All architecture is what you do to it when you look upon it,

(Did you think it was in the white or gray stone? or the

lines of the arches and cornices?) . . .

It is nearer and farther than they.

— Walt Whitman, *Leaves of Grass*

### PREFACE

The objectives, strategies, and activities set forth in this essay, are a refinement of those presented in the curriculum unit designed in conjunction with last year’s seminar at the Institute. Experience gained in the application of that unit and research into the writings of Walt Whitman, Vincent Scully, Louis I. Kahn, and Charles Moore, are resources which inform this supplement. I will also draw upon these sources in presenting my own design project, executed as a part of this year’s seminar.

In my reading of *The Shingle Style and The Stick Style* by Vincent Scully, I was drawn to the inscription from Whitman’s *Leaves of Grass* which precedes Professor Scully’s scholarship and research into theory and design in American architecture. This acknowledgement of the power of the poetic image to take precedence over both the scholarship and practice as will be seen in the work of Louis I. Kahn of architecture, parallels my own experience in presenting architectural concepts and methods to my students. It led me to search Whitman’s writing for other references to architecture. The selection by Professor Scully reads:

When the materials are all prepared and ready,

the architects shall appear.

I swear to you the architects shall appear without fail,
I swear to you they will understand you and justify you,

The greatest among them shall be he who best knows you,

and encloses all and is faithful to all,

He and the rest shall not forget you, they shall perceive

that you are not an iota less than they,

You shall be fully glorified in them.

My own discovery appears at the outset of this essay. The substance of these citations and the other sources I have mentioned will be utilized in my exploration into the nature and essence of architecture.

The preface of Professor Scully’s book lists four objectives which are compatible with my own purposes. These objectives are: 1.) “to illuminate the main course of theory and design;” 2.) “a concern with a process of growth in architectural thought and design;” 3.) “to present some works by important American architects;” and 4.) “the search for expression and order in American architecture.” In my own work, I will utilize poetry to illuminate ideas and projects planned for presentation to my students. The process of growth will not only refer to architecture, but to the student him/herself. I will present the work and thought of the twentieth century American architect Louis I. Kahn to accomplish the third and fourth objectives. Special attention should be paid to certain words which appear in these objectives, for they will come to play a greater role in the discussion of Mr. Kahn’s architectural and philosophical work. They are: thought, works, expression, order, and origin, as it appears in the subtitle of Scully’s book. This last word should read as “beginnings” in the work of Kahn.

Although I make no pretense to the authority which accompanies the exhaustive research and scholarship of Professor Scully, I am in agreement with the principles he has applied in his search for an indigenous American architectural tradition. The association of Whitman and Kahn is not a direct one. Whitman’s ideas, the product and expression of nineteenth century society, were no longer relevant in the 1950’s, when Kahn first began to fully apply his integrative art. There is no indication that he drew upon this philosophical tradition; and it is not my intention to imply that he did. The similarity lies in their position as artists. In the words of Professor Scully, it is that they “. . . most fully embody American conditions and aspirations.” Scully’s words are made in reference to Mr. Kahn, but it is my opinion that this is also the case with Whitman. In his discussion of Kahn’s work in his American Architecture and Urbanism, Professor Scully identifies these conditions and aspirations as “. . . the determined search for probity and integration, the struggle necessary to make contact with reality, and with the place, the tendency toward technological determinism, . . . all (these) . . . have been consistent American characteristics, and all have been turned to creative use by Kahn.” These traits are operating in Whitman’s work as well. The lines from Whitman are taken from two poems whose titles attest to this relation of artist to place, technology (read occupations in Whitman), and self.

The body of this essay is divided into three sections. The first, entitled The Architect as Poet, will reveal my own discovery of poetry’s ability to enhance and assist in the instruction of architecture. I will also make a brief analysis of Whitman’s lines for an understanding of the nature and essence of architecture. In the section which follows, The Architect as Person, I will investigate the work of Louis Kahn, specifically, in a tour of the
I would like to acknowledge a debt of gratitude to the authors mentioned above and others whose works appear in the bibliography. The ideas expressed in this essay, though perhaps derivative, are strictly my own. I have not sought to misrepresent their artistic and scholarly efforts and apologize for any misreading that might have occurred.

