A PLACE OF LEARNING
A School of Architecture in Old Town

by:

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(ABSTRACT)

"... a realization of what particularizes the domain of spaces ideal for "school" would make the designing of an institution of learning challenge the architect and awaken in him an awareness of what 'school' wants to be, which is the same as saying an awareness of the form: 'school'."  
L. Kahn

The aim of this design thesis is to consider 'the spirit of place' in a learning institution and explore how this 'spirit' may be expressed in a work of architecture.

The project is a new School of Architecture in Old Town, Alexandria. Issues of concern include designing with sensitivity to an existing urban fabric, the articulation of boundary between public and private domains, order vs. spatial variety, and creating a place for students and the community which celebrates learning.
ACKNOWLEDGMENTS

**To my Mother and Father,**
for believing in me.

And many thanks to all the people who helped me complete this endeavor. For your encouragement, support, inspiration, and guidance.

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All my friends and fellow students at the Alexandria Center.

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The concept of the design developed from a personal philosophy of architectural education. To me the successful system is one in which students explore through their own initiative new ways to effectively integrate an ever-expanding body of information and resources. By gaining this self-reliance, the students would be able to make effective decisions as architects. This type of education would involve not only traditional classroom activities, but also creative exploration and communication through the studio environment. Both learning environments form an important dichotomy of education that through complementary roles encourage a special 'spirit of community' for the student architect. At another scale, my building was also intended to show how a modern building that uses contemporary construction techniques can successfully integrate into a historically prescribed setting. The paradigm that rules new construction in older neighborhoods is one that relies on prevalent construction methods with pseudo-historical imitations as facades. I want to use my methods honestly while successfully integrating them into the context through the sensitive use of scale, mass, and proportion. Only through the intelligent use of building in such environments can architects produce a voice that will be heard.

Through these issues I have worked to make a place that is private for the student yet with grand spaces for the public. Giving the city a building which is a worthy neighbor while advancing urban issues was paramount to me. This building would hopefully exist as a success at both levels.
"Schools began with a man under a tree, a man who did not know he was a teacher, discussing his realizations with a few others who did not know they were students. The students reflected on the exchange between them and how good it was to be in the presence of this man. They wished their sons, also, listen to such a man, so the needed spaces were erected, and the first schools came into existence. The establishment of schools was inevitable because they are part of the desire of man. Our vast system of education, invested in institutions, stem from these little schools, but their spirit in now forgotten. The rooms required by our institutions are stereotyped and uninspiring.” L. Kahn
The architecture school in Lyon, France consists of two clearly delineated forms linked by a circulation spine. The administration section, a crescent structure, consists of a daylighted entry hall enclosed by the offices and used for school gatherings. It connects directly to a long and low rectangular block by a single, skylighted central 'street' that provides access to classrooms and studios. The classrooms are on the ground floor within concrete vaults separated by thick walls defining service distribution, staircases, labs, and storage. By contrast the studios' area have a double height framework of timber. The beauty of the design lies in the clear expression of structural systems, a sensitive use of materials, and specially designed connections as beautiful objects.

The Architecture School at the University of Houston by Philip Johnson is said to possess an uncanny resemblance to a 1773 sketch by Claude Nicholas Ledoux of an unbuilt 'house of education'. A temple-like building, dramatically lit from the inside, consists of a cruciform plan centered around an atrium rising four stories in five columned tiers and toplift with a square skylight cupola. Surrounding the inner court on the first level are a lecture hall, gallery, library, and administrative offices. The studios on all three floors above open to the court. Offices and smaller lecture rooms line perimeter walls.

The strength of the design lies in the simplicity of the parti, which provides a strong sense of community.

Dubbed by Aldo Rossi as the 'Acropolis of Miami', the school of Architecture at the University of Miami consists of a complex of buildings. Dominated by a rotunda and vaulted auditorium, the small pavilions contain administration offices and support functions. Classrooms occupy four existing buildings along a new palm tree lined walk culminating in a tower sitting at the edge of a lake and containing the library and jury rooms. This design exemplifies the urban nature of a learning institution, as demonstrated in the village type arrangement.

