistan, founded a university for Muslims exactly on the lines of Oxford and Cambridge. He was so impressed by European civilization that he saw his task as that of persuading his community not only to accept British rule, but also to acquire Western culture. “The natives in India,” he wrote, “high and low, merchants and petty shopkeepers, educated and illiterate, when contrasted with the English in education, manners and uprightness, are as like them as a dirty animal is to an able and handsome man.” He also proclaimed that “the British rule in India is the most wonderful phenomenon the world has ever seen.”

The modern Indian Muslim who emerged from this attitude wanted to shake off what he viewed as an old and decadent culture. He found that the new culture he now considered appropriate could be imported almost ready-made from Europe. Therefore, the new institutions that developed in India had no roots in tradition. Cities, the centres of this new civilization, were full of strange new buildings, local versions of European (mainly Victorian Gothic) architecture. As a response to the demand for a new setting to display the power and grandeur of the British Raj, memorable urban landmarks and new edifices were erected in quantity, urban planning was directed toward pomp and impressiveness and a tradition for symbols of power thus emerged.

In Muslim India, the urban elements—whatever their degree of importance—emphasized enclosed spaces and the interior as opposed to the exterior of buildings. Where the buildings had traditionally been self-effacing, the new rulers built buildings which were self-assertive, full of rhetoric and gesture. Based on traditions of the European Renaissance and Baroque periods, a new urban order was created in which the buildings dominated space, wide avenues led to major edifices and the streets converged on a square or a monument. Every urban element was designed to impress the spectator, a tradition which survives to the present day.

Independence did not lead to a qualitative break from the colonial social system, nor to any real social progress. Our present is only a quantitative and superficial variation on the colonial past. Apart from the apparent transfer of power to constitutional bodies, imperialism handed over the substance and reality of power to a colonial bureaucracy which was in every material respect an alien phenomenon. Its role and ideology is wholly alien, and it is in essence an imperialist imposition clothed in native garb: aloof, conceited and unconcerned, it is an intruder in our society. Both the bureaucrats and compradores of the Western-educated elite are impressed by and approve of the complete ascendance of Western science and technology. They are applying solutions of the industrially advanced countries as a panacea for very different local problems.

In the area of tourism, it was felt that no efforts must be spared to provide facilities to amuse and indulge Western tourists, in order to attract them in ever greater numbers. The newly built tourist facilities were therefore based on concepts and standards of recreation in the affluent Western societies. Thus the high-rise hotel became one of the most distinctive features of our cities.

The majority of Westerners have acquired their perceptions of Islamic architecture from buildings like the Brighton Pavilion, films about Arabian Nights and nightclubs with a pseudo-Islamic “oriental” atmosphere; all of these rely heavily on images of arches and domes. The perceptions of the Western-educated elite are heavily coloured by the popular Western media; they are sadly lacking in any but a superficial knowledge of our Islamic heritage. It is not surprising, then, that our cities are dotted with buildings designed by both foreign and local architects which are at best called “instant Islamic.” Their impression is created by the mere application of certain elements on the façades. In every other respect they are poor imitations of buildings found all over the Western world.

The first international hotels built in Pakistan are good examples of “instant Islamic.” Belonging to an international chain and designed by foreign architects, they were basically the stereotypical blocks; they only differed from their Western counterparts in the use of arches and pierced screens on the façades. These decorative elements were symbolic gestures to placate the natives and to give a superficial impression to the tourists that they were in an Islamic country.

Since tourism is a substantial foreign exchange earner, great emphasis has been placed on international tourism. It was felt that in order to attract foreign tourists, gambling houses, nightclubs and bars must be built. Little attention was given to domestic tourism, to the development of
places of cultural importance or to traditional centres of pilgrimage.

Latest developments in our countries, however, point toward a return to fundamentalism and populism, and a new awareness and assertion of self-identity. The old war between Dār al-Harak and Dār al-Islām is being waged anew. The concept of Dār al-Islām, supposedly buried with the defeat and death of Syed Ahmed Shaheed and his mujahideen at Balakot, has found a new life. The ideas and people that went into exile during the Caliphate Movement on the subcontinent were not forgotten: the exiles, the dispossessed, the exiles of yesterday are coming back to claim their heritage.

Strict new laws on drinking, entertainment and sex require that new directions in tourist recreational facilities be sought. These new regulations have disrupted plans developed for the promotion of tourism, since they are diametrically opposed to those facilities planned for the pleasure and convenience of international tourists. Thus the beach resorts, casinos, bars and many new hotels, either built or in the planning stages, have become superfluous with their present social unacceptability. Gadani Beach near Karachi, once promoted as a haven for tourists and including an ambitious project for a beach hotel, has now been taken over as a shipwreckers' junkyard. A casino in Karachi, planned after the civil war in Lebanon to make Karachi a new magnet for tourists, now lies deserted by the sea, soon to become a magnificent ruin. Similarly, the structural skeleton of the Hyatt Regency Hotel in Karachi stands unfinished, a mute reminder of the good days of the past.

The result of the back-to-Islam movement could have been a rediscovery of the moral and intellectual traditions of the past, coupled with the pursuit of spiritual growth and equilibrium, but in terms of architectural manifestation the results leave much to be desired. The real need was for a different orientation, a change in direction and attitude, but architectural solutions have responded by putting an even greater reliance on arches. In one hotel being constructed by an international
there are so many different forms of arches that one wonders whether this adaptation has not become a deformation, whether the whim of the client has not become stronger than the architect’s own judgment.

All hotels built in Pakistan for international chains have been designed by foreign architects. For practical reasons the design operation was carried on outside Pakistan. Since Western standards and Western models were used, it was not considered important to involve local architects in the design process. It is not surprising, therefore, that despite the number of hotels being built we still have not produced any hotel experts in Pakistan; we will continue to rely on foreign expertise for this building type. But can any architect, local or foreign, design a hotel building which is relevant and appropriate when the models are exclusively Western ones?

At this stage we do little more than apply certain local visual symbols to existing universal models. We can do little else, unless we fashion a hotel model appropriate for our environment. This new model would be built upon a resource-conserving lifestyle which prevents waste and is based on minimum adequate standards. The hotel buildings under construction today are really public monuments in terms of their scale of resource inputs. Working as I am in the Third World, in an Islamic country with limited resources, I am concerned about these monuments: designed with emphasis on Western techniques and standards, using almost wholly imported materials and relying entirely on an artificially created environment, they are much too wasteful.

The crucial problem for the people in the Third World is simple survival. Nonetheless, we tend to build monumental edifices which are expensive, which depend on technology we do not possess and for which the maintenance is beyond our means. The Taj Mahal Hotel, designed by me and now under construction in Karachi, is a good example of what ought not to be done. Review of the process of its design may be a good way to describe the pressures one works under in a developing country.

The Taj Mahal Hotel is perhaps the first large hotel designed by a local architect without the benefit of advice from foreign experts. Sponsored by a Pakistani entrepreneur, the brief consisted of a 450-room convention–capacity hotel with a 2000-seat auditorium equipped with conference facilities. In order to generate funds at an earlier stage, a number of showrooms and boutiques are also incorporated.

The site is close to the commercial centre of the city, situated at the junction of two important roads. The owner had paid an astronomical price for this prime land, and was interested mainly in two things: maximum utilization of the land to maximize returns, and beginning construction as soon as possible. “As soon as possible” meant one month from my appointment. I did what I should never have agreed to do—I tried to meet the deadline.

The owner had been impressed by hotels he had seen abroad, and wanted an efficient hotel. In order to optimize his investment in land the hotel had to go fairly high, although for ease of construction the height was limited to ten stories. The usual standards demanded that it be air-conditioned, have a certain number of elevators and sufficient services: the solution obviously pointed toward the Western hotel model. With the number of well-illustrated books and magazines published in the West, the model was easy to adopt,

Karachi, Pakistan: the 450-room Taj Mahal Hotel and Conference Centre Perspective of the complex designed by Yasmeen Lari
Plan: Y Lari
and considering the constraints there seemed to be no alternative.

This hotel and all others built on the Western model rely heavily on imported technology. The levels of energy and other resources needed to maintain high standards far exceed the supplies available. The resource inputs required for the hotels can only be obtained by reducing resources allocated for purposes which have a better claim on national output. In a hotel the size of the Taj Mahal Hotel, the imported airconditioning system consumes 100,000 gallons of water every day. This is a quantity which the arid city of Karachi can ill afford; it does not even have enough drinking water for its population of over six million.

Electrical power is similarly overstrained. The technology for an artificial environment uses an inordinate amount of electrical power. Demand already exceeds the supply, and the limited supplies available could be utilized for more productive purposes. The amount of energy and national resources required for these buildings should therefore be matters of great concern to us. The buildings for the privileged few absorb such a large proportion of national wealth that not enough is available for the general public.

Can we architects working in the Third World afford to consider such projects in isolation? Can we close our eyes to the fact that the issues are a little more serious than merely the design of aesthetically pleasing buildings? One may enjoy planning such edifices, but to the person passing by they are unreal, totally unrelated to his problems and able to do nothing for his spiritual or physical well-being. What, then, is relevant and appropriate? What should be the scale of expenditure on such buildings? Should the designs reflect concern for a resource-conserving future? In this context we would do well to remember that Islam encourages the judicious use of resources, and discourages excessive expenditure on buildings.

Sometimes such an investment is made in a building that one has to question the morality of it. The Taj Mahal Hotel is expensive, its total cost about twelve million dollars. Most of its equipment and many fixtures and fittings are imported, causing a drain on the scarce foreign exchange available to the country. But compared to this hotel, the cost of a foreign chain in both foreign currency and rupees is staggering. An international hotel of the same size, designed and built by a foreign consultancy group, has already cost five times more and is taking four times longer to build. The bank interest alone is presumed to exceed the total cost of the Taj Mahal Hotel.

I have already noted that work on the Taj Mahal Hotel started one month after the commission was drawn up, which was as soon as the land was acquired. Foreign chains, however, require a couple of years from the date they acquire the land until the start of work on site. The work gets delayed as foreign consultants proliferate and visit the site and begin to face the new realities of actually executing their designs in a foreign land. All the consultants brought in to unravel the problem succeed in complicating it further, as by this time there is often a complete breakdown in communications.

All this occurs because the client thinks that no expertise in this particular building type exists in-country, an error which is itself due to the fact that local architects are never integrated at the design stage. It has been completely forgotten that the architect performs many roles: he is the designer and supervisor and, most important, the coordinator of all the consultants who together make a project. If a local architect were appointed to participate in the design process and to act as coordinator, with a brief to draw upon all the foreign and local expertise which foreign resources could make available, projects might run more smoothly.

Including the local architectural organization in design and management would benefit the developers in two significant ways. It would encourage the development of badly needed local expertise, and would curb the tendency of consultants to use imported technology, equipment and materials, and designs and specifications in which each detail is oriented toward importing the smallest components from abroad. Employing local professionals would provide a more coordinated search for resource-conserving technology, and might result in the development of more appropriate solutions which encourage self-reliance and indigenous initiative. I believe that this would lead to more realistic costs and shorter construction times.

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**A Government-Sponsored Project**

We have so far considered a private sector project in Pakistan. It would now be worthwhile to look at a tourist resort built by a government agency at Keenjar Lake, midway between Karachi and Hyderabad.

The brief I received was very impressive. It called for deluxe accommodations, a convention centre, restaurant, yacht harbour and garden complete with water channels, fountains and waterfalls. In addition, there was to be a fountain in the lake of the same size as the famous Geneva Lake fountain. The installation of the Keenjar Lake fountain was calculated at one and a half million dollars, and the cost of running and maintaining it was also well beyond our means. But I was told that cost was no consideration. The project was directed toward international package tours, and the world was to be shown this latest symbol of modern Pakistan, complete with the largest fountain this side of Geneva Lake.

When I dissented, I was told that these were the orders of the Prime Minister. When I volunteered to speak to the Prime Minister, to explain that such high expenditure was simply not justified for one fountain likely to be visited by only a few hundred people on weekends, the bureaucrat in charge flared up and said that if I so much as mentioned my objection to the Prime Minister he would lose his job. Fortunately, consultants called in to study
Recreational and Tourist Complexes: An Overview

KEY:
1 Restaurant
2 Deluxe cabanas
3 Economy cabins
4 Administration block
5 Terraces
6 Parking
7 Site for future building
8 Administration and shopping

Keenjar Lake (near Thatta), Pakistan: tourist resort  Detail of master plan for landscaping. Architect: Yasmeen Lari

Plan: After Y. Lari
the feasibility of installing the fountain found the idea impractical, as the wind on
the lake was too strong. The idea of trans-
planting the Geneva Lake fountain from
an urban setting to a deserted Pakistani
lake miles from any city is symbolic of the
pseudo–environment and illusion that we
want to create.

With the change of government, it became
obvious that the project had little impor-
tance in the scale of national priorities,
and only limited funds were available. Our
original complex system of water channels
and fountains had to be totally revised.
The elaborate garden disappeared, and so
did the convention centre and the yacht
harbour. We redesigned the entire project
in order to make it feasible.

Looking back, I feel that as architects we
had a certain responsibility in formulating
a realistic brief. How far were we justified
catering to the demand for “modern”
symbols in our designs? Does the architect
have a responsibility to guide and in some
cases discourage the overenthusiastic
client? The Keenjar tourist complex is
not an isolated case; this issue raises its
head again and again in the Third World.
Although we often speak of limited re-
sources, we have adopted the ritual of
conspicuous waste; we forget that the key
to conservation for countries poorly en-
dowed with resources lies in the control of
consumption.

We ought to question the validity of
so-called symbols of progress, particularly
in the context of high-rise buildings
and comparable engineering feats: they
abound in the West, but are they suitable,
appropriate and relevant to us? In the
context of economic development, em-
phasis should be placed on the evolution
of lifestyles which save energy, time, mate-
rials and foreign exchange; efforts should
be directed toward moving away from
those symbols of progress which are im-
portant only because of their high visibility
and their supposed allusions to success.
Instead of emphasis on only science and
technology, we need to direct ourselves
toward humanization of the environment
and balanced cultivation of our natural
and social resources.

Conclusions

While many aspects of the Islamic heritage
are important for us, the following are of
particular relevance in the context of
building for tourism:
1) Places for travelers and for tourism
were in abundance, and hostels for all
types and income groups of travelers were
available. There was special emphasis on
gardens as places for entertainment.
2) Islam teaches humility, so buildings
were kept low to denote a rejection of
luxury and ostentation. The construction
of big buildings was considered syn-
onymous with pride and arrogance.
3) The secular and religious life is not
separated in Islam, and buildings for trade
and travel have formal and functional
parallels in religious architecture. The
same plan could be used for a number of
different functions, and it was difficult to
distinguish between a mosque, a madrasa
or a caravanserai. In the words of Grabar,
“the main concern of Islamic architecture
did not lie in the maintenance of certain
forms, but in the expression of certain
activities.”
4) Islam discourages excessive expenditure
on buildings and encourages the judicious
use of resources. For both hot and dry and
hot and humid climates, architecture was
used as a means of controlling the en-
vironment. The insulation properties of various
materials were exploited and a range of
ventilation systems developed.
5) The outward form of the building is not
considered important. The buildings are
self-effacing, and the exterior gives no
indication of the importance of the build-
ning nor of its interior spatial organization.
Even an important monument like the
congregational mosque is usually obscured
by buildings of secondary importance, like
the bazaar, sūq, khān or hammām. The
grandeur and the beauty of a building is
revealed only when you enter its portals.
The inward-looking character, the focus
on enclosed space and the element of sur-
prise are used in buildings, in gardens and
as an important feature of city design.
These aspects are still visible today in the
madinas and casbahs of ancient towns like
Lahore and Peshawar.

In designing buildings of importance, and
particularly in designing buildings for tour-
ism, certain issues demand consideration:
1) The Western model is not appropriate
because it requires sophisticated technol-
ygy and conspicuous consumption of re-
sources. A balanced resource-conserving
model which exploits indigenous solutions
for controlling the environment must be
developed.
2) Expenditure on buildings must be realis-
tic. Excessive stress on standards and
exorbitant expenditure in order to create
political and status symbols in the race for
modernity must be resisted.
3) The clients, private developers as well
as government agencies, must be made
aware of the advisability of seeking other
solutions. It is important that decisions
not be taken purely on the basis of optimum
utilization of land, or because on a visit to
Europe or America the client had been
dazzled by beautiful edifices.
4) A partnership on an equal footing
between local and foreign consultants is
important. Such a partnership could seek
to avoid unnecessary expenditure on ma-
terials and undue emphasis on high stan-
dards, and develop local expertise and
self-reliance.
5) Research on traditional forms and tech-
niques is essential, so that professionals
may be aided in the production of more
appropriate buildings for the future, based
upon the architectural inheritance of
Islam.

Note

“Recreational and Tourist Complexes: An
Overview” was co-authored by Yasmine and Suhail
Lari, and presented at the seminar by Yasmeen Lari.
Tourist Architecture in Morocco: Hotels by Faraoui and de Mazières

Abdeslem Faraoui, Patrice de Mazières and Editors

The architectural consequences of tourist development in Morocco are not insignificant. The country's magnificent architectural heritage is in the process of becoming overrun by increasing numbers of tourists, and this problem is not unique to Morocco; it is a problem faced by the entire Third World.

Tourism has been accorded a choice position in national economic development schemes. The vigilance of those responsible for national planning must match the value of the heritage which is at stake. The country could be fully opened to tourism, in anticipation of the revenues attending that industry. Tourists could be considered solely for their goods value; consequences to the physical and cultural environment could be ignored, but the consequences would be beyond our repair. The architectural manifestations of this position are likely to be insensitive examples of commonplace international architecture, or an insulting caricature or pastiche of tradition.

Conversely, the countries concerned can carefully plan and implement a method of receiving tourists in harmony with indigenous culture, capable of safeguarding national dignity and able to instil in the visitors a new and positive attitude toward their hosts. Tourism could be integrated into a broad scheme of development consistent with the living tradition and reflected in contemporary architecture.

A country's accommodation to tourism, then, presents an ideological choice and consequently a challenge to architects. Innsensitive modern hotels too often violate an urban texture or intrude upon an unspoiled tract of hinterland. Faraoui and de Mazières have attempted, in a number of recreational projects, to create an architecture of leisure which does not appear as an intrusion. Not only are these hotels integrated into the local terrain and evocative of vernacular building styles, but they incorporate the talents of Moroccan artists and craftsmen in their interior and exterior finishings.

Six Examples

Southern Morocco boasts a very lively indigenous architecture. We try not to imitate it, but to realize its essential spirit in hotels at Boumalne of Dades, El Kelaa and Taliouine. The striking natural environment also proved a constraint and compelled modest and harmonious designs. In an urban site, like our hotel in Marrakech, the robust architecture of the old town, the texture of traditional materials and the volumes of the urban fabric have guided our conception. In the North, other constraints are evident in the climate and in the Mediterranean spirit of that region. Grass-roots architecture is lively and in harmony with the old towns, yet full of innovation and spontaneity. In the resort villages of Malabata (Tanger) and M'diq (Tetouan) we have attempted a sincere integration with the spirit of the region.

Note

The work of Faraoui and de Mazières was shown at the seminar in the form of a film entitled "Taliouine—For an Integrated Architecture." The film was directed and produced by Mohamed Melehi/Editions Shoof (Casablanca)
Boumalne du Dades


View from the southwest

Photo: A. Faraoui and P. de Mazières

South façade

Photo: B. Taylor

View southwest from swimming pool

Photo: A. Faraoui and P. de Mazières
**El Kalaa**

*El Kalaa, overlooking Oued M'goun valley, Morocco: hotel by Faraoui and de Mazières.*

Capacity 100 rooms, 200 beds, divided into two wings of sixty and forty rooms each. Construction: walls in stonework, structure of reinforced concrete. Airconditioned throughout, independent electric generator. Interior painted ceiling by Mohamed Melehi, cloisters by Mohamed Chebaa, painted mirrors by Ait Amza. Work commissioned by Moroccan Ministry of Tourism, completed 1971

*Photos: A. Faraoui and P. de Mazières*
Taliouine

Near a casbah some kilometres from Taliouine, Morocco: hotel by Faraoui and de Mazières. Capacity: 100 rooms, 200 beds. Construction: walls in stonework, structure of reinforced concrete. Airconditioned throughout; independent electric generator. Hotel complex comprises three levels disposed around a terrace, swimming pool and interior patio. Design has been guided by a desire to integrate the hotel with the existing casbah and gardens, parts of which have been restored. Work commissioned by Moroccan Ministry of Tourism, completed 1972

Photos: A. Faraoui and P. de Mazières

View from ramparts of ancient casbah
Marrakech ("Les Almoravides")

View from a room, with the Koutoubia minaret in the distance
Photo: Photo Bertrand

View from alongside swimming pool
Photo: M Zekraoui

Photo: A. Faraoui and P de Mazières
Malabata (Tanger)


Photos: A. Farouk and P. de Mazières.
M'diq (Tetouan)

Near M'diq, Mediterranean coast, Morocco: holiday village by Faraoui and de Mazières   
Capacity: 300 rooms, 600 beds. Construction: low-cost local stonework, lime-bleached plaster, woodwork. Rooms are distributed in two wings flanking a general concourse containing the restaurant, pool, lounges, reception area. Work commissioned by National Bank for Economic Development (BNDE), completed 1969

Photos: A. Faraoui and P. de Mazières
Stambouli

It has been pointed out that our duty is to make the decision makers in our countries aware of the failure of our current environment and of the way in which we are shaping our spaces and shelters. We have touched a key issue—the issue of the nature of emerging political power and political forms which have established themselves recently in many of our Islamic countries. This issue is especially evident in those countries which are experiencing political legitimacy crises, as well as the ones which claim a revolutionary profile.

At a conference such as this we often tend to look at architecture and space building from a merely technical point of view. Happily, architecture and politics were brilliantly linked together today. I believe that architecture is basically a political expression at any given time and in any social formation. Therefore architecture is a tool, and an efficient one, whereby a political elite or an emerging social class may legitimize its status.

I believe that the alien architecture we are witnessing in many contemporary Muslim societies is largely a product of emerging political forces. These societies seek legitimacy roots, and believe that modern technology, as exhibited through modern (alien) architecture, can be a decisive tool by which power may be imposed.

In many of our contemporary societies, the emergence of the nation-state and its hasty attempts to impose itself as the hegemonic institution over global society (that is, over the primordial or classical main social actors such as tribal communities, rural communities, patrimonial families, religious fraternities and so on) leave no other option than to recourse to modern technology—as a means of dissuasion, in order to gain time and to prevent the dialectical reversal which is impeded in technology itself.

Porter

During the seminar we have heard assertions made in some cases rather bluntly, and in other cases by implication. I would like for the moment to describe these as geographic and disciplinary turfing. The geographic turfing has to do with people who argue that being from far away is better because of what a foreigner can bring to a project, and because of the broad range of experience that being foreign necessarily implies. The local people argue that being there brings the benefits of being there, and those are undeniable benefits that cannot be substituted for by not being there. I think both the local and foreign arguments are persuasive in some ways, but they are of course diametrically opposed. They strike me as being effective lines of argument for the purpose of capturing the local trade. We are in fact in a business, and it is good to see a healthy competitive set of attitudes.

Disciplinary turfing occurs when clients feel reticent to make architectural assertions; they would be criticized for doing so by the architectural profession. Yet they end up being blamed for the most horrible architectural mistakes, and even for the political indulgence which we heard very articulately laid out by Prof. Stambouli. This group expresses itself as a nation-state through an architecture which asserts and reinforces the new political order, making it increasingly difficult to back away from that order because of the way it is enforced architecturally, through a recognizable national style. On the other hand, both client and architect may be criticized by a builder. What can one do if the government wishes to go ahead with an inappropriate high-rise housing programme, and what can a builder do if architects are not more sensitive to the human and social issues? The architects, of course, are saying that they can only build exactly what they are told to build.