THE ARCHITECT AS POET

Since it constituted a major addition to my previous unit, I will begin with poetry. Although the exercises outlined in that unit addressed the means of architectural design, they did not adequately address the purpose of architecture. So, somewhere between the blind walk and some unsuccessful attempts at observation and gesture drawing, a discussion took place which necessitated my structuring a new approach. As a result of the blind walk and this dialogue, I discovered that the students were capable of describing the places they had been, as well as other significant places from their memories. I decided to tap this familiarity with description and the language of feelings. I scanned my collection of poetry books for works that described places or architectural features. Among those that proved useful were, *Somewhere* by Robert Creeley, *A Window and Room* by Denise Levertov, and *The Small Cabin and Frame* by Margaret Atwood. Each of these works revealed the intangible feelings and memories which places are able to invoke. They also provided a descriptive vocabulary of the physical features of place. They pointed to the personal nature of places and their existence over time. The piece that was missing in my unit had become clear. It was a piece of Mind.

This inclusion of poetry invigorated both teacher and student alike. It evoked a desire to learn more about what can be done to create images and objects which could invoke similar responses as these poems. The class became a meeting place in which this big word, architecture, was more thoughtfully confronted. Instead of the need to understand the making of places, I found a longing to believe that memorable places indeed existed. This precognitive mode of understanding is the basis of my choice of Louis Kahn as the architect who might best address this need.

This agreement on human action, in the form of feelings and memories, as a determinant of architectural purpose carried over into other activities and projects within the planned unit. Floor plans of the students’ homes were penciled on cream colored paper. Young photographers turned their lenses toward buildings and particular features of buildings. Students scanned books on architecture to search for images to copy and use in collage projects which created unique ideas and visions. Belief had turned into understanding. Imagination was applied to the designing and making of objects. In the words of Louis Kahn, “the will to be to express” had taken hold on my students.

The ideas expressed in Whitman’s poems, taken from Scully’s citation from “A Song of the Rolling Earth,” and my own selection from the poem which immediately precedes it, “A Song for Occupations,” display an orientation toward the nature and essence of architecture. It is an integration of active and passive elements. In our looking and searching, we are creators of the architecture that has appeared as a result of the harnessing of larger forces, such as materials, environment, and Mind. The Spirit of Architecture is invoked and embraces all. It is both present and tangible in particular elements, features, and materials; and it is as unreachable as the farther reaches of time, or space, or Mind. It emerges as the result of human needs,
activities, desires, and occupations. It is discovered in and created from the substances of the earth. Architecture is the product of man and nature.

**THE ARCHITECT AS PERSON**

This realization of the poetic nature of architecture, coupled with my work with light and materials in the art of photography, characterizes my affinity with the ideas and works of Louis Kahn. Long before I came across his writings and teachings, I had mentioned to my surprised photography students that we ourselves and other things composed of matter are frozen light. To make this statement more palatable, I revised this reference to ourselves to read: light slowed down. Their surprise was compensated by my own wonder when I later encountered Kahn's reference to matter as being “spent light.” This “light” and this “spent light” were to play a significant role in the design of his buildings.

This affinity motivated my choice of his works as resources for my students' understanding of the “unmeasurable” dimension of architecture. Too much should not be made of this dichotomy of the measurable and the unmeasurable, since Kahn himself had a great reverence for both of these manifestations of light. This categorization is artificial and fails to direct us to the integration which Kahn's buildings and Whitman's poems suggest.

Earlier in this essay, I referred to the ability of poetry to illuminate and inspire, where the more practical exercises in skill-building had failed. This ran contrary to my expectations in preparing the previous curriculum. I had thought that this sequential development of graphic skills would be better received. But a more conceptual reference to architecture, through words and poetry, intrigued them. Proceeding from this unknown relationship proved more successful.

Kahn’s attempted integration of materials and the sense of man is most apparent in the following passage which animates matter:

> You say to brick, “What do you want, brick?”
>
> Brick says to you, “I like an arch.”
>
> If you say to brick, “Arches are expensive, and I can use a concrete lintel over an opening.
>
> What do you think about that, brick?”
>
> Erick says, “I like an arch.”

