"A MUSEUM ON THE SHORE OF A LAKE": FINDING THE COMMON GROUND

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This is dedicated to the memory of my father, who designed the house that I grew up in. He built the terraces and steps and garden walls at the same time that he was building the foundation of the house... he understood the relationship of inside and outside rooms. He understood how to make a place.

"The existential purpose of building (architecture) is to make a site become a place, that is, to uncover the meaning potentially present in the given environment."

C. Norberg-Schultz
ABSTRACT

The intention of this thesis is to study both architecture and landscape architecture and to find the "common ground" between the two. By understanding nature and how the man-made environment can express and complement nature, strong and meaningful places can be created.

The project for this thesis is a competition. "A Museum on the Shore of a Lake," in which a museum, winter garden, health club, shops and restaurants, parking and a marina are to be incorporated onto a nine acre urban waterfront site.

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From the competition booklet:

"The site is a gentle west-facing slope leading from the business center of a town of 100,000 people to the shore of the lake, a vast inland sea in the heart of the Midwest. The town is a furniture manufacturing center that was also until World War II a producer of automobiles and until the late 1960s of pulp and paper products.

The site for the museum and surrounding complex is in the area on axis with Main Street, between Elm Street and Second Street, the lake and Water Street. Surrounding buildings are late-19th century vintage, of heights of approximately 25-40 feet. The bold double line bisecting the site represents railroad tracks, which are to remain. (The railroad right-of-way and station must remain in use. The tracks may, however, be raised, excavated, etc.)

The existing streets within the site may be altered. The lake edge on the site plan may be altered. The structures which are existing within the site boundaries may be either: demolished, incorporated into any newly designed structure, or allowed to remain intact. Services and utilities may be assumed at any reasonable location."
"The downtowns of most Middle Western cities are dying. Attempts to make them competitive with suburbia by copying suburbia—and in particular its enclosed shopping malls—have at best stemmed the tide of their extinction, at worst catapulted them to a speedy, if unnatural death. The mall-ed main streets that have been closed to traffic and landscaped in ways that make miniature golf courses look natural have made abundantly clear that downtowns cannot be revived, much less survive by further suburbanizing themselves. Downtown must be more than a nonfunctional shopping center. Downtown must be a special place, distinct from suburbia—a set of public places that combine cultural, commercial and civic functions appealing to a wide segment of the resident population—urban and suburban alike—as well as to the tourist in search of a change of scene.

To this end, it is proposed that a general interest museum featuring display areas for historical and contemporary painting, sculpture and the decorative arts, as well as special collections of memorabilia and industrial artifacts specifically relating to the history of the region, become the focus of a waterfront reclamation project at the end of downtown. This mixed use cultural, commercial and recreational center will also include a marina, specialized shopping and a health club as well as year round planthouse or winter garden which will feature specially changing displays and provide a setting for informal concepts, civic receptions, as well as dining.

The project combines architecture and urban design. While the museum is to be designed in detail, its placement in a setting that includes a marina, shops, and a year-round sports club are fundamental to the overall success of the undertaking."

This quote, by Robert Stern, is from the program booklet for the ACSA 1983 Student Design Competition. Besides the Museum and Winter Garden, the following space allocation is required for the site:

**PROCESS: PROGRAM FOR THE SITE**

Commercial:
- Health Club (500 members, indoors)
  - Running Track (1/10 mile long)
  - Swimming Pool (75' x 31')
  - Locker Rooms (2 @ 1000 sq. ft. each)
  - Racket Ball Courts (10)
  - Squash Courts (2)
  - Exercise Rooms (2 @ 500 sq. ft. each)
  - Health Food Cafe (30 seats)
- Restaurants (public)
  - Fast food (1 with 60 seats)
  - Sitdown overlooking Lake (120 seats)
- Shops (10,000 sq. ft.)
- Marina
- Parking (250 cars)

**PROCESS: SITE EXPLORATIONS**

I first looked at the site as a square bisected by the railroad tracks, one side belonging to nature and the water, the other side relating to the city. The museum became a wall between the two, an end to the city street axis, and an entrance from the water. This solution produces a traditional and monumental museum: a museum as object on the landscape. This solution, however, not only makes it very hard to build on the rest of the site, but also minimizes the importance of the site as a place.
"The basic problem to be solved... is how to gather the surrounding landscape."