Each of these has its merits. But if we are engaged in a serious search for form, there should be other paths that one might take in order to go beyond what I regard as a rather superficial level of turfing. How does one penetrate more deeply? One can live there, one can be of a place and have in it one’s blood, so to speak. Another possibility is to have a different sort of education. It has been alleged that students returning from the U.S. and Europe come back imbued with an architectural knowledge which somehow accounts for their expressing themselves in modern terms unsympathetic to local conditions. I wish that education had that kind of power. It would be enormously self-serving if I were now to turf mightily and say, “yes indeed, it’s the fault of the educational institutions. We can do something about it by simply changing the curriculum and introducing some new notions which will make people realize there is another way of building.” Is it not more likely a question of being embedded in an atmosphere in which certain styles and behaviours are learned, in which students somehow receive implicit messages much stronger than our explicit formal educational message? Almost all the products of architecture school end up emulating the post—modernists or the post—post—modernists or whatever happens to be in vogue. I do not know the answers to these problems. I do think it would be wrong to ignore the potential contribution of clients, architects and builders everywhere, although I remain unconvinced that any one or combination of these holds the answers to the future of Islamic architecture.

Haider

I would like to congratulate Mrs. Lari for her forthrightness and candor, qualities which are missing from most of the presentations. While she spoke of poor and resource—lacking countries like Pakistan and its associated problems, she might easily have been followed by a representative from a rich and resource—full country—the problems mentioned really have little to do with resources. I have made the following observations on the issues presented thus far at the seminar.

1) Perceptions of culture and architecture
seem to differ significantly in the minds of architects, clients and decision makers. 2) There are economic forces at work which extend far beyond the sphere of the designers. 3) The mental space of the designers dealing with the Islamic world, both Muslims and non-Muslims, is clouded. My three suggestions for overcoming this clouded perception are serious theoretical debate, responsible criticism (either through architectural journals or books), and proper recognition and reward, which I understand are the basic objectives of the Aga Khan Award. Over the next few years these will slowly help eradicate this perceptual problem from the minds of the designers. The result will be a better idea of what constitutes Islamic architecture.

All Muslim societies would like to achieve the spiritual and physical continuity of their traditional, present and future man-made environments. This cannot be achieved by copying past and traditional concepts or forms, or by completely breaking away from tradition and interpreting entirely new concepts using ultra-modern jargon; it can only be achieved by addressing ourselves to a more in-depth philosophy, simple and clean like Islam itself, and by incorporating into the vital aspects of this tradition the new technological innovations of today.

Fathy

I would like to say a few words, not to defend the alienation which we are suffering in Islamic architecture, but to be fair toward the modern architect. The problem of architecture is multi-sided, and this is especially true in Islamic architecture which has ceased entirely in Islamic countries since the middle of the last century.

Islamic architecture was a traditional and a regional art: every Islamic country had its own architecture. But now, when we come to modern Islamic architecture, the “modern” has been superimposed across the board onto the regional. Certainly all Islamic countries have something in common, in accord with the Faith, but their environments and consequently their physical needs differ widely. Architecture is the most important element in culture, and to my mind the best definition of culture is the outcome of the interaction between the intelligence of man and his environment and the satisfaction of his spiritual and physical needs. Spirit is the same, Faith the same and we have things in common among all Islamic countries, but the physical needs are different according to the environment.

There is another problem facing the modern architect. We have had a radical change from introversion to extraversion in house design, which has in turn affected town planning. Extraverted architecture is Western architecture, an architecture of façades, while introverted architecture is the characteristically Islamic architecture of the interior courtyard. We cannot naturalize an extraverted house into an Islamic design, whatever we add as far as decorative elements.

The architectural system of the past included the Sufi, the master mason and the apprentice. Nowadays we have the architect, the craftsman, the university student and the contractor. The system has completely changed. Never before in history were the drawing instruments a determinant of style. Today we have “T-square architecture,” which we also call modern architecture. What doesn’t come out on the T-square and the drawing board has no chance of coming out in reality. This is something which has made modern architecture rigid and uniform; as the old proverb says, “the straight is the line of duty and the curve is the line of beauty.”

There is little chance today of having any kind of interaction between man and material. We have made abstractions of all the natural resources and natural elements in building. The use of modern materials which suit the T-square and the concrete beam have presented modern architecture with aesthetic problems. There is an apocryphal story about a man passing by three men dressing stone. He asked the first one, “What are you doing?” The first man answered, “I’m earning my living.” The second said, “I am dressing the stone.” The third responded, “I am building a cathedral.” There is a great difference among the three men’s attitudes toward their material. I think we are earning our livings today with dressing stone. (Parenthetically, we are not even dressing stone because there is no opportunity to use that material!) Where is the dialogue between man and material? Our major construction material is concrete, and for concrete all we need is a pourer.

It is a very delicate problem, this modernization of Islamic architecture in the face of radical changes in material, design and concept. Town planning concepts have changed, for example, since the introduction of the automobile which has necessi-
tated large avenues. But there are solutions to every problem if we attack the problems properly. To my mind, defining the problem goes ninety percent of the way toward a solution, but we are not properly defining our problems. We are talking about economy, about crowding of people and this and that, but we don’t seem to go any further.

We are blaming the clients, but they are not to be blamed because, to put it bluntly, we are all in a mess. Architecture is one of the arts which is not well-known to the public. When we have a concert or a painting exhibition, there is a critique in the papers. When a building is put up in the city the newspapers do not review it. But to my mind, every brick placed on another brick in a city is marking something in the culture of that city, Islamic or otherwise. Every building should be criticized, photographed and publicized, so that everybody will know about it and discuss it, and make the problem one for the whole community.

“T’m coming from where you are going,” and on the other side, “You’re going where I am coming from.” That’s a deep truth we must understand about our societies.

The third and final point I want to make is this. I do not think you take a 450-room hotel and make it Islamic or Hindu or Protestant or Buddhist or anything else. It is only trying to be a 450-room hotel. If you work on that level it’s bound to be a kind of superficial styling, because nothing like that hotel had existed as a brief in the past. What we have to do, if we want to relate this modern problem to our own past, is to take the problem, take the brief and say why it should be 450 rooms.

Countries like Japan and Switzerland have dealt with large tourist populations without having large hotels. They have a different approach. We might try to look into our history for the equivalent, again by asking the right questions. That is the only way to achieve either a renascence in architecture or a new architecture.

Chandigarh, India: façade of the Secretariat by Le Corbusier
Photo: H-U Khun/Aga Khan Awards

Correa

The issue of good architecture in our countries is a matter of insight, perceptive-ness, the ability to raise the right questions. I think that this business of national-ity is a red herring. I am proud to say that when it comes to bad architecture, we local architects in India have made as sensational a contribution as anyone from abroad. I would like to add that it was a quintessentially European architect, Corbusier, building a succession of what to him were European buildings, who really opened up the possibility of creating Indian architecture for a whole generation of young Indian architects. We must realize that there are good architects and bad architects, and nationality has very little to do with it.

Now, the ability to raise the right questions, even if you don’t agree with the answers, is our real concern. Hassan Fathy’s work in Gourna asks the right questions about mud and bamboo architec-

ture. As our Prime Minister Nehru used to tell the Punjabis, “It doesn’t matter whether you like Chandigarh or you don’t like Chandigarh. It has changed your lives.” We must keep in mind, whether building in our home town or around the world, what questions we are raising with our designs.

The second point I would like to address are those hotels in Morocco, compared to what Mrs. Lari showed us in Pakistan. I would venture to suggest that the hotels in Morocco are more attractive than the ones in Pakistan not because the Moroccan architects or clients are better, but because Morocco attracts a far more sophisticated tourist than Pakistan. Tourists to Morocco would not live in a ten-story hotel; they want that crumbling village effect, rightly or wrongly. But when a Pakistani who lives in that sort of dilapidated village comes to the big city, of course he wants a ten-story building. I’d like to manufacture a line of tee shirts which state on one side,

Kuban

The speakers have generally confused the ideas of Islam as precept or precepts, and Islam as existence. Islam as precept strives for humility in building, but Islam as existence has created luxurious buildings. One is the culture, the other is the religious core. If I define an attitude, and this attitude can be based upon the interpretation of Islam or on the assessment of existing conditions, in both cases the form of response could be the same.

Another point worth emphasizing is that the architecture of the past which architects find beautiful was not done within the time limits of a single project. Today, within a single project an architect thinks he is in the process of creating a style. If there will be any building in the spirit of Islam it will come when society demands it. Architecture is created by society, not by the architect.
Grabar

One of the things which struck me in listening to the presentations about tourism is that regardless of the architectural merits or demerits of any project, they were enterprises that were justifiable for economic or other reasons catering to the non–locals. It seems to me that someone should question the nature of leisure within Muslim communities. In what ways does a Muslim take vacations or a day off or whatever, and what are the spaces which serve the recreational needs of local Muslim communities? Both presentations boasted fascinating explanations of the issues and questions involved in international trade and tourism, but there is a whole untouched area of local leisure. It would be very useful and important for architects and planners to know the nature of leisure within individual Islamic cultural areas, perhaps initially from a less architectural than sociological perspective.

Lari

I agree that Corbusier was lucky to work in India, although I do believe that Mr. Correa’s own work is a kind of reaction against what Corbusier had done. However, Pakistan really attracted some architects who did a disservice to the architecture of the country. Edward Durrell Stone did some very important building in Pakistan, and was the first to create the “instant Islamic.” I remember being in the offices of the Capital Development Authority when a model was supplied to the government along with models of different kinds of domes, so that the chairman could choose whatever domes he wanted to put onto the building under discussion. Maybe that is why I think it is so important that local architects be involved when these things are being done. We don’t have very many good architects in Pakistan, but unless they are allowed to become involved in the work going up around them, how are they going to get better?

Mr. Correa also questioned the fact of a 450–room hotel. I do believe that I tried to think of a different model. There is a Western model that we tend to adopt, and this is the time to rethink and redefine our needs—only then can we create something different. If I may be allowed to be critical of myself again, I am typical of the Western–educated architect working in the Third World. When I started designing the Taj Mahal Hotel I had no idea of historical background, of historical or spiritual continuity. Only when I was asked to prepare a paper for the seminar did I begin to try to understand what our traditions had been. Compliments are due the Aga Khan Award, because the first time I met people who were discussing problems which were really relevant to me was at the Award’s first seminar. All that I had seen in magazines or discussed with others really had little to do with the Pakistani context. But here in Amman we are all talking about similar things, having had the same kinds of experiences, and it is so important that we discuss and learn from each other. Maybe in this way we will be able to come to some solutions which are in the right direction. I don’t have the confidence of an international consultant. I have no ready–made answers, but I am certainly looking for some suggestions.
Conscious of the diversity that exists in the Islamic world, we tried to identify the common factors in the spaces which have traditionally served the recreational needs of people in that world. In doing this we noted that, in accordance with the Shari'a, state lands designated for public use and utilities may never be alienated. It would seem most important to emphasize this law in order to preserve the spaces which are existing or earmarked for this purpose. We noted the multipurpose nature of these spaces, and considered this a valid principle in a world of change and scarce resources.

Spaces for public use form a sequence which starts in the private courtyard, continues in the semi-public streets and squares between the houses and ends in the public maidan and garden. In new development it is the need for private space—the courtyard and terrace—that must be emphasized, because no amount of public or semi-public space can provide a substitute for inadequate private space. In a poor country with a hot climate the courtyard is a unique resource, one which also provides the necessary privacy for the women and children of a segregated society. It is obvious that new multistory developments can neither avail themselves of this resource nor provide the same standards of privacy.

The streets and squares, the semi-public spaces between buildings, have traditionally provided areas for encounter and play. We felt that such areas should be deliberately and carefully planned as social and recreational places, not regarded as mere access routes or traffic arteries. At the city scale we considered both the maidan and the public garden as valid models for the future: the maidan as an open space for prayers, games, large public meetings, fairs and other festivities, the garden as a haven and an analogue for paradise. Of particular importance is the provision of planted spaces for use as holiday picnic areas by the lower income group.

Another type of facility with both a social and recreational purpose is the community centre which serves a neighbourhood. It is of the utmost importance that such centres be multipurpose and flexible in use, providing a variety of services such as social and medical welfare, meeting and recreation rooms, a library, a nursery and a canteen. In this context we would also recommend that school buildings and playing fields be made available after school hours for use by the local community.

We recommend that the infrastructure for domestic tourism be developed, as it is in fact a prerequisite for international tourism. Insufficient emphasis has been given to date to places of religious and cultural importance, such as the mazar. In most Muslim countries the mazars are a major attraction, for people from inside the region and often from outside as well. Transportation capabilities may be the major constraint on the volume of tourism.

Sometimes modest accommodation is available in the form of serais. We believe that more facilities on the lines of existing hotels have to be provided for two kinds of tourists—business and pleasure. Typically, both these groups have been accommodated in the high cost, high-rise, energy-consuming buildings.

We realize that as long as building codes remain unchanged it will not be possible to prevent high-rise structures in central urban locations. Therefore we strongly urge that these codes be reexamined. Because of the disruptive effect of high-rise buildings on the environment, it is important to put a reasonable ceiling on height and floor area ratios. This will permit the provision of business tourist accommodations in the form of smaller hotels, which will reduce reliance on high technology and permit the use of local techniques. We realize the importance of location and services for business tourists; these could be provided in low-rise buildings without necessarily affecting efficiency. Although there may be provision for artificially controlled heating and cooling in extreme weather conditions, buildings should be designed to take advantage of natural ventilation for as much of the year as possible. For pleasure tourism the general principles remain the same, although a broader range of accommodation is clearly desirable.
Institutional Buildings

An Overview of Institutional Complexes

Sir Leslie Martin
Presented by Sherban Cantacuzino

The subject under discussion is public buildings and in particular buildings sponsored by governments, but even this requires further definition. Government building includes a wide range of projects, from desalination plants to regional administrative offices. This paper is not concerned with those; it is limited to examples of government building which occur in major cities. The number of these seems almost certain to increase in quantity and in scale. The question is what impact these buildings have on the cities in which they are built, and what kind of buildings they should be, bearing in mind that they represent a country’s government and traditions. There are many examples of government building complexes in the Islamic world. The examples referred to here are extremely limited, perhaps even atypical, but they suggest some questions which are generally relevant.

Government buildings in cities may be classified into two types: those used specifically for national assembly, as in the project for a National Assembly building in Kuwait by Jørn Utzon, or those ministry or office buildings which carry out the day to day government work. A building may consist of some combination of these categories, as does the project for an important central area of Riyadh by the Albini Studio. The latter includes a government reception palace, banquet suites and administrative offices, combined with a cultural centre and a commercial centre (which is not part of the subject under discussion, but is peripheral to it). What all of these building categories have in common is that they are usually large enough to make an important impact in any capital city. If the government means anything, its buildings should at least be recognizable as the centre of government activity. These buildings have their own generating activities, and these in turn should generate their forms. Moreover, they are all buildings related to a particular cultural background. They might help to form new and regenerated urban patterns which have evolved within particular cultural traditions and climates.

This does not mean, however, that these buildings cannot take advantage of suitable modern techniques. Nor does it mean that they have to be built in some kind of traditional pastiche. It simply means that, apart from the religious buildings and the mosque itself, the most significant edifices that a nation builds for itself are the government buildings. They have a very special place within the city, and their own special forms.

Let us consider the place of such buildings in the life and pattern of developing cities. In order to visualize this more clearly we can start by considering the site and grouping which has evolved in a very different situation—the government buildings of London. The Houses of Parliament, the centre of British government, have a significant place on the river frontage and the view of these buildings is one of the best-known sights in London. The Parliament buildings are associated with Parliament Square and Westminster
Abbey, and adjoined by the principal ministry buildings in Parliament Square and Whitehall. These buildings enjoy a reasonable proximity, and the whole area is clearly seen to be a centre of government although the traffic which passes around Parliament Square is alien to it. Ministries have proliferated in the last thirty years or so, and some have been accommodated on sites quite remote from this central group. Many of these ministries do not require close daily contact with Parliament, and have consequently been distributed on a regional basis. But the fact remains that there is a need for close connection among ministers, their ministries and the centre of government assembly to which the ministers are responsible.

**The National Assembly Building**

The site of the National Assembly on the sea frontage is closely linked to the road network which serves both the central area of town and the ministry area. A competition in the early seventies generated proposals for the construction of this building; the winning entry was by architect Jørn Utzon. In his conception the main sea-front road serves as the principal ceremonial entrance; an inland road running parallel to the sea-front road provides a public entry served by taxis and buses. The layout of the building is generated from a central hall passing through the building from the ceremonial entrance on the sea-front to the public entrance inland. This central hall affords easy control at the two entry points, and along its length it links together all departments. The organization of the plan is made absolutely clear by this central spine; it becomes the communicating element used by the public and is a public front for all departments. It is in fact a covered street in the tradition of the *sūq*. In addition it is associated with a cafeteria, and is clearly intended to become a general meeting place.

Entering the street from the ceremonial entrance, the main assembly building is on the left and a conference centre on the right. Along the sea-front façade there are lounges and reception rooms. The supporting offices are arranged along the lateral corridors and accessible from the central spine. Each section has its own readily identifiable entry point, and the use of offices is flexible and easily extendable.

The main design concept is quite clear. Instead of a series of isolated buildings to accommodate each function, with open spaces between them, Utzon's design is for one continuous building within which the larger and more important elements (the central route, the main assembly chamber, the conference hall and the ceremonial entrance itself) are identified by their roof shapes and volumes within the spreading form of the whole complex. The whole complex is only two stories high, above a car park, and it is lit entirely from a number of internal courts around which the offices are disposed. This is a form of building which could continue extending outward until the surrounding boundary wall is reached.

The shade-creating architecture which Utzon designed for Kuwait is quite different from the forms in which most Western building has been conceived. It embraces some ideas, such as the central covered street, which are part of a continuing tradition. It starts from the basic assumption that climate has long influenced the fundamental forms of architecture and should continue to do so today. The structural system of the Kuwait Assembly is certainly contemporary: it is reinforced concrete and involves long spans. The air-conditioning proposals are sophisticated, but it is not a bad idea to reduce the problems inherent in that system by emphasizing the shade-creating nature of the building itself.

At the time that the Buchanan Plan for Kuwait was being prepared (1968–70), four architectural firms were working on building proposals. A proposal by the Smithsons concentrated on ministry buildings. It is worth noting that the ministries, which are in this case closely associated with adjoining town areas, are conceived in spreading form. Starting from the minarets as focal points in the city, the street network is oriented toward the ministries. The buildings themselves have a basic servicing and structural grid. They are cantilevered outward on the street frontages to form shaded public pathways,
and on other faces they can be adjusted to relate to existing conditions. Again the buildings are comparatively low—predominantly three-or four stories—and again, we note the spreading form and the shaded entry of light into the building itself.

These examples in Kuwait, together with Pictura's work on the more specialized ministries around the Seif Palace, raise interesting questions about the kinds of government buildings which might be developed, and the effect which these could have on urban form. But the situation is not always so clear. Many government buildings in larger capital cities, such as Riyadh, have already been built. Several of these are along the main highway from the airport to the city centre, a kind of ceremonial approach road. But more buildings may be required, and where are these to be placed? What type of buildings should they be? How can they be related to other important public buildings which may be required by the city? The new buildings will undoubtedly cover considerable areas in the city centre, and it is important to consider in advance the questions which these will raise.

**The Riyadh Government Complex**

One proposal for the central area of Riyadh, the work of the Albini Studio in Milan, has recently been published. The siting of these buildings had its origin in an overall plan for the city developed by Doxiadis. This plan established the city's road network and the special area in which government buildings were to be introduced. However, the Doxiadis scheme suggested a form of development involving isolated buildings with communicating links. The area which has now been studied by the Albini group is a large one, and one section of it contains the old Muzmak fortress with its sloping mud walls and rounded corner towers. This is an important building, closely connected with the history of the unification of Saudi Arabia. The area has been planned to include a

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Riyadh, Saudi Arabia: general master plan of the Government Complex. The roof plan shows the position of the main groups of buildings, defined by agreement with municipal and other authorities. The buildings are not isolated, but form a compact horizontal form linked by shaded pedestrian routes or galleries. The junction of the arms of the plan is formed by a pedestrian square, with the mosque in the centre of the larger arm. Adjoining this is the Cultural Centre and a Commercial Centre built around the old mud Palace which is to be used as a museum. The shorter arm includes the official Reception Palace facing onto the Square, and the municipal and regional administrative buildings. Architects: Albini Studio (Franco Albini, Franca Helg, Antonio Piva, Marco Albini)

Plan: Albini Studio
commercial centre, a new cultural centre which makes a library and information service available to the public, a series of suites, reception and banqueting rooms for use by the King and the Governor and, adjoining these, administrative offices for the municipality, the emirates and the police.

In the Albini proposals, the main layout follows an L-shape. At the junction of the two main groups of buildings is a large open square surrounded by colonnades, over a central parking area which serves the total group. The adjoining arms are again connected by covered links from this central square, and a mosque will eventually be included in the scheme. The points to be noted are that again the buildings are low, three or four stories depending on the ground level. This makes the round towers of the mud fortress higher than the general roof level. The museum, library and royal reception rooms are identified once again by roof shapes which rise above the level of the surrounding buildings. The concept is that of a spreading form rather than a high-rise, but since the component parts of the scheme are large, the links take the form of covered walks and colonnades.

When overlaid on the existing city pattern, the large scale clearly becomes an important consideration. In this case, the architects have broken down the scale by the detailed treatment of individual buildings. They have deliberately rejected the accepted formulae of Western cultures, and have resisted the attempt to implant a style. Instead, they have tried to base their solution on the conditions and the context in which they found the problem itself. Clearly, it is not easy for architects without roots in a culture to interpret that culture and to give it an appropriate contemporary expression. Whether they succeed depends ultimately on some consensus from the users who are part of the culture which the buildings serve.

**Government Buildings: Taif**

The new government building at Taif in Saudi Arabia, completed about two years ago, might be taken as a final example. Taif is not a typical urban situation; the town is located in the hills at a considerable altitude. The government building is intended to provide comfortable working accommodations for the ministers and senior government officials during the summer months. Despite its somewhat uncommon location, the design principles adopted at Taif and the methods used to construct this building provide some points of general interest.

The site chosen for the government buildings is in the centre of the city, adjacent to the saq area and on a large plot enclosed by the walls of an old fort. These walls have their main entry points in the centre of each cardinal face. One of these, in the western wall, could be approached directly from the King's Palace. An entrance in the east wall gives access to the site from the public square. The placing of the building in the enclosed area has been conditioned by these entrances and by the need to leave space for future related buildings. These concerns have remained constant throughout the development of the scheme, as has the intention to design a shade-creating building.

When the programme was much smaller, the initial scheme took the form of an even grid of tall columns supporting an overall roof. Entrance halls and connecting spaces became colonnaded areas with
leng diagonal views. Apertures in the roof allowed natural light to illuminate the enclosed gardens. All suites and rooms for the ministers were planned below this overall cover.

As the scheme developed and the number of ministries and support staff increased, a two-story solution became necessary. The original siting and the shade-creating idea remained, but it became desirable to develop and give significance to the main points of entry. All main rooms, including the ministers’ suites, were placed at the main first floor level, while the ground floor contained rooms for the supporting staff.

The principal entrances were raised to first floor level. The main ceremonial entrance on the west side could be approached along a landscaped avenue which led to a ramped approach to the shade-creating reception portico. The public façade on the east is approached from the public square; its four elevated main porticoes mark the points of entry to the main ministry groups. The forecourt is landscaped, leaving possible sites for a future mosque and additional ministries.

The east and west sides are the principal points of entry. The two remaining sides have entrances for the ministers to approach by automobile. These ramp entrances are connected by a spacious corridor (the “Ministers’ Corridor”), which gives the ministers privacy of access to their particular ministry and links them to the Council of Ministers area.

At this principal level, a simple grid of galleries or spacious corridors links all entrances and all component parts of the building, providing easy horizontal connecting movement. The ground floor reflects this pattern: the support staff for each ministry is at this level, with direct vertical stair connections to the ministers’ level overhead. The access galleries are double-height and serve both levels, and both are lit by daylight from shaded roof lights. The roof overhangs all walls, and carries hanging trellises to screen the windows from direct sunlight. Shaded gardens inter-

Taif, Saudi Arabia: plan of the government buildings, showing their relation to the buildings already on the site. Architects: Sir Leslie Martin and David Owes

Plan: L. Martin

Taif, Saudi Arabia: model of the government buildings (view from the east) This view shows the porticos at the principal entries to the ministries. The model reveals the spreading form of the building Narrow slits in the roof provide daylight for the shaded gardens between the ministry buildings

Photo: L. Martin
penetrate the plan and all rooms look out onto planted areas.

