ABSTRACT

Hanover Bluffs

Connections Between the Inner and Outer Landscapes

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In this thesis I attempt to come to a better understanding of my process of design. It seems to me that design involves not only our conscious rational powers but taps at deeper unconscious feelings as well. I am therefore looking for a way of working which will include both processes and seek connections between the two.

Since the notion of an organic architecture seems very rich and real to me, I seek to integrate an exploration of connections to the natural landscape with an exploration of process.

To this end I decided to build upon a powerful natural landscape with which I am familiar. The land consists of the ridges lying along side the Mississippi River valley and their surrounding slopes in Northern Illinois. I will build a community of second homes here in response to the uniqueness and power of the natural place.

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A special thanks to Jenifer Pieszak who helped when I needed help most.

... and to Minor White who long ago taught me to see with more than my eyes.
To make a place is to make a domain that helps people to know where they are and by extension who they are.

Thomas Grubisich, as quoted by Cynthia Howard, M. Arch. Thesis 1977

People put the earth inside them in the land they find, place the landscape within them on the landscape without, and both become one.

Rudolf Schwarz, as quoted by C. Norberg-Schulz, Existence..., pg. 39
I seek, I think, continuity ... 

... continuity with my father and his 

His worked the land 

land. My father works with it still. 

This in my family a reference ... 

... a reference passed 

passed on to me. 

the land 

Thoughts
Although I did not grow up in the hard work life of a farm, I did grow up in the countryside of northern Illinois - a landscape of rolling hills and lush green trees and grasses. A landscape which is particularly inhabitable, productive and supportive - one which encouraged me to seek connections with it.

In this way, I seek continuity with the land.

The landscape I chose for my thesis is a section of the ridge overlooking the eastern edge of the Mississippi River valley in northern Illinois. What I was to build there was not, at first the issue, but that I would add to/enrich/complete the landscape -- inhabit it, was.
The landscape has become my original reference. A reciprocal relationship can exist between the landscape and the built form to be added to it. The built form is partly a product of the landscape, it represents and interprets the character of the site. At the same time it projects onto the landscape man's image and that of his needs and work. "The interaction between man and his environment consists of two complementary processes which are directed inwards and outwards respectively".1

It is a great power to be able to organize built form in such a way that it has this relationship to the environment. For the character or essential meaning of a landscape to be represented in the building and man's presence to be proclaimed/stamped on the landscape heightens the understanding between man and nature and contributes to our understanding of our existence itself.

We can think of dividing the physical and psychological world into levels of existential space as does Christian Norberg-Schulz in his book, Existence, Space and Architecture. These levels are geology, landscape, community and the house. The level of geology replaces ancient man's cosmos and is not directly experiential but in the realm of ideas; the landscape level is primarily of context; the

1C. Norberg-Schulz. Existence, Space and Architecture, pg. 33
community level is of man's shared relationship to the land and each other; and the house level is of the individual's private world. These divisions are made for the sake of clarity and because different relationships and associations are represented by the different levels. These levels, in reality though, interact to form a simultaneous totality - a complex dynamic field. Individuals perceive and experience parts of the field from all levels and gain insight into the whole. The understanding is therefore facilitated if the parts reflect the whole and the whole the parts, i.e. if the levels of the landscape, community and house are interrelated or, as Norberg-Schulz states, "...that the levels can represent each other". 2

A similar relationship is expressed by Ludwig Wittgenstein in Tractatus. Bertrand Russell explains that "Wittgenstein is concerned with accurate symbolism.. in order that a certain sentence should assert a certain fact, there would, .. be something in common between the structure of the sentence and the structure of the fact". 3 In designing I have tried to achieve a structural similarity between the levels of existential space - both in the representative of the higher by the lower levels (the house receives and articulates the landscape) and the lower by the higher levels (the houses project their image onto the landscape).