To paraphrase these lines in the sense of Whitman, brick is ready and prepared for you to look upon it. Both artists express a harmony of man’s will with nature. But nature has its laws and man must respect this. Scully, in referring to Kahn’s theories of architecture relates:

> “The whole represents a realistic appraisal of Kahn himself—and perhaps of the way all human ‘creation’ works: first the general conception, really a kind of preconception hammered out largely below the surface of
consciousness from what one knows and remembers; this shapes the symbolic configuration which enables the mind to ask new questions in a pragmatic sense, which may lead finally, if rarely, toward something with its own proper character, unique, perhaps new.”

You may be thinking, “This is all some pretty heady stuff, but what am I going to do in my classroom?” Or, perhaps you consider this anthropomorphism ideal for your students, who inhabit a world of dreams. A look at Kahn’s ideas on the institution of school can provide some insight, if not some solace: “I think of school, as an environment of spaces where it is good to learn.” This may be easy enough to agree with, but he has something more to say about the origins of school: “Schools began with a man under a tree who did not know he was a teacher, discussing his realization with a few, who did not know they were students.” What we discover in Kahn is an attachment to what comes before the knowledge of a thing. He associates with beginnings. His theory is to return to the curiosity, intuition, and delight which accompanies the discovery of new things. “Because after all, the bird outside, the person scurrying for shelter in the rain, the leaves falling from the tree, the clouds passing by, the sun penetrating; these are all great things. They are all lessons in themselves.” Kahn’s thought, like Whitman’s, embraces all, energizes all.

With this in mind, let us leave the fear of what to do in the classroom and expand our concept of what and where to learn. But be sure not to leave the Spirit of School behind, “The existence will of school (which) was there even before that man under a tree.” Even he cannot become too complacent; he must expand his experiences.

Kahn identifies the desire to learn as one of the three great desires of man. The “desire to meet” and “the desire to well-being” are others. So, let us meet at one of his places of well-being, the Yale Center for British Art on the corners of High and Chapel Street in downtown New Haven. I have come up with something concrete (and steel, and glass, and oak, and linen) to use with your students. I intend to present two examples of architecture, one product, one process, in order that you and my students might believe in architecture.

In case you haven’t lost faith in this and are still with me, I am now going to provide an analysis of the building, in order to establish some aspects of Kahn’s architecture which will be used in the activity that appears at the end of the text.

Before I went off into an apology and appeal for you to remain with me, I left you standing on that street corner in downtown New Haven amidst a composition of concrete, steel, and glass. You haven’t found the oak and linen, yet? The true believers among you may have risked stepping inside and have discovered it. While the others are here on the street, I’d like to look at what Kahn has said about the street: “... in the city, the street must be supreme. It is the first institution of the city. The street is a room by agreement, a community room, ... for common use. Its ceiling is the sky.”

Watch out now, bring your head down, no, you don’t have to duck as you enter under the void in the corner of this rectangular solid that is the entrance to the Center. It is a transition space between inside and outside, a kind of porch, which brings you under the protection and influence of this building. It even serves the city and one of its great things, that “man scurrying for shelter in the rain.”

As we proceed through the door (ah, here’s the oak), we enter a tall interior court which provides another subtle transition from outside to inside. We are entirely exposed to the building’s vertical dimension. Here too, the ceiling is the light of the sky. Light is structuring the entire space, illuminating this void in the solid four walls. Borrowing from Charles Moore, the four walls, the one floor, and the one ceiling—these six planes—have created a seventh and new dimension.
Now that we are in the building, I’ll stop having fun with you and give you some specific concepts to work with when you bring your students here. I am not going to say anything about the paintings on display here, but you should certainly avail yourself of them, since they are one of the reasons for this building’s existence. The particular nature of these paintings prompted Kahn to arrange for the maximum amount of natural light with which to view them. In Kahn’s vernacular, it is as if the paintings said to the architect, “We want a room filled with natural light.” The architect, who had developed a rigorous communication with materials and buildings, has responded adequately.

