THE DESIGN OF A MUSEUM OF ISLAMIC ART FOR PARIS

by

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ABSTRACT

This thesis is an attempt to clarify a strategy of design and architectural vocabulary for handling the large public building in an urban context. It is concerned principally with the design of an art museum and will demonstrate the ideas, impulses, and processes which led to the building's form.

The creation of a public setting for looking at works of art is a relatively recent idea which, I feel, can be explored further in its formal and functional definitions. While there are basic principles to consider concerning lighting, sequence, scale, and the "artificial" context of museum space and time, there is no fixed language within the modern or earlier traditions for this type of building. There is, perhaps, nothing so distinct as a type at all, and one of the aims of this thesis is to devise a concept and a form which combine my own architectural themes with useful lessons from tradition in the definition of a museum which also responds to modern attitudes concerning the role of works of art in public life.

I have chosen to work on a recently proposed program for a museum of Islamic art in Paris, which will incorporate art and ethnographic objects from existing national collections. The museum program embraces three widely disparate contexts--that of the museum space, Paris, and the Islamic world. This poses a particularly interesting and complex set of formal problems for the architect.

The first of these has to do with defining the formal and functional character of the museum space. The second problem is the relationship of the building to its site, which addresses local as well as generic features of the Parisian setting. Context in this case includes the more distant realms of the Islamic world, defined
not by an actual physical setting, but by a cultural and artistic tradition. Thus another objective of the design is to create a building form which reflects the cultural nature of the institution and a sense of Islamic formal principles. The formal character of the museum will also stem from the arrangement of interior spaces, lighting directions, and from a concern for formal unity and clarity of image. In establishing an image for the modern museum one of the main difficulties lies in reconciling a strong unified form with a sensitive handling of size and scale. One of my interests in this thesis is to see how architectural elements from my previous schemes might be expanded and adapted to a new range of considerations and, particularly, to the problem of size and scale in the large institutional building.

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INTRODUCTION

This thesis is an attempt to clarify a strategy of design and architectural vocabulary for handling the large public building in an urban context. It is concerned principally with the design of an art museum and will demonstrate the ideas, impulses, and processes which led to the building's form. The creation of a public setting for looking at works of art is a relatively recent idea which, I feel, can be explored further in its formal and functional definitions. While there are basic principles to consider, concerning lighting, sequence, scale, and the "artificial" context of museum space and time, there is no fixed language within the modern or earlier traditions for this type of building. There is, perhaps, nothing so distinct as a type at all, and one of the aims of this thesis is to devise a concept and a form which combine my own architectural themes with useful lessons from tradition in the definition of a museum which also responds to modern attitudes concerning the role of works of art in public life.

I have chosen to work on a recently proposed program for a museum of Islamic art for Paris. The new museum will incorporate art and ethnographic objects from the Louvre, Musee des Arts Decoratifs, Musee Guimet, and other national collections. It will form part of a cultural complex, comprising a library and information center, a large auditorium, and a conference center. These various functions will be orchestrated in the overall scheme of my project, but more detailed attention will be given to the design for the museum.
The museum program embraces three widely disparate contexts— that of the museum space, Paris, and the Islamic world. This poses a particularly interesting and complex set of formal problems for the architect. The first of these has to do with defining the formal and functional character of the museum. I conceive of the museum as a sequence of spaces, varying in volume, lighting, and scale, whose main function is to enhance the display and formal qualities of aesthetic objects and to allow them to be perceived in a variety of ways. Thus I will be focusing on the problem of recreating in the museum a space which helps to anchor objects in their original context and which allows historical, typological, and cultural links between the works to be sensed.

In this thesis I also wish to handle the problem of the large institutional building in a civic setting, and I conceive of such a building as an extension of urban surroundings. The notion of circulation as the continuation of an urban route, the interlocking of public and private zones, siting and formal relationships of the building to its surroundings will be key considerations in the design.

Context in this case also includes the more distant realms of the Islamic world, defined not by an actual physical setting, but by a cultural and artistic tradition. Thus another problem of the design is to create a building form which reflects the cultural nature of the institution and a sense of Islamic formal principles. While the notion of what constitutes an "Islamic architecture" is difficult to define due to its varied expression over time and different regions, it is possible to distinguish pervasive formal themes within the Islamic tradition which can be restated in a modern building to evoke an Islamic feeling for space and mass. Too facile a view and interpretation of tradition, however, can lead to a form which is superficial and meaningless in its present context. Thus, ways of
abstracting principles from Islamic architecture will have to be found which are compatible with a modern vocabulary and system of construction, and with the particular conditions of the Parisian context.

This is not to imply that the form of the building is derived principally from responses to local and distant contexts. The museum has an interior logic of its own: its formal character will stem from the arrangement of interior spaces, lighting directions, and from a concern for formal unity and clarity of image. In establishing an image for the modern museum one of the main difficulties lies in reconciling a strong unified form with a sensitive treatment of size and scale. Because most modern architecture is based on a reductive notion of form, an intermediary scale is oftentimes lost. This makes it difficult to handle the large program without producing an overblown, stark monumentality, as exemplified by I. M. Pei's East Wing of the National Gallery in Washington, D. C. This does not mean, however, that a modern vocabulary is destined to fail in the sensitive handling of the large public building. Louis Kahn's two museums in New Haven provide rare examples of the judicious combination of controlling mass and articulate human scale.

In my architectural studies so far I have been concerned with defining a vocabulary of consistent elements able to handle a wide range of architectural tasks. Some of the elements used in previous schemes include: directional piers which help to define movement, axial views, and space; stairs and ramps as processional routes; clear volumetric distinction between public and private zones which are anchored by a main "central" space or circulation route; the articulation on the facade of a frame and regulating lines (window frames, mullions, railings, panels, etc.) to denote scale; and the use of the horizontal concrete cantilever to emphasize the raised plane as a public outdoor surface. One of my interests
in this thesis is to see how these generic elements might be expanded and adapted to a new range of considerations, and particularly, to the problem of size and scale in the large institutional building. Thus a vocabulary will have to be found, which allows the museum to combine scale and proportion, a sense of nobility, and a clarity of image, without becoming an isolated lump in the cityscape or an empty rhetorical gesture towards "culture."

Because the idea and basic functional requirements for the project are still tentative, more detailed interpretation of the program was based on my own notions of appropriate needs and arrangements. These were founded on first-hand observations of museum spaces and knowledge of Islamic objects, and on discussions with curators of Islamic art\(^1\) concerning exhibition techniques, spatial requirements, and working needs. Other sources included general readings on the contemporary functions of museums and on Islamic art and architecture.\(^2\) A study of previous museum solutions was also made as a means of determining basic strategies for handling spaces and circulation. Site analyses were based on actual site visits and on documentation provided by the Paris Planning Office who have conducted a thorough study of the area around the site, published in one of their recent journals (Paris Projet, no. 17).

While the givens of a site and program were useful in providing a framework for the project, my intention is not simply to provide a realizable solution for the problem at hand. Thus, more detailed programmatic and technological require-

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\(^1\)See Acknowledgments.

\(^2\)See Bibliography.
ments such as lighting and climate control, while important, are not a central concern of this thesis. Rather, the aim is to establish a method of design by which responses to larger fundamental problems may be brought together to form a rich formal synthesis.
THE PROBLEM

1. The Idea and Program for an Islamic Cultural Center in Paris

The idea for creating an Islamic cultural center in Paris was put forward by a group of French and Middle Eastern scholars whose interest was to promote a wider knowledge and study of Islamic culture in France and in Western Europe generally. The "Institut du Monde Arabe et Islamique" would not be solely for the use of scholars and experts in the field, but would address a general, interested audience. The aim of the program, as stated by one of its founders, was "... to inform and instruct the western public about the culture, civilization, and current events of the Arab and Islamic world."³

The idea of forming such an institution had existed for several years, but it is only recently that the possibility for its execution became real. Its emergence at this point in time is not merely fortuitous, but coincides with the growing sense of "Islamic consciousness" which has ensued from the economic and political "awakening" of the Arab countries. This phenomenon is not restricted to this one particular example. If one looks at the history of museums, it is apparent that economic expansion and a sense of national or cultural pride often coincided with the creation of public buildings.