2 C. Norberg-Schulz. Existence, Space and Architecture, pg. 32
3 Quoted by C. Norberg-Schulz, Meaning in Architecture, pg. 388
I found it difficult to pursue this relationship with the experience of reality from a purely objective, rational position. The whole I was pursuing was not only physical but of the psychological world as well. I found it had to relate to life and living. "...the particular character has to be extracted from a comprehensive vision of modern life". For this reason I repeatedly turned to my unconscious associations -- childlike thought -- which suggested to me images and possible representations of the character/reality of my landscape. From these intuitions, I consciously, rationally developed and explored solutions which defined a potential reality rich in associations to identity, security and continuity.

From my unconscious intuitions I have consciously rationalized goals/guidelines for my design. These are listed below within the three categories of identity, security and continuity which I felt essential to the character of my thesis. I sensed that these were connections between unconscious wants and desires and conscious requirements. The image is incomplete though without the connection to physical built form. It was this connection which I primarily sought in my design explorations.

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Identity seems assured by the presence of the Mississippi River. At the geographic level, one's position is understood in relation to the known centrality of the River. We know of its importance in American history and can be proud and gain pleasure from being associated with it.

... respect the preglacial age of the limestone bluffs and recall the action of water which carved the rock in relating the buildings to the ground and the community to the ridge

... enhance the relationship to the river valley by taking a position above and overlooking it at the edge of the ridge

... create a recognizable form at the level of community with an analogous sense of identity - of a shared place, above and overlooking

... increase the contrast between the built place and the natural landscape by grouping the houses in clusters and rows

... concentrate definitions at the house level and give special identity to the individual
Security itself is gained by recognizing identity and by sharing with others:

...build on a finger of the ridge not directly bordering the river valley but within a protected cove, a smaller valley opening up off of the main valley

...seek shelter under and behind trees and other partial screens from the overpowering view

...recognize in the productivity of the land that one could grow food and eat from it

...be receptive to the water below and its symbolism of birth and life
Seek continuity with the land.

...face out over the valley and lie back within the ridge - remember continuity with the father when facing out over as when sitting on his shoulders as a child, remember continuity with the mother when lying back in the earth as in her arms
...bring the water below up to the ridge in wells, pools and streams
...acknowledge the raw power of the limestone bluffs and extend limestone up into the built form
...recognize the sheltering bows of trees with pitched roofs of wood
...recall the trunks of trees with vertical wooden columns
...extend the community along the edge of the ridge and respond to the directions in the land
...bring the scale of the broad valley down to the human scale in nesting steps by building in a valley off the main river valley - create a scale of the community and one for the house
...indicate paths and places along the paths
...reciprocate with the land - let the form of the community be open and closed, let the land move into the houses and the built places extend out onto the land
This could be a place to return to; a place like where we come from -- rich in rememberances of childhood desires and yet physically built, of reality and the present. Continuous from past to future -- a place for our children also. A place to renew ourselves and our associations with one another and the physical world.

A place for a community of second homes. Identity, security and continuity combine to create a place protected and interacting with its surroundings. The physical, built manifestation of these feelings will create a stage for activity, a place to express feelings, needs, wants and desires.

.... A place to find connections between the inner and outer landscapes.
Landscape

--- context
The landscape is a section of the ridge and its slopes lying like long bulky bodies along the eastern side of the Mississippi River valley in northern Illinois. It is an unglaciated area of steep narrow valleys and tall vertical bluffs of limestone bordering the broad (four miles wide) river valley. Finger ridges extend west from the main north/south direction of the ridge and tower 300 feet above a farm on the lowland at the northwestern corner of the site. The underlying limestone, originally carved by runoff from melting glaciers is covered by wind blown silt from the river valley. At the ends of the finger ridges, the limestone remains exposed -- rising in bluffs up to 75 feet.
In reverence of the power of these bluffs, the Indians built burial mounds at their bases.

Hot air escapes from subterranean caves in the underlying limestone through holes in the ground.