Aside from the grand entry we are standing in, there are other places you should visit within the building. They are the stair tower (round, but not spiral), the large interior court on the second floor, and the fourth floor, where the viewing of paintings in natural light is most prominent. Attention should be paid to the voids created by the windows, which also frame pictures for viewing. They provide an oscillation from inside to outside, further enriching our spatial and perceptual experiences. Finally, you should arrange to visit the study gallery, also located on the fourth floor. I will refer to it as a resource for some criteria in the project for students.

These places provide many concepts which may be used for looking at and analyzing other buildings. They can serve as guidelines for constructing problems and activities for the student. A quick review shows that we have spoken of site, entry, volume, shape, and transition. Others which are obvious, but have not been mentioned, are: pattern, regularity, ordering or organization of rooms, and boundary. A closer look at the corners of the fourth floor will reveal a kind of ornament or detailing, that announces the meeting of different materials. It articulates an element of the support system. Kahn had felt that the joint was the beginning of architecture and, indeed, in many styles, ornament grows from this point. In this particular case, the steel rises to form a pyramidal shape that fits tightly against the slant of the concrete members. Kahn has spoken of the building as leaving a history or trace of its construction. This articulation is an example of such a trace.

Before you leave the building, you can stop at the gift shop, where you will find a book presenting a detailed explanation of the Center’s history and construction. At the information desk, you will learn of a more formal tour which is given at the Center. A film about the architect is presented on Saturday mornings and could prove helpful to you.

As you arrive outside the building and as you move away from it, look back to see how the organization of materials suggests the arrangement of the rooms inside the building. Does it anticipate the interior? And what is the support of the building? And what is the purpose of the steel?

THE ARCHITECTURE OF PLACE

Since we have already been to a place, the title of this section may seem belated. However, I wanted to reserve this section for my own explorations into design. Among other things, the architecture of Louis Kahn has been described as an architecture of ideas, of the unmeasurable, of spirit, and as taking place between silence and light. What is certain about Kahn’s process is that, besides the metaphysical concepts he employs, a number of images result in ordering “a society of rooms.” For example, the image which dominated the materials and organization of the Center for British Art was that of an English country house. The linen, the oak, and the arrangement of space into small viewing areas, are a result of adhering to this image. His buildings also evoke images. The Center has been described as looking like a moth on a cloudy day and like a
butterfly when it is in full sunlight. The animism which characterizes his thought can be seen as manifest in his work. Other buildings have inspired other images and have required different conceptual categories emanating from the needs and activities of the program.

Further insight into this process can be obtained by reading Jules Prown’s book, or by visiting the Yale Library’s Manuscript and Archives Room. The library possesses a thorough documentation of the building’s history. There are photographs of the building at various stages of its construction, and even some original drawings, including the floor plans of an earlier scheme for the Center. There are photographs and reproductions of drawings and models of both projects. The Kahn Collection includes a thorough bibliography of his writings and critical writings by others on his work.

I refer to this process of change and flexibility in design as an introduction to my own experience of designing “a society of rooms.” As a requirement to this year’s participation, the Fellows had to design some architectural feature, to be added to their own homes, that would make a personal claim on the spaces they presently inhabit. Another criterion was that the design be considered realizable. My own choice meets this latter criterion in a way that is consistent with a statement made by Kahn. Not all of Kahn’s designs and projects were realized. This is true of many other architects as well. His thoughts about this read, “. . . what is not built is not really lost. Once the value is established, their demand for presence is undeniable. They are just waiting for the right circumstances.” It is in this spirit that I set out on my own project.

Kahn’s work and process exhibit both passion and commitment. It is described by Romaldo Giurgola and Jaimini Mehta, in their book on the architect, “. . . as a laborious, inexhaustible, and painstaking search for the identity for the rooms of which the building is made—identity with human issues—identity with himself as a person.” This desire for identity is inevitably intuitive. It is in keeping with similar goals that I set out on the design which appears in this essay.

Much like Kahn’s “teacher” and “student,” I did not know I was an architect. I just made some realizations, in the form of plans, drawings, models, and photographs. Only the drawings and plans can be reproduced here. I intend to make the others available to my students during the application of my unit.