C. Norberg-Schultz
Important physical aspects of the site:
- The east-west visual axis of the cities Main St. to the water.
- The slope of the land towards the shoreline at the south-west corner of the site.
- The diagonal street parallel to the site's slope, running from the end of Main St. to the railroad station and beyond.
- The isolated piece of the site that is between the city and the diagonal street.
- The railroad tracks cutting through the site, parallel with the street and the slope.
- The implied density of the city at Water Street and east.

Observations:
- The requirements of the program would put new and relatively large buildings at the edge of a city full of small-scale older buildings. Therefore an effort should be made to break up the volumes as much as possible.
- In organizing the buildings on the site, logic determines the location of shops along Water St., closest to the city; parking central to the site but buried; the health club convenient to both the marina and the city workers and benefiting from the southern sun; and the Winter Garden close to the water, looking out and away from the city.
- The pattern of layering from the city to the water, already set up by the diagonal street and the railroad tracks, should be continued.
- The site is a link in the path from the city to the water. Therefore anything built on the site should reinforce that path. The visual axis of Main St. should remain.
- The museum—the focus of this urban site—wants to be a linear building, a bridge from land to water, an architectural path parallel to the Main St. axis.

It is at this point in the design process that the museum and the site become intertwined. The site affects the building, the building affects the site. They are on "common ground."
"(Man) wants to visualize his understanding of nature, "expressing" the existential foothold he has gained. To achieve this, he builds what he has seen. Where nature suggests a delimited space he builds an enclosure; where nature appears "centralized," he erects a Mal, where nature indicates a direction, he makes a path."

C. Norberg-Schultz

"Common ground is where architecture and landscape overlap. It is where the forms of streets and hills shape the forms of parks and buildings. On common ground there is an ambiguity between public and private, real and fantastic, outdoors and indoors, nature and technology and most other things... The story of the common ground is told by walking from one room, indoors or out, to the next. Floors, walls and ceilings of verdure alternate with those of stone, wood and water. One walks through a succession of elements linked by straight lines. Paths radiate. Views emerge. Lines of trees color the path as if it were immersed in the sea. One sees ahead at each new glance through layers of transparent walls. One is not lost. Stairways and ramps make the player move through space rather than stare at it. The action involves playing and playacting, remembering old texts and where you were five minutes ago. The plot is hinted; a glimpse of green through an arch, a view down a balustrade, the sound of water. The story is not revealed at any one point; there is surprise and ambiguity... There is magic in the insides of outdoor theater and the outside of movie houses. In the back of Grey Walls, in circus tents, grape arbors, cafes under trees and shops under awnings, fishing piers and Pacific Palisades. There is magic when illusion is reality and opposites merge... Order encloses Magic..."

B. Solomon
PRODUCT: THE SITE MODEL
Because of his need for a belief in permanence and continuity, and more specifically, as a reaffirmation of his own existence and heritage, man has always been a collector of objects. Collecting reflects his interest in the impact of man on his environment and of the environment on man, the effect that objects have on man, and that man has upon objects. It reflects his strong desire to learn from the past and to ensure a safe future.

The first museums expressly built as such were straightforwardly planned for the sequential viewing of works of art. A product of the second half of 18th century Europe, they bore the imprint of ancient Greece, Imperial Rome, and Renaissance Italy. J. N. L. Durand's generic design for an art museum established a powerful precedent for the monumental museum, the temple of art. It demonstrated his rationalistic method of planning, with units of small and large rooms arranged in long sequences, not unlike the Renaissance palace. This tradition of museums as monumental civic structures continued in the first museums built in America, in the form of great sprawling Beaux-Arts buildings in parks or garden settings. And for the most part, civic monotempality remains the rule for new museums being built today.

