REJUVENATION
THROUGH
ARCHITECTURE AND NATURE:

An Island Retreat

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PERHAPS

The truth depends on a walk around a lake.
A composing as the body tires, a stop
To see hepatica, a stop to watch
A definition growing certain...

- Wallace Stevens

In our rush to apply "technical fixes" to environmental problems, we have for the most part, ignored the emotional and spiritual dimension of man-environment relations.

- Lewis Mumford
ABSTRACT

Architecture should not act as an imposition upon nature, but as an integral part working interdependently with it. I am not only dealing with architecture and nature in a symbiotic relationship, but exploring how nature can nurture man's spiritual growth and empowerment.

I have chosen an isolated natural environment (an island) and examined the cycles and systems already present and ways to interject an environmentally sympathetic architecture. I am designing a nature retreat to test this. The retreat would include different shelters for different groups of users: group spaces, solitary spaces, recreation/trails, and other various types of spaces.

The retreat would be a safe, secluded place of contemplation away from the pressures of today's society. It would be a return to nature where man could redefine
his relationship with the natural environment, an active participant, and experience new environments (in turn fulfilling a fantasy or reliving a childhood adventure).
THEESIS GOALS

Dr. Rollo May calls today's present condition "The Age of Anxiety where people are suffering from a loss of a center of values—many individuals have lost their identity as selves. We are in danger of losing our sense of relatedness to nature, and the result will be emptiness and anxiety."¹

Ian McHarg states that "today there is a need for the transformation of values and the acceptance of a new ideology based upon the understanding of natural systems."²

I am designing a retreat not only as an experiment of balancing nature an architecture, but as a place where man can come back in touch with nature, its cycles, and in touch with himself. I see a retreat as an oasis, a quiet secluded place of contemplation disconnected from the pressures of ordinary life and society. The retreat would be a place for man's
introspection to occur at two levels: with man and himself, and man sharing with others.

On another level I set up goals/objectives for the island to meet or aid the people who visit here to do the following: promote physical, social, emotional, and spiritual growth; encourage ecological awareness (consciousness of nature and its cycles); broaden horizons and encourage appreciation of diversity; provide an adventure, quest, or challenge through discovery; contribute to human enlightenment through aesthetic experiences; and finally to encourage each person's own interpretation of what is experienced by stimulating minds, reactions, imaginations, and memories.

The architecture should promote these goals and at the same time not impose on nature, but act as an integral part working with it. It should orient its users to nature to help develop awareness, sensitivity, and participation in the everchanging environment.
SITE DESCRIPTION

The site is an island of approximately 50 acres located on Sylvan Lake, Rome City, Indiana. At the present time the island is overgrown with trees, swamp, and other vegetation, and has a few rickety structures left from the boyscout camp which was located here 15 years ago. Sylvan Lake is the largest lake in Noble County and consists of four basins. The lake was originally part of the construction of a ship canal from Michigan City to Fort Wayne (1836-1837) passing through the Elkhart River. A dam was built across a tributary of the Elkhart River, forming the lake known as Sylvan Lake (the work on the canal was abandoned after the state spent $200,000,000 and found they had undertaken too much with the advent of the railroad). Several hundred cottages and summer homes line the shores of Sylvan Lake. Since the recent fish kill, the clear
lake as made it one of the better fishing lakes in Northern Indiana. The lake now affords an abundance of fish attracting fishermen both winter and summer.

Site Analysis

In analyzing the site I wanted to go beyond the so-called "site analysis" and so I developed a number of layers of different types of analyses. I began with a site analysis as a basis, and then proceeded with an aesthetic site analysis, a cyclic analysis, and an emotional/experiential analysis of the site (going from analytical to intuitive studies).

In the site analysis I first looked at the island's context. It is surrounded on most sides by a shoreline of cottages; except for the northeast shore which is heavily wooded and relatively undeveloped. Most of the shore and the island is dominated with large, mature trees. On the east side of the island there is a swamp connected across the water to the shore which is marshy and full of cattails. There is also a marsh located in the north to middle part of the island itself. A few dilapidated structures exist on the island.
(from the boy scout camp) and are located on the site analysis plan (along with other site information).