I did not set out to imitate either Kahn’s thought process or any of his specific works. This is not to reject a debt of influence. I do not propose that my own efforts at design either resemble, or in any way, equal the accomplishments of so great a master of this art.

It is difficult to relate all of the thoughts and images that went into my design. The drawings and the notes to the drawings that appear at the end of this paper, will provide further understanding of my intentions.

There is no single image which dominates or directs the design. It is guided more by a multiplicity of images. One is that the rooms are to be visible from the center of the proposed courtyard. From this vantage point, one is to imagine a city or landscape pressed up against the masonry walls of the existing building. Against these stone planes, one can see volumes of different sizes and shapes. Although a group of them may be joined by a rising staircase, they do not all connect with each other. The rising line is visible rather than enclosed in an incongruous volume. In addition to these volumes, there are platforms, or plateaus, or mesas, open to the large space at the center.

Another image relates to the building’s inspiration and the formative act of its creation. The maker of this place is enclosed in the center of a claylike mass. Like the occupant of Plato’s cave, he has seen or imagined light. He has chosen to carve his way out of this mass toward the light. In this act he has created spaces to
which he can return to after he has reached the outside. If one must choose an image from nature, one might select a geode rock, whose hard surface encloses a core of glasslike crystals.

The design is a renovation of a house built in 1857 and is presumed to have been derivative of the architect Henry Austin. No documentation exists which authenticates this fact, but many features suggest his influence.

As it stands, the building abuts another one on its southernmost elevation, thereby creating areas at the center which receive little or no light. The site does not provide for the inclusion of an exterior yard, although it does enfront a tree-lined park on its eastern side. This provides access to greenspace, but there is no private place for outside enjoyment.

The goals of the design are that it cooperate with and carry the intention and design of the past; that it satisfy present needs and employ newer technologies (primarily in its structural support system); and that it anticipate the future, in its gestures toward an energy-efficient design.

The design is still in process. What appears suggests certain definite solutions. The problems that have been solved thus far, have exposed other problems and other paths toward different solutions. Exploration and discovery continues. I would hope that the final solution would be humane and not wasteful. It should enliven the spaces as stages for the activities of people and it should be generous. It should be an important element in the fabric of the neighborhood it inhabits.

The major architectural feature is the inclusion of a glass-covered, enclosed courtyard which will provide a source of natural light and a private, semi-exterior room for its occupants. Since the creation of this courtyard and the design of its facade, an extension of this gesture toward the perimeter of the building has occurred. The new construction, proposed for the southwest corner of the building, projects this facade into the courtyard of the city block. It is both an introduction to and echo of the image that dominates the interior courtyard.

The entrances that are presently closed off to the street are reopened. All elevations which enfront the two streets that intersect at this corner property are now accessible. Circulation into and through the building is achieved in a variety of ways. This opening to the street is contrasted by the intimate possibilities of the enclosed court.

In an attempt to view the column of light created by the courtyard as a special object, floors are cutback from the interior surface of the courtyard facades. Views above and below each floor are acquired and expose the entire vertical dimension of the court.

In my design, the second-story, front porch has been removed to accent the vertical thrust of the tubular stacks, which in my drawings suggest an image of classical columns. The projection of the porch from the vertical plane detracts from the vertical thrust of these cylinders. Its removal relaxes this tension. The lower front porch is to be restored and a similar one is to be built at the rear entrance. A gesture toward the street adjacent to the north elevation is achieved.

The load of the courtyard facade and of the floors will be suspended from a steel frame. The prospects of applying active or passive solar energy are being investigated.
CONCLUSION

Kahn’s death in 1974 evoked many poetic comments in memorials given by those who knew him. This is to be expected of someone whose thought and spirit was both far and near from the art of poetry, but whose work attests to the poetic accomplishments in the art of his choosing. In paying my own tribute to a man who I never encountered personally, but whose work has touched my own discovery into expression, I would call upon the words of the poet Gary Snyder:

A Mind Poet

Stays in his house.

The house is empty.

And it has no walls.