³"... destine a informer et instruire le public occidental sur la culture, civilization et evenements courrants du monde arabe et islamique." From an interview with a member of the Institut, in November 1979.
The situation of the cultural center in Paris is also not merely a chance occurrence. While it is unclear to me where or exactly by whom the idea for the building was conceived, it did not fall on unfertile ground in the French capital. Several people in Paris, among them scholars, diplomats, and patrons, had sympathetic ties to particular Islamic countries and were eager to see such a cultural program established. Equally important, perhaps, is the fact that France as a nation has a long tradition of contact (if not always a stable one) with countries of North Africa and the Near East. Such a project also relied on the existence of a major fund of objects which the French museums were able and willing to supply. Collected over the last 250 years during France's colonial era, these objects were brought back from numerous expeditions, beginning with Napoleon's Egyptian campaign until those of the 1930's when the Musee Colonial (now the Museum of African and Oceanic Art) was founded. The idea of a cultural center and museum was also encouraged by museum curators in Paris, who felt that Islamic art was unduly represented, badly displayed, and too fragmented among the various museum collections. The Louvre, for example, contained key pieces from the earliest expeditions and covered a wide range of media, periods, and regions. Other museums owned objects specifically related to the nature of their collection: the Musee des Arts Decoratifs specialized in textiles, wood and bronze work; the Musee des Arts Africains et Oceaniens had the largest collection of art from the Maghreb; the Bibliotheque Nationale owned books, manuscripts, and miniatures; the Musee de l'Homme had objects of an ethnographic nature; while the Musee Guimet, essentially a museum of Far Eastern art, had miniatures from Moghul India. Without depleting museums of their entire Islamic collections, many curators were eager to see a new Islamic museum formed which would provide better exhibition facilities and give a
more coherent view of Islamic art to the public.

While no detailed program has yet been fixed, the basic functions of the cultural center were to include a permanent museum collection and temporary exhibits area open to the general public; a library and information center serving the public as well as scholars and the museum staff; an auditorium for the showing of films and lectures whose use was also shared by the public and more specialized groups; and a conference area reserved for the Institut's gatherings of scholars and guests. One of the Institut's sponsors stressed the need for separating the public from the more restricted functions, while maintaining some physical links between related uses, such as the exhibit spaces and the auditorium, the library and the conference center.4

Although part of the cultural complex and funded by some of the same sources, the museum remained affiliated with the national association of museums and would be independently administrated. The museum and its supporting services thus had to be thought of as an independent unit, but formally integrated with other functions of the center. It was to hold 4000 square meters of exhibition space with a curatorial and storage area of 2500 square meters (see list of program requirements). Additional space for temporary exhibits could be added to the main body of the museum or placed separately in the building. The museum was not conceived on the grand scale of other national museums, such as the Louvre, but was to be moderate in size, so that the entire display could be viewed comfortably in one session. This meant that a major portion of the museum collection would be kept in storage

4Information based on an interview held with the Institut president in Paris, November 1979.
rooms in the curatorial wing. These, I felt, could also serve as study spaces for scholars. Objects would be placed in the museum space on a rotational basis, and this was a suitable method of display because of the fragile nature of Islamic objects and their sensitivity to light and exposure.

While museum curators were mainly concerned with presenting a historical view, sponsors for the cultural program felt that museum displays should give a broader picture of the Islamic world and include ethnographic objects, photographic displays of geography and architecture, as well as contemporary examples of cultural and technological achievements:

The museum is not only a museum for art objects, but will also contain objects from daily life, models of cities and building types, and will demonstrate technological methods used in agriculture and industry . . . from the past until our own times. ¹⁵

It was also suggested that each Islamic country be given a space where salient contemporary and historical achievements could be represented. ¹⁶ The idea of juxtaposing an irrigation system with a 15th century garden miniature, a modern building method with a vernacular example, was appealing. My own view, however, was to place objects of a historical, artistic, and ethnographic nature in a separate space from those related to contemporary functions and innovations. Without such

¹⁵"Le musée est non seulement un musée pour objets d'art, mais contiendra également des objets de la vie courante, des maquettes d'architecture et d'urbanisme et montrera les méthodes techniques utilisées dans l'agriculture et l'industrie . . . du passé jusqu'à nos jours." Interview with sponsor for Islamic program, November 1979.

¹⁶This was met with skepticism by the Institut members, as too many rooms (about 33) were required.
a distinction, there was a danger of obscuring the quality and meanings of objects, as modern-day borders did not always coincide with traditional regions, cultural origins or influences. Furthermore, I saw the main function of the museum as providing a historical perspective and not as promoting separate national interests. Thus, the museum space in my project would contain works of art from the permanent collection, and exhibits of a more popular and contemporary nature would be placed in a separate temporary exhibits area and in the informal setting of a public foyer.

From the initial outline of the program and the Institut sponsors' stated aims it became clear that the various functions of the complex were seen as integrally related and were to be orchestrated in a unified building form. It was also emphasized that the overall form of the building should express the cultural identity of the institution and be distinct from its modern Western neighbors. I saw these aims as linked, for the reconciliation of public and private realms within a single, tightly-knit structure was an inherent principle of Islamic urban design. Analogous arrangements to those of the traditional Islamic city could therefore be used in the present building as a means of achieving both functional and symbolic aims of the program.
MUSEUM OF ISLAMIC ART PROGRAM

Permanent Exhibition Space  4000 m²
Temporary Exhibition Space  1500 m²

Facilities (Public):
  Reception area/Offices  flexible
  Cloakroom and Toilets  90 m²
  Museum cafe  180 m²
  Museum shop  130 m²

Facilities (Museum):
  Reserve collections--storage  2000 m² approx.
  Conservation lab  90 m² approx.
  Conservation technicians' offices (4)  40 m²
  Wood shop  90 m²
  Guard room (cloakroom, rest area)  30 m²
  Technical services on separate floor -- Total approx. 2500 m²

Administration:
  Director's office & secretary  30 m²
  Curators' offices (6)  120 m²
  Receipt and dispatch  90 m²
Circulation, Outdoor Courts, Garden Flexible

Connected Facilities:

Cinema-lecture hall 400 m$^2$ approx.
Library and Information center 720 m$^2$ approx.
Public Uses:
- Temporary exhibition spaces
- Cafeteria
- Museum shop
- Foyer, circulation, outdoor areas

Related Uses:
- Cafeteria and shop
- Auditorium -- Museum -- library
- Guard room and service area
- Temporary exhibits

Semi-Public (Shared) Uses:
- Library and Information center
- Auditorium
- "Permanent" Museum

Library -- Curatorial offices -- Storage rooms
Receipt and dispatch

Private (Use upon request):
- Conference center
- Administrative offices
- Services area
- Reserve collections and curatorial area

Storage (reserve collections)
Library -- Conference center -- Auditorium
Administration
2. Choice of Site

While details of the program are still in the process of being formed, a site for the building has already been determined on the southern bank of the Seine to the west of the Eiffel Tower. It consists of a vacant lot of 8000 square meters which was considered to be an adequate ground area for containing a large building of moderate height (five stories) as well as a garden or outdoor public area. The Institut's reasons for choosing this site were pragmatic ones, based on the scarcity of large vacant sites within Paris and on the fact that it belonged to the city and could be obtained at no cost (because of the institution's public and civic function). Secondly, the site was located on a main vehicular axis along the Seine and was close to the residential area of the 16th arrondissement where a major portion of the city's museumgoers lived.