Because of the art museum's consistent history as a temple of art, the word "museum" will likely always evoke a particular character of building. Rarely, however, does the term evoke a particular spatial organization. There are two primary, although contradictory, functions of an art museum and both influence the spatial organization of the building, one directly and one indirectly. These functions are preservation and display. Preservation includes the control of temperature, humidity, and air pollution. It includes securing the works of art from natural disasters and from vandals. And it deals with the important issue of lighting: whether artificial or diffused light, indirect natural light, or a combination of these methods should be used. These issues of preservation, however, give no direct clues to a museum building's form. It is the function of display, the need for objects to be seen and understood, and for the past to make its impact on the present, that begins to give a clue to a building form. As Vincent Scully said, "There is no way to separate form from meaning; one cannot exist without the other."

Just as the purpose of building architecture is to reveal the truth about a site, the purpose of the museum enclosure is to reveal the truth about the objects on display. (The enclosure, therefore, must relate to the site outside and the objects inside concurrently.) The museum is rarely concerned with the creation of illusion, but, on the contrary, tries to reveal the true nature of the object in the clearest way. To this end, the typical museum experience is one of viewing images in sequence, with that sequence being sensed by a walking observer meeting static objects. (It is similar to the way in which we experience a town or a building, by moving through it, making our own choices of direction.) We always perceive things one after another, whether the route is a tightly controlled or relatively undetermined progression. What almost every museum holds in common, no matter what their geometric configuration, is a relationship between spaces in terms of continuity and linearity, whether it is the straight line of John Russell Pole's National Gallery of Art, or the spiral of Frank Lloyd Wright's Guggenheim. One other configuration does exist that combines linearity and continuity but also allows for a variation or choice in the route. Such a system allows for either a more or less continuous viewing by going through the exhibition galleries or for selective viewing of one or two galleries by going only to these from a corridor. In this instance, there exists a hierarchy of subdivision, which is a prerequisite for man moving comfortably through space.

E. H. Gombrich observed that "we do well to remember that relationships matter in art not only within any given painting but also between paintings as they are hung or as they are seen." Relationships also matter between paintings and objects all of one kind or of one time. Our experience of an exhibition is always a kind of mosaic built up in our minds as the result of serial viewing. It is impossible to comprehend a whole museum or even one gallery space all at once. For this reason, the arrangement of objects is the vital key to a museum's comprehensibility. It is only by the successful arrangement of objects that truth is revealed, connections are made, and knowledge is gained about the objects themselves, about man, and about the world that we live in.

"Since its emergence some two hundred years ago as a specific building type, the art museum has occupied a compelling place in the history of architecture. In itself the embodiment as well as the repository of a given society's aesthetic values, the art museum focuses attention on architecture's dual nature as functional craft and expressive art. The architect's mandate here—the shaping of celebratory spaces revealed in light and experienced with heightened sensibilities—goes to the very heart of the architectural enterprise."

H. Searing
PROCESS: PROGRAM FOR THE MUSEUM

From the competition booklet:

"The museum's program reflects at a small scale the tradition of the comprehensive or encyclopedic general purpose museum, a tradition that includes at much larger scale the Smithsonian complex in Washington, D.C. and the Brooklyn Museum, where the arts and sciences of man are showcased in a single facility. As such, the program for the museum has within it four major divisions, each of which constitutes a kind of museum within-a-museum. One division is devoted to the arts of man and emphasizes historical and contemporary painting, and sculpture. The second is devoted to the history of the region and combines the collections of various hitherto dispersed local history societies and university collections. The third is devoted to works of man and contains significant displays of industrial archaeology including a collection of machinery related to the processing of wood into paper, each intended to be housed in a large warehouse-type structure. The fourth is devoted to man and his environment, and includes a large greenhouse intended to serve a double function as educational tool and pleasure garden—in the latter capacity constituting a major attraction for tourists and residents particularly in the bleak winter months. The winter garden is to be operated independently of the museum, so that it can be visited by anyone; it is also intended to be a major focus of the entire cultural and commercial center—though it is not to be an "enclosed mall" or "galleria."