Aesthetic Analysis

I took a more informal approach to evaluate visual/aesthetic aspects of the site. It is impossible to divorce the pure spiritual, or aesthetic aspects of a given site from the scientific aspects. From previous investigation and readings I found that so-called subjective descriptions while conveying the site's visual qualities, may accurately describe its current ecological condition. Beyond specific definitions of site character a given landscape may be evaluated by other criteria such as: sequential visual build-up, viewsheds, viewing units, vistas, and spatial units, established by various features (areas of high and unique value). This level of interpretation brings special attention to important elements of the site. Nine primary visual/aesthetic aspects were identified as follows: potential entry points, existing trails, proposed trail extensions, nodal points, points of interest, areas of biological interest, views of significance, viewsheds from water, viewing units, and ecosystem continuity. They are defined as follows:

Potential Entry Points: possible entries to the site marked by a land marking.

Existing Trails: recording of trails generated by animal and human activity.

Proposed Trail Extensions: extensions of existing trails or proposal of new ones.

Nodal Points: these points represent the beginning and ending of visual links or sequences along trails. Most are marked with rises or vegetation—marking the limits of a spatial experience.

Points of Interest: a point along the trail system which one can experience a specific
SITE ANALYSIS

- Trees into water, no landing
- River/current through water
- View of heavily wooded shore, no development
- Taller, dense trees, swampy, dark side
- Sunny, fishing cove (ducks)
- Cattails
- Clearings
- Smaller trees
- Fireplace
- Small, swampy fishing coves
- Swampy marsh
- Fireplaces and existing structure
- Bank covered with trees
- Cattails along shore
- Clearings
- Marshy, cattails, not navigable fir and pine trees
- Stiff, hilly bank w/oak trees
- Chapel on hillside/ seating
- Powerlines next to island
- Cottages along shoreline, number of mature trees
- Calm, peaceful water
view, areas of specific biological/aesthetic interest, or the point of impact from which one can experience the character of a given area.

Areas of Biological Interest: areas selected for their unusual combination or richness of vegetation and setting (i.e. moss covered logs, water rock, and topography).

Views of Significance: very limited views out of site from the island—a viewing window.

Viewsheds from Water: an overview marked by landmass, vegetation mass or topographic rise which has a definite appearance as an entity.

Viewing Units: subunits of viewing/aesthetic interest found within each viewshed. They offer variety based on color, texture, and mass (dictated primarily by the dominant type of vegetation found in that unit).

Ecosystem Continuity: areas of the wetlands where a complete section of the varying levels of the ecosystem may be viewed (i.e. marsh, shrub swamp, treeswamp, upland forest—also others is a less dramatic fashion.

See Aesthetic Site Analysis for data pertaining to the island.

The importance of bringing attention to this aspect of observation and data is to emphasize the need to observe the physical character of a given site (which in turn, can also give clues about its biological condition at that point in time).
AESTHETIC SITE ANALYSIS

- Potential Entry
- Existing Trail
- Nodal Point
- Point of Interest
- Area of Biological/Aesthetic Int.
- Views of Significance
- Viewshed
- Viewing Units
- Ecosystem Continuity
Cycle Analysis

In the cyclic studies I studied the different cycles of nature: from water to carbon to the succession of a forest. In examining these cycles I generated cycles of my own and also looked at ways to incorporate different cycles into the swamp habitats. (See cycle illustrations).
FULL SUN
EARLY
PIONEER

SUCCESSION

LATE
CLIMAX

BARREN SITE
LITTLE CHANCE
FOR SEEDS TO
GERMINATE.
FEW HARDY
SEEDS TRY

PIONEERING
SPECIES GER-
MINATE AND DO
SURVIVE.
CHANGE IN SOIL TEMP.

CHANGES THE
MICROCLIMATE
OF PLANTS
GERMINATION
BENEATH.
HERBACEOUS
PLANTS RE-
AND MOISTURE.
PLACED BY
SHADE TOLERANT

SUCCESION
OF PLANTS
COVER OF TREES

MID-SUCCESSION
TREES DOMIN-
ATE CANOPY:
EARLY SUCCESSION
PLANTS DISAPPEAR.

CLIMAX
LATE SUCCESSION
PLANTS DOMINATE.