The physical quality of the site itself was particularly unattractive and harsh. Surrounded by a chaotic jungle of highrise towerblocks, an elevated subway line, the new Australian embassy, and a highly trafficked boulevard along the river-front, it was constricted on all sides and could not benefit from views of the water at ground level. In physical terms, it seemed an unlikely place to put a cultural center, for any sense of public life and noble expression of form would only be diminished. This was an extremely conventional choice of site, for its location favored a highly selected public and stayed within a zone where numerous museums already existed (Musée de l'Homme, de l'Art Moderne, Guimet, etc.). For these reasons I decided to abandon the site along the Seine and choose a new site which was socially less exclusive and offered more inspiring and harmonious surroundings.
In searching for a site I consulted with the Paris Planning Office as to available large plots which could accommodate a cultural function. Several sites were pointed out within the Parisian area, all of which contained buildings to be torn down or renovated in the near future. These included a defunct railroad station on Place de la Bastille, old government buildings near the Eiffel Tower, a block of theatre buildings south of the Montparnasse tower, old warehouses along the bassin de la Villette, and finally, several plots along the canal Saint Martin in the 10th arrondissement to the northeast of Paris. Among these I chose the canal Saint Martin area because it combined natural scenic beauty with an urbane setting, and was more removed from noisy traffic nodes than the other sites, while still easily accessible by car and public transport.

The specific site for the building is located on the western bank of the canal Saint Martin at the point where the canal makes a sharp bend (see map of Paris and aerial view). It forms a quadrilateral of roughly one hectare (10,000 square meters) and borders on a public garden to the west, the canal boulevard to the east, a vehicular side street to the south, and a pedestrian street to be made along the northern edge (see plan of site boundaries and axonometric view). The site is easily reached from both the center of the city and the suburbs, being adjacent to a major boulevard and the Gare de l'Est, an important rail and subway terminal. From the Louvre, for example, one can reach the site by subway in five minutes. Main pedestrian approaches to the site are from the west (coming from the Gare de l'Est) and the primary vehicular route is along the canal boulevard going North.

The canal forms a transitional boundary between the residential and commercial center to the west and the outlying industrial zone, which is reflected in
the diverse architecture and uses of the surrounding buildings. Due to a local
decline in crafts and industries over recent years, the Paris Planning Office is
in the process of rehabilitating the canal district for new public and residential
uses. My site is among those to be cleared, and presently standing municipal de-
pots and offices will give way to the extension of the garden towards the canal
and to other yet unspecified uses.\footnote{It is suggested that the corner apartment building and the one along the
side street be kept, as these are "solid" and presently in use.}

For these reasons, I felt that the placement of a cultural building on
this site was realistic, as well as appropriate. Along with other public activi-
ties proposed in the renovation plan, such as pedestrian malls along the canal,
shops and cafes, the new museum would help to reactivate and attract new people
to the area.

Situated on the "elbow" of the canal, the site offers long-range views
along a poetic sequence of locks, arched bridges, and wide tree-lined embankments
(see photographs of canal and site). The canal is cut off from the rest of the
city by a high ridge of flanking buildings and is sensed as a world of its own.
Its rugged stone levels, rows of plane trees, and cast-iron bridges belong to an
erlier industrial age. On winter days, the canal is tranquil and like a smooth,
dark green snake; on clear, brisk days, it becomes a deep blue swiftly moving
current. Cargo barges silently glide along the water's surface, descending gradu-
ally towards the Seine and main axis of the city.
Fig. 9. Photograph of site from the garden side
Fig. 10. Photograph of canal embankments
3. Definition of the Museum

The third element of the problem was to establish a basic concept for arranging objects and spaces in the museum. This relied both on general notions of the museum's social functions and on more specific ideas concerning the nature and display of Islamic works of art.

On the most basic level, the museum can be seen as a repository for the history of ideas and phenomena, housing natural and man-made objects. Its function is thus to record events through the means of artifacts. Without giving a detailed account of the history of museums, it can be seen that, in the past, private and public museums have also been a means of displaying national and individual wealth, and of making foreign cultures and ideas known to select groups of people. This was true, for example, in 17th and 18th century France, where artists and literati relied on the museum for their knowledge of Classical art and architecture. While these basic functions remain with us today, the museum (since the late 19th century) has become more oriented toward the general public. It is seen not merely as a storehouse where people can stroll and look at objects en masse, but more as a place for contemplation and study, where one can gain a broader knowledge of the physical and mental world. In this sense, the function of the museum has become increasingly didactic. The museum is also associated with the notion of refinement and improvement, and part of its didactic function is to encourage a public appreciation for things of quality and uniqueness. It is often felt that the museum serves to restore the link with direct experience which in modern times has been weakened by mass media. I believe, however, that the museum is by its very nature an artificial medium: lighting, spaces, and arrangements create "lenses"
through which we perceive objects. The museum combines two frameworks—it evokes historical time and space which we experience in a present time and setting. In this sense, the museum can be said to be an artificial context, whose experience is hardly more direct or "real" than that of a movie or recorded sound. The question then becomes what "lenses" to use for enhancing the display and one's perception of objects.

In this project, the museum was to be a simple sequence of space and light—restrained, but not neutral, in character, which allowed the brilliant colors and geometric shapes of Islamic objects to become the salient features. Thus, objects, as well as space, would serve to create the context.

The initial idea for arranging spaces and objects was to group them by themes (e.g., "The Art of the City," "Religious Spaces," "Gardens and Waterworks," etc.), each category containing objects from different periods, regions, and media. In speaking with curators of Islamic art, they felt that such an arrangement could become arbitrary and difficult to execute because objects could not always "fit" into one simple category, and doing so would give a narrow view of their meaning. Arranging objects by chronological sequence was felt to be the most satisfactory method, as it was less arbitrary (providing one can date the objects), and also had the benefit of showing the evolution of an art, which gave the public a coherent view of a tradition. Within the time sequence, "cross-sections" could be taken through different media, regional styles, and themes or functions.

The sequential character which I envisioned for the museum space thus could be used to reinforce the notion of historical progression. Individual rooms along the sequence were to be related to specific periods, regions, and developments, beginning with an introductory space for "the sources of Islamic art," following
through to the 19th and 20th century Maghreb (see separate description of chronological sequence). This main sequence could be "punctuated" by special rooms for arranging displays around thematic scenarios (e.g., the garden), particular functions (e.g., religious worship), craft techniques (e.g., the craft of carpetmaking), or regional style (e.g., the art of Persia in the Safavid period). These rooms might also be used for showing photographic displays, films, and other documentation related to nearby objects. In this manner, objects may be perceived through many different "lenses." This is the essential purpose of the museum space: while objects placed in the museum are stripped of their original functions and meanings, they may gain new meanings by their relationship to other objects across time and space.

The second half of the problem was to find a space and a form which embodied this concept for the museum. While previous museum examples and existing Islamic collections (e.g., at the MET in New York and in the various Paris museums) provided clues for handling the problem, they did not point to a simple solution, but drew their own forms from many sources. How the museum space was defined and reconciled with other considerations of site, programmatic functions, symbolic expression, and vocabulary is the central subject of the following chapter.
Museum Spaces in Sequence

**Entrance vestibule**
- coats
- tickets and information
- rest

70 m\(^2\)

1. **Sources of Islamic Art**
- source objects
- slide show

100 m\(^2\)
2. The Beginnings of Islam: objects in cases from roughly 7th c. - 12th c.  
   : Egypt, Arabia, Syria, Iraq, Spain

150 m²

3. The Mosque: religious objects (mihrab tiles, lamps, minbar, etc.)  
   : Koran manuscripts and madrasah plans  
   : models of photographs of mosques throughout different periods and countries  
   : slides

200 m²
4. **The Spread of Islam**

-sequence roughly 12th c. - 16th c.
-Seljuks, Mameluks, Ayyubids, etc.
-All types of objects

300 m²

5. **Persia (Possible "theme" room)**

- carpets
- miniatures
- scientific instruments

450 m²
6. **Multi-purpose room**

: e.g., technique of
: epigraphy
: ceramics etc.
: slides

150 m²

7. **Moghuls**

: Garden 200 m²
: miniatures 16th c. – 19th c.
: carpets

400 m²
8. Multi-purpose room

150 m²

9. Ottoman Turkey

: carpets 18th c. - 19th c.
: miniatures
: ceramics
: armor

400 m²
10. **Nomad and City**

: desert life
: photographic displays
: vernacular architecture
: plans and models of cities
: rotating shows

250 m²

11. **Maghreb**

: mainly 19th c. objects
: carpets
: jewelry
: textiles
: furniture and woodwork
: ceramics

at least 400 m²

**Total**: 3000 m² in main museum with additional 1000 m² of exhibit space in other parts of building.
Fig. 11.
GENERATION OF FORM

1. Responses to the Site

The first sketches for the project were concerned with finding a dynamic urban arrangement which addressed both the garden and the canal, responded to existing pedestrian and vehicular movement, and which enhanced public use of the site. Formal responses were generated with the help of diagrammatic abstractions of topography and circulation, but more important, they stemmed from real observations made during several site visits, of changing sun and weather conditions, physical qualities of the canal area and buildings, scale, and movement.