The thick forest of hickories, oaks and pines has been cleared for fields of hay on the broad back of the main ridge. Here you are protected, held in by the trees all around, sky oriented and on the "inside" of the site.
From the small town of Hanover, you enter along the top of the ridge,

through the open fields. Plunge back into the forest to emerge at the edge where space explodes

with the overpowering view of the broad river valley--the "outside".
Conservation / development

--- shared
In my desire to make connections to the landscape, I have zoned the land in districts ranging from conservation of existing qualities to development of new uses. This, in line with my projected community of second homes. City dwellers who would care to have a house in the country could be expected to have some image of a return to the wild. To this end I have projected three districts - the natural area, the farm and the community (residential and recreational). The land not covered in these categories would be used in the future as decided among the owners themselves. Thus giving the initiative to interact with the land back to the residents themselves after the initial framework is in place.
The Natural Area

Approximately 100 acres of the 500 acre site has been designated by the state of Illinois as a natural area. Briefly this means that the state wishes to preserve this area permanently in its wild state. To quote their report:

Hanover Bluff is a large, diverse natural area overlooking the Mississippi bottomland. The area has unusual, high quality and very high quality prairie openings on sand dunes. The wooded ravines and hill prairies are the site of collection of five rare or endangered plant species. Hanover Bluff has high dolomite (a form of limestone) cliffs, and there are Indian mounds and a spring run.5

I agree with the state and feel that the creation of a permanent natural park would be a valuable asset to the residents and future generations. In addition the state is willing to forego taxes on the natural area in return for a guarantee that it will remain undeveloped. This area becomes the primary reference to the landscape unchanged and untamed by man. A reference to the frontier and man's past; to the primal landscape - untouched. Although for its own protection paths could be maintained through it to avoid unnecessary trampling of the ecology.

5 Illinois National Areas Inventory, #1058
The Farm

Already existing on the lowlands on the northwest corner of the site, the farm seems a valuable reference to the first taming of the land. Its productiveness is a result of the union of nature and man -- a process continuous over many years. Surely its operation preserves continuity with the land.

In addition the farmer could serve as keeper of the site - providing a watchful eye for the many residents who would not live on the site permanently. He could see that the land is cared for, perhaps also care for the horses and be a valuable friend, more connected to the land, than they (the urban residents).

The dimension of productivity which the farm brings to the site, its reference to a history of the land, and position of being tamed yet natural all argue for its important place on the site.
The Community

The form of the community seeks a density capable of attaining a feeling of inside - of closure in juxtaposition to the landscape/ridge. In addition I have given it a figural character in order that residents might recognize the place their house has in the community and by extension in the landscape as well. The community also bears an important relationship to the path from "inside" the site to "outside".

The community is to be located on the northern finger ridge within a protected valley off the main river valley. The settlement of 50 houses on approximately 15 acres seeks to develop shared parking and minimize roads, create neighborhood relationships, preserve a close relationship between house and landscape, and unit the citizens as a group in relationship to the landscape.
The individual houses seek to create a scale of the community in their juxtaposition. This community scale is seen as more capable of relating to the large size of the finger ridge and eventually to the broad view valley itself. Also the density and interrelationship of the houses adds a potential richness to the site which scattering the houses on one acre lot would not be capable of.

The community of 50 households is based on a reference to the typical smallest village cluster in Japan. It also stems from allotting 10 acres per household although the land would be communally owned by all the residents. This 50 seems a reasonable size - large enough for much diversity and intimacy at the same time.
Of the 50 households, 12 would be developed closest to the community center as permanent (retirement) homes grouped around a "common". Of the rest 16 are to be single family houses with 1 to 3 bedrooms each; 7 duplexes and 2 four family communal structures.
The community center is like a large common house. There can be rooms to talk and eat in, places to prepare food, a cafe/bar to meet at, an office for the chairman of the community, a community meeting room. In general a place to meet and talk less intimate than the individual houses - a common place. It would be located at the edge of a bluff with a commanding view of the valley beyond. A tower shoots up from the high point of the ridge overlooking the community center and river valley below. A reservoir of water is held next to it providing water for the community and overflowing down the ridge in a small stream under the community center and on down the slope.