SEASONAL, LUNAR, AND
PLANETARY CYCLES
Emotional / Experiential

Wandering around exploring the island I found certain spaces to have a special quality or character about them. I drew up an emotional/experiential site analysis trying to capture the essence of these spaces and portray them in a graphic form.

The north side of the island was dense with trees and vegetation and seemed dark and shadowy. The swamp within this area also lent to this dark, mysterious quality. The south side was quite the opposite; very bright and sunny with a number of clearings. The dead white tree on this side seemed a natural marker as a main entry point to the island. I was also drawn to the large brick fireplace on the west side looking out into a small cove of water where the sun sets (it seemed a very private, solitary space). Another special place was the clearing at the top of the hill on the east corner of the island. The hill has stone benches built into the side of it an overgrown with vegetation, and a small masonry chapel sits at the base of the hill. The clearing above has a small window through the trees looking out across the blue shimmering water where the sun rises in the early morning.

All of these spaces and others have a certain quality special to me that I wanted to retain and take advantage of in my design (without harming them). (See Island Illustrations for emotional/experiential analysis and site masterplan).
PROGRAM

To narrow the scope of my project I chose certain user groups who would visit the island. This helped generate in a more specific manner the types of spaces and activities I would need to provide on the island. I looked at the number of supplies, water, and square footage each person might need and arrived at an approximate number for the island's full capacity at a given time. I also decided on the length of stay according to each user group and charted this out along with the times of year the users would be using the facility. I then came up with scenarios/activities for each of the user groups which generated the spaces needed to accommodate them.

Users

PROFESSIONALS: use island as a retreat/vacation; a rejuvenation period (childhood memories); free, unstructured
time.

CHILDREN: planned activities provided for them on the island, play, recreation, education--learning about nature.

NATUREBUFFS: visit island for seminars, lectures, programs; oriented to nature and an awareness an understanding of it; observation, exploration, discovery.

Scenarios

SCENARIO - PROFESSIONALS

Arise - breakfast (in shelter, also could participate in a group eating space) bathing

Morning activities - hiking, canoeing, depending upon the season and interests.

Lunch

Afternoon activities - swimming, exploring, reading, etc.

Dinner

Nighttime observation/activities

The professionals are more or less left on their own (solitude) and are free
to do their own activities, but they may also join in any of the seminars or group activities of the children or naturebuffs.

Activities (dependent upon what season): hiking, boating, swimming, cross country skiing, sledding, skating, ice fishing, exploring, drawing, painting, reading, and others.

SCENARIO - CHILDREN

Arise—morning exercises/bathing, flag raising, and go to breakfast; morning chat.

Morning Activities—sailing, fishing, swimming, etc.

Lunch—group eating (camp out)

Rest / Reading / Writing

Afternoon Activities—trail exploration, hiking, etc.

Dinner—flag lowered; watch sun set; games, songs at campfire; also free to participate in naturebuff seminars, films, etc.

The children have more planned activities and programs to follow throughout each day.

Activities—swimming, boating, canoeing, fishing, birdwatching, exploring, picnicking, and others.

SCENARIO - NATUREBUFFS

Arise—join in morning exercise, bathing, breakfast at shelter; or may eat together as a group.

Morning Activities—scheduled seminars/lectures, trail exploration (special trail guide), (different according to particular season).

Lunch—group or solitude

Afternoon Activities—free time, exploration; quiet space, meditation

Dinner—group or solitude

Night Activities—group discussion
of findings that day (show and tell). View animals at night, view the stars (observation platform).

Turn In

The naturebuffs have a scheduled outline of the seminars/programs offered and they also have free time to pursue their own personal interests.

Activities: hiking, swimming, fishing, photography, boating, trails of interest (waters edge, swamp), observation-astronomy, and others.

Programs (seminars) - migrating waterfowl, gardening, bird watching, astronomy, potpourri, and others depending upon the season.

Spaces Generated - from activities/scenarios

PROFESSIONALS - shelter (with some type of eating space, more secluded for one or two, or a family), solitary space (quiet spot for meditation), and also access to a group activity space, trail exploration, a beach/dock.

CHILDREN - shelter (for a number of children, dormitory type), group meeting space (indoor and outdoor), group eating space, beach/docking points (swimming and boat access), trail exploration (different nature trails for education in different areas), small group space, and a recreation space.