The Curve

The first move in the design was to place a thin arc-shaped piece along the canal boulevard. This served to extend the curve of the facades on both sides of the site and reinforce the dramatic swing of the canal itself. Placed at the eastern extremity of the site, the curved strip acts as a boundary or culmination point for the flow of pedestrians entering the site from the west. From the garden side it is an "end wall," but along the canal side, its face is perforated and screen-like, creating views of the canal scenery on all levels of the building. In compliance with the area's zoning regulations, the building was given a height of 17.50 meters at the cornice, which creates, with its neighbors, a uniform street
Fig. 12.
scale similar to that of Haussman's boulevards behind the site to the west. No setbacks were made, as these would have destroyed the continuity of the curved space. Instead, walkways were carved out of the frontal plane both at ground and first floor levels (5,10 m.) to provide pedestrian shelter along the canal boulevard. Because of its great height and length, the curve acts as a barrier for the rest of the site against noise and hazards of fast moving traffic. Its wall-like character also can be seen to have an associational meaning with the past, being in a loose sense a reinstatement of the old city walls which once stood along this edge. The idea of a singular curved piece along the canal front, which emerged in the first site sketches, remained relatively unchanged throughout the design, acting as one of the anchoring elements for the complex.

The Steps and Spine

Like the canal, the garden at the western edge of the site is one of the few large, open spaces in the area, and the lure of sun and greenery became the impulse for giving the building a second and opposite orientation. The screen was treated as a separate piece belonging to the canal zone and a second building was placed behind it, stepping from the initial 17,50 meter height down to the garden level in a series of tiered platforms. The building thus took on two facades of differing character responding to changes in scale, sun, circulation, and eventually, to changes in social function—one facade making a fixed, vertical gesture towards the canal, and the other extending laterally in a "mat" formation towards the garden.

With the articulation of two facades and orientations it became clear that the building was to have at least two separate entrances. For the majority
Fig. 13. Pedestrian and car paths
of Parisian visitors arriving by public transport from the west, an important pedestrian entranceway facing the garden and points of arrival was made, in the form of a central spine of ascending ramps placed axially to the screen, cutting up and through the tiered building. For people coming up the canal boulevard in cars, the entrance was placed at ground level behind the screen building. Circulation and entrances were therefore aligned with the two major directions of the site -- the main axis being west to east, and the secondary axis south to north.\footnote{While in plan the canal may appear to be the obvious entrance facade, it is experienced very much as an "end zone." This was another reason for placing the main pedestrian entrance on the garden side.}

As in the case of the screen, the concept for the building's stepped formation embraced many considerations simultaneously. It served to break
Fig. 15. Early sketches of raised ground level idea
down the size of the complex, giving it a humanly compatible scale along the garden edge, and allowed light to penetrate deep inside the different parts of the building. More important, the outdoor terraces expressed the possibility of extending the public life of the building to the outside and surrounding city. From the ground, the entire building resembled a grand stairway, and reinforced the idea of entrance and ceremonial ascent towards the screen.

The Piano Nobile Idea
The ascending spine and horizontal terraces expressed from the outset the notion of a raised "ground" level. This idea of lifting the main floor of the cultural center to its present 5,10 meter height was introduced as a way of separating public activity from the rush of traffic along the canal boulevard, while maintaining direct views to the water.
Fig. 17. Early ground plan of covered shopping streets
It liberated the ground surface for pedestrian movement, for passages connecting 
one end of the site to the other, and for the placement of shops and services. 

In the earliest scheme the entire ground level was covered, and contained 
pedestrian passageways, shops, and cafes. These "interior streets" were derived 
in part from the Parisian passage or covered gallery, of which there are numerous 
examples in the canal Saint Martin area. Their key purpose was to encourage pub-
lic activity along the canal front (as well as to give shelter from the weather and 
traffic), for it was strongly felt that the institution should not block out the 
city, but allow for the coexistence of different public realms. In the final scheme 
the covered passage idea was discarded almost entirely in favor of open passageways 
and shops along the canal front and side street only. The former solution proved 
to be too dense and more space at ground level was needed for the services of the 
museum, for the penetration of light, for parking, and vehicular entrance to the 
site. Formally, it was felt that more distinction between the parts was necessary 
and thus the building was "carved out" and made into more separate elements which 
were connected at points by bridges. The principal idea of a raised "datum" level 
was retained.

While the passage idea was partially rejected, that of differentiated pub-
lic zones within the site was carried further by the creation of raised "ground" 
levels which allowed for varying degrees of public use and created separate realms 
for the pedestrian and vehicle (e.g., garden terraces, raised walkway along canal-
front, and the creation of a new bridge across the canal, carrying the flow of 
circulation from the pedestrian path over the canal boulevard). The use of levels 
in the scheme was inspired in part by the canal, where sidewalk, ledges, embank-
ments, and bridges serve to define different conditions of use (e.g., fast walk-
ISLAMIC CULTURAL CENTER

PARIS Xe

1. Vehicular entrance to site
2. Visitors entrance to underground carpark
3. Pedestrian entrances to site
4. Entrance platform and central "spine"
5. Foyer, temporary exhibits and administration
6. Museum of Islamic Art
7. Library and conference area
8. Curatorial wing
9. New canal bridge
ing, stopping, crossing, etc.).

Seen as a whole, the scheme departs from the traditional handling of the Parisian ilot or city block. Rather than building up around the edges of the block, keeping circulation at the periphery, the bulk of the structure is placed in the center and penetrations inside and across the site are made possible.

Public and Private Zones
From the various responses to site, circulation, and outdoor activities, a hierarchy of public and private zones was established which suggested how internal functions of the building might be arranged. This is not to imply that pieces of the program were simply "slotted into" the spaces of the building. Programmatic functions were seen as having a life and logic of their own and were used as organizing elements for clarifying the building's form and giving it a more vital meaning. While the basic idea for the "mat" and "wall" buildings remained relatively unchanged throughout the design, the precise arrangement and relationship of parts went through several trial stages, where functions were shifted, pulled apart, and put back together in new ways.

In the final site plan, the building was broken into four functional units. The screen and central spine are read as one piece because of their axial relationship and similar dimensions. The significance of this arrangement is reinforced by the fact that the screen was the most public realm of the complex, and therefore, a logical continuation of the circulation route. It contained the mainlevel foyer, spaces for temporary exhibits, the museum bookstore and shop, an outdoor walkway, and a cafeteria and terrace on the top floor which offered the best views to the canal and surrounding city. The museum for the permanent art collection
Fig. 19. Photograph of site model
which is of a less public nature (people have to buy tickets) was placed in the southern portion of the stepped building, on the cross-axis (e.g., perpendicular to the central spine). Because of its great bulk and height (high interior spaces were needed), the museum was positioned away from the pedestrian path and behind the tallest building at the corner of the site. The library and conference center, both among the more private uses of the complex and needing protection from noise, were placed away from the canal boulevard, opposite the museum on the cross-axis of the building. To the northeast of the site is the curatorial building, containing storage rooms, offices, and a truck delivery area. Demanding the greatest amount of privacy, the curators were placed on the periphery of the central public zone and connected at the upper levels to the temporary galleries and research library.
Fig. 21. Photographs of first two site models
Fig. 22.