The building can hardly be said to have elevations. It is a continuous mat of building, and the external form changes to reflect the changing pattern within. The silhouette reveals the porticoes which mark the entry points, the mosque, the audience hall and principal meeting areas. The consistency of the building is maintained by its materials. The structure is formed by a grid of reinforced concrete columns 5.6 metres apart. This is subdivided into a finer grid of ribs which provides a regular coffered ceiling over the rooms on the main floor. All larger rooms are roofed and lit with a precast shaded roof light system; this builds up the stepped form of the loftier spaces, a fact which is clearly recognizable externally. This use of light screening by means of timber trellises is worth emphasizing. It is one solution to the problem of creating brilliance without glare in a country where the light is harsh.

The building is faced in local stone. The hanging window screens and the internal mashrabiyas are of teak, while the standard rooflights were precast. The building was erected by a Saudi contractor, and as access to the site by the mountain road was difficult, most of the joinery was made in a factory on the site. The production of the building and the standards of finish achieved were undoubtedly helped by the building of a test assembly, in which the structure, finishes, joinery and installation of services were all demonstrated in the early stages of the building process.

2) Should it be recognized that varying
government requirements and administra-
tive needs will have their own organi-
zational patterns and groupings? These can
be a starting point for formal arrange-
ments that would recognize variety and
individual distinctions, and could re-
late government buildings to their own
background.

3) With these bases, and recognizing the
great importance of technical advances in
structure and services, should we not recog-
nize that planning for shade and for
the control of natural light is part of a
long tradition which might be continued?

4) Could these basic requirements be as-
sisted by local contributions from the
construction industry itself, which
might concentrate on developing certain
specializations: woodworking, stone-
cutting, precast elements for shade-
creating rooflights, etc.?

5) Could such general considerations help
to establish a continuing and developing
contemporary tradition?

Questions

These examples raise the following
questions:

1) Are government buildings in Islamic
cities numerous and important enough to
have a major impact on those cities? If so,
could planning policies for future buildings
regard this as an objective?
The Aga Khan Award seminars evince a serious intention of dealing with the issues of Islamic architecture in the modern world. This is important not only in the Islamic world, but in other parts of the world where there is a need to find alternatives other than Western architectural styles to meet advancing technologies. I refer to many countries with a strong cultural background that are facing the difficulty which every culture has faced in the twentieth century: to deal with the new issues that exist today as a result of new institutions, new knowledge and new technologies.

The gulf which must be bridged between tradition and the new technology is simply not that easy to bridge. It has been done successfully in some cultures, and one of the instances we could refer to is Japan. Japan was a culture that, until the early years of this century, had not attempted to move away from its deep traditional roots. Nonetheless, when faced with the technology of the West it was able to make that transition. In a way which is exemplary for other cultures, Japan has developed a very strong contemporary tradition in architecture without abandoning or compromising its traditional styles. It accomplished this in two ways: by training architectural leaders like Tange in the offices of Western masters such as Le Corbusier, and through examples set by sensitive Western practitioners in Japan, such as Raymond and Taut from the Bauhaus and Wright from America. Though many “imported” Western buildings were out of place in the early Meiji period of westernization, a few individuals sowed the seeds of a new style which was distinctively Japanese and technologically advanced at the same time.

A point I tried to make during the educational discussion about the inheritance from the West, so visible in widely dispersed parts of the world, is that there is not simply a wholesale adoption of techniques, technologies and thus styles from the West, but also a wholesale adoption of Western institutions. I strongly feel that this is a matter to be questioned. I have been able to introduce fundamental changes in my own planning for universities by observing the Oxbridge campuses and the El Azhar University in Cairo, both of which seemed pertinent to new universities in my country.

There are other institutions, such as hospitals, whose traditional patterns one accepts without thinking. There is no question that Western technology in hospitals has enormously advanced the care and treatment of the sick, but I think that Western hospitals leave much to be desired and in a very fundamental way. They work efficiently, but they are based on an American technological approach that has come to influence everything in the West. This influence has to be tempered by some indigenous traditions. For one thing, health care is and can be much more than what is offered in a hospital. It can include such things as health education; the care of the family; and the care of the whole individual, in the sense of mind, soul and spirit as well as body. These things are neglected in the West, and the whole body is considered secondary to that part which is malfunctioning at the moment. These are all issues which need to be addressed and which have not been addressed in Western medicine, and this in itself should give one cause to question the wholesale adoption of a Western institution. We may take a lesson from China, where there is a strong medical tradition; Chinese hospitals provide both Western and traditional treatments.

I had the opportunity a few years ago to introduce into a Canadian medical centre an emphasis on health education and preventive measures. This resulted in a reduction of inpatient beds and an increase in outpatient ambulatory facilities. Adjacent motels for families also allowed for family nursing, which reduced the shock of disorientation for people coming from remote villages in British Columbia, and also lowered the cost of hospital beds. The concept of the institution was that the hospital should not be a place to be visited only when one is sick, but also when one is well in order to find out how to keep from getting sick. It is significant that the hospitals of ancient Greece gave the patient not only the best treatment possible, but also the best diet in the best architectural setting, in the best surroundings with the finest libraries, finest theatres and most significant contact with the great philosophers and with one’s religion. The mind and the soul were recognized as part of the cure, and we in the West have a long way to go to equal that.

After years of traveling in many parts of the world and some thirty years of travel in the Islamic world, I have learned a great deal; I have been able to go back and challenge the institutions of my own country. It is very difficult for any Westerner, any outsider to the culture of Islam, to do the same for the Muslim world. The issue must really be dealt with by Muslims, but perhaps it is possible for some of us outsiders to point the way, as we did originally for Japan.

I feel that window-dressing is not that important; I doubt that design in contemporary terms is the most important aspect of architecture. Architecture goes much deeper; it can transform an institution by casting it in the most contemporary terms and providing a new meaning for it. In other words, architecture has to meet present-day issues, not just functionally but socially and philosophically as well. It has to be changing constantly, because institutional issues in the contemporary world are changing constantly. There are inflexibilities built into any government or administrative unit; these are slow to change, and therefore provide the stability that is needed in the face of otherwise rapid change. The architect, because he is delving into the workings of all institutions, can recognize where the change should be made and where the lack of it is a handicap, and he can assume a leadership role in making that change.

It is impossible for anyone from the West to do any more than attempt to understand the environmental and social conditions and the ideas that have given rise to architectural styles in the Muslim countries. The final expression of those ideas and factors has got to come from within the Islamic world. But travel yields a cer-
tain objectivity, probably more with regard to one's own culture than to any others. I have discovered extraordinary and informative cultural differences which have made me begin to appreciate the reasons for and the value of these differences.

It has been extremely interesting for me to experience Japanese culture. To a North American, the perplexing thing about Japanese architecture is that it has a concept of space which really has nothing to do with the space familiar to us in the West. This makes it very difficult for us to understand the Japanese architectural tradition, because in comparison to the West they have no tradition of interior space. Japanese buildings were designed and built to be approached from outside, to be seen from a courtyard or garden, to be perceived in that context and not to be moved through. Western space is dynamic; it takes its very shape and meaning from the experience of moving through it. The movement is toward a goal, and that kind of objective appears absolutely essential to Western concepts of space and architecture.

Of all the great traditions, the one closest to the West is that of Islam. It too is concerned very much with internal space, interior space, but the aspect of dynamic movement is missing; there is a profound difference in the organization of spaces. Each space in Islamic architecture is much more a place of arrival. It is a place of refuge rather than a space to be moved through en route to something else.

Behind all of these traditions, the climate and the terrain have been absolutely fundamental. I have been working in the Muslim world for three or four years, and am discovering things about the architecture of the West which I never knew before. I have found, for instance, that what I was dealing with for the first time in this part of the world was the wall. The difference between working in a hot arid climate and that where I come from is very much centered on the wall. The wall is essential in the Muslim world—as a structural technique, as a symbol of shelter and as a means of providing protection from the extremes of heat. But I come from an area which is exactly the opposite in climate—it is very wet, with a lot of vegetation and enormous rain forests, and there the tradition stems from wooden post and beam construction. Until I started working here in the Middle East I did not realize how deeply ingrained the post and beam was to my perception.

Central to virtually everything I have designed is the idea of structure as the form of expression, the determinant of style. However, I now see that this philosophy comes uniquely from post and beam conceptualization, since all the forces of structure are concentrated in those two members. This stems from the wood construction tradition of ancient Greece, where the sources of style were concentrated in the column (post) and the lintel (beam). In wall architecture, on the other hand, structure is ambiguous. The structural forces are so distributed that structure itself is not as important as the effects of mass and surface. This is an entirely different kind of expression from that in which structure itself is the source of expression. Where structure is the source of expression one is free to open up the walls to view out and let the light in, as we do with large expanses of glass, but that structural style is entirely foreign to the traditions of the Middle East. Frame construction is being used here because in many ways it is more practical for labour-saving prefabricated components.

A basic problem of maintaining traditional or stylistic mannerisms is that they become impractical as the building industry changes, and it simply becomes easier to build in another way. For instance, how is it possible to build a simple but beautiful wall such as those built of finely-cut stone or of plastered mud brick, which shows its subtle surface modulations under the sharp sunlight, in any other materials? It is impossible to duplicate or equal this surface effect with precast concrete components which always look mechanical and cold, or in stone veneer which has the artificial thinness of wallpaper. This represents a central problem of most modern structures built in the Middle East: frame construction, which is rooted in the northern climates, has become the predominant mode of construction and hence undisguisably the form of expression.

The long horizontal lines which personally appeal to me are a heritage of the frame architecture of the West; they really do not fit in this part of the world, where the surface is and should be more important. Yet traditional solutions are expensive, although much more practical in terms of energy considerations, protection from the climate and utilization of natural methods of airconditioning. Now what I would like to do is review my own probing into an appropriate Muslim architecture, with some examples from Saudi Arabia and Kuwait.

My first example of an institutional build-

Riyadh, Saudi Arabia: model for a ministry building

Photo: A. Erickson
ing was designed for a ministry in Riyadh. It was a first attempt at dealing with the problem of light and shade in what was basically an office building. The site was overlooking the city, and the parking requirements, as everywhere in Saudi Arabia and Kuwait, were among the most serious considerations. The conceptual idea was to put the parking on a podium and raise the whole building off that by three stories, so that all facilities which were more or less communal and recreational within the ministry would occur in the shaded courts and gardens underneath. The building was to act as an umbrella to the site. Under the building a series of coffee areas, cafeterias, conference rooms and leisure facilities which were part of the ministry programme were planned. The podium surface displayed the more ordered use of landscape found in traditional gardens, recalling a Persian carpet in pattern.

Once the building was placed over this, the problem was how to get light into the offices and below, and how to support a building not on columns but on walls. We began to explore a wall support for the structure and for a way of piercing through the offices above to get light down into the gardens below. The basic structure has enormous weight and is in a sense a wall structure. It grows up into the stepped skylights that bring light down into the lower area, much like the muqarnas of the Islamic dome. The raised office block is fronted with pierced screens, an admittedly arbitrary way of dealing with the sun.

A housing scheme in Kuwait was a very interesting project, because the Government of Kuwait was very concerned about the paucity of Kuwaitis living in the centre of the city. They wanted to find a way of inducing middle class Kuwaitis to live downtown; this was important for political reasons, to balance the downtown expatriate population. We were asked to develop a project of large 300–metre apartments, with the general requirement that if they were to be high–rises, no apartment could look into any other for reasons of privacy. We opted for a scheme of stacking the apartments, which were really enclosed
villas with an outside courtyard. The staggered stacking offset that courtyard so the light came in vertically, and the only view out was through a controlled retractable screen opening onto the courtyard.

The apartments were organized into neighbourhoods of ninety to one hundred families. Each neighbourhood was clustered around a small shopping complex and shared with others a number of mosques, schools, a larger central club, a park and roof gardens. The stacking of the villas resulted in a configuration which provided a sheltered, shaded space in between; this neighbourhood common space was reminiscent of the sūq. The landscaping had a series of trellised walkways which connected the various components, so that automobiles were relegated to the outside and the central area became entirely pedestrian.

The same idea for a housing complex was explored further in a simpler structural solution in Medina. This project featured a major shopping centre underneath, and provided a sheltered central recreational area for the families.

In Kuwait, we were asked to revise the master plan made by Shankland Cox for a new town centre south of Kuwait City called Fintas. We wanted to internalize everything as much as possible: get rid of the car, put it underground or in parking structures, and centralize the offices and housing as much as possible into the core of the complex. Unfortunately, the programme did not allow this because of the economic plan for private development and financing. However, we were able to bring a certain proportion of the office space into the centre along with the major shopping complex, hotel, government offices and cultural facilities.

Shopping in Kuwait is a major recreation, so we viewed the shopping centre as a recreational centre. It was divided into two sections: one airconditioned in more or less Western fashion, the other a traditional sūq. The total central core was a little under 800 metres in length, enclosed by a wall of parking structures with four main gates recalling traditional city plans.
There was a gate for the car which took you either to the underground shopping or to the parking structures, and gates for pedestrians who arrived via bus or central transportation. Once inside, the offices, shops and recreation facilities were completely intermixed in the total complex. Here we varied from the Shankland Cox plans, which in Western fashion kept each of these separate.

There was a north and south gate, plus an east gate which was really a botanical garden surrounded by a hotel and convention complex on one side and a cultural complex on the other. At the west end the gate was the entrance to the sūq, through the government building, fire department, police department and health care centre. The sūq was a single-story un-airconditioned complex which used natural air circulation in a traditional manner; it also had parking underneath. This was connected by a bridge/transportation centre, on top of which were many restaurants looking out onto formal gardens which had a view over the sūq and toward the sea in the distance. One then descended a stepped water garden down to the main square, with the Friday mosque on one side and the entrance to the sūq on the other. At one side of the city was an educational institute with a major sports complex and a public park with a central salt-water lake. Water was supposed to be used fairly extensively throughout the project, but was limited in its outside use to this salt-water lake.

Another project was an Air Force Academy in Saudi Arabia, connected to the town of Al-Kharj across a major highway. What we tried to do here was to take an institution and make it as compact as possible for climatic reasons. The Academy was comprised of three colleges of two thousand cadets. The plan was generally a series of concentric squares, starting from the ring of cadet dormitories on the outer perimeter to the classroom ring, with the general laboratories and common facilities in the central space: library, mosque, dining hall, administration building and transportation centre.

The opportunity for a shading device arose
from a need to provide a million gallons of stand-by water.

We also designed the Air Defense Headquarters building in Riyadh, a square complex with two office wings flanking central administration and reception areas. It was designed to shelter a central garden onto which all of the offices faced. The exterior walls were absolutely solid, and the complex opens instead onto the central sunken garden court, a kind of shaded oasis. The offices are actually hung from the structure, which bridges the court like a type of enormous aliwan found in Iran or Pakistan, with the mirrored surfaces of the offices reflecting the garden from the shadows underneath.
The project and the concept for the Tehran Museum of Glass and Ceramics materialized from a number of components. I think one factor was my background and my heritage. I have grown up and studied in Vienna, and that city has always been a meeting place of the East and the West, sometimes not so peacefully and recently more so. This was a big advantage.

One of our best Viennese architects, Fischer von Erlach, put together the first illustrated history of architecture in the early eighteenth century. This history contained not only Renaissance and Classical examples, but also a great number of others; starting with Stonehenge in England, it went on to examples like the Porcelain Pagoda in Nanking, plus a lot of Islamic architecture. Knowledge of the latter was of course derived from the continuous relationship between Austria and Turkey. Until recently, most European histories of architecture usually dealt with the buildings of the Near and Far East in the last three pages. The eclectic background of Vienna has left its traces in the architecture of the city; the Church of St. Charles, a mixture of Classical, Baroque and Islamic elements, is the foremost example. My own relationship with Islamic architecture is also a product of my training with Professor Clemens Holzmeister, who dealt very early with countries of both West and East.

I had been invited to a conference somewhat like this one in Persepolis a few years ago, and out of that meeting came some very nice relationships and friendships. One day a few years later I was called by the Chief of the Special Bureau of Her Majesty the Shahbanou of Iran to come to Tehran, to look at a particular building and site and to discuss its possibilities in terms of use as a museum.

There were two aspects to the project: one was an existing building, and the other was the assorted body of works of art to be placed therein, including different kinds of Iranian glass, ceramics, calligraphy, etc. We deliberated whether and in what way these two aspects could be brought together. The building is of the Qajar period, about 120 years old. The Qajar period was a very interesting one in Persian architecture, but unfortunately one which has only recently been appreciated; many of its beautiful buildings have been destroyed in the past few years and replaced by modern structures. This has often occurred in instances where such destruction was entirely unnecessary.

The Qajar style has a very interesting atmosphere because it is again a meeting point between East and West. It contains a lot of traditional Persian architectural elements, but it also has very definite traces of European ones, especially Rococo, as well as certain transformations of what was being conceived in Russia at that time. We do not know the architects of this particular Qajar building.

Now, a building like this has not been built to any particular strength or durability, especially that required by public use. Should we use this old building, or should we just keep the old shell and make a new museum? A museum for certain works of art requires artificial light and some technical equipment, while this type of building was designed with oil lamps and candlelight in mind, and for heating by open fireplaces. For a ceiling it has only very thin vaults. And it has a very definite type of decoration which continues into the fenestration and the decoration of the doors. If we were to apply the physical standards here which we would apply to a new building, we would have to destroy a lot of the existing substance.

We decided to keep the building, to keep it as much as possible as it was, because we thought its use as a public building offered a very good possibility for its preservation and for its being made known to the people as a cultural monument. We therefore made very careful measurements of the building and a photogrammetric...
When I arrived, all these beautiful glass and ceramic pieces were in shoe boxes, and we looked at them with the help of advisors because there was no real staff yet. We started to make the first sort of survey of the objects, photographing and measuring them. The pieces of glassware and ceramics date from prehistory, through Achaemenid times, up to the main bulk of the Islamic period and on to the early twentieth century. The presentation of these pieces was of major importance for a variety of reasons. The building was to be kept mostly in its original state, and this meant that certain electrical conduits and ducts for airconditioning could be introduced only on a limited scale. We decided that since a museum of glass and ceramics is, by definition of conservational and security standards, a museum of showcases, the showcases were important. They should be the complementary object, to provide housing for a piece and the necessary services.
and equipment to maintain it, as well as to offer a certain counterplay to the existing architecture.

The whole project, from the start of planning to completion, was estimated to require fifteen months, and we kept to this time schedule. The interior of the building is completely covered with decoration, which of course we could not touch. The only thing that could be touched were the floors. These were really very thin structures, so we followed two strategies. In the most important interiors our strategy was to strengthen the floors, keep the space as it was and install independent showcases. In areas which were not in their original state or were damaged, we introduced a second inner shell to create a new space, partly with integrated display provisions. Some special spaces were created which could, for example, be air-conditioned to a specific degree.
We started with a very basic design and a very specific model investigation of how the building should be restored. The building was used originally by the Prime Minister of the Qajar period, later as the Egyptian Embassy and eventually for various other uses. The whole planning, production and construction schedule was of course geared to the very short time period available, and an intricate integration of planning and execution was made by careful development of CPM, or rather RNT. This model method is one I developed when I designed a much larger project, the Museum of Art at Moenchengladbach in Germany. We made great use of models and model simulations, not only to study or present things, but also to evaluate such factors as light conditions. The models simulated daylight and artificial light conditions in order to investigate certain issues and to initiate a dialogue with the client, so that he knew what we architects were up to.

The objects in the Museum of Glass and Ceramics were preserved through the centuries and millennia, and we thought that this should be reflected in their containers. One could of course argue for a sort of neutral background, but there is no such thing, and in fact this sort of background is often contradictory to the content. So, in our design the showcases provide for the lighting of the space and the objects, and they are in themselves highly technological objects which sometimes have airconditioning or humidity control. We have several systems of humidity control because we could not, because of the structural constraints, create a fully airconditioned building.

The question of light was of extreme importance. The objects in the Museum are of such a nature that they should not just be lit with whatever light source is available. Illumination should be in response to the special needs of the contents. Some of the objects of glass and ceramics need point-light sources or warm light. You do not want fluorescent tubes for some objects, while for others you may prefer them; in other cases you want the lustre, the many reflections on the piece.

Tehran Museum of Glass and Ceramics

Vienna, Austria: full-scale model simulation of interior of the Tehran Museum of Glass and Ceramics. An example of the installation of a new shell, it comes very close to the realization of the Museum's room 207. Model simulation by Hans Hollein

Photo: H. Hollein

Tehran Museum of Glass and Ceramics: plan, room 207, which contains the collection of lustre ware, "polychromed" and "painted" ceramics

Plan: H Hollein

Tehran Museum of Glass and Ceramics: freestanding showcases in room 107 contain individual pre-Islamic objects and have individually--monitored lighting

Photo: H. Hollein
Otherwise the piece appears dead, and the idea of this Museum was to show the pieces to their best advantage. A museum should be not only an educational institution, but a place where the objects themselves confront the viewer as works of art.

We gave a great deal of thought to the structuring of the Museum. We finally developed a mixed system which meant overall chronological structuring, although certain aspects or certain material combinations (such as the turquoise-coloured Islamic ceramic pieces) were all put together because of their special relationship. Some parts were singled out because of the specific importance and beauty of an object. Although the existing architecture on the whole is marked by very ornate interiors and these are reflected to some degree in the display cases, there was also some necessity for more sombre display spaces. These were desirable especially in the area of Islamic ceramics, where for instance the calligraphic plates might be better set apart without any distraction from the decoration around them. A new architectural space was therefore created.

We investigated the possibilities in model simulation and in realization. The lighting was studied in full-scale mock-ups for each major showcase, and many showcases were designed for specific pieces or arrangements. The result was several different types of showcases, about 120 of them in all. Fabrication was done in various places; the more complex single items were done in Europe, mostly in Switzerland. Even the very large pieces were built completely ready, then disassembled, packed and transported by air to Tehran.

On the first floor of the Museum is the central stairway, which in later periods was completely built over until we opened it up again. On the right is the cloakroom and sales desk and an audio-visual introduction to the collection, plus the first rooms for the prehistoric and Achaemenid periods. Because the building itself was of the Qajar period, evident especially in the very ornate staircase, we put all the objects of Qajar times and the late nineteenth century into this area, in contradiction to the chronological sequence. In the central hall with the opened-up stairway, we had to support the balconies because of the necessary floor loads. We did this by means of columns which became an integral and not an obtrusive part of the installation. We also reused a motif which was omnipresent in the building—the mirrored ornament. We continued this mirrored ornament with the use of highly polished stainless steel or chrome-plated steel. Even the intervention or intrusion of the new is handled very delicately. We did not take away most of the fireplaces, even though fireplaces are no longer needed for heating, because we considered them a part of the interior worthy of integration into the display.

We had to deal with artificial light as well as natural light. The light question was handled specially in each case and for each object or group of objects. However, we
Tehran Museum of Glass and Ceramics: audio-visual introduction to the collection in room 105, viewed through an ornate original Qajar doorframe

Photo: H. Hollein

Tehran Museum of Glass and Ceramics plan, room 105

Plan: H. Hollein

Tehran Museum of Glass and Ceramics: one face of cubic showcase display in room 107, containing Achaemenid, Parthian and Sasanian glass

Photo: H. Hollein

Tehran Museum of Glass and Ceramics plan, room 107

Plan: H. Hollein
didn’t want to create a museum which was completely static and did not allow any change or expansion. What would be the point of finding a beautiful piece of ceramics or glassware in some excavation, if there were no place in the Museum to put it?

The Museum is conceived not only as an educational institution where visitors learn about techniques or what period an object comes from, but also as a place where one is confronted emotionally by the objects and their quality as works of art. On the other hand, of course you should know something about an object’s background, where such things are found, how they are made. We started off with a piece found in an excavation at Hasanlu which was implanted in a floor showcase. Then the lights went out and on the screen there was an audio-visual presentation which gave information about glass and ceramics, how glass is manufactured, about the sites, about uses, etc., in either English or Farsi.

One of the problems was how to introduce necessary equipment like airconditioning. Normal airconditioning equipment like the fan coil unit was developed for European parapet heights, not for Iranian houses which have low parapets. We developed special new units to integrate with the existing equipment, taking care not to destroy the building. We also used new technology in the showcases to ensure easy handling; for instance, you can open some showcases with the tip of a finger like you open a car trunk.