NATUREBUFFS - shelter (with eating facilities), access to group eating space, solitary space, trail exploration, group space (indoor and outdoor), viewing platforms, towers (view nature, wildlife,
stars), and a small group space for interaction among the group.

Types of Site Development

Shelters in different locations on the island: swamp/wilderness shelter, water's edge shelter, sunny clearing shelter

Group eating and or group gathering space
Observation tower
Main entry and secondary entries
Orientation space
Nature trails through swamp and along the water's edge
Solitary spaces
After generating the spaces needed from the scenarios I developed a systems diagram which illustrated a person's journey to the island. It showed what they took with them, what they left behind, the spaces visited, the functions of each of these, and paths connecting them (major and minor). I then laid out the possible locations of each of these spaces on the site plan according to the layered site analyses and the relation of the functions of each. (See systems diagram and schematic site masterplan).
A PLACE FOR SHELTER:
STORE FOOD, BELONGINGS,
SLEEPING, COOKING, HOMEBASE - LEAVE FROM TO
EXPLORE, 2-PEOPLE TO FAMILY SHELTERS,
OPEN, OUTWARD FOCUSING.

CAR AND BELONGINGS
LEFT ON SHORE!

BOATHOUSE - GET EQUIPMENT,
DIRECTIONS FOR ISLAND. BOATMAN
TAKES VISITORS ACROSS.

R/B - RAFT/BOAT VEHICLE TO
CROSS WATER.
In my design I focused in on the swamp and the designing of a habitable shelter which would take on the swamp vernacular. I collected a number of images which I felt pertained to the character of the type of architecture appropriate to the swamp and other areas on the island. The images ranged from vernacular architecture to southern architecture to landscape architecture (sculptures). I also sketched images of my own which I felt fitted in with the island vernacular.
DESIGN DEVELOPMENT

Before designing the swamp shelters I laid out criteria by which they could be judged. The criteria was classified as: idea, aesthetic character, structure, performance, and interpretation of each swamp unit.

Idea

The basic goal behind the design of the swamp shelters was the intensification of a sense of place of a specific area. I wanted to capture the essence of that place and relate to it; to set up a dichotomy between the work and the context/surroundings. I also wanted to set up an ambiguous situation where experiencing the space would be a total new adventure particular to that person; to fulfill a fantasy or relive childhood memories. The intention is to stimulate consciousness to promote the discovery of how we feel about a place and the discovery of who and what
we are. The architecture would promote constant participation (in varying degrees) with the environment. As Alice Aycock puts it "To become unusually aware of the physicality of your body in relationship to its surroundings, of temperature, the movement of the wind, the sounds of nature, and how isolated you have been from nature until this moment."³

Aesthetic Character

The swamp shelter would be a living entity within the swamp with internal/external cycles of its own. It would be a handmade mark on nature balanced and at harmony with its surroundings. The swamp structure would capture the metaphoric quality of the swamp.

Structure

The structure of the swamp shelter would be very direct and develop a rapport between the site and materials. I feel the appropriate materials would be natural ones (i.e. wood in its raw state) and used in small modules. I also feel other materials used in their natural state would also be appropriate (i.e. the cylindrical steel bathing tanks that rusts when it ages).

Performance

The swamp shelters should reinforce the elements of nature; reinforcing nature's power and strength, yet providing a basic shelter for man. The shelter would be zoned according to users/activities/privacy and each piece would provide or reinforce certain activities or rituals performed.

Interpretation

The swamp shelter and the other pieces on the island would be interpreted by the users differently. Each piece would be a special, unique place and a person's past experience would lead them to their own...
interpretation of what they see, feel, and how it affects them.
MEMORIES AND DESIGN

In the design of the swamp shelters and other island pieces, I incorporated childhood memories from my own past and others.

The first swamp shelter employs a number of these memories. As a child I can remember climbing as high as I could up a tree to look out across the fields. The first swamp shelter has a small observation deck at the very top (the ladder/deck has a pulley which pulls the ladder up the north side of the shelter); and it is like sitting high upon a branch of a tree. I also can remember balancing on an old log in a pond to see how far out I dared to go. The swamp shelter has a ladder/deck floating on the water in which you half walk—half climb to get to the screened box (sleeping unit). I also collected lightning bugs as a kid and stored them in a glass jar. I have incorporated a screened
box which floats on the swamp water where the person is on the inside observing insects, wildlife, and nature (on the outside).