The program requires the following space allocation for the museum:

**Galleries:**
- Entry Lobby
- Exhibits galleries (4)x 7,500 sq. ft. (in 4 divisions)
- Changing exhibits (4)x 2,500 sq. ft.
- Demonstration Gallery 6,500 sq. ft.
- "Works of Man"

**Sales**
- 250 sq. ft.

**Information Area**
- 300 sq. ft.

**Coat Room**
- Rest Rooms
- Theater for 250
- Winter garden 20,000 sq. ft.

**Subtotal**
- 68,750 sq. ft.

**Administration:**
- Director 200 sq. ft.
- 4 Assistant Directors (4)x 150 sq. ft.
- Secretaries 600 sq. ft.
- Conference Room 100 sq. ft.
- Board Room 275 sq. ft.
- Publicity 400 sq. ft.

**Subtotal**
- 2,175 sq. ft.

**Service:**
- Loading Area 100 sq. ft.
- Superintendent 100 sq. ft.
- Locker Area 100 sq. ft.
- Workshop 400 sq. ft.
- Storage 5,000 sq. ft.
- Phone Equipment 75 sq. ft.
- Mechanical 900 sq. ft.

**Subtotal**
- 6,675 sq. ft.

**Museum Total**
- 77,675 sq. ft.

**Total Net Square Feet**
- Plus 25% Allowance
- For mechanical areas, circulation, structure, etc.
- 97,000 sq. ft.

*As Required

The museum will receive approximately 500-1500 visitors a day, six days a week. Provisions should be made for proper orientation, circulation, and separation of visitors and employees.

PROCESS: FIRST IDEAS

My objective was to design a building that, through the choice of structure, and the location of spaces and openings, would be organized in the most coherent way possible, in order to heighten the viewers understanding and perception. I was concerned with somehow offering the viewer the context of the art objects origin, rather than to encourage the opposite, which is the tendency of many museum-goers to relate an original painting to a dorm room poster or an office-mate's coffee mug. Though it is unrealistic and undesirable to recreate the church where a painting originally hung, a museum can offer some sense of history, some avenue for memory, just by the careful arrangement of the art objects, one to another.

Concerns:
- How to simplify yet enrich? How to make each part within the whole comprehensible; how to make the viewer realize, while in one part of the building, what relationship that part has to the whole? How to develop a hierarchy of choices: what are the rules? How to create an order of four museums with things that are alike, and things that are different; to identify the repetition and differentiation of elements.
PROCESS: DESIGN DEVELOPMENT
"Why The Floating Opera? . . . That's part of the name of a showboat that used to travel around the Virginia and Maryland Tidewater areas . . . It always seemed a fine idea to me to build a showboat with just one big flat open deck on it, and to keep a play going continuously. The boat wouldn't be moored, but would drift up and down the river on the tide, and the audience would sit along both banks. They could catch whatever part of the plot happened to unfold as the boat floated past, and then they'd have to wait until the tide ran back again to catch another snatch of it, if they still happened to be sitting there. To fill in the gaps they'd have to use their imaginations, or ask more attentive neighbors, or hear the word passed along from upriver or down river. Most times they wouldn't understand what was going on at all, or they'd think they knew, when actually they didn't. Lots of times they'd be able to see the actors, but not hear them. I needn't explain that that's how much of life works."

John Barth

The site determines the form. a linear element from the city to the water, that reinforces the Main St. axis, creating a new path that defines more clearly the outside path that already existed.

Continuing with the idea of layering of elements to the water, the museums begin to relate to the landscape. The Art Museum and main entrance are located on the isolated piece of land nearest to the city. This building is not only the primary entrance from/to the city, but also holds the theatre, restaurant, permanent art collection and changing art exhibits. The Art Museum continues as a bridge structure down to the water. Connections occur along the way between the bridge and the other museums.