Final solution
GROUND LEVEL PLAN

1. Truck entrance
2. Receipt and dispatch area
3. Entrance to curatorial building
4. Photography lab
5. Loggia and way up to canal bridge
6. Shops along canal boulevard
7. Porte cochère entrance
8. Entrance lobby and ramp to main level
9. Auditorium lobby and exhibit area
10. Auditorium
11. Kitchen
12. General storage
13. Underground link to curatorial building
14. Temporary museum storage
15. Offices
16. Guard room
17. Construction workshop
18. Mechanical services
2. Arrangement of Interior Spaces

The ground level of the cultural center was conceived primarily as the service floor, containing mechanical equipment and storage rooms directly below the museum and a truck entrance alongside the curatorial building for the receipt and dispatch of exhibit objects.

A porte cochere entrance for people arriving by chauffeured car was situated behind the canal building, beneath the main level foyer (see ground plan and central longitudinal section). This ceremonial gesture of entrance was echoed on the inside of the lobby by the placement of a ramp on the cross-axis, along which one processed up to the main level. Apart from the shops along the canal front, the only other active use to be placed on the ground was the auditorium with an adjoining lobby for temporary exhibits. Its situation alongside the pedestrian street and ground entrance lobby served to enliven the building edge and allowed for lectures and films to be held at times when the rest of the center might be closed (e.g., at night, on holidays, etc.).

The main level of the building (at 5.10 meters above ground) was conceived as a grand foyer or public floor for the meeting of circulation routes and different functions of the complex. Here the dual theme of the building (two main axes, entrances, orientations) is most strongly felt. The primary axis created by the central spine continues on the inside through a longitudinal space which extends to the screen and reveals panoramic views of the canal scenery ahead. Having ascended the central spine, one enters through a low, compressed zone and is propelled forward by the sudden release of space (4.50 meters high) and the revelation of views. The foyer thus celebrates the long axis and the linking of the two
LONGITUDINAL SECTION
THROUGH CENTRAL SPINE

1 Entrance spine
2 Upper level entrance
3 Ground entrance lobby
4 Foyer (5.10 m.)
5 Upper level walkway and entrance
6 Open passage
7 Temporary exhibits
8 Outdoor terrace
9 Administration meeting room
10 Gallery on mezzanine level
11 Mechanical services room
12 Visitors carpark
13 Staff and v.i.p. carpark

Scale 1:200
key features of the site—the garden and the canal. It transposes the *passage* idea from the earliest scheme, but makes the visual link between garden and canal one floor up, instead of on the ground. The cross-axis of the site is expressed by the outer walkway along the face of the screen and by the ramp bringing people up from the ground lobby. Placed ninety degrees to the central spine and on direct axis with the museum entrance, the ramp reinforces the cross-axis on which one of the center's key functions is placed. From the outdoor walkway along the canal-front (linked to the ground by stairs), one enters the building at the center, directly opposite the garden entrance. The foyer and screen building thus are joined to form a common zone for people to enter, meet, mill about, and to partake in public activities such as openings, the viewing of informal exhibits, and browsing in the museum shop. It acts as a common linking space for the various functions of the complex, and expresses their unity in a larger institution.

The screen and foyer are also expressed as one by their common ceiling height and similar concrete post-and-slab construction. The reasons for using such a system in the screen was to allow for flexible arrangements of space and for an open, screen-like facade along the canal. Thus, temporary exhibit spaces on the main and upper levels of the screen could be changed to suit different types of objects and displays, and the cafeteria on the top floor could be largely glazed and made to extend onto outdoor terraces during the warm weather.

At the main level the curatorial building remained separate from the screen building. The square piece between them acts as a pedestrian gateway on the ground and as a "landing platform" above for people coming and going across the bridge. Connections between the two buildings were made on the top two floors and joined the delivery area, storage rooms and curatorial offices with the tem-
PLAN OF MAIN ENTRANCE LEVEL  +5,10 M

1. Entrance foyer
2. Museum entrance
3. Sources of Islamic art
4. Early Islamic art
5. The mosque and religious objects
6. The expansion of Islam
7. Loggias
8. Museum exit
9. Balcony and library entrance
10. Library
11. Bookstore and museum shop
12. Temporary exhibits
13. Grand loggia overlooking canal
14. Platform connected to canal bridge
15. Curatorial offices and study areas
16. Storage rooms

Scale 1:200
Porary exhibits floor and institute administration.

The public entrance to the library was located off of the main level foyer, opposite the museum entrance. The library contained a double-height central atrium, around which the stacks, study carrels, and conference rooms were placed, overlooking both the interior space and the garden scenery outside.

Although the museum constituted one of the most important functions of the cultural center, it was not placed in the screen as the culminating space of the main axis of the building. For formal reasons it was important that the screen remain thin, and this conflicted with the museum's need for large spaces. Secondly, it was felt that the screen was too undefined in its spatial character (because of its free plan) to be a suitable stage for a permanent collection of specific objects, but that it was an appropriate setting for exhibits of a changing nature. Finally, the museum was to be an enclosed space and this contradicted the very purpose of the screen building which was to offer views of the surrounding city and be an airy, light-filled environment.
LONGITUDINAL SECTION
THROUGH MUSEUM

1. Entrance platform
2. Public terrace
3. Museum gallery
4. Service floor
5. Visitors carpark
6. Upper level loggia
7. Persian carpet room
8. Persian miniatures room
9. First room of museum sequence
10. V.I.P. and staff carpark
11. Retail shops and cafes
12. Temporary exhibits
13. Cafeteria and outdoor terrace

Scale 1:200
3. The Museum Space

Responses to local site conditions and programmatic functions helped to define a formal arrangement for the building as a whole, but they could not by themselves generate the spatial concept and form for the museum. As suggested in the previous chapter, formal ideas were also based on an a priori definition of the nature of the museum space—its particular narrative functions, social purpose, and desired qualities of space, light, and movement.

One way of anchoring an initial form for the museum was to turn to previous museum solutions, looking at various organizational principles used for combining circulation with contemplative spaces. The Louisiana Museum (1958) outside Copenhagen, provided one example of the "building as walk" principle. Circulation was contained in a separate linear spine off of which nodical exhibit spaces were attached. This distinction between path and enclosed space reinforced the notion of the museum as a route, and created two zones with different exposures to light and views—the spine being glazed and open to the natural surroundings, and the exhibit rooms providing a darker, more sheltered environment.

Another example of the "museum as route" was I. M. Pei's Everson Art Museum project in Syracuse, New York, where four main exhibit rooms are joined by a loop of circulation. Here spaces and movement were made more continuous and were contained inside a box, not revealed in the building's exterior form.

Also related to the idea of movement was the "spiral solution," found in Frank Lloyd Wright's Guggenheim Museum (1956-59) and Le Corbusier's project for the Museum of Unlimited Growth (1939). In both cases the spiral was used to express an unfolding historical progression, the simultaneous perception of time and
Fig. 27. Plan of the Louisiana museum outside Copenhagen by J. Bo and V. Wohlhert
space, and referred to natural forms of spiral motion, such as the conch shell.

The opposite solution to the previous three might be said to be the "museum as box" approach, exemplified by Piano and Rogers' Centre Pompidou in Paris (1977). Here the Museum of Modern Art had been slotted into two levels of the building whose structural frame was placed on the outside to allow for a completely free arrangement of space on the inside. The museum space thus was treated as a neutral receptacle for objects, without particular concern for historical route, lighting (the building was uniformly glazed on all levels), the modulation of space, or the enhancement of aesthetic objects.

Older museums from the 18th and 19th centuries often derived their forms from particular examples of palaces, temples, and villas, in part because these served as the first private and public museum spaces (e.g., the Louvre), but also because they had associational meanings with the culture of Classical Antiquity (e.g., the British Museum built to house the Elgin marbles) which was the established norm of style and "Culture" at that time. The general spatial formula for the museum consisted of a central portico, followed by a vestibule and central domed space or open courtyard, around which exhibit spaces were wrapped (forming a square or u-shaped building). These were a series of oblong rooms and long galleries, based on the arrangement of reception rooms of royal and aristocratic residences, and were linked as one continuous sequence or by a separate hallway along the inside edge of the building. Conceived originally as showrooms for massive displays of paintings and sculpture, the spaces tended to be large and uniform and emphasized the drama rather than the study of objects.