In the design for Harvard's GSD, the main element promoting student communication consists of a central studio space for four hundred students which is designed on five levels. The overlapping tiers are spatially open and are clear-spanned by single trussed roof. Support spaces are located at the ends of each studio level, and more specialized spaces such as technology workshops, auditorium, and library are located under the studio tiers. Multiple curved sidewalks lead to multiple entrance doors at ground level. These sidewalks link all ground level functions as well as horizontal circulation at other levels.
The last fifteen years of my life have been dedicated, as both student and a practitioner, to architecture. During this time, many people have been important to me in defining my own architectural position. When I began my graduate thesis, I sought to choose those architects with whom I had the greatest affinity. The two architects whose work seemed the most germane were Louis Kahn and Herman Hertzberger. I found their work, both written and built, as the best embodiment of my direction architecturally. I wanted to design a school that was not only a strong institution, but a place for the community to come together.

Kahn's extensive writing about the role of the institution in culture was what led me to him. He seemed to have an almost poetic understanding of how the institution throughout history has been a dominant feature of society. His struggle to understand helped me in my own struggle. How does one create an institution in today's context with its multitude of mixed-use programs? Academic buildings today must consider complex programmatic needs and make use of modern construction technology. Where Kahn's work was helpful was that it made me aware that this must be achieved within the context of something more important, which he would call the 'spirit of place'. Even with today's emphasis on technology, flexibility and security in our buildings, we should strive to preserve the intimacy and openness of the 'spontaneous encounter'.

Herman Hertzberger also approached his work in a humanitarian manner as did Kahn. While Kahn was focused on the role of the institution in culture, Hertzberger took a more primary view of social interaction. His work seems intent on looking at the small scale as the basis for growth. His buildings, whether schools or offices, deal with the flexible and repetitive use of a building material as the beginning of a matrix that builds a democratic and non-hierarchal system of social interaction. This can be seen in his Central Beheer project in Holland.

This philosophical view of the workplace or the place of learning was a major attraction to me. He viewed environments as flexible in order that the inhabitants would help define them. This was important when designing a school of architecture because of the need for the student to feel that they can explore their built environment and appropriate their place in their own way.

My thesis sought to cull from the work of both architects the pieces that would be the most appropriate to combine as inspirational in my work. Although the work of both are quite different, their view of the importance of architecture to society seems to have much in common.
Louis Kahn defines architecture in its simplest terms as the thoughtful making of spaces. He presents the idea that the 'court' is the most ideal form for a 'Place of Learning'. He explains spaces within a Court as superior to all other arrangements because of one's feeling of association with it, not only directly but an association with it in spirit. The court would serve not only as a physical meeting place, but also a meeting place of the mind.

In agreement with this notion, I began my thesis adopting the idea of the Court. In the initial scheme I designed a large outdoor courtyard open on one side to the waterfront park with the school functions in a U along the remaining three sides. After developing this design for a semester, I felt dissatisfied with it for several reasons. Most importantly, in its current arrangement as an outdoor space the gathering area seemed to lack the strength to become a meeting place of spiritual proportions, a place which one might enter and appreciate as such. In addition, the open courtyard was also unsuccessful because it did not provide a boundary between public and private realms.

While respecting the decision I had made toward the form of the building, I transformed the design and brought the court to the inside. This made it a space belonging to the private domain of the school and open to the public only by invitation. By moving the court to the inside, I was able to use the building structure and mass to more directly shape the space and give it a specific character. This character should fit its purpose by making its users aware of the importance and spiritual dimension of a place to meet. This inner court would become the magnificent 'place of arrival' and thereby the sacred space of the school. Heavy with light and grand in scale, the inner court would give the building presence and invoke a feeling of power which was appropriate for a place of learning. I imagined this space almost sacred in its emptiness and yet appropriate for many activities. It would be a place for assembly, a place where students could present their final projects, a place large enough for students to build full-scale models and a place to invite the public on occasion for viewing the students' work. I imagined all the other spaces defining themselves in relationship to the Inner Court.
"In simple terms you could say that building order is the unity that arises in a building when the parts taken together determine the whole and conversely when the separate parts derive from that whole in an equally logical way. The unity resulting from design that consistently employs this reciprocity-turns determining the whole and determined by it - may in a sense be regarded as structure... In other words, a structure which may be said to be programmed to accommodate all expected infills. In this way it is possible to aim consciously at a unity of spatiality, components, materials, and colors in such a way that maximum variety of uses can be accommodated." H. Hertzberger