The poem is seen from all sides,

Everywhere,

At once.

from As for Poets

He added, in some notes on this poem: “Now we are both in, and outside, the world at once. The only place this can be is the Mind. Ah, what a poem. Its what is, completely, in the past, the present, and future simultaneously, seeing being, being seen.” These words seem quite fitting for a man whose work exists on all parts of the earth and whose spirit remains in the lives of those he has taught.

I might add, in words of my own choosing:

I feel

the silence

when we meet

in between

the busy wind

that blows

from between our lips

or in this case from the tapping of my fingers.
ACTIVITIES

You can draw upon your own resources to introduce poems similar to the ones mentioned in the body of the text. I certainly hope that this essay has convinced you of poetry’s ability to enhance the nature and essence of architecture.

A visit to an example of inspired architecture is a must. Another building designed by Louis Kahn is the Yale University Art Gallery. It can be visited on the same trip to the Center for British Art. It is his first major commission. His personal, integrative art first makes itself manifest here.

I intend to take my students to visit other buildings. In them I will look for different uses, single and multiple. If you wanted to meet this need and to look once again at the work of a single architect, Ingalls Skating Rink and Morse and Stiles Colleges by Eero Saarinen would be ideal. The architect Cesar Pelli worked in Saarinen’s office for ten years. He is the former Dean of the School of Architecture and presently has offices on Chapel Street. Arrangements can be made to meet with him to discover more insight into Saarinen’s buildings. Pelli himself has created inspired architecture and can supply a first-hand exposure to the work of a living architect.

I will present my own design to students during the course of this curriculum unit.

All these activities are designed to prepare students for the project which follows.

A CORRUGATED COMMUNITY

“. . . the physical environment and its measurable objects are the necessary starting points for viewing human-environment interactions.”

“. . . stimulus impoverishment creates perceptual and learning deficits in the developing child. Conversely, it is believed that enriched environments will accelerate the development of perceptual, motor, and conjunctive abilities.”

“The data are mounting, therefore, to suggest that the physical environment, and the man-made environment in particular, exerts a powerful influence over the perceptual and social development of the child and young adult. Because in most cases, these individuals have little or no control over the nature of this environment, it is especially important that those adults who have control exercise wisdom in selecting alternative structures . . .”

from Child Mind Architecture

by John C. Baird and Anthony D. Lutkus

After an encounter with poetry, building site visits, and a presentation of my own design efforts, students will begin a three-phase project. They will build a child-scale room of their own out of corrugated board. (Boxes will be acquired from commercial establishments and other flat pieces will be purchased.)

No more than three sizes of blocks will be made from this board. The construction will simulate masonry and the blocks will serve as both support and infill.
Children will be assigned a measured space in the classroom for which they are to create an enclosure which will meet the following criteria:

1.) There must be at least three separate framed views inside the room. One of these must be achieved without creating an opening in the walls. (Resources: the study gallery at the Center for British Art; references to John Soane in *The Place of Houses* by Charles Moore et al; and the project by Cesar Pelli and William Bailey in *Collaboration: Artists and Architects*);
2.) The room must have only one function and purpose, but provision for connecting to another room must be allowed for;
3.) It must be portable and must be able to be reconstructed in one day; and
4.) Students will explore ways of connecting their individual rooms to each other.

The end product will then be moved and adapted to a different site inside the school. It will again be moved and adapted to a site outdoors.

The concepts of solid and void, connection and transition, rooms and their organization, the adaptation to site, and other concepts, discussed in the body of this paper, will be investigated and employed.

Children will document phases of design and construction through drawings and photographs. A journal and sketchbook will be kept by each of the students.

The project is expected to take fourteen weeks, meeting twice a week for one hour sessions. Other arrangements will be made for building visits and the exploration of poetry in the six weeks prior to the initiation of the project.

(figure available in print form)

East Elevation

(figure available in print form)

North Elevation

(figure available in print form)

West Elevation

(figure available in print form)

Ground Floor

(figure available in print form)

First Floor
BIBLIOGRAPHY


The selections by Wright and Sullivan, and the one on Howe are given to expose teacher and student to the writings and lives of architects. Readings from these are quite enjoyable and adaptable for student reading also. The final entry is included so that you may avail yourself of my previous unit and of others by the Fellows in the Institute. You will also find annotated bibliographies at the end of all these units.