The Museum contains not only many extremely precious single pieces, of the Achaemenid times especially, but we also wanted to show that glass was a product of early mass production. Thus you see both showcases and a big cube containing many objects clustered side by side, so the visitor can get the idea that some of this art is found in quantity.

In a project of this nature attention was paid to many details. At the seminar we have seen so many big projects many kilometres long; I am talking about millennia, and that is why I have gone into such detail. Our objective, I repeat, is to show the objects to their best advantage; to have light but not to dramatize light; to integrate the new with the old. The concept behind the Tehran Museum of Glass and Ceramics was a harmonious relationship between the old which was to be preserved, and the new which was being introduced. The new, while having an identity and character of its own, would embody the presence of tradition in its contents and in their Qajar setting.

Note

1 This paper represents a compressed and edited modification of a transcript of a presentation given at the Amman seminar. This informal talk was accompanied by a comprehensive slide show, and the explanation paralleled the visual presentation quite closely. Therefore, certain inconsistencies will appear when reading the transcript as an independent paper without its exactly corresponding illustrations. However, it seemed appropriate to preserve the informal nature of the talk and to attempt to illustrate the text as exhaustively as possible.
Until the nineteenth century, "culture" was dispensed by universities. Outside academia, the ability to contribute to culture was limited to private collections. Access to these was possible for only a few individuals; the majority of the population had no opportunity to contemplate monuments of culture.

The creation of museums allowed the public access to works of art. Museums became specialized storehouses of archeological treasures, paintings, manuscripts and the like, or immortalized man's activities in war, in the sea or in space. A recent evolution has promoted "houses of culture," which afford a view of the theatrical, literary and pictorial arts of the modern age all under one roof. For Kuwait, it was important that this presentation of culture be even more general.

Established in 1960 by Mr. Sélin Abdulahk of UNESCO, the programme of the National Museum of Kuwait not only measured up to this evolution, but even surpassed it. Examination of the programme of buildings which comprise this museum makes one realize that the term "museum" itself is obsolete.

The Kuwait museum comprises five separate buildings constructed around a central garden, corresponding by their grouping to knowledge of the Arabian peninsula, its geography, its history and its civilization. The buildings are linked by galleries which allow easy passage from one to another. Those visitors who wish to visit only one section could have access to it through a garden, shielded from the intense heat of the sun by a three dimensional structure comprised of brise-soleil (sunbreakers).

The building divisions are as follows:

1) **Administration and Cultural Section**, a type of cultural house in our present conception, containing conference rooms, a library, discotheque, cafeteria and administrative offices

2) **Country of Kuwait**: geology, botany, zoology (numerous aquariums), ethnology, etc.

3) **Man of Kuwait**: archeology (on the island of Falaka there exists a Greek temple and excavations of a Sumerian town), history, painting and graphic arts, folklore, and a display of the wooden boats which travel the Gulf and still use the construction techniques of the seventeenth century

4) **Kuwait of Today and Tomorrow**, a kind of palace of discovery with the history of oil, its extraction, its expedition and its refining; the atomic era and use of the atomic pile; the development of the country and its urbanism, etc.

5) **Planetarium**, with an astronomical museum showing the ancient instruments of observation, a province of which the Arabs were the undisputed masters until the fifteenth century.

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**KEY:**

1. Administration and Cultural Section
2. Land of Kuwait
3. Man of Kuwait
4. Kuwait of Today and Tomorrow
5. Planetarium

*National Museum of Kuwait: plan showing the arrangement of the five buildings Extensions will be required to accommodate more specialized areas. Architect: Michel Ecochard*

*Plan: M. Ecochard*
It is obvious that as the material development and culture of the Gulf progress, more specialized buildings will have to be constructed. Nonetheless, it was important from the outset to give the inhabitants of Kuwait and the Gulf an overview of both the present state of the arts and sciences, and their evolution in the Arab countries. The Kuwait National Museum should fulfill this important educational and cultural objective.

National Museum of Kuwait: view of construction of central courtyard from "Man of Kuwait" building. The four-legged concrete structures are parasol supports to provide shade. Architect: Michel Ecochard
Photo: M. Ecochard

National Museum of Kuwait: view of construction of Planetarium (right) and "Man of Kuwait" building, with remainder of Museum and Kuwait skyline in background. Architect: Michel Ecochard
Photo: M. Ecochard
Kaban

What we seek in architecture is forms which express a particular cultural or regional sensibility. Yet the projects we have seen differ little from projects in non-Islamic countries. These different forms and sensibilities do not imply a question of relative quality. Rather, they should suggest some important questions and considerations. What, for instance, are the building dimensions that create a harmonious continuity with the past? Can the insertion of a totally modern building into the cityscape of Taif create this harmony?

We cannot ignore the question of whether Muslim architecture can be created by non-Muslim architects. If a building in good Islamic spirit can in fact be created by a non-Muslim, what is the meaning of Islamic culture in this particular context?

The goal of the Aga Khan Award is a better environment for Muslims. This involves an approach to modern design free from formal prejudices. But how can we expect to build a modern Muslim university without a clear definition of the conceptual bases of such a university? Should we import into our countries hospitals developed in the West, for Western users and with Western standards, or shall we first define an Islamic hospital? I urge very strongly against the adoption of forms which are only applicable in the oil-rich countries, because they tend to set an inappropriate standard and an incorrect image for the majority of Muslim countries. We ought instead to seek humility for the new image of the Islamic environment, fighting nationalist or elitist tendencies in our Islamic architecture.

ul Haq

The presentations we have heard are largely descriptive, not analytical. They do not address the following important issues:
1) What is uniquely Islamic about the projects shown?
2) Which distinguishing features of the projects shown might have broader implications in the Islamic world?
3) What are the financial constraints behind such constructions? How were choices made between alternatives?
4) How did each building respond to the socioeconomic objectives of society? What would be the best and most appropriate response?
5) The dominant social reality today is mass poverty. How then do the projects we have seen address reality? In particular, how do the mesmerizing beauties of the Tehran Museum relate to reality?

All of these questions and issues go beyond the scope of architecture. I believe it was wise to have a number of disciplines represented at the seminar and on the Award Master Jury, to ensure profitable interaction among these disciplines. Perhaps this interaction can bear fruit in the form of responses to these important questions.

Correa

I have a specific comment about a particular presentation, Prof. Hollein's discourse on the Tehran Museum of Glass and Ceramics. I think it is not just a matter of luxury or of a high budget; it is also a matter of what and how we design. There was enormous sensitivity shown by Prof. Hollein in that project, but one of his remarks was tremendously illuminating. One of his illustrations showed the factory in Switzerland where the beautiful, expensive showcases were being manufactured. It struck me as quite ironic that, in a Museum designed to celebrate the craftsmanship of Iran, all the existing craftsmanship in Iran was being ignored. It is ironic and it is modern, but it is also tragic, because craftsmen in that part of the world are dying of poverty. There is no one to sponsor them.

It is as if General Motors asks a designer from Indonesia to create a setting for their collection of great automobi­es, from the 1930 Lo Salle to the very latest model. The Indonesian designer would say, "Why don't we do it in batik, put this cloth around . . ." General Motors would certainly reject that idea. I simply want us to see our own responsibility. I do not mean this in any way as an indication of Prof. Hollein. I am saying that the people in Iran should say, "No we understand what you are trying to do, but there is something else which can be done instead." The development has got to come from self-confidence and a commitment to our own things. It does not
necessarily mean that we have to concentrate on poor things for poor people. We can also have other projects, because life is pluralistic; we do not have to choose between building palaces or building houses, because we can do both. The point is that even when we consider building a palace we should think of what we are designing, for whom, and what it will be used for.

M. S. Islam

I am a historian of architecture. The history of mosque development clearly reveals the open-mindedness of Muslims toward their architecture. They had synthetic attitudes, and could accommodate to and integrate foreign influences. They made these foreign elements their own, and did not suffer from any conflicts. I am afraid that Islamic cultures today lack such a level of open-mindedness.

The question has arisen whether or not there can be a modern Muslim architecture. If we can perceive the kinship between an Islamic monument of the seventh century like the Kufa Mosque and one of the eighteenth century, we might at least understand the Muslim architecture of the past. But we cannot ignore country or regional differences in Islamic architecture. Indian Islamic is not to be confused with Egyptian or Turkish Islamic. Local elements cannot be ignored. The Taj Mahal has very little to do with the Qayrawānīyyin. However, if a layman having no background whatsoever in Islamic architecture is taken from Calcutta to Cairo and made to stand before a mosque in each city, he can probably identify both buildings as mosques. There is something fundamental which links the two. The historical perspective can be useful; we must look back in order to look forward.

Istanbul, Turkey: the Suleymaniye by Sinan (ca 1550)
Photo: W. Porter

Ardalan

I have some queries about places of civic and commercial or institutional activity, which I broach both as broad considerations and as pointed responses to today’s presentations. I begin with the most general, which really deals with a programmatic functional aspect. What is the role of central decision making versus local participatory decision making? In particular, what is the changing role of central government and big business in making centralized decisions, thereby aiding centralized places of activity, versus localized dispersed autonomy? The two produce entirely different programmes for building. This issue needs to be addressed because so many of the projects we have seen, for instance those in Saudi Arabia, indicate a vastly growing central decision making process requiring vast central complexes. These hardly existed in traditional times. Is this a good trend, both sociologically and in terms of urban design?

The traditional places of civic and commercial activity were the madinas and bazaars. These were metaphors of totality, and I wonder how much we really value these ancient treasures. Most of our traditional madinas and bazaars are being categorically discarded and are in various stages of disintegration for many reasons, some of which I elaborated in a paper presented earlier in the seminar. A recent UNESCO conference in Lahore on the preservation
of the Islamic heritage in architecture specifically recommended that the preservation of the madinas and bazaars be of primary importance.

Our civic places have traditionally been very compact, very dense and highly animated. This is now contrasted to the scattered functional pocket developments which characterize contemporary centres. If we look at any master plan being developed for an Islamic town today, we find that one of the striking differences between traditional and modern cities is this scattering of the town's vital organs. Its heart and liver, stomach and lungs are now separated by kilometres across town from one another. I would ask if this is a necessary trend, and if in fact it is not one of the causes of the disintegration of our cities. The work by Utzon and by Leslie Martin and some of the later works of Arthur Erickson indicated at least some understanding of these compact multi-activity zones. At least in that way I feel that they were architecturally in sympathy with the traditions of our areas.

I have two more questions. What is the effect of multiple usage of a space versus specialized usage? Most traditional societies built facilities of a civic nature which had many uses. We built caravanserais, for instance, which were inns, warehouses, places for passion plays and many other activities. Today we are building specialized functional spaces, and the result is a need for many more spaces; before, because of multiple uses of space, we were building much less. Is this a healthy trend?

My final question concerns images of modesty versus ostentation. We heard some excerpts from the Koran by Dr. Nijem and I found that to be a beautiful challenge to all of us. In this world there is a certain amount of abundance (and certainly we know it is limited abundance); should it be spent on ostentatious display, or should it be spread around more, the display essentially being one of modesty as a basic Islamic attribute? Such questions may prove worthy of further deliberation.
Faghilh

I want to react to Prof. Hollein's museum project, and I also want to react to the reactions to that project. We should not confuse the incorrect priorities of decision makers in a country with the work of an artist. In the Iranian history of architecture the Tehran Museum has a particular significance; it is the first nineteenth century building which has received any attention. The very fine glass objects contained in this Museum need more than a regular showcase, and I think that the homage afforded these objects by the designer is very proper. Finally, this is more than a restoration project. It is an artist's statement, and the reason I support it particularly is that it is one of the rare building reuses in Islamic countries which is pretty successful.

Makiya

Leslie Martin's work in the United Kingdom is notable for its sensitivity and for the quality of the designs. I would only have wished to see a parallel sensitivity brought to bear in his work in the entirely different environment of Kuwait. Similarly, Buchanan's plan for Kuwait is merely an example of professionalism devoid of soul. It lacks any depth of appreciation or understanding of Kuwait, of the Gulf area, or of the culture. The traditional centre has been completely eradicated by large avenues alien to Islamic tradition, and there is no longer any feeling at all for the old city of Kuwait. The idea now is to encircle an existing neighbourhood in the area of the Seif Palace and somehow preserve it magically. This is important to me because I am presently designing the Kuwait State Mosque in an adjoining area.

I. Serageldin

The question of the public as the ultimate beneficiary of the public buildings we have seen today seems to be lacking. If public buildings are the interface between government and the public, do the buildings we have seen facilitate or nurture this interaction? Are they too monumental, their accesses too inaccessible to the public? This question is addressed to both architects and clients, as there is evidence that architects can influence clients in this regard. So-called public buildings should be public in spirit as well as in name.

Cantacuzino

I think Prof. Makiya got his facts wrong about Kuwait. What I think he is referring to is an earlier development by English consultants which did pull Kuwait literally to pieces. Buchanan, on the contrary, was called in to save what was still salvageable, and I think it is very unfair to blame him for the earlier consultant's work. In that context I think we should remember that it was thanks to Buchanan and Leslie Martin that professionals were called in to build up a feeling of what had been there before. Whatever we may think about the present design of Kuwait, it was a genuine attempt to fill up the city again and to make it a decent place. The earlier consultants were trying to allow the indiscriminate building of distinct office blocks, outward-facing and not even shade-creating.

I did not quite gather what Prof. Makiya was talking about when he said that avenues were alien to the Islamic tradition. Was he referring to the main avenue of Taif? If he was, he ought to bear in mind that this was purely a link between the new ministry offices and the Kings palace, and not intended for people. So the question of people not using avenues does not arise in that case, since it was clearly a processional route. I do not know if processional routes are Islamic or not, but the example in Taif provides

![Image](https://example.com/1234567890.png)

Bagdad, Iraq: model of the Al Karkh Government Centre urban complex by Makiya Associates

Photo: M Makiya
ample room for people on the other side. There is plenty of opportunity for people to congregate amid a lot of planting and shade trees.

Finally, I wonder if Prof. Makiya would agree with me that the institutional buildings we saw today represent an advance over past schemes, such as Doxiadis' approach to the development of Riyadh, which consisted of isolated buildings. I consider the Alibini proposals to be a definite improvement, and I think that can be said of many of the other examples we have seen as well.

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Hollein

I was asked to present the Tehran Museum as a case study, as a building with its own implications, and not to present my general views on Islamic architecture. I think that the Tehran Museum as a concept is as Islamic or non-Islamic as the existing Qajar building. There is no particular emphasis in the design of this museum to make it specifically Islamic. I confess to some difficulty in pinpointing what constitutes a specifically Islamic building. For me it is more a spiritual than a material thing. Islam has been able to take certain archetypal buildings and make them their own, and this possibility of interpreting a building or an object in a specific way for a specific use is very important.

The idea behind the Museum of Glass and Ceramics were not only to preserve an existing building of a particular type, but also to put it to use. In this case it is a special and not a completely undefined use. It can be argued that it might have been better to use this building only as a museum of Qajar art, instead of a museum of the glass and ceramics of Iran. Whatever the decision of content (and there were indeed many discussions on this subject), the question arose as to the instruments of exhibition. Do showcases belong to the building or do they belong to the object? When does an object become part of a particular context, part of an Islamic or non-Islamic building, part of a specifically Islamic environment?

I did not consider the contents of the Tehran Museum, which consist partly of Islamic and partly of pre-Islamic pieces, as decorative art. I took exactly the opposite approach. Too often ceramics and glass are considered secondary arts, not important like paintings or the "trus" arts. This Museum elevates these so-called "minor arts." You may argue about the means, and you may declare a certain showcase to be a little too elaborate or exuberant, but the idea was to suggest a different look at this object as a work of art, not only as a glass.

In response to Mr. Correa's remarks, I too thought "how wonderful, there are all these craftsmen at our disposal who can do metalwork and stone decoration and all types of crafts." Unfortunately, this is not true. These people do not exist. We had planned to have a live show in the Museum about how glass is made; we looked for people who could demonstrate this, but there are virtually no glassmakers left in Iran. After nine months we found one, and he said he would do the demonstrations if we could guarantee that he would earn the same money as he then earned as a taxi driver. This is a cultural problem, and not only in the Islamic world.

As far as the extravagance of this building, this is admittedly not a cheap building and the Museum is not a cheap museum. But it certainly is not an expensive one. It costs the same as any normal museum does per square foot or cubic metre, or however you calculate it. In a cultural heritage you often find certain more expensive edifices preserved, and fewer humble ones. The expensive ones are preserved in a little more expensive way. New construction would be much simpler, but if we had not actively preserved this building there might not be any Qajar examples left in Tehran.

Photo: H. Hollein
When small-scale activities such as living together in a home take on a community scale, certain aspects of the activity assume the form, both socially and physically, of institutions. Those activities could be religious, political, educational, cultural or creative, or be concerned with the physical well-being of man. In the Islamic world they are not isolated, but interrelated.

The issue at hand is the physical manifestation of institutions and the recognition of how the physical environment can enhance their functioning. Such institutions can be specifically a school, a mosque or a museum, each housed in a defined space, but it has also been acknowledged that certain parts of the urban fabric, such as the square and the street, generate an interchange on an institutional level.

The importance of the interrelationship between the physical container, its quality and the institutional activity is clearly established. We therefore suggest that the built form of such institutional complexes have a scale sizable enough to integrate into the context of the environment and into the activities of a community, to encourage participation by the public at large. We would argue further that the search for form for institutional buildings would be significantly improved if participation started with a definition of the need, followed by the establishment of cultural boundaries and subsequent formulation of a programme. The participants in these activities should be the client, the public and the specific users.

Institutional buildings, both in their scale and in their relevance, have considerable impact on society. They will have to perform a pilot function for subsequent development, and their quality and excellence therefore have to be assured through the careful selection of designers. There should be accompanying control of the design process, provisions made for management and occupancy, and eventual assessment of the project in use as feedback for future development. The establishment of such a process for institutional buildings would guarantee the emergence of a heightened cultural sensibility.

Amman, Jordan: the Jordan University mosque, at the southwest edge of the University campus
Architect: Attal Hal Doan Completed 1980
Photo: A. Doan

Tehran, Iran: Museum of Contemporary Art, situated in a park in the centre of Tehran. Architects: DAZ Architects, Planners and Engineers; Kamran Diba, principal
Photo: H-U Khan/Aga Khan Awards
Panorama:
A Multi-National Survey of Public Places

Amman Site Visits

Raif Nijem and Editors

The Amman seminar participants were privileged to see several new public buildings in Amman on a site visit hosted by the local architectural professionals. The site visit afforded an opportunity to observe Jordanian responses to the challenge of creating effective educational, recreational and institutional spaces. At the same time, it brought the fact of the unprecedented amounts of building currently underway in the Arab world strikingly to the fore. The four stops on the site visit illustrate a great variety of public building types.

Nasb Al Shaheed

Nasb Al Shaheed, “The Martyrs’ Memorial,” was opened in 1977 as a monument to members of Jordan’s Armed Forces and National Guard who had lost their lives in the service of their country.

Amman, Jordan: Nasb Al Shaheed

Photo: Aga Khan Awards
Amman, Jordan: Plan of Nasb Al Shaheed
Ramp 1 (right): the Hashemite family and the
Arab revolt; Ramp 2 (top): Trans-Jordan and
the Arab Legion; Ramp 3 (left): modern
Jordanian Armed Forces
Plan: Jordanian Armed Forces

The Memorial is approached by a broad
staircase which rises behind the King Hus-
sein Youth City; this ceremonial approach
ends at the imposing Memorial itself, 37.8
metres long, 27.2 metres wide and 13.5
metres high. The building, oriented to
take advantage of prevailing winds, is of
reinforced concrete faced with white
stone, encircled near the top by a basalt
band of Koranic inscriptions. The cool
interior is of polished granite, marble and
bronze; the height of the space allows hot
air to rise.

Audio-visual displays of the history of the
Jordanian Army are projected onto the
four niched faces of the central “cube.”
Along the sides are ascending ramps de-
voted to a “procession” through periods of
Jordanian military history. The ramps sup-
port display cases (in the form of antique
military chests) which are in turn sur-
mounted by green glass panels bearing
Koranic injunctions to fight in the name of
God. At the top of Nasb Al Shaheed is
the actual and figurative culmination of
the visitor’s ascent through history: a
walled garden, open to the sky. The trees
and plants are symbolic of eternity and
paradise.

Nasb Al Shaheed attracts 700–1000 visitors
per day. It combines symbolism and record
and is both a shrine and a museum, pre-
senting both the relics and the story of the
past.

Jordan University Mosque

Completed in April 1980, the Jordan
University Mosque by Attalah Doany is
but one component of his total University
scheme (see p. 45). However, authorities
Amman, Jordan. Jordan University Mosque,
under construction View of the qibla wall.
Photo: A. Doany

Amman, Jordan: Jordan University Mosque, after completion in 1980 Architect: Attalah Doany
Photo: A. Doany
interfered in the realization of the mosque design; it no longer reflects the architect’s original intentions.

The Jordan University Mosque combines traditional and modern materials. There is extensive use of glass and brass tubing; the latter, formed into arabesques, is found inside the dome and on the minaret and is repeated in the carpet pattern. Pointed arches form the vestibule, windows and awnings, and the qibla wall is uncharacteristically pierced by glass windows. The original design called for a dome perforation which would project a solar crescent onto the interior carpet on certain days of the year, but this ambitious plan was not realized.

A paper on the Jordan University Mosque was distributed by Mr. Doany at the seminar, but space limitations preclude its reprinting here. Readers wishing to obtain additional information on Jordan University or the Jordan University Mosque should contact the author.

**Jordanian Parliament Building**

The Parliament Building is composed of two parts. The first, with a total floor area of three thousand square metres, includes offices and committee meeting halls. The second, covering ten thousand square metres, contains the assembly hall, library and other public areas. Completed in 1980, the Parliament Building boasts interesting interior spaces and lavish materials and detailing. Architect Rasem Badran and Arabtech Consulting Engineers used local materials (with the exception of the green Italian marble interior revetment) and all local labour. Badran also designed the furnishings for the building.

The assembly hall seats 150 representatives and has one thousand gallery-level seats for visitors. It is an imposing polygonal chamber paneled in stained oak and surmounted by a 28-metre diameter dome. The rectangular coffering on the dome is of faceted gypsum, graduated in size from the central “oculus” light fixture to the outer rim; the effect is one of dynamic movement. The exterior of the Parliament
Building is also lively, although not in such a unique manner: it is pierced by interlaced geometric stone screens common to the façades of the area.

**Haya Arts Centre**

The Haya Arts Centre, for children aged six to fourteen, is located near the King Hussein Housing Estate in a relatively affluent area of Amman. Three or four hundred children per day use the facilities, which include an art room, theatre, library and playground. The facilities are presently being expanded under the direction of Jafar Tukan. A crafts workshop and gymnasium are planned, and labour for construction and maintenance is local.

Scaled to children, the single-story Arts Centre is modeled on the barrel-vaulted Jordanian desert palaces (such as the well-known Qasr Amrah). The plan links hexagonal rooms around the central theatre, which boasts the finest acoustics in Jordan. In functional terms the building is successful, but it has suffered some structural (ceiling) damage as a result of a severe 1980 winter.

Named for the daughter of the late Queen Alia of Jordan, the Haya Arts Centre was built by an Iranian architect in 1977 as a gift from the Shahbanou Farah Diba. The bulk of its operating budget (about $240,000 U.S.) comes directly from His Majesty the King. The two thousand member children who use the Centre pay 5 Jordanian dinars (about $15 U.S.) per year, while the actual cost for child care is nearly 40 J.D./year.

Twelve full-time staff members are supplemented by part-time assistants. They supervise the very popular library containing eight thousand Arabic books, three thousand English volumes and some French texts. Only high-quality materials are provided in the art room, in a conscious effort to elevate tastes. As explained by Director Nabil Sawatha, the use of lesser-quality materials would transmit and condition a lower aesthetic expectation.


*Photo: S. Abuhamdeh/MP Centre*
Amman, Jordan: planned extensions to the Haya Arts Centre. The existing building (to the left on this plan) contains an arts and crafts studio, theatre and library. The first extension will include a workshop, gymnasium, game room and offices. Extension Two contains a lecture hall and storage areas for the children's traffic school (in which they “drive” pedal cars and acquire familiarity with street signs and the rules of the road). Long-term plans call for a museum, commercial building and amphitheatre.