The connective thread or common theme I employed to give my building a sense of unity and order, and that serves to create a single image, is the repetitive use of parallel concrete walls. The concrete walls are the material which gives the building mass and contributes to a sense of 'realness'. In exposing the lines of the formwork, the walls tell the story of the forming process by which they were made. The walls are the spine of the building, supporting the floors, roofs, and other elements necessary for human habitation. This structural system of parallel concrete walls provides the building with clarity through their placement. Their manipulation provides the capacity for a multiplicity of forms and spaces required by the program. The walls are arranged in an alternating rhythm of ten, twenty, and thirty foot bays. This rhythm of bays is reminiscent of the traditional rowhouse typology of Old Town. Generally, the smaller bays contain circulating elements and other core functions. They are often the servant spaces for the adjacent larger bays. Toward the northwest corner of the site an interruption of the regular rhythm occurs to create an entry court for the public to enter into the semi-public domain of the school. Public functions including a bookstore, cafe and public entry to the lecture hall occur at ground level of this entry court. It is only from here that a public entrance to the school occurs. The series of walls terminate to the north of the entry court, at the northwest corner of the site in a tower containing the library. Standing as the tallest element in the school, the library tower announces the presence of the school in the urban landscape and terminates the building. The walls are manipulated in section with great diversity to allow for spatial variety. Where Kahn strove to make his building plans a 'society of rooms', I have integrated this idea in section, thereby trying to achieve the same sense of unity. This can best be appreciated along the section at the inner court. At the western end, the walls are solid forms with a limited number of openings, thus providing the desired separation and privacy between similar self-contained functions. The walls span across the Inner Court at the highest level, almost like large lintels, which channel light down thereby flooding the inner court. To the east, in the studio realm, the walls are transformed into a structural framework similar to a Vierendeel truss. A desired openness in the horizontal direction is thus achieved allowing for the passage of people, mechanical systems, and apertures for light and air.
The site is bounded to the north, south, and west by the treelined streets of Old Town, and to the east by the Potomac River. The land gently slopes toward the river, ending at a concrete wall which rises ten feet above sea level. The existing structures on the site are a series of brick warehouses which block access to the waterfront. My design proposal would remove these buildings.

The immediate neighborhood provides a mixture of new and old buildings. Along the north side of the site is a series of one-story flat-roofed warehouses which seem to lack any true architectural merit. The Harborside development along Wythe Street to the south and the houses along Union Street to the west are of primarily new construction. These developments are typical of new construction in the area in that they are built to a maximum building envelope and make an abrupt transition to the street that is insensitive to the human scale. They also provide elevations to the street that mimic the existing urban patterns in a superficial way which detracts from the whole. It is my hope that my proposed building will be able to illustrate through the thoughtfulness of its design that a modern building can be inserted successfully into an existing urban fabric. My position is that this approach is ultimately more successful than those that propose a pastiche of older styles.
The existing buildings on the site stretch from the street to the waterfront. My building would change this situation by being developed to the street side of the four hundred square foot city block. Its placement there would achieve two urban issues which were important to me.

The building would be held to the same distance from the street as the neighboring buildings to help define the existing urban "wall". Also, by pulling the school back from the waterfront, the existing greenspace to either side of the site can be linked enabling the city to gain significant outdoor space.
The program was organized according to activities ranging from public to private.

PUBLIC
- Cafe
- Bookstore
- Public Exhibit

SEMI-PUBLIC
- Lecture Hall
- Exhibition
- Inner Court

PRIVATE
- Administration
- Faculty
- Seminar Rooms
- Workshops
  - wood and metal
  - graphics and printing
  - sculpture
  - ceramics and pottery
  - photography
  - painting and drawing
  - computers
- Design Studios
- Library and Reading Room
- Student and Faculty Housing

1. Inner Court
2. Social Gathering
3. Small Lecture Hall
4. Metal and Wood Shop
5. Clean Workshops
6. Public Exhibit
7. Cafe
8. Bookstore
9. Toilets
10. Administration
11. Student and Faculty Housing
12. Entry Court
13. Terrace
The infill system used between the parallel concrete structural walls is a new facing system borrowed from a design patented by Renzo Piano. He employed the system in a social housing project in Paris. The system clads the exterior elevation of my design with a masonry unit material, reminiscent of the neighboring brick built structures. However, it uses this traditional material in a way that is contemporary with modern construction techniques.

The design incorporates the innovative use of masonry into current curtain wall technology. It completely omits the use of mortar. It is diverse and adaptable, providing a frame work within which opaque and transparent materials and shading devices are incorporated to provide varying degrees of privacy, view, light, air and shade. The system acts as a frame, profile and fastening for panels of fire clay tiles, window units, and louvering devices.

This design provided a cladding system for the elevations which was uniform and created a coherent image. It also allowed for great flexibility, in order to accommodate the desired openness for the functions within. It is used for both punched openings of varying sizes within the concrete walls, as well as in large planes of infill walls, from floor to roof, between the structural parallel walls.
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