Beside the diagonal city street, the Museum of the Region is connected to the bridge. Beside the railroad tracks, the Museum of Industry is connected. Finally a third layer of the site is created, a garden, and beside it, the Museum of Environment is connected to the bridge.

This connection, or cross-over between each museum and the art bridge implies that the arrangement of the art is not chronological or by schools of art as in most museums, but organized by subject. Everything having to do with industrial America is clustered in the portion of the bridge that intersects the Museum of the Environment, and so on. There is a change in level, stepping down, where the subject of art on the bridge changes.

By organizing four museums within one museum in this way, it is hoped that what would be seen by the museum-goer would be seen with a new richness of meaning. Connections could be made directly between the object and how man made that object art. This concept also allows for choices. One could just walk the bridge, and see only works of art. One could enter any of the buildings and see only the objects in that particular museum. Like the Floating Opera, the museum would have no specific beginning or end. The museum-goers would rarely see everything, but only snatches at a time. They would always be able to understand, however, the context of what they see in terms of the whole museum.

The Pieces:
Museum of Art
Museum of the Region
Museum of the Environment
Museum of Industry

Parts that can be alike:
Entrance space
Changing galleries
Service core
Circulation core from bridge to museum
Structure

Parts that are not alike:
The permanent collection to be housed in each museum: the enclosures of each exhibition space.
"The profound originality of architecture as such rests in the internal mass. By giving definite form to this hollow space, architecture creates its own universe... If you think of it, the greater wonder is the conception and creation of a kind of reversal of space. Man moves and acts on the exterior of every object; he is always outside, and to go beyond surfaces, he must break into them."

Henri Focillon
"Inflection in architecture is the way in which the whole is implied by exploiting the nature of the individual parts, rather than their position or number. By inflecting toward something outside themselves, the parts contain their own linkage... Inflection is a means of distinguishing diverse parts while implying continuity... In terms of perception it is dependent on something outside itself, and in whose direction it inflects. It is a directional form corresponding to directional space.

Robert Venturi
"A STAIR ISN'T SOMETHING THAT YOU GET OUT OF A CATALOG BUT A VERY IMPORTANT EVENT IN A BUILDING."  
L. KAHN
"The architects' main work is the organization of a unique whole through conventional parts and the judicious introduction of new parts when the old won't do... Familiar things seen in an unfamiliar context become perceptually new as well as old.

Robert Venturi
PRODUCT: THE BUILDING MODEL
(ONE PIECE)
PRODUCT: THE BUILDING MODEL
"A strong place presupposes that there exists a meaningful correspondence between site settlement and architectural detail. The man-made place has to know "what it wants to be" relative to the natural environment. We have to be able to see the meanings of the things that surround us: be they natural or man-made. Things always tell several stories; they tell about their own making, they tell about the historical circumstances under which they were made, and if they are real things, they also reveal truth. The ability of a thing to reveal truth depends upon how it is made, and the next thing to learn is therefore making. Seeing and making are united in inspiration and concretization.

C. Norberg-Schultz

"Place" can be broken down into categories of outside, inside, and in-between spaces, though these are relative terms. The outside spaces where man has defined a void and so created an enclosed space in the city, in the streets, the parks, the squares, Norberg-Schultz calls this the "urban inside." The exterior of any building is the interior of the city; the landscape is the extended ground to the man-made places.

By recognizing the difference between the inside and the outside, architecture, according to Robert Venturi, opens the door once again to an urbanistic point of view: "Since the inside is different from the outside, the wall—the point of change—becomes an architectural event. Architecture occurs at the meeting of interior and exterior forces of use and space. . . . Architecture as the wall between the inside and the outside becomes the spatial record of this resolution and its drama."

Unfortunately, though, that difference is hard to recognize, and very few things are designed from the outside in and the inside out. "The habits of our mind are fixed on matter," states G. Scott in The Architecture of Humanism: "We talk of what occupies our tools and arrests our eyes. Matter is fashioned; space comes. Space is "nothing"—a mere negation of the solid. And thus we come to overlook it."
REFERENCES