Plan: Jafar Tukan and Partners
The children are free to use the Centre on their own initiative, and the seminar participants could not help but note its popularity. Similar library, crafts and exercise facilities for children are now viewed as increasingly important additions to mass-housing projects.

Amman, Jordan: crafts room in the Haya Arts Centre
Photo: Aga Khan Awards

Amman, Jordan: theatre of the Hays Arts Centre, in which seminar participants heard the Director of the Centre explain its programme and facilities
Photo: Aga Khan Awards
Recent Public Sector Projects in Saudi Arabia: A Critique

Ghaith Pharaon

Both economic and cultural development are taking place at a very rapid pace in most of the Islamic nations. It is appropriate that we pause and ponder the social problems associated with this pace of development, and the cultural changes to our Islamic heritage caused by the importation of Western ideology.

It is in the architecture of modern Islamic cities that one most clearly senses the impact of the Western and industrial traditions on our societies. The steel and concrete boxes of the so-called “functional architecture” of the West have displaced or dwarfed the truly functional architecture which was developed during the glorious age of medieval Islam. This architecture, so well suited to the climate and environment of specific regions, was refined through the centuries. In the heat characteristic of the Middle East, for example, a modern “functional” building can be kept reasonably cool only by means of an expensive, energy-consuming and often inefficient airconditioning system. Yet the shade and pleasant coolness found in any ancient mosque on even the hottest days is proof that construction technology is neither a modern nor a Western invention. The traditional houses in Egypt, in areas where the temperature rises to 45°C in summer and drops to just above freezing in winter, are a good deal cooler in summer and warmer in winter than the concrete cubicles which Western training has taught our young architects to design. In addition to being more climatically appropriate, traditional popular housing is constructed of locally available materials.

Few of the new cities and projects being implemented in the Islamic world replicate the design concepts of traditional Islamic architecture. These concepts had successfully integrated the religious, social, environmental and cultural values of the particular region. However, it would be a mistake to assume that the architecture of our new urban centres has been imposed by outsiders. It is our own younger generation (whose cultural values come from universities like UCLA, Berkeley, Oxford and Cambridge) which has chosen to ignore the values of traditional Islamic architecture. These younger professionals have promoted the construction of such Western symbols of wealth as office skyscrapers, high-rise apartment buildings and reinforced concrete homes, whose bay windows transform them into solar furnaces.

The problems which our modern cities face today are by no means new. If we look at cities like Cairo or Alexandria, we observe that much of the charm of the old Islamic cities was swept away beginning in the last century, to be replaced by the richly baroque styles which were in vogue in the West at that time. Just as these buildings seem out of place today along the boulevards of Cairo and on the corniche of Alexandria, so too will the new skyscrapers and concrete apartment blocks seem alien a few decades from now. However, despite its crumbling façades and broken mashrabiyas, the old Arab city will always retain a beauty which the years cannot erase.

We in Saudi Arabia have been speaking of a renaissance in the Islamic arts for years, but the only renaissance discernible in our country has been fueled by oil revenues. While it is understandable that the newly emerging and affluent private sector in our country should find functional Western-style architecture attractive, and the use of equipment which meets recognized international norms and safety standards essential, constraints of time and budget should not have influenced the public institutions in their architectural decision making. For most public sector projects carried out in the Kingdom, cost factors have always been of secondary importance.

When our Ministry of Housing undertakes rush housing programmes in several cities in order to rapidly meet the demand for adequate low income housing, these programmes should integrate the technology of the West (with respect to standards, safety features and new materials) with the traditions of Islam (in terms of privacy within and outside the housing unit, and other features). Due consideration should also be given to the lifestyle of a typical low income Saudi family and to the harsh climatic conditions of the area. There is no shortage of public lands around most of the major cities in Saudi Arabia. There are ample financial means available to the Ministry of Housing for the development of infrastructure such as roads, water, sewage and electrical systems in these areas. Finally, traditional Saudi society lives in individual low-rise housing units, enclosed within a well-defined outer perimetre which provides both privacy and breathing space for the family. For these three reasons the government should have promoted the development of new horizontal cities.

Individual housing units should have adequate surrounding space to meet the requirements of a traditional population. Arab families tend to hang clothes outside to dry rather than use electric dryers; they frequently cook outside, and some keep goats and sheep in enclosures around the houses for ready milk or meat supplies. Open spaces around houses may also be used as playgrounds for children, especially female children who cannot be allowed to play in the streets. Often the space also serves as a family gathering area in the evenings. Furthermore, horizontal units surrounded by adequate open space allow for future expansion as a family grows and additional children require more space or greater privacy.

These necessities, at the base of our Islamic traditions, have been neglected in the housing projects undertaken by Saudi Arťba’s Ministry of Housing. Instead of designing and building houses suitable for the majority of the Saudi population, expensive high-rise buildings were constructed in the middle of every city. The Jiddah and Dammam “Rush Housing Projects” were both completed over a year ago. Composed of 36 seventeen-story buildings costing over $300,000 U.S. per unit, excluding land costs, the 3600 housing units stand empty today. The government seems unable to allocate the finished units or even to ascertain whether the typical low income Saudi family for whom the units were originally constructed would be able to live in them at all. Privacy in these high-rise apartments would be next
to impossible. Furthermore, expensive mechanical devices such as elevators and water pumps have to be maintained, and the safety problems which might arise from improper use of common electrical systems are compounded.

Unfortunately, the sad experiences of the Jiddah and Dammam projects have not dampened our Ministry of Housing's enthusiasm for more high-rise, high-cost apartment blocks for low-income families. Most recently we have witnessed the awarding of new contracts to Korean firms for the construction of similar projects in Riyadh and Al Kharj.

The 1.2 billion dollars disbursed for 3600 housing units in the rush housing programme could have been allocated to the construction of satellite low-rise cities; in these, individual families are housed in a one or two-story detached dwelling surrounded by a small plot and outer wall, thus fulfilling the family need for privacy and air circulation. Where space or land is more limited, the old Arab-style house concept could be used: low-rise units clustered around cool courtyards and situated along narrow streets which provide shade and compel air circulation. Such a concept has been used in the King Khaled Military City at Hafr al Batin; housing units cluster around the central mosque, and the low-rise buildings are packed closely together to combat the desert winds.

In another public project, the University of Petroleum and Minerals in Dhahran, buildings were constructed to blend in colour and form with the surrounding terrain. Colonnaded shaded walkways around the principal buildings protect them from the harsh sun, and provide shaded spaces for student movement. This example proves that a balanced integration of Western and Islamic design not only can work, but can even be acclaimed by both cultures. This was the case for the University of Petroleum and Minerals, which won the highest awards in the U.S.A. for its architects, Caudill Rowlett Scott (CRS) of Houston.

More attention should be given by the affluent Islamic nations to the preservation of traditional Islamic architecture, not only for its quiet beauty but for its functionality and adaptability to the environment as well. However, modern Western architecture does reflect new and advanced technological innovations, and these should, where possible and practical, be merged with traditional Islamic design concepts. It is unfortunate that we see little attention being paid to this important synthesis.
It is important to underline some of the demographic and geographic changes currently taking place in Jerusalem, one of the most sacred cities in the world. This city is close to the hearts of millions of people, since it is a focal point of Judaism, Christianity and Islam, the three monotheistic religions. The changes taking place in and around Jerusalem are relevant to some of the themes underlying the seminar. These changes are undermining the environmental harmony of the region; the introduction of foreign transplants yields a destructive disharmony in any community. We can illustrate the polarization that results from the importation of foreign architectural elements.

The Haram al-Sharif (Sacred Precinct) in Jerusalem contains two of the holiest of Muslim sites. First is the Dome of the Rock, a building of exquisite design and workmanship built by the Umayyad Caliph Abdul Malik Ibn Marwan in 691 A.D. It was constructed around the rock from which the Prophet Muhammed ascended to Heaven on the night of al-Israa. Second is the Aqsa Mosque, to which the Prophet was transported from al-Ka'ba in Mecca; after the Ka'ba it is the second most sacred site in Islam. However, changes are being effected around these buildings in the course of Israeli excavations in search of the Temple of Solomon, razed by Titus in 70 A.D.

Excavations to the south and southwest of the Haram area have unveiled an Umayyad palace, Roman ruins and a single coin minted during the Bar Kochba rebellion. The presence of this latter artifact has justified the disruptive search for the Temple in this area. The plaza in front of what is held to be the exposed western wall of the Temple, the so-called Wailing Wall, was enlarged to accommodate visitors. This necessitated the bulldozing of many homes and much waqf property in the Moroccan and Bab al-Silsila quarters.

Arab dismay at the Israeli excavations, which were seen as tampering with the local Islamic heritage, was compounded by a mysterious fire in the Aqsa Mosque in August 1969. The fire occurred on a day when the water mains had been shut, necessitating fire-fighting help from outlying Arab towns. The Saladin minbar was completely lost, and the mihrab area, three colonnaded aisles and the roof were seriously damaged. The decorative dome and several ornamental windows of gypsum and stained glass required extensive repair. Restoration of the Mosque was commissioned by the Government of Jordan, and advice from UNESCO and ICCROM resulted in implementation of the latest techniques.

Other edifices and landmarks in the Haram al-Sharif area require urgent care and restoration before they become ostensibly unsafe eyesores and are demolished by the Israeli government. These landmarks include important sīqs, gates, sabiš (fountains) and Islamic religious schools. Changes to them affect the centuries-old Arab urban character.

Damage to Muslim areas in Jerusalem is not unique; the environs of the city are also plagued by rapid redevelopment and in particular by the imposition of new architectural styles on the old. As French photographer Marc Ribout wrote of the new Israeli buildings at French Hill on the northern outskirts of Jerusalem:

The bulldozer and the crane in Jerusalem have become a new skyline foreign to this sky and this land. This frantic race to anchor—with steel and concrete—new roots on a new soil has to brave the dignity of other people. As on many faces, I saw the humiliated pride and anger on the faces of the Palestinian women. A bulldozer had smashed through their small orchard. The next day the whole family was expelled from their beautiful old stone house which had been theirs for generations, and knocked down. I understood then how dignity is much dearer than an improved standard of living for the people of this land, and what is built on humiliation seldom lasts long.

In Jerusalem: City of Mankind (1974)
Nijem

I have a brief comment on the Islamic architectural treasures which we have seen in the presentation by His Royal Highness. These treasures are deteriorating now due to the inability of their Arab proprietors to face the socioeconomic pressures which the Israeli authorities impose on them. If these buildings cannot be restored immediately, a survey and recording of the inscriptions on these Islamic treasures is of utmost importance. This is a challenge to all countries, since Jerusalem is important to all. We Islamic and Arabic countries in particular should contribute by recording these inscriptions first to prove their existence, then to facilitate the restoration of the buildings. It is a challenge against the will of the Israeli authorities, and I think we have to meet this challenge.

HRH Crown Prince Hassan

As far as the need for a survey of inscriptions and buildings, I am certainly aware of the activities of the British school in this regard, and of course they consult the Islamic waqfs and have their support. But one archaeological school is not enough to complete the tedious work required for the maintenance of both major and minor buildings. Furthermore, the programme of the school as I understand it is to produce an anthology of problems in Jerusalem, visiting the madrasas over the next two years. Of course they will have some specific recommendations to make—whether the use of Portland cement, for example, is detrimental in terms of the high concentrations used, and whether various forms or fixtures should be maintained or repaired. These are all extremely sensible outlooks, but unfortunately, in terms of the Muslim heritage in Jerusalem, the larger issues are obscured.

Were it not for the Jordanian presence in Jerusalem prior to 1967 there would be no grounds for referring today to an Arab Jerusalem. The Muslim countries (with one exception) refused to recognize the final status of the central issue of Jerusalem, in common with much of the international community. This is all very well if one regards Jerusalem as symbolic of the "heritage of mankind." Certainly the Israelis on the one hand say it is an international domain, yet at the same time they would be the first to reject any form of internationalization.

When discussing Jerusalem one should subdivide the issues of which we are speaking into three: sovereignty, control of municipal rights and control of holy places. Within municipal rights and holy places comes the question of what the architects could or should be doing in the future. The responsibility is effectively being shouldered by a handful of architects and engineers who are trying, under severe pressures, to do a good job. But in terms of supporting this issue, with the exception of the fact that it was raised rather vehemently in UNESCO on one occasion, it does not seem to me that a case for the Islamic heritage is being made. Similarly, I do not want to limit myself there. I should have shown slides of the Virgin Mary and the Church of the Holy Sepulcher; the fact that the crown of the Virgin was stolen is another of the acts of vandalism which we are facing.

Unfortunately, very little is being done to maintain and restore the heritage in Jerusalem, and very seldom do the institutions involved contact the party directly concerned, the Islamic waqf. What is required most at present is to preserve in general the Arab and Islamic identity, by whatever institutional measures can be taken by individuals and organizations.

Kuban

I do not know whether there is a permanent board or commission for the protection of the Haram al-Sharif or entire Jerusalem area. However, what we see there is a development against which we fight all over the modern world and especially in the Muslim World. Considering the universal symbolic significance of Jerusalem, one should certainly take a firm stand and propose a total evaluation of the Haram area and its environs. We need to make a complete survey of the standing elements of historical value and prepare a plan for their protection. It might be decided by an international commission of experts. This situation has an immediate importance beyond the political considerations, and we must take care of this most important historical heritage.

Al-Hariri

All of us probably feel the same way. I thank His Royal Highness for reminding us that, as we have discovered over the past few days, Islam and its identity are being challenged everywhere. We tend to forget that it is being challenged intentionally in Jerusalem, and not just due to accident or to the poor knowledge of the people involved. I wish to ask what a gathering such as this seminar, involving scholars and political decision makers and intellectuals from all over the world, can do to assist in ensuring the future of Jerusalem.

HRH Crown Prince Hassan

I think that knowledge is the first necessary ingredient in any consideration of this problem. It is unfortunate that these issues are not brought to the attention of specialized professional groups. In focusing on Islamic architecture we are sadly in need of roots if we move into the area of reconstruction or facsimiles in different parts of the affluent Muslim world, and do not consider channeling some of the necessary support to a cause such as Jerusalem. Funds are available. What is important is to evoke the support and competent contributions of the specialists, and communicate these to decision makers on a wider scale in the Arab and in the Muslim world. The work required is badly in need of not only financial, but also professional
and intellectual support. It is very difficult for one country to orchestrate such an activity, particularly when the object is so vague in its status and yet so clear in its associations.

Grabar

There is in fact an international committee on Jerusalem which, at least in theory, is charged with a notion of trying to preserve a certain identity there. It was organized by Teddy Kollek, Mayor of Jerusalem, to supervise or pass on the various projects dealing with Jerusalem.

HRH Crown Prince Hassan

This concept of an international committee sponsored by the established users under the abnormal situation of occupation lends itself to certain legal arguments. Basically, the committee should not interfere in terms of excavations with the heritage of the area concerned. But it seems that the Muslims do not have a very clear mandate as far as the preservation of their buildings is concerned. Obvious violations have taken place, the most monstrous being the burning of the Aqṣā Mosque. On the Jerusalem question and the Muslim role in Jerusalem, I feel that we are not in need of an international activity which patronizes the existing order. What we are in need of is a clear role for the three monotheistic religions, and a return to the status quo which had existed in Jerusalem for many hundreds of years.
Informal Seminar Sessions:
I Ghadames, Libya

Intisar Azzouz

Ghadames is a Libyan town of five thousand inhabitants, located near the junction of Tunisia, Algeria and Libya. The town displays a fascinating architectural response to prevailing social mores: it is divided into two levels to preserve the separation of men from women. The lower (street) levels of the town are reserved for men, the rooftop pathways for women. The sexes meet only in their private family residences, which the wives have decorated with a colourful mélange of tapestries, metal utensils and other products of local craftsmanship.
Ghadames, Libya: house interior
Photo: I. Azzouz
The Casbah of Algiers dates to the seventeenth century, and was originally structured along two streets which led to the Higher and Lower Casbah and to the *sūq*. Major transformations to the compact structure of the madina occurred primarily between 1830 and 1870, when the *sūq* was expanded into an arced boulevard, and around 1940 a large portion of the Lower Casbah was destroyed when apartment blocks replaced the traditional patio houses.

The Casbah suffers from the structural isolation imposed by the presence of new roads cutting across old lots. Entry into the madina is now made through undefined and largely ruined spaces which constitute a veritable slum. The destruction of many buildings has weakened the horizontal linkage of the town, leaving empty holes in the urban fabric. Filling these holes would intensify the already serious density problem created by the influx of newly urbanized rural masses.

Ideally, these holes should be filled by new community structures and public institutions which are badly needed. Of 130 mosques in the city a century ago, there remain only ten. From the same number of public baths, only half a dozen are left. A comparable decimation has reduced the numbers of shrines, fountains and other meaningful architectural elements. In other words, a total urban structure which fulfilled all the cultural and social needs of its community has all but disappeared.

The residential areas have also suffered. The single cluster of traditional houses preserved as a remembrance of the old city yields an opportunity to compare the old with the new. The new residential units, some forty percent of the buildings in the Casbah, decay more quickly than the old patio houses. They alter the street scale and therefore the human scale, but their contiguity with the remaining older houses makes it impossible to remove them without compromising the entire quality of the street.

Formerly, the typical Lower Casbah house was large, with two-story rooms. Some of these are well maintained—two have been converted into museums—while others, such as an old palace, are now overpopulated with as many as twenty families. The Higher Casbah was always characterized by smaller houses, and now by an enormous population density problem.

Certain steps ought to be taken to make the rehabilitation of the Casbah operational. The first step would be a survey and inventory of the existing buildings; next is a selection of what is to be preserved. A typological analysis of houses and other monuments should be used as a major source for future design. Finally, an open and participatory approach to reuse should be employed. Present inhabitants or newcomers should be encouraged to take over the care of their houses and to make changes in them within the minimal framework suggested by the professionals. The Casbah is the sole heritage of the pre-colonial history of Algiers, but it has become a slum like so many old urban centres. It demands and it deserves our concerted efforts.

Algiers, Algeria: stairway in the Casbah
Photo: N. Faghih

Algiers, Algeria: upper level of a courtyard house in the Casbah
Photo: N. Faghih
III Islamic Architecture in Non-Islamic Environments

Gulzar Haider

The following are guiding principles for architecture in non-Islamic environments.

1) This architecture must express:
   - Unity as its essence: one God, one Truth, one existence
   - Koran as its message
   - Prophetic tradition and Islamic law as its path: the framework for functional programming
   - Pervasiveness of justice as its school of thought.

2) The structure and form of religious activities such as ablution, prayer and Friday congregation should be treated with the utmost care, and preserved and reinforced by architecture.

3) The sacred and mundane are to be integrated through continuity and juxtaposition, yet differentiated by the character of space and form. For example, architecture should ensure that it is an act of conscious will to step inside a mosque, as compared to (for example) walking from the library stacks to the reading area.

4) This architecture should be expressive and understandable to all. It should employ a form language which for immigrant Muslims evokes a sense of belonging in their present and hope in their future. To indigenous Muslims it should represent a linkage with Muslims from other parts of the world, and should underscore the universality and unity of Islam. To new Muslims this architecture should invoke confidence in their new belief. To non-Muslims it should take the form of clearly identifiable buildings which are inviting and open, or at least not secretive, closed and forbidding.

5) It should exhibit a sense of economy of architectural means and generosity of Islamic-humanistic ends. There should be nothing, whether functional or symbolic, without a purpose. It should not be a temperamental nor a capricious architecture.

6) It should be ecologically appropriate; embellish and reinforce the natural context; be energy-conserving and climatically sensible.

7) It should be technologically appropriate in terms of the choice of materials and techniques of construction.

8) In the choice of architectural motifs it should in no way reinforce the erroneous mythology of Near Eastern "Islamic" exotica of the Thousand and One Nights.

9) It should be a beautiful architecture, aiming at the ideals of the Islamic aesthetic.

10) This architecture is a physical statement on behalf of Islam and the Muslim community. It is a proselytizing gesture which, according to Koran XXV, should be made in the best manner:

"Invite to the Way of your Lord with wisdom and beautiful preaching, and argue with them in ways that are best and most gracious. ..." It should be like a greeting of peace and an invitation to discourse and dialogue about Islam.

Case Study:
The Islamic Centre of North America

In 1975, the Muslim Students Association of the U.S.A. and Canada decided to centralize its numerous activities by establishing a headquarters in Plainfield,

Plainfield, Indiana: The Islamic Centre of North America Plan of the lower level

Plan: G. Haider
Indiana. The 84-acre site has been reserved for the following major facilities:
- Mosque for five hundred men and women, with provision for about twenty-five percent overflow
- Research library for 100,000 volumes, plus microfilm and audio-visual library
- Office complex for sponsoring and associated organizations
- Offices and storage space for the Islamic Book Service
- Educational camp building with an auditorium, classrooms, day care centre and cafeteria
- Cabins and dormitories for five hundred short-term residents
- Staff housing for seven families
- Recreational and outdoor sports facilities.

The Master Plan and the design of all buildings is already complete. The Mosque–library–headquarters building illustrates most of the design principles used in the project, including continuity under one roof, spatial hierarchies and morphological discipline in the form of principal geometric elements.¹

**Note**

¹ This report is an abridgement of a more comprehensive study of Islamic architecture in non-Islamic environments, for which the Islamic Centre of North America is but one case study. The larger study could not be printed in its entirety due to spatial constraints. Readers seeking more information on this topic should contact the author.

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**KEY:**

1 Entrance lobby  
2 Mosque entrance  
3 Mosque lobby  
4 Dome area  
5 Minbar area  
6 Mihrab  
7 Eyvan  
8 Men's toilets  
9 Women's toilets  
10 Ablution  
11 Imam's office  
12 Men's canteen  
13 Women's canteen  
14 Women's entrance  
15 Librarian  
16 Assistant librarian  
17 Circulation desk  
18 Stacks  
19 Reading area  
20 Conference rooms  
21 Offices  
22 Offices  
23 Showroom  
24 Plaza pools  
25 Minarets  
26 Sundial

Plainfield, Indiana: The Islamic Centre of North America  
Plan of the main level

Plan: G. Haider

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Plainfield, Indiana: The Islamic Centre of North America  
Northwest elevation

Drawing: G. Haider
Plainfield, Indiana  The Islamic Centre of North America  Plan of the upper level

Plan  G Haider

Plainfield, Indiana  The Islamic Centre of North America  Longitudinal section

Drawing  G Haider
I speak at this forum of distinguished architects and Islamic scholars with considerable apprehension and self-doubt. I am neither an architect nor a scholar of Islam. By training I am only an economist—one of those unfortunate creatures, according to the cynical definition of Oscar Wilde, “who know the price of everything but the value of nothing.” When I have concluded my remarks, you may well decide that Wilde was right!

It is my great misfortune that I did not attend any of the earlier seminars of the Aga Khan Award for Architecture. I enthusiastically and fully support the basic aims of the Award; it is indeed an act of rare vision in this uncertain world of ours, a world far too preoccupied with current crises to plan for the world of tomorrow. I believe that the Aga Khan Award is one of those courageous initiatives which can start a whole new movement and change the very course of world events.

I also wish to ally myself with the essential objectives of the Award, which His Highness the Aga Khan has enunciated so eloquently on a number of occasions. In his concluding remarks to the Istanbul symposium in September 1978 he said, “The Award will not be confined to architects competing with designs for a succession of prestigious public monuments. We are concerned with the Islamic world and, above all, with the people of Islam.” I have added the italics, for those are key words: concerned with the people of Islam. My main effort in this commentary will be to highlight some of the policy implications of making Islamic architecture relevant to the people of Islam.

If Islamic architecture is to become more relevant to the people of Islam, we need to have some idea of their economic, social and political conditions in the contemporary setting. The majority of people living in the Muslim countries—probably as many as two-thirds—can be described as “absolute poor”: a condition of life so miserable as to defy any human description. They survive, if it can be called survival at all, on 25 U.S. cents, or less than one-tenth of a Jordanian dinar, per day. Their children are malnourished, they are largely illiterate and they are often denied the very minimum of basic needs and public services. They live on the margin of existence, below any reasonable definition of human decency. In addition, the political and social environment in many of their societies is feudalistic, and the concepts of equality of opportunity and peoples’ participation in political and economic life are often mirages, not realities.