A range of recreational facilities can be provided: a pool and locker room next to the community center and juxtaposed to the steep slope; horse stables, pastures and tennis courts back up on the top of the main ridge "inside" the site; and paths with places along them reinforcing the actual ways thru the site.
Process of design
In my design process I used the conventional methods of sketching, drawing and model building to develop ideas and refine images. By images I mean abstract notions of what a building or piece of a building would be like. These can be consciously or unconsciously derived, but for me they are primarily a result of unconscious thought processes. I tend to "feel" an image would be appropriate in a certain place. Of course the connections one's unconscious thought processes make are largely hidden from us consciously, but I did see some links.

Previous experience seems key in that it is the prime source of information upon which I drew, synthesized and decided what new information to seek. Particularly useful, too, were analogues. I use the term to mean an expressive symbol which represents a quality or image which one intends in a built environment. The analogues I found tended to interpret my intuitions rationally so that I could consciously pursue my feelings and transform these wants and desires into specifically defined goals.
These analogues were quite often abstract. They would represent one part of something which I intended. They were partially defining -- being like a certain piece of an idea or built form in a certain way. Other analogues were more specific (actual pieces of built form) and I call them references. References were of most help in the later phases of design where their specific qualities helped me to see potential ways to convert well defined images into built reality.

Many analogues and references were needed to create the image and reality of my whole design. The following sections trace the development of my design through the use of analogues and reference (marked out with corner mounts), drawings, bits of the previous writing, and notes written on the sides.
level of landscape
...build on a finger of the ridge not directly bordering the river valley

but within a protected cove, a smaller valley opening up off of the

main valley
by taking a position
above and overlooking
at the edge of the ridge
respond to the directions in the land

...indicate paths and places along the paths
level of community
...face out over the valley and lie back within the ridge

I looked for anthropomorphic qualities in buildings -- it seemed a comfort for the building to be "like" us. Swiss indigenous housing provided many examples (it was quite often on a hillside, too).

Rooftops seem particularly expressive of the 'directionality' of a house ... indicate facing out or lying back.

Windows indicate places for people -- seem much like eyes.

lying with the land

responding/echo the land
facing out over

facing out but standing up

the house itself may be inhabited by faces

sitting down & facing out
I sought ways to integrate the facing out & lying back...

standing

& sitting...
Aalto faced his buildings out in a splayed fashion.

...this radial pattern recurs later...
... create a recognizable form at the level of community with an analogous sense of identity - of a shared place, above and overlooking

... increase the contrast between the built place and the natural landscape by grouping the houses in clusters and rows

create a scale of the community

while looking for a form of the community - I looked at this orthogonal plan of Frank Lloyd Wright's
also there was the desire to surride the hill partially-
like a defense or a fort,
or like Taliesin East
lacks a character of its own and fails to interact as a whole with the landscape.

1st plan of "common" tries to introduce diagonal movement

from the N.W.

from west

from the south
this photograph connected unconscious thoughts of
radial forms with conscious ones
later I found earlier consciously forgotten radial pattern which almost assuredly influenced me.

original road plan
1st rough sketch from willow tree analogue
Laguna Alguazil provides a sense of scale and a possible language of forms.
let the form of the community be open and closed
- diagram of site plan -

- road

- top of ridge

- to top of main ridge "inside"

- each house has a similar relationship to the landscape

- looks out

- like guest who sit in a circle "facing out"

water flows thru the site
I say Mother. And my thoughts are of you, oh, House. House of the lovely dark summers of my childhood.

Milosz quoted by G. Bachelard, Poetics of Space.

level of house
In the house, man finds his identity.