It is not satisfactory, however, to look at museums simply in terms of different "type solutions." First, it does not adequately describe the unique
Fig. 28. Plan of I. M. Pei's project for the Everson Art Gallery in Syracuse, N. Y. (source: Brawne, M., The New Museum)
character of each building, nor does it distinguish quality and ingenuity. Sec-
ondly, it confirms that there is no one "museum type," but a vast range of inter-
pretations, even within each period. While such an analysis of museums can be
useful for learning basic strategies, it does not provide a set language for the
museum. The solution for finding a suitable form and spatial sequence relies ul-
timately on the client's and the architect's combined interpretation of the museum
experience.

One of the elements which I saw as fundamental to any museum experience
was the sense of movement along a historical route. The museum could be described
as a "journey" through present and historical time and space, and this notion, I
felt, should be reinforced architecturally by the expression of a strong proces-
sional route. A second key function of the museum was that it should offer a rich
modulation of space, light, and scale which enhanced the aesthetic qualities and
display of objects from the collection. The need for creating spaces which helped
to fix objects in a specific context was felt to be important, especially in the
case of an Islamic art collection. Because Islamic art is for the most part non-
figurative (e.g., there are few figural paintings or sculpture) and consists of
numerous small objects, it relies strongly on a setting for bringing out its mean-
ing and physical qualities. More important is the fact that many objects are re-
lated to ceremonial and daily functions and, when taken out of their original con-
texts, become less vital and more difficult to comprehend. Thus, it was felt that
the museum should provide a supporting spatial framework whose specific character-
istics and general ambience suggested possible "scenarios" for the grouping of ob-
jects and for making their aesthetic, functional, and symbolic meanings more ex-
licit to a general, Western audience.
Fig. 29. Plan of Le Corbusier's project for the Museum of Unlimited Growth
Among the museum examples which I studied and described earlier, the first three were of particular interest to me because they emphasized the idea of sequential movement. The Louisiana Museum offered a highly poetic and attractive solution, but its extended form along the ground level, while suitable for its rural site, was not viable on the more constricted and urban site in Paris. Louisiana was also an independent and smaller building, while the larger Islamic museum demanded a more compact treatment and had to be integrated formally with a whole complex. The spiral form for the museum offered a more contained and vertical expression, but was only partially used as a reference because its channeled spaces were too uniform and constricting for the types of objects to be displayed in the Islamic museum. I. M. Pei's project for the Everson Art Gallery was perhaps the most useful demonstration of how linear movement could be reconciled with nodical spaces to form a compact building arrangement. It was, however, only partially suggestive because more floor area for exhibits was required in this case.

In the eventual museum design, linear movement was embodied by a sequence of "rooms," linked aurally by ramps, doorways, and long views (see museum plans, axonometric, and cross-sections). Direction and the character of each space were defined by strong planar walls and piers, changes in floor level and ceiling heights, and by top and clerestory lighting.

The museum sequence begins on the main level of the building (to the right of the central entrance) and continues down to the mezzanine level in an unfolding and descending spiral motion. The processional theme of the building is stated from the beginning in the first three spaces of the museum. Containing objects from the formative period of Islam, they are expressed as a continuous sequence by
CROSS SECTION THROUGH MUSEUM ENTRANCE

1. Curatorial offices and conservation
2. Storage area for museum collection
3. Receipt and dispatch of objects
4. Staff carpark
5. Visitors carpark
6. Exhibits lobby
7. Library stacks and reading area
8. Library main level
9. Stacks and study area
10. Ground entrance lobby and ramp
11. Main level foyer
12. Museum entrance and first sequence
13. Sources of Islamic art
14. Formation of Islamic art
15. The mosque and religious objects
16. Work space
17. Persian miniatures
18. Temporary exhibits
19. Moghul India
20. Mechanical services and temporary storage

Scale 1:200
flanking walls and an axial progression of level changes and ramps, which lead to an end niche. The ascending movement of the museum space extends from that of the ramp in the foyer, creating a continuous processional route which begins outside as one approaches the building and culminates in the interior spaces of the museum. Arriving at the top of the ramp, one has a clear view through the first part of the museum all the way to the end niche. For special social occasions such as openings, this first sequence can be closed off from the rest of the museum and opened to the foyer, giving people a dramatic perspective of brilliantly lit objects against a dark, solemn background. The ascending motion of the first sequence and its focus on the end niche also express the importance of the end space as the anchoring element on the exterior of the museum and as a key theme room, containing objects related to the mosque and religious functions. The solid, flanking walls of the space create a dark interior and occasionally break, as in the niche spaces, to allow in small, concentrated patches of natural light. From this channeled, dark space, one can glimpse into adjacent and well-lit galleries from window-balconies. Entering the museum, for example, one has a view down into a double height space, where people finishing their tour of the museum are walking in the opposite direction towards the exit. These glimpses into other "scenes" of the museum indicate future directions of movement and give one an overall sense of the "dynamics" of the museum space.

Emerging from the "mosque" space onto the balcony next to the garden, larger and brighter spaces are revealed, marking the beginning of a new spatial sequence in the museum chronology ("the spread of Islam"). Walls and piers are placed perpendicularly to those of the first sequence to reinforce the shift of movement back onto the main axis and to allow light and views to penetrate the open
ends along the garden. The balcony and garden court are experienced as one space (see cross-section) because of the open loggia and the gap left between the balcony and the end wall. A visual "path" is created straight through the three double height courts by perforations in the wall planes. These signal a shift of movement back onto the cross-axis, as the square spiral begins to descend.

Leaving the balcony by an end ramp, one continues along a loggia which overlooks the interior garden on one side and the outdoor garden on the other. The loggia brings one into the central double height space at an upper level, where movement is then cranked back onto the main axis, completing one loop of the spiral. The carving out of well-lit, double height spaces in the heart of the museum allowed for important displays of large objects such as Persian carpets. Entering the "Persian room" at an upper level and then descending into it, enables one to observe objects from different vantage points.

From this high, well-lit space one continues through to a lower and darker sequence, directly below the first sequence of the museum. Flanking walls again channel one forward along the cross-axis. Smaller objects related to those in the adjacent "theme" rooms (such as Persian miniatures next to Persian carpets) can be displayed, protected from direct light. These dark spaces also may be used for special photographic shows. Openings in the ceiling of the niches allow light from above to penetrate to the lower level, and can be opened or closed. One continues along the outer edge of the lower level, repeating the same spiral movement of the upper floor which gradually unfolds around the garden court. The garden was created because it represented an important Islamic theme in art and architecture and because of the need to provide relief for the museum audience. It also was related to the garden themes of carpets and miniatures placed in the ad-
PLANT OF MAIN ENTRANCE LEVEL  +5.10 M

1 Entrance foyer
2 Museum entrance
3 Sources of Islamic art
4 Early Islamic art
5 The mosque and religious objects
6 The expansion of Islam
7 Loggias
8 Museum exit
9 Balcony and library entrance
10 Library
11 Bookstore and museum shop
12 Temporary exhibits
13 Grand loggia overlooking canal
14 Platform connected to canal bridge
15 Curatorial offices and study areas
16 Storage rooms

Scale 1:200
CROSS SECTION THROUGH CENTER OF MUSEUM

Scale 1:200

1 Curatorial offices and conservation
2 Storage area for museum collection
3 Workshop
4 Underground passage to museum
5 Pedestrian street
6 Lobby
7 Auditorium
8 Final space in museum sequence
9 Museum exit
10 Main level entrance
11 Chicaned passageway to final museum space
12 Ottoman carpets
13 Persian carpets
14 Garden court
15 Mogul art
16 Garden balcony following entrance sequence
17 Mechanical services and temporary storage
18 Visitors carpark
PLAN OF LOWER MUSEUM LEVEL +2.55 M

1. Persian carpets
2. Persian miniatures and small objects
3. Changing exhibits and work spaces
4. Mogul miniatures and carpets
5. Mogul carpets and large objects
6. Changing exhibits
7. Garden court
8. Ottoman objects
9. Ottoman carpets
10. Changing exhibits
11. Objects from the Maghreb
12. Café
13. Garden terrace
14. Library stacks
15. Work space

Scale 1:200
jacent rooms (e.g., Persia, Ottoman Turkey, and Moghul India). On the outer edge of the museum facing the terrace, latticed window bays offer glimpses of the outdoor garden and alternate with blank stretches of wall which, on the exterior, have built-in benches where people can sit.