I am sorry to bring up these unpleasant truths, but as an economist I live and breathe in their midst all the time. Now, what is their relevance to Islamic architecture? Very simply, if Islamic architecture is to become a living reality in modern times, it must respond to the needs of the poor people who are the overwhelming reality in the Muslim world. It cannot afford to become an elitist concept.
Islamic architecture must be unlinked from the popular image of kings’ palaces and old castles and overflowing gardens and ornamental monuments. It can certainly borrow its essential designs, concepts, indigenous technology, functional features of drainage and cooling systems, etc., from the past, but it must translate them into a wholly new architecture which reflects the essential spirit and value system of Islam: equality, accessibility, mass participation and cost—effectiveness.

In other words, there are two fairly clear choices. We can proceed from a study of architecture to the needs of the people; or we can reverse the relationship, and proceed from the needs of the people to the relevance of Islamic architecture to those needs. My own preference is for the latter course, though both routes can be made compatible if we remember that they are essentially linked. I do not believe in art for the sake of art; I believe that art must be for the sake of life. And I certainly do not believe in Islamic architecture merely for the sake of Islamic architecture; I believe that a revival of Islamic architecture must correspond to the needs of the poor people of Islam. Let me not overdraw the contrast. It should be possible to engineer a happy blend, a proper fusion between the functional needs of our poor people and the aesthetic needs of an architecture which truly reflects our Islamic culture, traditions and history. But this remains an open question: we have no final answers yet.

The real question is the social, economic and political context within which all of us—architects, economists, everyone—must work. We simply cannot shirk our broader social responsibility and pretend that poor societies have no alternative choices. For instance, the lights that shone so brightly on individual objects in the Tehran Museum of Glass and Ceramics could also have lighted a poor village. The 140 million Jordanian dinars which the first phase of Yarmouk University may cost can also be spent on alternative needs and less costly designs. The water which saturates the lush gardens and trees of high income Clifton and Defence Society and along the main highway to the Karachi airport is water which is denied to at least two million poor inhabitants of Karachi’s low income areas, who do not even get adequate drinking water. Architects may admire the beauty of these buildings and the symmetry of their designs, but the economists will bemoan wasted resources and the denial of the very basic needs of the poor.

Let us face the honest truth. Poor societies have scarce resources, and they confront some cruel choices. There is no use shrugging off our social responsibility under the convenient label of “client—architect relationship.” The architects must point out the different options and alternative choices to the policymakers, and be prepared to be overruled. Yasmeen Lari had the courage to question the cost and the need for a grand fountain to rival that of Geneva Lake, even when the commission came directly from the Pakistani Prime Minister. His Highness the Aga Khan referred to the same critical dilemma when he stressed the question of economic efficiency. I welcomed these emphases on an architect’s broader social responsibilities as a breath of fresh air.

My architect friends may be looking somewhat unhappy, but I assure them that I do not expect them to be the final decision makers in the system. None of us technocrats is. But at least we can point out a number of alternative policy options and designs, to ensure that final decision makers have a reasonable range of choices.

I have proceeded so far at a certain uncomfortable level of abstraction. Let me come now to a few practical examples, to illustrate how architecture should respond to the essence of the Islamic value system. Islam teaches equality. A building that does not embody the concept of equality cannot be regarded as a very illustrious example of Islamic architecture. In the
It is important to remember that the much-admired urban fabric of many older Muslim cities was not the result of any grandiose vision of individual architects. Rather, it represented a multitude of decisions made by the members of the community, through a subtle social interaction that struck a balance between the rights of individuals, their neighbours and the larger community.

Another essential feature of Islam is to place man (and woman) at the center of the universe. Islamic architecture must therefore be built around people, not people herded around architecture. We economists learned a bitter lesson in the last few decades when we belatedly recognized that the real end of economic development was not increase in production but increase in human welfare; not worship of the goddess of GNP growth, but satisfaction of basic human needs. Of course the two objectives are interlinked, but the perspective is important: do we go from production to people or from people to production? Let me pose the same question to the architects: do you go from buildings to people or from people to buildings? I hope that the architects are much wiser than the economists, and that they do not get lost in form and design and forget to put people and their needs and aspirations at the centre of their creations.

Islamic architecture must be economical and cost-effective if it is to be at all relevant to the needs of the poor people of Islam. Islam resents conspicuous consumption; it preaches austerity and simplicity. However, most of the seminar discussions barely mentioned economic costs. Maybe architects and economists are prisoners of their own disciplines. Architects are fascinated by the beautiful symmetry of design and form, and feel uncomfortable when reminded of financial costs. Economists, on the other hand, are far too lost in their economic calculations to appreciate beauty, which is also an integral part of life. I hope for a happy marriage between the two, or (if that is an unrealistic expectation) at least a quiet coexistence.

I have listened carefully to the seminar discussions, and I believe I have learned a lot. But it would be dishonest to imply that I am left with no uncomfortable questions. In fact, I wish to raise seven specific issues to which I think we must seek convincing answers.

Can Islamic designs and forms be incorporated into low cost housing, which is targeted for poor people with an income of less than one quarter of a U.S. dollar per day? This question was discussed in Jakarta at the third pre-Award seminar, but I am not sure that any conclusive answers emerged. Can Islamic architecture be blended with the public services of education, health and water supply, where standard costs must be so low as to be affordable by the poor without huge and perpetual government subsidies?

What is the choice when confronted with the conservation of a historical building or the preservation of people? In the Istanbul seminar (the second pre-Award seminar), the Walled City of Lahore was discussed. This is a historical site that architects romanticize, but which its half million poor residents bitterly resent and would gladly leave, if given an alternative to such a miserable slum. I recall that when environmental concern arose in the rich societies, the developing countries argued that preservation of human life was far more urgent for them than conservation of wildlife. What would be the architects’ answer if given the same choice between people and buildings?

We must pause and ask ourselves whether we are getting too preoccupied with buildings, too little with people; too much with form, too little with substance; too much with physical realities, too little with socio-economic objectives. Many commentators, particularly Messrs. Soedjatoekko and Sera-geldin, pointed this out when it was noticed that the presentations of educational building models scarcely mentioned the very educational objectives they were supposed to serve.

How much of a stress are we to place on indigenous technology, local materials, indigenous architects? I could not help
Fez, Morocco: squatter settlement
Photo: H-U Khan

noticing that many of the projects presented to us over the last few days were designed by non-Muslim, non-indigenous architects. While it is an eloquent tribute to the infinite tolerance of Islam to let non-Muslims interpret Muslim architecture and Muslim culture for Muslim societies, and while I am a great believer in the interaction of varied cultures and religions and architectural designs, I plead for some balance. There must be more self-confident development of indigenous architects and increased recognition by their own governments and by outside aid agencies. It is a sad commentary on their own intellectual colonialism that many governments are reluctant to recognize the talents of their own nationals, even when they are seeking a revival of national pride and culture.

While I have freely used the term "Islamic architecture," I am still a little confused about what it really means. The case studies we have heard tend to obscure the distinction between Islamic and non-Islamic architecture instead of sharpen it. I am left with no clear or generally accepted definition of Islamic architecture except that the relevant buildings are all located in Muslim countries. I am sure we agree that this is not much of a definition. Is Islamic architecture that which embodies the essential value system of Islam, or is it a triumph of form and colour, or is it some unique synthesis of the two? I, at least, am not very sure. In a way I am glad that Islamic architecture was not rigidly defined at the outset of the seminar, and that its definition is evolving gradually and pragmatically. But there is also a danger in keeping it too open-ended, as this will make the task of the Award's Master Jury very difficult.

Let me go on to an even more ticklish question. Much of the Islamic architecture we admire today was the product of a feudalistic age when the will of the people hardly mattered. It reflected elitist decisions, although not always elitist value systems. Its adaptation to contemporary needs must take peoples' aspirations and voluntary choices into account. But do we really know these needs? Have there been any careful surveys? Are the poor people aware of what we are doing here? Do they really care? Should not some of our projection and dissemination aim at those people who will be the final arbiters of tomorrow?

Let me add a final series of questions. Can Islamic architecture be developed in those Muslim countries which still deny equality of opportunity to their own people, which still violate every principle and the very spirit of Islam, and which are still run by a handful of vested interests? Isn't the revival of Islamic architecture part and parcel of a much larger movement, a much wider struggle for a real renascence of the true spirit of Islam?

These are troubling questions, and they are not the sole concern of the architects. I raise them with great humility, well aware of my excessive ignorance. But I have faced many of them as a national economic planner in Pakistan in my previous incarnation, and some of them I still confront in dealing with problems of mass poverty at the World Bank. I am sure that some of these issues will be dealt with by other commentators. If I may make a concrete suggestion, I believe it would be extremely useful in future seminars to structure the workshop discussions around a set of specific predetermined questions, so that there is more focus in the final results.

Let me also add that I view the Aga Khan Award not as an event, but as a process—indeed, as a whole new movement. It is unrealistic to expect that we will find all the final answers tomorrow. What is important is simply that we keep searching. And what is of even greater importance is that we involve more disciplines in this search, since we have a tendency to get wrapped up in our own individual disciplines.
I believe we are all on a journey of
discovery, a voyage of the spirit. We have
a proud culture, a glorious heritage. Let
us follow its spirit, not merely its form.
Let us distill the very best out of it, not
the worst. Let us not turn a nostalgia for
the past into costly monuments for the
future. Let us build for tomorrow’s genera-
tion and for all our people, not only for a
few. And let us do it with candor, with
honesty and with humility, for the task is
immense and the process has just begun.

When I began my address, I promised to
speak as a layman with little knowledge of
architecture and even less knowledge of
Islam. I suspect I have lived up to these
expectations! Let me conclude, however,
by wishing the seminar great success in its
continuing deliberations. And let me also
leave you with a few of my favorite lines
from T.S. Eliot:

All our knowledge brings us closer to
our ignorance;
O, where is the knowledge we have lost
in living;
O, where is the wisdom we have lost in
knowledge.

I hope that all your future deliberations
will be inspired by a happy blend of life,
knowledge and wisdom.
I have been very uncomfortable during these days of deliberation because I felt that we were engaged in two opposite operations. One was rearguard action, to preserve as much as possible of the Islamic architectural heritage against the onslaught of cosmopolitan modern architecture. I felt very misplaced there. Secondly, I felt that we were engaging in flights of architectural imagination that had little to do with the social realities and potentials of the situation.

For all the discontinuities about which we have been speaking, the discontinuities in Islamic art and architecture as we move into the future will be much greater than suggested by our discussions. We have discussed only a very narrow aspect of the problems facing the birth of a new Islamic architecture. One reason is that our discussions have been limited very much, though not entirely, to the Arabic tradition. But the Muslim societies in the Arab countries will be only one element in the shaping of the modern Islamic civilizations that we sense to be emerging; many will be shaped by Asian Muslims and African Muslims as well. The demographic distribution of Islam suggests that the impact of these non-Arab Muslims will be considerable—they will draw upon their own Islamic and non-Islamic traditions to present different visages of the widely varied range of Islamic expression.

We have become prisoners, I think, of the present and of the past. A major source of the discontinuities we are going to face, and one which we will have to learn to "domesticate" and to integrate into our mode of a modern Islamic civilization, is that the future will profoundly change our lives both individually and socially, at the community and at the national and international levels. In discussing government buildings and universities, we have not sufficiently taken into account that the manner in which they will function will be greatly affected by the impact of modern electronic communications. Classrooms may no longer be a central element in planning for the universities of the future. The emphasis will be different; it is likely to focus on the development of critical judgment and disciplined creative imagination which develops from interaction with great teachers, rather than from the transfer and transmission of established knowledge.

The discussion of projects in the seminar takes us right to the heart of the basic problem of our societies, and that is change—rapid and fundamental social, economic and political change. The fact that this was inadequately reflected in the presentations made it easier to become imprisoned in the rather narrow range of our discussions. All our societies are in the throes of convulsive changes which will both alter the relationships between governments and their people and affect social structure, in terms of degrees of upward mobility and access to governments by little people.

Many of the projects which we have heard described are already obsolete, and will become even more so as they are being built. We will therefore have to pose the question differently. Of the changes in which we are individually and collectively involved, which are in part forced upon us and which have we created by ourselves, deliberately, in the process of modernization? Modernization has been going on, but we are beginning to see the moral backlash against the excesses of waste, corruption, growing inequities and injustice as side effects. Materialism and greed are side effects of the process of modernization. There is a danger that our Islamic societies will come to reject modernization, but there is no escape from it.

The real problem is whether we Muslims in the Islamic world can modernize, can renew our societies from within, in ways that will enable us to redirect the use and development of science and technology for our purposes—the creation of a just and moral society. Can we modernize in a manner which ensures that the process of modernization remains embedded in a transcendental conception of social life? I make a fundamental distinction between the processes now going on in Islam and in

Isfahan, Iran: women outside the Shaykh Lutfullāh mosque

Photo: W. Porter
Islamic society, and the earlier reformist movements, which were essentially attempts at the adjustment of Islamic societies to what seemed to be the inescapable power of Western science and technology. That is no longer the case. We are witnessing the beginning of the end of modern secularism, not in the Third World alone but in the rest of the world as well (and even primarily there). We are witnessing a new struggle between a secular conception of human and social life and a transcendent one, and what is happening in much of our Islamic world, chaotic and violent though it may be, may well portend the breakthrough of a new sense of Islamic social and political spirituality. It is this element which will provide the continuity and the linkage between the huge variety of responses which our Islamic societies will show as we move into the future.

We need not be defensive, we need not continue rearguard actions to preserve the Islamic architectural heritage against the onslaught of cosmopolitan architecture. The processes in which we are involved are much greater and more fundamental. We should remind ourselves that great architecture and great civilizations are born out of great faith. We all know examples of religious faith, but sometimes secular faith is important as well. The whole discussion in Europe fifty years ago on the new architectural styles was an expression of the then prevailing sense of man's unlimited power over his environment, over materials and over technology. That sense of power has gone. We all have a sense of limits now, and these will shape a different kind of society.

The major problems in the Islamic countries are poverty, injustice and large populations. It is because of these problems that the Muslims in our countries may uncover and develop new impulses toward a rebirth of faith. Unless that happens, the slow, painful emergence of new and modern Islamic civilizations side by side with others, including Western civilization, may simply be a dream. Chances are that what is going to happen is a rebirth of faith; we can see the beginnings of it. Without that faith, all talk about modern Islamic architecture is essentially tinkering. Out of the struggle against poverty and inequality, new modes of use and technology and science will develop. This will lead to different urban and rural configurations. It will lead to new concepts, including many that differ from the traditional Islamic and especially Arabic concepts of space and form. But I want to make the point that these are not the essential elements in the birth of a new Islamic architectural tradition. It is faith and the rebirth of faith which will provide the creativity, the flexibility and the daring to provide new answers in a variety of manifestations of man's obedience to God.

Now, what does all this mean in terms of criteria for the Aga Khan Award? I think we are fortunate that we have not reached a clear notion of what the criteria should be; it would be the height of arrogance, and indicative of a narrowness of mind, if we had succeeded. We are involved in enormous processes, in questions to which we can only provide tentative answers. The real significance of the Aga Khan Award lies neither in the identification of present excellence nor in the grand design of buildings. It lies in its capacity to trigger and stimulate and direct the creative architectural processes within our societies. It is in that light that the Master Jury should make its decisions. It should ask itself how a particular decision in a given field can help trigger ongoing processes and new searches; these in turn may stimulate the reflection and exchange that is needed among architects and among societies.

The greatness of Islam and the greatness of new Islamic architecture will not be defined by the major public buildings alone. This greatness will also be defined by responses to the little people in their day to day lives—to their needs for shelter, for community, for communication, for identity. It is these forms of response which will fructify and interact with the grander designs of public buildings, in order to shape a general visage of a new, modern, but essentially an Islamic architecture.
I shall try to highlight a certain number of broader issues which have emerged and a certain number which were not discussed. One thing that struck me as we were talking about public buildings and spaces is that, as opposed to homes or many other kinds of buildings, there are always two contradictory activities taking place in public spaces. The restaurant appears quite differently from the point of view of the cook or from the point of view of the eater. The viewpoints of the schoolteacher and student are not the same. The point of view of the bureaucrat or the signature-seeker is not the same in an office building. In other words, a peculiarity of public buildings of whatever variety is that at least two different positions, two different attitudes, two different uses and likes or dislikes of buildings always exist.

Another aspect of public buildings is that they remain longer than other edifices. They are more difficult to destroy, and are therefore much more likely to affect architectural style and self-identification. They affect the lives of almost all people in one way or another.

As usual in our seminars, we have not arrived at conclusions nor even at a consensus. Rather we derive a more or less formulated sense of key issues, key needs, key troubles, occasionally a few prescriptions. I will skip prescriptions like ecological balance, local materials and so forth, these being a kind of tag we can add to whatever we are talking about. What, then, are the key issues, needs and troubles that seem to have emerged?

One group is a series of omissions. There are a certain number of things we did not talk about, and yet those seem to be extremely important in thinking about public spaces and the search for form. We did not discuss spaces for movement and transportation, from airports to the way in which taxi organizations find a nook in a city, the place from which they will go from one city to another or one part of town to the other. I am not sure why we did not discuss them, but it is curious that this aspect did not come up.

Particularly in comparison to our previous seminars, we talked little about Islam. We mentioned some obvious generalities here and there, and some very simple run-of-the-mill statements about modesty, privacy and what have you. But I wondered whether this is so because the types of monuments we are dealing with are much more contemporary, more a result of today’s changing world than of the relatively stable world of the past. To equate a modern hotel with a caravanserai can be done, but it is not an entirely fair proposition because those were very different institutions. If Islam is to be relevant, it has to come in not through the citations from the Koran or from Sunna, but from a sort of intelligent use of the principles of analogy and innovation. I think we are dealing with a very new set of propositions.

There is one fascinating aspect of Islam which is public but about which we did not speak; it is in the area where the search for form is perhaps most fascinating, and that is the mosque. The mosque is a sacred building, a holy building, a building restricted to the Muslim community, but it is a public building and not a private one. One can argue perhaps that these holy spaces, mosques, shrines, etc. are the places least in search of forms. I wonder whether this is not instead a most significant area for the search for form, if architects do in fact seek what we have paid lip service to in other contexts: the problem of creating a contemporary form for something deeply embedded within the fabric of society. In many ways the tastes of the masses are affected more by mosques than by great public buildings.

Hamadan, Iran  plan for Bu Ali Sina mosque of the University of Hamadan, designed by Nader Ardalan

Plan: N. Ardalan
there is a different psychological attitude involved. It became clear to me during these past few days that a seminar on mosques and holy places is absolutely essential, even though it is likely to create more fireworks than a seminar on government buildings or universities.

Another issue which consistently came to the fore is the relationship of public buildings to people. I fear I will get into some difficulties in trying to go beyond the obvious statement that buildings have to be good for the people using them, convenient and attractive and pleasant and what have you. I would rather try to think of this issue of relationship to people in terms of how it can affect the creative processes of the architects and the decision makers today. I am very confused by the architects’ notion of process. I think it refers archeologically to something one analyzes while it happens, but I am not entirely sure I understand what it means once a building is built, once it is in use. I do see in the large institutional complexes and public buildings a fulfilling of two functions. One is a synchronic function, creating a setting for daily life, for the number of activities which take place daily within society. The second, perhaps much more so than housing, is the sort of diachronic process of creating the future. In many ways the process of daily life will adapt itself to anything, because life has to go on. But there is also a way in which buildings and settings create the future, and our concern should be about the long-range effects on society of large government complexes, hotels for foreigners or campus-style universities.

We call constantly for flexibility. Is flexibility a form, and is form not frequently a straitjacket? Someone observed that function, in time, creates a style. In time the buildings we are talking about are going to create the style and the manner of behaviour of a whole culture. But given the restrictions of climate, locale, politics, etc., are we not saying that each region, perhaps in this case each national entity, will acquire its own style of creating architecture? Will not the very nature of public buildings compel oil-rich countries to have one set of answers, poor countries another?

I was fascinated by the following problem: within the obvious renascence of Muslim architecture in our time, I wonder whether the architecture of social forms is going to follow one of three models. There is the Roman model, where in Amman or Jerash or Fez you will find the same theatre, nicely built, beautifully fit and so forth. It may be the Gothic model, where in a sort of ripple effect a series of changes occur, then spread out by whatever means to encompass a whole area. Should it be the Baroque model, where from the very beginning a clear individuality existed in areas from Spain to Russia within a common idiom of purposes and functions? We are at the moment faced with the possibility of any one of these models reappearing in the Muslim world in its own contemporary fashion. It is the major monuments, the public buildings which will determine this direction.

I would put one series of key issues which were raised constantly into the general category of “training.” The main training required is clearly the training of the decision makers. I have not the foggiest notion of how one sends ministers back to school, or who is going to train them anyway. But the need for training of the bureaucrats in this area is an issue on which we have all agreed. Another kind of training which surfaced during our discussions is the development of a partnership between the historian and the contemporary planner or designer. This would allow an individual commitment from each, while allowing for the development of a true sense of which forms are within the continuity of the Muslim world and which forms may as well be given up. We are still faced with the problem of how to define a relationship to the past. How do we decide on its mode, how do we decide on the ways in which we are going to try to understand it? The notion of a lobby of action and judgment, signals of which I picked up informally during the meetings, rather appeals to me. However, a lobby frequently sounds very much like an academy, and we know that we do not want to develop an academy. Yet the question of training, the question of explaining or discussing, of thinking about the past as one deals with the present, is something which is clearly needed in order to create a future.
Toward an Appropriate Living Environment: Questions on Islamic Development

Balkrishna V. Doshi

During the last three days we witnessed presentations on educational, institutional and recreational buildings by the architects. Dr. ul Haq has spoken of economic and Mr. Soedjaatmoko of social issues, and there were also many other speakers. The main thrust of the discussion following each presentation related to how each architect had understood Islamic traditions, and how he integrated these into his designs. Other questions were related to the way a project became part of the urban fabric and the community. The answers to these questions were not really convincing, at least not to the non–architects, because the solutions did not specifically indicate the relationship of a project to the social life of an area.

Dr. ul Haq made very pertinent comments on the crucial issues of the Islamic Third World and the poverty of the masses. He asked if the architects were involved in solving the problem of shelter for that eighty percent of the population, or were giving them some alternatives of hope. Dr. ul Haq’s remarks, preceded by questions from other experts, opened many avenues of discussion extending beyond the topic of the present seminar. However, from these discussions a few questions come to my mind:

1) What is the Islamic tradition?
2) What are the lessons which we can extract from it?
3) Should the development imperative only be beneficial to a few, or should society at large be the focus?
4) Should there be a dependence on borrowed technology, or should there be an emphasis on local wealth, resources and skill?
5) Should there be a concern for the immediate future, or should the long–term perspective be given equal importance?

I will try to answer these questions one by one. It is important to recognize that Islamic culture originated and consolidated under the most severe environmental conditions in the world. Lack of resources and a scarcity of almost everything motivated Islam to establish a few very fundamental principles of life, such as dignity of labour, humility and dedication to God through work. This further evolved into a sense of participation, which through cooperation and equality became pronounced. Interdependence became one of the main principles. Scarcity also taught restraint and contentedness, with a feeling of gratitude to the unknown Almighty who provides mankind with the essentials and the inner strength to be happy with them. Devotion and dedication became the primary considerations for the well–being of the community instead of the individual, and tensions of inequality were avoided.

Basic cultural values found their expressions both in terms of behaviour of the individual and the community, and of the forms and structures which shelter them. The expressions that can be very clearly identified in the Islamic behavioural codes are: simplicity (ways of living and aspirations); adaptability (with limitations and constraints); participation (to generate the most from scarce resources); cooperation (united efforts to survive); humility (contentedness with life); devotion (gratefulness to the Unknown who provides for us all); stability (through minimum aspirations) and security (through a sense of tolerance, brotherhood and self–reliance).

Simplicity, adaptability, participation, continuity, equality and a sense of stability became the canons of architecture. These canons were interpreted in terms of building design and forms, and gave rise to the unique architectural expression which we know as Islamic architecture. Because their attributes were so direct and meaningful even when built in another culture, the quality of Islamic architecture remained similar; it even adopted the local pattern or style for its expression without losing the principal message. The attempt to establish the concept of non–directional design modules to allow for intermingling of major and minor spaces, provide for easy communication and facilitate the religious, educational or cultural activity of the community emphasized the fact that constraints are virtues and need not be abandoned.