C. Norberg-Schulz, *Existence*...

... concentrate definitions at the house level and give special identity to the individual.
...acknowledge the raw power of the limestone bluffs and extend limestone up into the built form
stone in a wooden forest, has identity / promises shelter

rock walls extend up

66
stone walls may also create terraces
-echo the contours of the land

if the wood roofs & walls were to rot away ... stone would remain as terraces/ruins
...recognize the sheltering bows of trees with pitched roofs of wood

...recall the trunks of trees with vertical wooden columns

great broad roof may speak of more than one family

inhabit the roofs with places of / for people
...seek shelter
under and behind trees
and other partial screens
from the overpowering view
"It is of great importance that the levels can represent each other..."

C. Norberg-Schulz

Let the angles created by the radial pattern find resolution within masses & between masses both.

Look for analogies in Paul Klee's work.

My exploring...
angle change internal & external

References for angle change

angle changes internal
Explore the spatial qualities

try imagining a vacation house as a single great space divided into smaller spaces or with smaller spaces off it for sleeping cooking/eating

like F.L.W's usonian houses...
or M.LTW's Seearanch

Small spaces opening up off of a large one

Frank Lloyd Wright's Grant house
Steps down with the hill.
Exploration of vocabulary/grammar; continuity with other levels; spatial relationships
drawing

Usonian house variations

central core...
kitchen/bath/hearth

small, tight house
... stepping down the hillside
Shallow angles were introduced...
the angled parts would have flat roofs...
... swung out from the main roof...
... added on
I explored the angle as path generator through the nave attempting to integrate it more fully...
then from the Klee study,
this sketch...

and these suggestions
from Jack...

space expands!
Space explodes toward the outside (it usually view) as does the experience of the landscape.
angled roofs frame the "bursting out of space" under the pitched roof

possible relationship of 2 houses
possible display plan...

large rock
shared

small rock

- flat
- roofs
- frame
- opening up
broad roof speaks of more than one family...
roof plan

great broad roof to south or west
the single house's roof might be more like the display
In looking back over my design I find that a conscious rational process was not enough to enable me to find and develop images and make rich, associative environments. I need to make use of my unconscious irrational processes - child-like thought - in order to form rich expressive images - images defined and organized with conscious rational thought and responsive to life and living. This makes sense considering that man himself is a synthesis of his conscious and unconsciousness.

Would not connections between these two processes be powerful things to control? Probably if they can be located. In my process I find past experience to be one such connection. Research and explorations conducted previously and concurrently to this project find their way into my unconscious where they remain perhaps more strongly than in my consciousness. And in some ways, if one is open to it, this wealth of information can be surfaced from the unconscious to the conscious and used.
Analogues here were very powerful tools, for they helped in surfacing ideas (intuitions) from my unconscious. As an example, take the willow tree photograph which surfaced ideas about radial forms which my conscious mind had forgotten about. In this way analogues were connections between my conscious and unconscious processes.

It seemed important to use analogues at the proper time. The use of Frank Lloyd Wright's Como Orchard's site plan as a reference for my site was too early along in the design process. This reference analogue was too specific to be used to surface feelings about the relation of the community level to the landscape. Instead it led to a dead end where I was shallowly copying form and not intent. A more abstract analogue was needed to surface my own unconscious wants and desires.

Reference analogues were certainly useful at later stages in the design. After the general intent had been decided the specific examples of built pieces showed me potential ways of physically combining forms in order to serve that intent. In this way Carlo Scarpa's vacation houses and Jack Myer's Laguna Niguel site plan provided valuable references for the design process.
In conclusion then I found experience and analogues chiefly useful in connecting my conscious and unconscious processes. Yet, the design process itself seems a connection, for by adding over other decisions at different existential levels or making many changes one perhaps opens up to his unconscious mind by giving his conscious mind too much to handle. In any event the best design seems to flow out and have a certain structured simplicity about it.

"Good environments activate the playful and fearful childhood yearning by conscious logical articulation".  

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6 J. & M. Myer, "Patterns of Association", pg. 86
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