The second swamp shelter is similar to a swamp bird wading out in the middle of the swamp. A person rafts out on a special pontoon to a deck and half walks--half climbs up a ladder to the shelter deck (which is the top of the steel bathing tank). The bathing tank is like a submarine which can be climbed down into. Another angled stair/ladder leads up into the compact pyramidal living space; which can open up in the summer. Further up the tower is an observation deck and a triangular sleeping space suspended from cables (similar to a birdhouse). The sleeping space is connected to a series of pulleys and can be lowered onto the pontoon in the swamp--to float, sleep, fish, or whatever a person wants to do.

The third swamp shelter is a propped up wall bounding the edge of the swamp. A person enters on the ground side and peers through the cracks and windows into the swamp. The swamp side of the shelter has a totally different image; a camouflaged appearance like a duck blind, whereas the south side is much more open and active with a series of stairs and platforms/decks occurring at different levels and a catwalk at the very top. The living space is self-contained (connected in the interior to the bathing area and sleeping loft) so as to permit living during the winter months. There is also another sleeping unit across from the living space for use during the warmer months.

The swamp shelters would be heated by small kerosene heaters (capable of heating water also) which would be brought to the site. (In contrast, the water's edge shelters would have a hearth/fireplace made from the earth and rock). Water would be pumped into each of the shelters (the first
shelter is capable of collecting some of its own water) and the waste products would go into a special tank (along with the kitchen waste) and decompose each other. There would be no electrical power on the island. The shelters would use lanterns or candles for a light source.

After focusing in on the design of the swamp shelters, I developed schematic ideas/images of what other spaces on the island should be like.

The main entry to the island would be marked by the dead white tree already present and a gateway of rocks. A new dock would stand over the old rotting one in the water, contrasting with it in form and shape. From here a path would lead the visitors to an orientation point where an engraved map of the island would be located. Different main paths would lead the way to the swamp shelters and the water’s edge shelters (located on the southwest edge).

The entry to the water’s edge shelters would be marked by a circular stone sculpture which would take a person underground to the water’s edge shelters built into the earth and looking out across the lake. The other trail would take you back into the swamp to the swamp shelters. Off of the main trail around the island is the tunnel entry to the swamp.

The tunnel entry is reminiscent of exploring the huge drain pipes at the creek as a child. Mystery and a degree of uncertainty add to the experience as a person crawls through the tunnel from light source to light source to emerge in new and different surroundings—the swamp. Part of the swamp is to be preserved like it is. A boardwalk trail winds through the swamp to control people travelling through it. The swamp trail helps teach the value of the wetlands/swamp wildlife and is a very
effective method for providing opportunities for first hand experience with nature; contributing to human enlightenment through aesthetic experiences. The swamp trail comes back out on the main trail and this can lead to the water's edge trail along the edge of the lake; illustrating the transition from land to water and abundant life found in the water environment. The other trail leads to the observation tower on the north tip of the island.

The observation tower hidden among the trees is another type of adventure. First, of exploring to find the tower, and then climbing as high as it will go and standing precariously perched over the water.

See Island Illustrations for the design of the swamp shelters and the other spaces on the island.

Conclusion

Throughout the exploration of my thesis I have constantly been made aware of the fact that man is distancing himself from his natural surroundings and losing touch with his basic needs. So many times a structure will be built without any effort being made to salvage a piece of nature to be experienced by the users. In my design I have attempted to interject architecture into an extremely natural setting without disturbing the natural cycles. I see the island as a stopping point for man; a place where he can not only come back in touch with nature, but more importantly, back in touch with himself. The island is a place of rejuvenation; a place to be a child again -- exploring and experiencing nature and the architecture.

Man is rarely getting the opportunity to participate/experience natural settings and steps must be taken to preserve the natural settings which remain. I feel that
I have maintained a critical balance between technology and the environment on the island and this allows visitors to the island retreat the chance to participate in nature and promote their physical, social, emotional, and spiritual growth.
ISLAND

ILLUSTRATIONS
First swamp shelter
Third swamp shelter
ENDNOTES


BIBLIOGRAPHY