The innumerable varieties of mosques, madrasas, khans and caravanserais discussed in the last few days demonstrate the adaptability of changing needs. Not only that, but the basic principles mentioned above have been fitted to a variety of sites and integrated with the surroundings. The modular structural system had the capacity to emphasize hierarchy with subtle nuances, and the total unity of this formal and often amorphous complex expressed the presence of the Supreme through the articulation of space, form and light. The quality of simplicity for individual use on the one hand, and magnificence of public buildings for the community on the other, provided a dual sense of equality in the community and gave unrestricted accessibility to all. In short, it was the outward expression of maximum benefits with minimum input; it achieved more with less, and anonymity while imparting divinity and grace. These principles saw the evolution of different

East Jakarta, Indonesia: the Azziadah mosque complex, part of a community–initiated kampung improvement scheme

Photo: H–U Khan/Aga Khan Awards
architectural styles in different countries, and contributed to each culture in a particular way. This contribution, this ability to enrich the other culture, is what makes Islamic architecture great. We can summarize the Islamic tradition by saying that constraint is a virtue and that we can successfully achieve the design of desired goals if they are related to the community at large.

The second question asks what lessons can be drawn from the Islamic tradition for our present work. Islamic architecture's answer to this is simplicity and anonymity; that is, solutions designed with humility can absorb the prevalent cultural ethos as well as impart the qualitative aspect to the viewer. The idea of simplicity in design for the common dwelling is another message conveyed, as opposed to the provision of grandeur in the mosque or public institutions. The message therefore is that institutions are most important, and deserve the highest priority and all the energy and wealth we put into them to glorify hope and salvation.

My third question asks if the development imperative should be beneficial to only a few, or if society at large should be the focus. The answer lies in the Islamic conduct of commitment to equality; it should be asserted to reestablish social cohesion and stability. Muslim society as a whole should be the focus, and this will require that society prepare itself for the benefits of development. This will perhaps take time, and development will therefore have to be based on priorities with a different base; in short, priorities and scales should be established.

The fourth question was whether dependence on borrowed technology should be complete, or whether emphasis should be placed on local wealth, resources and skills. The answer follows clearly from the above. If benefits can accrue only when the adaptation of new technology is made possible, it follows that adaptation will grow out of both participation and a local wealth of resources and skills. Society at large suggests minimum dependence on borrowed technology; this in turn suggests that building design solutions not be very high-technology oriented, unless they are capable of being assimilated into the culture and also, preferably, employ local skills.

The final question I wish to address is: should there be concern for the immediate future, or should the long-term perspective be given equal importance? There is only one answer, to my way of thinking. Benefit for society at large is paramount, and therefore a slow pace of development and a long-term perspective are required. Short-term goals compel a society to maximize gains, but they destroy local resources and skills in the process. This also leads to a decline in self-reliance and the loss of economic and consequently social independence. Preservation and conservation therefore become very vital. In short, our designs should be based on local potentials, with reliance on external help being minimized to encourage public participation rather than exclusive monopoly controls.

Let us recapitulate the issues. Constraint is a virtue and it must be the basis of design. Institutions are the backbone of society, and they must have the highest priorities in the development process. Buildings should avoid sophisticated technologies if not capable of assimilation, and reduce importation of materials in order to remain self-sufficient. Unfortunately, in contrast to these ideas, we are faced today with contraindications to the development process. They include rapid economic growth and an urge to create an environment comparable to that of the West; the fear that if material well-being and impressive development are not achieved, even the freedom of the society and the culture will be under strain; and finally, a mad rush for rapid change, with an ambition to achieve in a decade what the West could not achieve in a century. These are heightened by the fact that the control of decision making rests in the hands of a few, and the newly formed wealth is not shared by many.

This is the dilemma, and the only way to go about realizing the ideals of Islamic culture is to make the clients or the decision makers aware. They need to be convinced of the long-lasting qualities of the Islamic heritage so they can direct development strategies accordingly. There are many alternatives that we can explore and follow, but the one that comes to my mind in the context of the present seminar is the following: attempts must be made to convince the decision makers that if they wish to achieve the Islamic order, they must take into account not only today's problems, but also their eventual spiraling in times to come. They must be made aware of the existence of the backbone of Islam, that is, the institutions and their priority in the process of development. "Institutions" does not denote a mere building with a particular function.

Dacca, Bangladesh: the New Capital, designed by Louis Kahn in the 1960s
Photo: H-U Khan/Aga Khan Awards
but signifies in a wider sense the place of such an edifice in the daily life and movement of a community. It is through these institutions that people generate a cultural ethos apart from mere economic development.

The workshop conclusions highlighted these issues and explained the role that they can play. If this institutional role is understood, then the particular function-oriented institutions will expand their field of activity. They will not then be conceived in isolation, as was the case with many of the projects which we viewed during the seminar. The realization will change the scale of those institutions, and effect their change from personal exhibits to public places. The newly discovered institution will not only become part of the community, but will have the possibility of asserting itself as a new symbol of the society through a sense of belonging.

With this new institutional association the designer would have the opportunity to perform a dual responsibility: to exalt the cultural ethos through the integration of old culture with new aspirations and new technologies, and to demonstrate the most beautiful and excellent in design. In this way a seed can be sown to build affinity with the new or even with the so-called alien. The integration of such varied message experiments will have the fundamental message of honesty and truth.

I am convinced that architects and designers have much larger roles to play in the communities and societies of the future than they do today. The professional should not just be a vehicle for the expression of different attitudes, but must be, through his skill and ingenuity, a builder of attitude as well. He must be the agent who inculcates an attitude to live with others, rather than simply consolidating only the attitude to live. His designs must have a place for everybody, and must offer everyone a participatory role in the process of building the total environment. This is why I believe that architects and designers must place the highest emphasis on communal and social institutions; there is no better tool for creating an attitude for a total living environment. History has taught us this lesson, and today's growing disintegration is a result of breaking away from institutions. We must revive the institutions, we must bring them back to the forefront, and we must in due course put them back at the focal point of design if we want our communities and societies to continue advancing to the point where everybody receives a fair share of the living environment. With the equitable distribution of this share, the attitude for living together can be born. This, I believe, will result in an appropriate set of symbols and forms.
Bokhari

I would like to comment on Dr. Pharaon's speech on Saudi Arabia. The affluence and building boom in Saudi Arabia which began in the early 1950s had various advantages as well as disadvantages. The advantages, briefly, included the appearance of a much wider choice of better building and finishing materials, increased services and an advanced building technology. A concern for the aesthetics of buildings, completely ignored until the beginning of the 1970s, began to appear. World-renowned architectural firms and other professionals were attracted to Saudi Arabia. Concern was evinced about the Islamic cultural tradition, particularly as it was manifested in public and government buildings. Appreciation of the architect's role in his society increased. And, as a final positive response to the building boom, the number of students studying design disciplines at Saudi and foreign universities multiplied.

The disadvantages of the sudden prosperity began with excess wealth in the hands of the lower middle class, who are architecturally uneducated and whose aesthetics are undefined. This led to the mushrooming of a bastardized type of fake and gaudy architecture. Secondly, in addition to the respected professionals, there was an influx of architects willing to compromise all professional ethics in order to pocket a big contract. This of course harmed the architectural profession substantially, and the architectural awareness irrevocably.

The wealthy and influential people who could have set a strong pace and a high standard for the architectural profession in Saudi Arabia largely failed to do so. Instead, these influential people turned most architects into agents who served their personal desires for social and material distinction. What Dr. Pharaon was saying about the young architects coming from abroad with a foreign education is not quite true, because what then could one say about foreign architects who arrive for a month or two and pretend to be the saviours of traditional architecture?

And how can we explain that it is the young Saudi architects who are now calling for the preservation of the traditional values of Islamic architecture?

A. Ahmed

Whatever justification is given for what is happening in the oil-producing countries, particularly Saudi Arabia, is insufficient. What is being produced there is alien to culture, to climate, even to function. I have recently been to Jiddah and Mecca; there I saw beautiful small-windowed stone buildings conducive to the climate being pulled down to make room for a forest of concrete and glass. In Mecca I was taken to visit a renowned twelve-story building in the centre of town, and believe it or not it was a car park—in a holy and a sacred place, where traffic to the centre of town should be strictly limited!

These issues go beyond architecture—they concern institutions from the highest level down to the implementation level. It is a question of culture and values, but as a number of participants have commented, these terms really refer to false culture and false values. So-called “Islamic architecture” is a rather vague concept and needs to be defined, but we cannot ask governments to define it. The Award's seminar process can be seen as a vehicle toward that definition. Intangible terms like “culture” need to be defined in tangible parameters and dimensions. Definition should be the role of this and perhaps other seminars, because our emphasis should be on the process of producing buildings rather than on the buildings themselves. If we focus on process we will truly be contributing to the environment in this part of the world.

I have some comments for Yasmeen Lari. I admired her presentation, and in particular I admired her showing us the Taj Mahal Hotel. She gave us a chance to criticize her because she criticized herself, and that type of work, whatever the cost, is an asset—she will avoid such mistakes in the future, and will learn from the process. Whatever she does, even if it requires many steps, is likely to be far cheaper than the activities of a foreign consultant. She also raised the important question of the morality of architects in advising clients, particularly governments.

I also have some comments about Yarmouk University. The university is just like a town, particularly if you are designing for a population of 20,000; if you include the staff members and their families and so forth, it is more likely to be a town of 30,000. Its growth should continue over a generation of more, and it might well exist for centuries. Consequently, I doubt that the proper approach for a university is the concept of a master plan. The term itself denotes a rigid framework. I think a more suitable term would suggest a development plan. This development plan should indicate land use, and land use in universities differs from that in towns. The university might have common central areas and a teaching core and students' residences and so forth. Where the university is remote from the town it will need to be supplied with infrastructure services, including sewage, electricity and water. A scheme should be detailed to show its feasibility, but these details should not be adhered to rigorously. Technology changes, needs change, attitudes change. How can something designed today fit one hundred percent of the requirements of a future which we know nothing about?

Gardezi

I speak as a much maligned bureaucrat and decision maker. I have been a patient listener over the past few days. A problem which has arisen repeatedly is the communication gap between architects and decision makers. I wish that more of the latter were represented at the seminar, so that we could get a clearer perspective on what is really wrong or missing between the two groups.

When a decision maker places his ideas and specifications before an architect, he
is likely to meet one of two reactions—either he is accused of ignorance, or his uninformed whims are implemented to the letter. This is the gap we must try to bridge. There is no point in telling the decision makers about the philosophies which we have heard expounded in the course of the seminar. I had the impression that the philosophy being bandied about in such elegant words was going to lead to the supposition that since grass is green, it must be Islamic!

One thing that was really striking about this conference was its emphasis on objects which are only useful to some five percent of society. We have totally ignored what we ought to be doing for the balance of society, the ones who require basic facilities in every city and every village. We exalt our heritage and its artistic marvels, but in truth we are living in a different age, and we must make concessions to the ranking of priorities. Basic utilities should be provided before beautiful objects, even if these objects represent some continuity of tradition. I did an experiment in Islamabad in which I wanted to build a house for the poor—anybody sitting on the pavement could get a bed in the place. I asked the architects to build this poorhouse in the shape of a caravanserai, but I discovered that it cost three times more to do this than to construct the concrete box that was the other alternative. Of course we would rather see a caravanserai, but we decision makers have constraints too. It is up to the architects to offer us some alternatives which may be more akin to tradition, and which will cost about the same as a more obtrusive modern option. When cost differentials are slight the choice is easy, but when the cost is three times higher it becomes very difficult to opt for this more expensive alternative.

I humbly request that the professionals try to understand the viewpoints of the decision maker, and I further suggest that we separate the urban institutions which must be provided as a result of political or social circumstances from the Islamic institutions. We have heard very little discussion of Islamic institutions, particularly the mosque. We have neglected the zawiyas and the sabils. We have also forgotten our good Islamic tradition of providing a majlis, a place where people can gather to air their views. The architects must help us in re-devising these institutions in a way which does not put such a drain on our scarce resources. The architect must not turn his nose up at the prospect of designing these small, traditional institutions—they are needed by fully ninety-five percent of the populace. If we do not first fulfill our duty to the majority of our populations, we will never fulfill our design potential in either technological or aesthetic terms.

I simply wish to raise a couple of points which I hoped somebody else would have raised by now. The first concerns a misconception on my part when I read the title of this symposium, “Places of Public Gathering in Islam.” I thought we might be talking at least as much about the spaces between buildings as about the buildings themselves. My point has to do with landscaping. Nearly all of projects we have seen contained an element of landscaping, and I have to admit that I was not very impressed by this landscaping. It was what one might call landscape as an

*Edirne, Turkey: Rüstem Pasha caravanserai. View across the courtyard
Photo: M. Pehlivanoglu*
apology, as if one were saying "this space which we created is perhaps not much good—it may be rather windswept, it may not be the best way of getting people from one place or one activity to another—but don’t worry, everything will be all right, we’ll landscape it." In the economic and climatic context we have been talking about this sort of landscaping is an absurd luxury. It requires too much equipment for maintenance, and hardly takes into account the qualities of the landscape.

There is in fact a perfectly serviceable landscape, a landscape of considerable beauty. The elements of the landscape should be harmoniously rearranged and respected, not subverted in the way we have too often seen. The first conclusion to be drawn from this is that perhaps we ought to design buildings of a sort which make ludicrous attempts at landscape unnecessary. The second is that I am surprised that so little comment has been made on one of the more distinguished contributions of Muslim countries toward architectural design: the garden. I wonder if we could not issue some kind of plea for a real revival of the art of gardening in Islamic countries.

My second point has to do with questions of scale. Speaking neither as an architect nor as a planner but as a simple user, I detected a pronounced tendency in many of these public building projects toward elephantiasis. They were often very large, in contrast to Koranic precepts concerning the modesty of building such large and prominent things. Another problem which merits mention is the difficulty of integrating such large objects into the existing urban environment. We talked about new housing projects, about new universities and so forth, but what about the hospitals and other buildings which must be integrated into existing environments?

In the context of conservation this integration is really of vital importance. Conservation implies change. It is certain that the growth of new institutions and revival of traditional institutions in Muslim countries will be an important element and generator of this change in the foreseeable future. But conservation also implies some
kind of an assessment of the capacity of the existing environment to absorb change, and this is the primary problem inherent in scale. I am obviously not asking for a homogeneous scale—there never was such a thing. There were always ruptures of scale, but these ruptures reflected some kind of hierarchy of values. The prominent buildings were the ones which expressed power or faith. But the scale of the projects we have seen does not necessarily represent or reflect any hierarchy of values. This scale responds to a search for efficiency, a search of questionable success. They either reflect no symbolic content or incorrect symbolic content. This poses quite a challenge to the architect, and I think the professionals have shown extraordinary ingenuity in rising to this challenge. Their response has been to try to reduce the bulk of these monsters, and often they are successful. However, there is a limit to what can be done because the scale of the public projects reasserts itself on a different level, the level of function which swamps other activities. I would suggest that if we are really serious about integrating institutional buildings into the existing urban environment, we must think in terms of more smaller institutions and of a dispersal policy for institutional buildings.

Now, my final point is derived from something Mr. Gardezi said about cost. We have been talking about costs as if the cash costs of projects were the same as the overall economic costs. I understand perfectly that somebody in the position of a trustee has to count the cash. So indeed does anyone who has been given a budget for executing a particular project. But the policymakers at the highest level should also consider other components: the total economic costs and the social costs. They should consider such things as the relative advantages of a capital-intensive or a labour-intensive building industry, and understand the role that the industry can play as an economic regulator. The decision makers should also consider the impact of building on their energy policy and on the balance of trade, and the availability of building materials.

Another factor which I regard as very important is the input which can be made by the people themselves in the housing process, if not in new construction than at least in improving or rehabilitating the settlements in which they already live. I wish we would not talk about costs as if there were only one sort of cost. The example of the caravanserais which Mr. Gardezi cited as costing three times as much was a consideration only of cash costs. I believe that the particulars would be very different if, within the context of an entire country, one would consider the total economic costs.
Comments

Gutbrod

We have heard very good contributions over the past few days, but we are not very happy because we do not know what we have to do, what we can do. One thing which we tried to do was look for better form by looking back to Islamic forms, whatever we understand them to be, whether mud houses or attached rowhouses. My opinion is that the system of finding the right people for a job is an entirely commercial one, which most of the time fails to bring the right man to the spot. What power does this man have? He receives orders to execute, and he can say no, but there are 199 others waiting to fulfill the demands of even the most misguided clients.

We need a lobby that can try to formulate the higher motives, that can speak for spiritual and not commercial or profit-motivated things. This lobby can help educate the decision makers and help bring the right components together—the client, the budgets and the professionals. An architect should be chosen because of his spiritual and moral qualities. My hope is that perhaps the Aga Khan Award can be developed into such a highly moral, absolutely uncommercial, peaceful lobby or directing body. Then we could hope to develop a truly Islamic architecture for today.

Jencks

The title of this seminar, “Places of Public Gathering in Islam,” is soul-searching in an implicit way. The seminar seeks a definition of Islamic architecture. We could have a conference which asks “what is American architecture,” and see that American architecture is suffering from almost exactly the same problems that face Islamic cultures. These problems are brought about by the predominance of mass culture and its omnivorous appetite, and by the industrial imperative which erodes traditions as soon as they happen to be built up. The size of modern commissions and the speed with which they are completed seems to me almost to preclude architecture. We have indeed seen a lot of engineering and building, but where is the architecture? Except for the work of Hans Hollein we have not seen much architecture at all, because it is precluded by the way it is produced today.

Another point I want to underline is the way in which the international elite dominate all regional cultures today. The best architecture being produced anywhere dominates, and maybe even terrorizes, the rest of the world. A few architects in New York or Japan or London can have an extraordinary effect today because of their global situation and because, in any period, most people learn from mimicking. Given those realities of mass culture and a world village outlook, it seems to me that the only way for an Islamic architecture to emerge is by creating a countervailing force in the form of Islamic schools of architecture. I know this is somewhat unpopular idea, associated with academics or with politically unacceptable alternatives. But only through identifying the young or the emergent creative individuals within Islamic architecture—giving them active patronage over a period of time, and allowing them to work and develop within the goals of the clients, thereby developing a new productive process—can a countervailing force be built up against this international elite.

The school of Wren established English architecture and that of Gaudi established Catalanian architecture, both as an active style and as a philosophy; in searching for a true Islamic architecture perhaps these can serve as precedents.

I do not think that conferences, committees and the good intentions which have been voiced so far will quite produce the countervailing force I have been talking about. In order for the best architecture produced by Islamic architects to be disseminated, we must establish an institution such as the lobby recommended by Prof. Gutbrod—a lobby which can act objectively, can criticize and can also act as a patron.

Atepa

My suggestion is that a permanent advisory committee go around officially and with much publicity to every country which thinks its local Muslim aesthetic or cultural identity is in danger. This panel would advise the decision makers in these countries, because unless government officials are made aware of the negative impact of their laissez-faire attitude (so often revealed when they are presented with architectural projects), the well-founded resolutions of this seminar will end in a quarter-page in the Architectural Record or Progressive Architecture or L’Architecture d’Aujourd’hui. I therefore strongly recommend that a most vigorous campaign be carried out on our behalf. One practical means might be setting up some kind of Declaration of Amman which could be produced in a single brainstorming session of our very talented seminar participants. Much publicity would have to be made about it; many people are well-intentioned, but their good intentions end up in desk drawers because they do not know how to go about publicizing them.

Kuban

I have a few remarks, which can actually be taken as a summary of all our seminars. Our discussions clearly show a gap between the conceptual and practical approaches to Islamic form or Islamic quality. The architects have difficulty in conceptualizing their formal approach and the non-architects are unable to concretize their concepts. We notice among the professionals a tendency to call any decent architecture sensitive to the local conditions “Islamic,” even if it is not formally evocative of a particularly Muslim form. It is equally noticeable that there is a strong reaction against those forms which are identified with the image of the modern West: high-rise buildings, big dimensions, glass screens, imported technologies. However, we must confess to a rather hazy if not altogether confused image of
the modern Islamic environment. The confusion comes from the fact that we tend to mix up three different levels of expression. Islam is expressed in physical form, in behaviour and in words. The latter is the least changeable, but the other two have changed throughout the history of Islam. The immutable interacted with the existing situation to generate new patterns of behaviour or new forms. These are what we call Islam as existence or Islam as culture.

We may take the University of Blida campus as an example; there we can see a project which directly responds to its situation. The demand for a new university is expressed in modern terms within a Muslim society, and the image sought is that of a modern university—the prototypes of which are in the West and not in Islamic history. The material constraints have here been well understood and interpreted by Mr. Netsch; they are basically correct within the formalism which is the domain of individual artistic approach. If we are dissatisfied with Blida it could be on two levels: one is purely architectural, which is not our specific concern here, and the second is the image created by Blida for which both the architect and the client can be blamed.

From the above-mentioned observations and evaluations one may derive some conclusions. There are generally two basic approaches to new construction: in one the use of traditional local elements, forms and spaces is interpreted within a modern programme; in the second, local conditions are respected but formal solutions are attained through modern analytical methods and modern forms. In the first case the concept of form is taken from history, but the inherent weakness of this approach is that it idealizes and petrifies a form and unconsciously rejects changes; it may be called a fundamentalist approach. In the second case change occurs spontaneously. There is no inherent weakness in this approach, but it is dangerous and destructive for the traditional environment and social structure to move toward a false image. In most cases today this is a false image, but it is nonetheless extremely strong because it is a collective image. It is created by modern technology, and it cannot be changed immediately.

In order to be on the right path we should probably be skeptical of immediate new formal solutions. But we should discourage any sort of imitation of form and attitudes, and encourage the decision makers, architects and public opinion to reinterpret modern life on their own terms, terms within their own tradition and conditions. Respect for and harmony with the past is the most practical guide.

Yücel

As we approach the end of the seminar I think we have to look at what we have already seen and heard in order to look forward. The aim of our investigation has been to develop more appropriate architectural vocabularies for contemporary architecture in the lands of Islam, taking its public spaces as examples.

When we talk about form and vocabulary we talk inevitably about language. I do not want to explore the well-known and confused discourses on architectural semiotics, but we have to consider some basic features as concepts of architecture and as means of communication. In order to go beyond general and abstract issues such as “Islamic shape” or “Islamic space,” or some so-called Islamic elements such as the (superficial) use of courtyards, arches or even geometry, we have to explore the syntactics of the language. To do this a special effort has to be made to discover its deep structure. This knowledge, I am afraid, is neither complete nor satisfactory enough to develop criteria for the Award.

Amman, Jordan: Dar Al-Shaab press and publications building. Cost of construction $700,000 U.S.
Architect: Waddah el-Abidi
Photo: W. el-Abidi
In this respect we face two kinds of issues. The first is the content or *raison d'être* of the end product, the organization of functional patterns, hierarchy of symbolic elements and so on. The second kind of deep structure is the basic organizational pattern or the morphology of the physical space. If we consider such research our immediate objective, we see ourselves faced with the need to move from the scale of single buildings to large complexes. In considering the perceptible space in which communication is possible, we have the urban scale related to single buildings and the mutual organization of these two entities—in other words, the deep structure of the architecture of cities, the Italian concept of "l'architettura della città." This would seem to be a useful approach in order to understand our buildings in their environment.

A building may be seen as a symbol—object, or considered only as an element of the urban fabric, a limited portion of the organization of the built space. From this latter point of view the Award suffers, and perhaps totally collapses, from the elitism of *chefs d'oeuvre* concepts.

These ideas are implicit in this first Award programme and in the seminar discussions, even if they are lacking in some of the projects we have seen. They lead to some further implications for the future of the Awards. First of all, the Award programme should not only promote masterpieces (symbol—objects) in order to find excellence in achievement; as excellence can only be reached through a long road of development, it should also promote this accumulation. It should encourage research itself as a patient and humble effort to accumulate knowledge about our environment and our history, through which the above—mentioned deep structures grow and emerge. By this I mean not only the very scientific research work of academics, but also the continuous and very pertinent total work of some rare designers, those who through their patient research try to touch the inherent deep structure of their culture and traditions.

All of these humble efforts, the more modest by the scholar and the more ambitious by the designer, are steps on the long march toward excellence in the search for form and—if excellence and perfection are only found in God—toward wisdom.