From this low, tranquil sequence, one then emerges into the double-height space first seen from above as one entered the museum. A cross-axis, also perceived at the upper level by the alignment of windows through the double-height courts, is "rediscovered" and indicates a new line of movement across and below the central entrance spine (see plan and room #10 in central longitudinal section).

The final space of the museum is a double-height room for exhibiting carpets, furniture, and other smaller objects from the
Maghreb. It is a restatement in miniature of the entire museum arrangement: a central "court" with an outer ambulatory is formed by a high wall of cases. Circulation is channeled around the court, turns back on itself, and is swept up by a bridge which leads one to the left of the main level entrance, directly opposite one's point of departure.
4. Methods of Display and the Museum Context

Objects from the formative and early periods, placed in the first sequence of the museum, were generally small (ceramic bowls, metal work, tiles, etc.) and had to be kept in glass cases. Rather than positioning these along the walls of each room, the continuity of the space suggests that they can be placed in a free arrangement and lit locally, either on the inside or from the ceiling. Thus one's path was not merely determined by the contours of the space, but by the focal arrangement of objects. Niches in the wall plane were conceived as places for key objects, providing a special focus or particular setting. A wooden screen, for example, could be placed in the embrasure of the niche, with natural or artificial light illuminating it from the rear. This suggested how
the screen might have been seen originally, as part of a window or doorway, with
the sun streaming through its latticework. For the display of an important carpet
or ceramic bowl, windows in the niche could be blocked off, allowing for a more
appropriate type of artificial lighting.

Light sources for the museum were both natural and artificial. Daylight
was not treated as the main means of illuminating objects, but was conceived as an
element for enhancing the ambience of a space and for dramatizing important ob-
jects placed in niches. Because of the sensitivity of many objects to direct
natural light (e.g., miniatures, textiles, carpets), openings were made at cler-
estory height, facing north, and in the ceiling to create a diffuse and indirect
light source. While lighting deserves a more detailed study than has been made,
some thought was given to the placement of light control mechanisms, by giving a
substantial width to certain parts of the ceiling-roof slab (see sections).

Dimensions of rooms were determined with respect to chronological sequence
and particular types of objects to be housed. The Parisian collection, for ex-
ample, was rich in Persian objects from all periods, ranging from very large car-
pets to extremely small objects such as miniatures and jewelry. The extensive wall
surfaces of the "Persian room" were therefore intended for the hanging of carpets
and the darker, more contained adjacent spaces for the display of miniatures.

While thematic rooms such as the "mosque" space were conceived for particu-
lar types of objects, the aim was not to recreate a specific physical setting.
The celebration of the end wall and niches in this first spatial sequence did not
give an accurate representation of a mosque. The space only became significant as
a religious space when relevant objects were placed against the wall and in the
niches, whose relationship evoked a ritualistic context (e.g., the placement of a

81
Hanging carpets

Wall plan - sliding carpet panels

Fig. 39

Carpet pit with side lighting
mihrab in the niche, flanked by hanging mosque lamps, a minbar or pieces of one, and other objects related to the ritual such as Koran manuscripts, stands, etc.). Thus, the museum context—its historical and cultural associations—is not defined by space alone, but by its dialogue with objects.
Fig. 41. Sketches of an outdoor garden and Moroccan courtyard houses
5. The Problem of Cultural Representation: Islamic Analogues

While the museum avoided making direct references to specific settings, it did attempt to elicit a feeling for generic qualities and principles of Islamic formal arrangements. Because one of the main functions of the museum was to represent an artistic and cultural tradition, the very nature of the museum context was symbolic, and embraced both the Parisian setting as well as the more distant and varied traditions of the Islamic world. Thus, another attempt of the design was to create a form which symbolized the cultural nature of the institution.

My approach to the problem was not to transpose forms from ancient building examples (e.g., the domes of the Blue Mosque in Istanbul or the arches of the Ibn Tulun Mosque in Cairo). Such obvious formal gestures, I felt, would lead to an unauthentic building which was meaningless in the present context of Paris with its different climate, geography, and social uses of space. Rather, I tried to abstract organizational devices from Islamic architecture which I felt were germane to a modern vocabulary and means of construction, for handling the "dynamics" of a space and the distribution of public and private zones. This did not rely solely on an analytical understanding of form, but also on a feeling for the more numinous qualities of form and space.

One of the key references used was the Islamic city arrangement or casbah, where the street, individual building, and public and private spaces are integrally

These "devices" were drawn from cities and buildings which I visited in parts of North Africa and the Near East.
Fig. 42. Aerial photograph of Marrakesh (source: Galloti, J., Moorish Houses and Gardens of Morocco)
linked to form a dense, unified structure. Because of its unity, the city as a whole can be read as a large building. The cultural center was not situated in a dense urban fabric and was essentially a free-standing building, but analogies with the casbah could be made by the manner in which interior functions were integrated within the larger framework of the complex.

The central spine was treated as an extension of the urban street which continued on the inside of the building. Like many streets in the casbah, it was both open and covered and for pedestrian use. The museum was expressed as a separate, less public area off of the "street" and was analogous to the courtyard building of the casbah placed off of the main public way. The use of courts lit from above and high flanking walls was also derived from the typical courtyard arrangement of the casbah and the chasm-like quality of the streets. The eastern wall of the museum was particularly evocative of fortification walls surrounding the Islamic city. Other features of the museum--its inward-looking spaces with light filtering in from the top; axial views which shifted and realigned; the creation of a garden court; and visual connections to water (e.g., the canal and garden fountain)--also stemmed from characteristic elements of the casbah, its palaces, and buildings. The terraced form of the building and its roof decks were a further expression of (though not only derived from) the casbah with its flat roofs stepping downwards to draw in light, views and breezes.

The overall form of the cultural center was not as rich and diverse as an actual casbah and lacked the "additive" quality of the Islamic city. An earlier solution for the complex (see photo) did give a sense of the building as an unfinished and expanding composition, whose parts were also more articulated as diverse fragments. This solution was not satisfactory, however, because greater
Fig. 43 Early museum solution
formal unity between the various functions was needed and the social spaces were too disjointed from one another. Thus, the form of the building also had to express a sense of formal unity and clarity and had to obey further rules which the Islamic city or casbah did not.
Fig. 45. Early sketch of entranceway of museum
TRANSLATION OF FORM: DEFINING AN
ARCHITECTURAL VOCABULARY

While analogies made with the Islamic city suggested rich possibilities for the handling of space and form, they could not be applied literally as this would have produced a pastiche. References to the Islamic context, like other considerations of site, social function, and definition of the museum space, had to be translated into a personal idiom if the building was to have a genuine and coherent form. Thus, one of the aims of this thesis was to try and clarify an architectural vocabulary for synthesizing the various aspects of the problem.

As the canal and garden elevations show, another main problem concerning the building's exterior expression was to unify large volumes with a sense of detail and human scale. Making a form which was not overly monolithic and stark was especially difficult in the case of the museum because its functions were inwardly oriented and did not need much natural light. This tended to create large blank walls on the outside which excluded the surrounding city and did not express the public nature of the building.

I was interested, therefore, in enlivening and articulating the facade, and in extending the building and its social activities outwards. This gave the building its expression of strong horizontal planes which extended from the inside to become terraces on the outside. Tiered levels stepping down to meet the
Fig. 46. Photograph of elevation of previous project for a country house
Curatorial building
Library and conference area
Museum

GARDEN ELEVATION
Fig. 49. Sketch perspective of canal building
Fig. 50. Photograph of elevation of previous project for a residential skyscraper (M.I.T., Fall 1978)
garden floor served to break down the building's mass and size, and created a gesture of invitation. They allowed people and activities to be seen from afar, and as previously explained, carried different degrees of public activity--some fully accessible along the garden edge and the canal front, and others related to the public life of the center on the upper levels. The use of the concrete cantilever as an important formal device for expressing social activity was drawn from two of my previous schemes--one for a highrise apartment in Boston and the other for a house in the English countryside. In both cases, lateral extensions took the form of balconies and roof patios.