**Haider**

This seminar has been fascinating. It has brought recognized scholars and practitioners of Islamic architecture face to face with those who, though well known in their own spheres, might rarely have thought about issues of architecture in the world of Islam. The meetings have been educational in many ways. Paraphrasing Saadi of Shiraz, "One may learn more by recognizing what not to do than by emulating what ought to be done." Over the past three days we have seen a great deal of what should not be done. This is indeed a significant step forward. However, if one dwells too much upon what is undesirable one can easily become a victim of cynicism leading to despondency.

I would like to suggest two specific items for further consideration by the Aga Khan Award:

1) The problems of architecture for Muslim communities in those parts of the world which are ideologically, culturally and historically non—Islamic (not necessarily anti—Islamic)

2) Most of us cherish and take great joy in history. However, it is important that our past anchored thinking be replaced by some anticipatory and visionary thought. We may construct, though not necessarily physically, some utopian models of Islamic reality for discussion and debate. If we start from a utopian construct and tenaciously stay as close to it as possible, while bringing it down to match the present reality, we will get better architecture than if our starting point were the highly constrained and pragmatism—ridden present reality.
Finally, I would like to register a purely personal feeling. Over the past three days we have been repeatedly reminded of the distinctions and disparities among East and West, Orient and Occident, North and South. One begins to get the feeling that there is a sinister and exploitative West imposing itself on an innocent and docile East. This might be emotionally satisfying rhetoric to some, but I submit that in such a seminar these dichotomies have little positive value. We will be much better served if we recognize that for any architectural problem situation there may be good design responses or bad ones. Temptations toward irresponsible, exploitative and just plain bad architecture, or the desire and ability to create appropriate and beautiful architecture, transcend the distinctions of East and West, Orient and Occident, North and South. It is only through the spirit of openness and freedom of discourse, and a conscious attempt to avoid ethno-cultural chauvinism, that we have some hope of achieving our common goal: the making of an architecture rooted in an idea as profound and as universal as Islam.
Concluding Remarks

His Highness the Aga Khan

After all of the formal and informal discussions and today's summary remarks, there is very little left for me to say. I think I should begin by expressing again my gratitude to His Majesty the King, to His Royal Highness the Crown Prince and to the government of Jordan for all the assistance and support they have given us. Much has been said at the seminar about influencing decision makers, and there are no more important decision makers in Jordan than the King, the Crown Prince, the Prime Minister and the cabinet ministers who attended the opening session. This is the first time in the five pre-Award seminars that the head of state has personally opened the seminar, and I think this alone demands an expression of gratitude and admiration. The Crown Prince himself presided over two full days of our meetings, and also took time to speak to us about central issues concerning the conservation of Islamic buildings and the Islamic heritage. I sincerely hope that the example set here in Jordan will be emulated in the Islamic countries in which we hold future seminars.

At one point during the seminar I was concerned that we were moving in the direction of architecture for architecture's sake, and moving away from the fundamental concerns which affect the Islamic world today. Only a very small part of that world is wealthy; vast numbers of its population are poor. This has been said before but it deserves reemphasis, and I was particularly gratified that all three workshops made statements encouraging this priority and indicating directions for Islamic architecture in the future. In addition, not one of them ignored the realities of the Islamic world of today.

Much was said during this seminar about communication. I have no doubt that communication is central to everything we are trying to achieve, and I am very grateful to important members of the architectural and general media for their participation in this seminar. But I am concerned that communication might be interpreted as centralization. If we look at Islamic history, we find that great buildings were simultaneously built all over the Islamic empire, even when mass communication was practically new. This is one of the reasons we have resisted and will continue to resist anything which would lead us in the direction of creating a school. The Islamic countries have their own schools of architecture, complete with men of talent and creativity. It is much more important that the Aga Khan Award encourage the strengthening of these schools and the support of their graduates, particularly the younger architects who in a sense control the destiny of the Islamic architectural world of the future. This is an issue of primary concern to me, and one which has been raised many times.

I would like to close the seminar by saying that this has, in my view at least, been one of the most creative seminars we have had. I think we have achieved a sense of opportunity but, even more difficult and perhaps more important, have given that opportunity some direction, some idea of routes which could be taken in the future. We have not sought to impose any formal guidelines, but aim at contributing to the thought, imagination and creativity which are required if we want to improve the future built environments of Islamic countries.
His Majesty King Hussein opened the seminar by welcoming Their Highnesses the Aga Khan and Begum and by expressing his support for the Award programme. Citing the harmful impact of unguided construction of the environment, His Majesty stressed the need for more deliberate planning and firmer links to the rich Muslim architectural tradition. His Highness the Aga Khan responded in his opening remarks with appreciation for the interest shown the Award, not only by His Majesty King Hussein but by other leaders in the Muslim world as well. He reviewed the topics of the previous seminars and supported the selection of Jordan as the venue of the fifth seminar. He told seminar participants that the extensive new construction in Amman should serve to emphasize the urgency of their endeavours.

His Highness the Aga Khan cited his own involvement in building programmes, which range from small schools and rural health clinics to large regional hospitals and teaching centres. He stated his belief that imported ideas and technology must be suited to the needs of the people, and that Muslims now face the danger of losing a vital sense of continuity with the past.

The topic of the fifth seminar, public buildings, acknowledged the considerable symbolic and physical presence which these structures command in the environment. His Highness the Aga Khan concluded his remarks by reaffirming a belief that the continuation and evolution of Islamic cultural and architectural traditions is of vital concern to all Muslims.

In a brief opening presentation, William Porter reviewed the concerns and attitudes of the previous seminars. The initial seminar pointed to architecture as a potential mediator of Islam on three levels: as idea, as society and as symbol. These themes were recapitulated in the next three seminars with their successive emphases on conservation, housing and symbolism. In the search for contemporary form Porter stressed the careful conservation and sensitive reuse of existing forms. He defined form as a function of individuals and groups in society, and concluded that significant form can facilitate society’s awareness and redefinition of culture.

Nader Ardalan’s discursive essay addressed several issues related to places of public gathering. He began by noting that certain cosmological concepts which formed the basis of major Islamic cities in the past have been disrupted by catastrophic changes in modern times. As an example he cited Hamadan, Iran, where a radial road plan superimposed on the city in the 1930s has destroyed the unity of the bazaar.

Ardalan strongly criticized notions of progress which emphasize only material concern. He observed that Islam, based on a pragmatic view of physical reality, promotes a “middle way” in which material and metaphysical values are balanced. He stressed that architecture must be adapted to ecological constraints. Ardalan also discussed the role of public buildings under three broad subheadings: places of education, places of leisure and recreation (with a focus on sports centres, public parks and tourism), and places of civic and commercial activity. He presented three case studies of his own works in which traditional Islamic ideas have played a prominent role. Further emphasis was accorded the use of local materials, available local labour and passive, energy-conserving design.

In their paper, Mona Serageldin and François Vigier proposed that the process of modernization has created a growing alienation between the users of public buildings and the procedures by which the buildings are provided. As governments assume the broad range of responsibilities previously undertaken by religious authorities, community associations and charitable individuals, there is a tendency for buildings to become routinized. Widespread use of Western prototypes for public buildings has to some extent prevented the full and proper use of these buildings by the population which they are intended to serve. In a historical survey of modernization in the Middle East and North Africa, the authors examined the institutional factors which led to the selection of Western models in the delivery of public services. They also analyzed the consequences of such factors as the institutionalization of the contract system of labour recruitment, the adoption of the bidding system, the impact of standardized building types and the adoption of new programmatic and design standards in city planning.

Serageldin and Vigier labeled user participation in the design process vital to the successful delivery of public services. Local needs, concerns and lifestyles must be taken into careful account and the use of unsuitable, unfamiliar building styles and programmes avoided. They noted that most professionals express interest in their own culture by a superficial use of traditional forms. They emphasized that professionals, rather than bureaucrats, should take responsibility for asserting and incorporating user needs and desires into the design process.

Three case studies of educational environments were presented to the seminar: the University of Bliida in Algeria, Yarmouk University in Jordan and Pakistan’s Karachi University. According to Walter Netsch, the design for the University of Bliida by Skidmore, Owings and Merrill reflected three factors: the goals and aspirations of Algeria, the underlying Islamic ethic and the limited resources available relative to nationwide demands in housing, industry and other areas. The University represents a total programme in the humanities, technology and science. Its physical plan comprises six individual areas, each pedestrian-oriented and each with an individual focus. According to Netsch’s holistic aesthetic, the geometry of each building, unit and garden is a variation of the geometric orders (field theory) which underlie the overall design.

Raif Nijem described in detail the administrative and organizational planning necessitated by the establishment of Yarmouk University in 1975. When complete, the University will include five faculties emphasizing various disciplines in the sciences and technology. The student population will number twenty thousand, and the permanent campus of 2600 acres will be one of the world’s largest.
The Master Plan for Yarmouk University was devised by Kenzo Tange and Urteg, and was selected from among 175 applications. Nijem cited twelve factors which led to the selection of the Tange design. Among these were the monumental character of the University, the rhythms and spaces between buildings, the social spine connecting the University to the neighboring community, and the simplicity of the architectural system and spatial organization based on a succession of courtyards. In concluding his presentation, Nijem quoted Koranic verses relevant to the creation of an Islamic environment.

Michel Ecohard briefly described the main features and underlying principles of the design of Karachi University. Designed to accommodate seven thousand students (one thousand in residence), the 1200-acre campus is located eight miles from the city center. A north-south road forms the principal axis and divides the campus into two halves. The great flexibility of the scheme permits construction by degrees and subsequent enlargement without endangering the whole fabric. The gardens and open spaces are planned to evoke Moghul landscaping conceptions, most notably in the use of water as a decorative element.

Attalah Doany distributed literature about the Jordan University campus to suggest a local solution which differed from the Tange plan described by Nijem. Ismael Serageldin began the discussion session with a comment on the differences in character between the traditional Islamic university and the contemporary university. Ardaline observed that universities can be incorporated within existing communities instead of segregated on separate campuses. He also averred that greater compactness rather than dispersal is more suitable in light of the need for energy conservation. Fredj Stambouli remarked that the academic space in contemporary Arab-Muslim universities is designed as a tool of control and seclusion, rather than conceived as a space to stimulate contact or promote the rise of a genuine student community.

Netsch spoke of the difficulty of incorporating ten or twenty thousand students into an existing urban fabric. Soedjatmoko expressed concern that the monumental scale of the universities described might lead to the creation of enclaves of arrogant and insensitive technocrats. Abdulla Bokhari discussed the isolation of King Abdulaziz University in Saudi Arabia from its surrounding community. Gulzar Haider presented a schematic diagramme explaining the six interactive roles of the Islamic university. Arthur Erickson challenged the North American educational concept and suggested that Islam seek other, more integrative models.

In response to the criticism of Ardaline, Soedjatmoko and others, Nijem defended Yarmouk University and claimed that, owing to decentralization of the facilities, it will not appear monolithic in scale. Mohamed Makia, however, described Blida, Yarmouk and Karachi universities as "prestige projects by prestige consultants." He criticized the Blida University plan as lacking in sensitivity to the Islamic environment. Samir Abdulac observed that Western universities often experience problems when they expand into the community. In contrast, Islamic countries enjoy the opportunity of linking university building to new town planning. Expressing dissatisfaction with the university designs presented, Nasrine Faghib stressed that those responsible for design must make a genuine break with internationally-accepted forms. Mokhless Al-Harriri observed that a proper Islamic design concept emphasizes the baqen (inner dimension) rather than the thafer (outer dimension).

I. Serageldin reported the findings of the educational workshop. Their approach was to begin with existing communities and their aspirations, and from these extrapolate parameters of the university design process. They warned against excessive devotion to any architectural vocabulary, and cited the essential elements of a university as student life, teacher life, student/teacher interaction and university/community relationship. The most basic considerations in university design, according to the workshop, are programme, balance areas, simplicity, volume and utilization.

Yasmeen Lari opened the session devoted to recreational and tourist buildings by discussing these activities in their traditional and contemporary contexts. In medieval Islam recreation was commonly understood to mean spiritual rejuvenation. Travel was undertaken for the sake of trade, education and pilgrimage, and by the imperial courts. Lari reviewed the forms of traditional lodging such as the caravanserai and the Sufi khâlangah. She also surveyed paradise gardens and their origin and function.

In modern times, tourist facilities have been built in Muslim countries mainly to accommodate Western tastes. The recent revival of Islamic fundamentalism, however, has encouraged new directions for tourism. Lari described her own experience in designing a large Karachi hotel on the Western model. To develop local expertise she encouraged the involvement of local professionals in all phases of the design process. The exclusive use of foreign consultants results in more expensive projects with longer completion schedules. She also described a government project in which inordinate expenditure was approved by decision makers for the construction of a Geneva-style fountain at Keenjar Lake in Pakistan. Among her conclusions Lari recommended realistic expenditure for tourist facilities and the judicious use of resources.

Abdeslem Farouaoui and Patrice de Mazières presented a film, directed and produced by Mohamed Melehi, which described their recent projects for the accommodation of tourists in Morocco. They viewed tourist architecture as an ideological choice that posed a challenge to architects. They described and illustrated their own efforts to develop a hotel architecture throughout Morocco evocative of vernacular building styles and employing the talents of local craftsmen.

In the discussion which followed, Stambouli defined architecture as a means of political expression. Porter averred that the dynamics of the architect-client rela-
tionship often prevent the creation of designs more sensitive to local conditions. Haider expressed his support for the aims of the Aga Khan Award, and Bokhari likewise urged that Muslim clients seek a better understanding of their environment. Hassan Fathy observed that the adoption of an international style threatens the existence of regional styles in all Muslim countries. He also cited a break with tradition which cannot be replaced by modern architectural education. Lastly, he stressed that architecture in Islamic countries should be subject to public criticism and debate.

Charles Correa alluded to the constructive influence of Le Corbusier on a generation of Indian architects. Concerning tourism, he urged that approaches other than large tourist hotels be sought. Doğan Kuban pointed to differences between Islam as a cultural attitude and Islam as a religious attitude. Oleg Grabar raised questions concerning the nature of leisure activities enjoyed by Muslims themselves. Lari reiterated the need for architects to evaluate their traditions.

The recreational workshop attempted to define the use of public spaces such as the *maidan*. Speaking for the group, Sherban Cantacuzino urged the development of an infrastructure for domestic tourism which would evolve around the *mazars* and other places of religious importance.

In the seminar session devoted to institutional buildings, the role of government buildings in Islamic cities was discussed in a paper prepared by Sir Leslie Martin and presented at the seminar by Cantacuzino. Martin designated two types of government buildings: those for national assembly and those for ministerial or day to day activities. He observed that these structures may be the most significant edifices that a nation builds for itself. Martin presented three examples at length: the National Assembly in Kuwait designed by Jørn Utzon, the proposal for the central area of Riyadh by the Albani Studio and the new government buildings in Taif. He posed a series of questions concerning the impact of government buildings on Islamic cities, and asked how such buildings may be adapted to meet organizational needs and what contributions the local construction industry may make.

Erickson prefaced his presentation by observing that the issues raised by the Aga Khan Award seminars were not exclusive to the Islamic world. They appear in every country whose strong cultural tradition is confronted by new technologies. He encouraged the questioning of Western institutions instead of their wholesale adoption, and noted the importance of experiencing many cultures for the evaluation of one’s own tradition. He felt that the conceptual bases of a country’s architecture, as well as any design aspects that respond particularly to climate and terrain, were not easily transplantable. Erickson described his own projects in the Islamic world, which included a ministry building in Riyadh, housing and planning projects in Kuwait and a Saudi Arabian military academy. In each of these examples Erickson stressed the integration of indigenous architectural concepts in contemporary designs.

In a slide presentation Hans Hollein discussed the evolution of the Tehran Museum of Glass and Ceramics, and described the refurbishing of the Qajar building which houses the Museum. New spaces were created within the existing structure but the fine wall decoration was left untouched. Special showcases, many with humidity and temperature controls, were devised for display purposes, and particular attention was paid to the lighting of each object or group of objects. Attention paid to the showcase designs gives the impression that they are “complementary objects”; from a practical viewpoint, the technology self-contained in the cases obviated its obtrusive introduction into the whole building structure. The cases were fabricated in Europe, then disassembled and re-erected in Tehran. The rationale of the Museum is to present the objects as works of art, and an audio-visual presentation provides visitors with information on manufacturing techniques and historical background of the pieces.

Michel Ecochard offered a brief description of the National Museum of Kuwait and the programmes housed in each of the five buildings which comprise the Museum complex. In the discussion which followed, Kuban averred that the large projects cited were only applicable to the oil-rich countries, and therefore set on inappropriate standard for the majority of Muslim nations.

Citing changes which have occurred in the Islamic world, Mulk Raj Anand expressed the hope that the Islamic sense of humanism will reassert the pivotal role of man. Labelling the presentations descriptive rather than analytical, Mahbub ul Haq raised a number of social questions pertaining to architecture for later discussion. Correa objected to the use of foreign craftsmen. Muhamad Sirajul Islam urged greater historical appreciation of the Islamic architectural tradition. Ardalan raised the issues of the centralization of decision making and the departure from the traditional density of Islamic civic places. Faghih praised Hollein’s endeavours at the Tehran Museum. Makiya criticized the planning and design efforts by Europeans in Kuwait which were alluded to in Martin’s paper. I. Serageldin urged that public buildings be public in spirit as well as in name.

Cantacuzino defended the efforts of Buchanan and Martin in Kuwait as attempts to correct the work of earlier British consultants. Erickson identified sensitive response to climate as one of the main sources of Islamic architecture. He also expressed support for the traditional multi-functionality of public facilities as a useful principle of planning, noting, however, that this was not practiced in the examples shown at the seminar. Concerning the Tehran Museum, Hollein remarked that there was no particular emphasis on making the Museum “Islamic,” and confessed an inability to pinpoint what would constitute a specifically Islamic building. In response to Correa’s concern for using local craftsmen, Hollein stated that these were solicited but with meagre response—there are virtually no glassmakers left in Iran capable of demonstrating that craft.

The institutional workshop, with Hollein as *rapporteur*, established the interrelationship between the physical environment and the institutional activities which take place
in that environment. The workshop recommended that the scale of institutional buildings be appropriate to the activities of the community.

Jordanian responses to the challenge of designing appropriate public gathering—places were examined in the site visits hosted by local professionals. Included on the visits were the Martyrs’ Memorial, the Jordan University Mosque, the Parliament Building and the Haya Arts Centre, all in the Amman environs.

In his survey of recent public sector building in Saudi Arabia, Ghaith Pharaon observed that the Western sense of “functional architecture” is often out of place in a Middle Eastern context. Although Saudi Arabia has no shortage of public lands or funds, the government embarked on a series of “rush” high-rise apartment projects. Pharaon described these structures as unresponsive to the needs and traditions of the proposed low-income occupants. The 1.2 billion dollars expended for 3600 uninhabitable units could have been allocated for the construction of low-rise satellite cities, in which each family would be provided a detached dwelling with a small plot and outer wall. In contrast to the housing projects, Pharaon praised the design of the University of Petroleum and Minerals as a successful synthesis of Western and Islamic design.

His Royal Highness Crown Prince Hassan outlined the dangers which threaten the Islamic and Arabic heritage in Jerusalem. He specifically cited the razing of homes and waqf properties in the Haram al-Sharif area. He decried the destructive al-Aqsa fire and the disrepair into which so many Muslim properties have fallen, and raised additional issues of sovereignty, control of municipal rights and control of the holy places. Commenting on the presentation by His Royal Highness, Nijem alluded to the challenge of preservation. Kuban proposed an international commission, and Grabar observed that one nominally exists already. Al-Hariri stated that the Israeli activities in Jerusalem posed an intentional challenge to the Islamic identity. His Royal Highness Crown Prince Hassan remarked that professional and intellectual support is needed for the preservation of Jerusalem just as much as financial support. He labeled the existing political situation “abnormal,” and spoke of a need for the three monotheistic religions to assume a clearer role in the city’s affairs.

In informal evening sessions, a number of participants gave slide presentations in areas of particular personal interest. Intisar Azzouz described the town of Ghadames in Libya, in which the strict separation of the two sexes is reinforced by the architecture. Faghiih described the structural deterioration which has taken place in the Casbah of Algiers over the past 150 years, and made recommendations for its renewal and preservation. Haider proposed guidelines and issues to be addressed in the design of Islamic buildings in non-Islamic places. As a case study he described the design of the Islamic Centre of North America in Plainfield, Indiana.

In a discussion of the social priorities and contexts of public buildings, ul Haq sought to highlight the policy implications of Islamic architecture. Noting the overwhelming poverty of most people in Islamic countries, ul Haq urged that scarce resources and monies be spent on meeting popular needs. Construction must be economical and cost-effective. If specific Islamic values such as equality are to be reflected, cities cannot be hierarchically structured, nor can access to public buildings be restricted. He expressed satisfaction that Islamic architecture had not been rigidly defined at the seminar, and praised the Aga Khan Award as the beginning of a new awareness.

Soedjatmoko underscored two conflicting tensions: the desire to preserve the Islamic architecture of the past and the need to meet present-day social and economic exigencies. He listed probable changes in education which may make certain contemporary projects obsolete. He further predicted that a rebirth of faith in Islamic countries will provide creative and unforeseen responses.

Grabar alluded to issues which had been omitted in the seminar discussions, such as spaces for movement and transportation. He also observed that, relative to the earlier seminars, Islam was not central to this seminar’s discourse and mention of the mosque as a public building was seldom made. He also observed a need for “training” of many kinds in the Islamic world.

Doshi summarized the preceding discussions in the following series of questions: What are the Islamic tradition and its lessons? Who should derive the benefits of development? Should emphasis be on borrowed technology or on local resources, wealth and skills? Should concern be for the immediate future, or should a long-term perspective be adopted? After seeking to provide answers to these questions, Doshi stressed the role of social institutions in the development process. He concluded that architects and designers will play increasingly prominent roles in future societies.

In the final discussion session, Bokhari added to Pharaon’s presentation by listing both advantages and disadvantages of the Saudi construction boom. He said that young Saudi architects are now calling for the preservation of traditional values. Awad el-Karim Mohamed Ahmed likewise expressed dissatisfaction with recent Saudi architecture. He praised Lari for adopting a self-critical attitude. Syed Ali Nawaz Gardezi interjected the viewpoint of the decision maker, and urged that priority be given to meeting the needs of the majority of the people. He also insisted that, if decision makers are to ignore pressing financial constraints and choose more appropriate designs for new buildings, the architects will have to develop more viable and cost-effective alternatives. To build a caravanserai for a poorhouse, he claimed, is three times more expensive than to build a concrete box. Piers Rodgers remarked that the seminar gave insufficient attention to landscaping, gardens and the broader issue of integrating buildings into the environment as a whole. The latter is of particular importance in the context of conservation. He also urged consideration of all costs, not merely economic costs.

Rolf Gutbrod blamed commercialism for
poor architecture, and proposed a lobby which would educate clients and promote the employment only of spiritually-aware architects. Charles Jencks observed that Western architecture suffers from the same identity problems as Islamic architecture. He noted that the work of a few architects tends to dominate the architecture of the rest of the world, and said that a countervailing force—perhaps the establishment of a pan-Islamic school of architecture—was necessary to combat this domination.

Pierre Goudiaby Atepa advised the publication of a “Declaration of Amman,” and the creation of a permanent advisory board to promote Islamic culture and aesthetic values.

As a summary applicable to all five seminars, Kuban noted a growing skepticism regarding modern architectural forms, and concluded that a respect for the past serves as the most pragmatic guide. In terms of criteria, Atilla Yücel suggested that the Aga Khan Award not aim at promoting the creation of isolated masterpieces. Rather, general excellence requires steady development and extensive research into the deep structures of architecture and culture. Haider advised that the Award encourage visionary, even utopian thought as a means of escaping what he called “the highly constrained and pragmatism-ridden present reality.”

In his concluding remarks, His Highness the Aga Khan reiterated his thanks to His Majesty King Hussein, to His Royal Highness Crown Prince Hassan and to the government of Jordan for their assistance and support. He observed the need for Islamic countries to develop their own schools of architecture. Finally, His Highness labeled the fifth seminar as one of the most creative in the series, in that it suggested some interesting directions for the future of Islamic architecture.