I attempted to create a sense of scale and proportion through the means of a repeated modular bay size (as windows or panels) and by the articulation of balcony railings, window mullions, transoms, and vertical supports. While the basic material for the building was a silver-gray concrete, wood was used for the window frames, railings, and sun screens as a way of giving the building a more delicate feeling and smaller dimensions.

Another key feature adapted from previous projects was the ceremonial treatment of circulation. One's route was thought to begin some distance away from the building and continued to the uppermost floors on the inside. With the increase in size and use of the building, the expression of route became more explicit and grand.

Concrete is widely used in Parisian construction. Its light color here is similar to that of the surrounding buildings, and it is a material which I have used in previous projects because it allows for a "plasticity" of space--for views and space to be compressed and decompressed freely. It can weather beautifully and have the grandeur of stone.
Fig. 51. Plan of project for the Royal Photographic Society, London (AA, Spring 1979)
Piers used to define direction of movement, axial relationships, and "incidents" within space were also extended as devices, and in this project, became continuous wall planes.

The volumetric articulation of functional parts—of public and private zones—anchored by a "central" space or circulation route was the final element carried through from other schemes. The individual building, and particularly the large building, was conceived as an arrangement of integrally linked parts—not as a monolithic piece.
CONCLUSION

A central aim of this thesis has been to explain how a concept and a form were found for the design of a museum of Islamic art in Paris. Drawings and a written account attempted to show the decisions, responses, ideas, and actions which led to the creation of the building in its present form. While no final or fully resolved solution was reached, the project was important as a testing ground for clarifying a general process of thought and set of attitudes towards architecture.

The approach used in the design embraced many levels of consideration which were then fused by elements of an architectural vocabulary. Local responses to site were important for generating the "dynamics" of initial arrangements. They stemmed from the idea of the building--and of the public building in particular--as an extension of its surroundings, relating to patterns of movement and sun, rural and urban topography, and social activities.

The "life" of the building was seen as derived from the nature of space and from the program. Functions were not treated merely as passive elements needing to be housed, but as was discovered, could be used to generate and give meaning to the form of the building. It was felt that the public functions of the museum and cultural center should be shared by a wide audience and extend outward to the city. Public areas accessible to all thus were created on the inside and
Fig. 54. Comparison of skyscraper plan and Islamic museum plan
outside of the building, while other spaces offered contemplative settings addressed to a more restricted public.

The problem of determining a space and form for the museum transcended both the site and the program. The lack of a set definition for the museum within the modern and earlier traditions meant that an a priori notion of museum functions and characteristics had to be found. This also relied on a definition of the "museum context" and the nature of displays and objects. Previous museum examples which reflected similar notions could then be used to suggest ways of handling form and space.

Because of the cultural and representative nature of the institution attempts were made to ally the building's form with principles and qualities found in Islamic architecture. Analogies were made not by simply transposing traditional building elements, but by finding modern formal equivalents.

Another main concern of the design was to clarify an image or civic expression for the museum. Problems of formal expression, of size and scale, were magnified in the large building because it demanded greater clarity, formal order, and sense of detail. This was one reason why I chose to work on such a project: the larger and more complex the program, the more one's vocabulary would be stretched and its possibilities and limitations laid bare.

Elements drawn from my previous projects (and from other sources) could not simply be restated, but had to be transformed to meet the specific needs of the problem at hand. While the present design for the building is far from satisfactory, it did reveal new ways of using a pre-existing vocabulary: piers and columns were extended as walls; balconies and overhangs became long horizontal terraces serving as major unifying elements; interior circulation was extended to
Fig. 55 Samarra. Jausaq al-Khaqani palace, middle of the 9th century, plan. Scale 1:2000. (After Creswell)
the outside in the form of a ceremonial street or spine. The notion of a building as a miniature urban arrangement was also more clearly expressed in this project than in my former schemes.

Perhaps the most useful lesson drawn from the design was that architectural form becomes significant when it embodies many responses or levels of thought simultaneously. The creation of form relies on three vital elements: the first is the clarification of an idea and intention; the second is the existence of a functional solution to a problem of design; and finally, it stems from a synthesis of idea and "function" with a means of expression or architectural language.
1 Vehicular entrance to site
2 Visitors entrance to underground carpark
3 Pedestrian entrances to site
4 Entrance platform and central "spine"
5 Foyer, temporary exhibits and administration
6 Museum of Islamic Art
7 Library and conference area
8 Curatorial wing
9 New canal bridge
GROUND LEVEL PLAN

1. Truck entrance
2. Receipt and dispatch area
3. Entrance to curatorial building
4. Photography lab
5. Loggia and way up to canal bridge
6. Shops along canal boulevard
7. Porte cochère entrance
8. Entrance lobby and ramp to main level
9. Auditorium lobby and exhibit area
10. Auditorium
11. Kitchen
12. General storage
13. Underground link to curatorial building
14. Temporary museum storage
15. Offices
16. Guard room
17. Construction workshop
18. Mechanical services

Scale 1:200
PLAN OF LOWER MUSEUM LEVEL +2.55 M

1. Persian carpets
2. Persian miniatures and small objects
3. Changing exhibits and work spaces
4. Mogul miniatures and carpets
5. Mogul carpets and large objects
6. Changing exhibits
7. Garden court
8. Ottoman objects
9. Ottoman carpets
10. Changing exhibits
11. Objects from the Maghreb
12. Café
13. Garden terrace
14. Library stacks
15. Work space

Scale 1:200
PLAN OF MAIN ENTRANCE LEVEL -5.10 M

1. Entrance foyer
2. Museum entrance
3. Sources of Islamic art
4. Early Islamic art
5. The mosque and religious objects
6. The expansion of Islam
7. Loggias
8. Museum exit
9. Balcony and library entrance
10. Library
11. Bookstore and museum shop
12. Temporary exhibits
13. Grand loggia overlooking canal
14. Platform connected to canal bridge
15. Curatorial offices and study areas
16. Storage rooms
LONGITUDINAL SECTION
THROUGH CENTRAL SPINE

1 Entrance spine
2 Upper level entrance
3 Ground entrance lobby
4 Foyer (5.10 m.)
5 Upper level walkway and entrance
6 Open passage

7 Temporary exhibits
8 Outdoor terrace
9 Administration meeting room
10 Gallery on mezzanine level
11 Mechanical services room
12 Visitors carpark
13 Staff and v.i.p. carpark

Scale 1:200
LONGITUDINAL SECTION
THROUGH MUSEUM

1 Entrance platform
2 Public terrace
3 Museum gallery
4 Service floor
5 Visitors carpark
6 Upper level loggia
7 Persian carpet room
8 Persian miniatures room
9 First room of museum sequence
10 V.I.P. and staff carpark
11 Retail shops and cafés
12 Temporary exhibits
13 Cafeteria and outdoor terrace

Scale 1:200
CROSS SECTION
THROUGH MUSEUM ENTRANCE

1. Curatorial offices and conservation
2. Storage area for museum collection
3. Receipt and dispatch of objects
4. Staff carpark
5. Visitors carpark
6. Exhibits lobby
7. Library stacks and reading area
8. Library main level
9. Stacks and study area
10. Ground entrance lobby and ramp
11. Main level foyer
12. Museum entrance and first sequence
13. Sources of Islamic art
14. Formation of Islamic art
15. The mosque and religious objects
16. Work space
17. Persian miniatures
18. Temporary exhibits
19. Moghul India
20. Mechanical services and temporary storage
CROSS SECTION
THROUGH CENTER OF MUSEUM

Scale 1:200

1 Curatorial offices and conservation
2 Storage area for museum collection
3 Workshop
4 Underground passage to museum
5 Pedestrian street
6 Lobby
7 Auditorium
8 Final space in museum sequence
9 Museum exit
10 Main level entrance
11 Chicaned passageway to final museum space
12 Ottoman carpets
13 Persian carpets
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