NARRATIVE LIGHT:
the design of a monastic retreat

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Abstract
This thesis is the design of a monastic retreat on
Cumberland Island, off the coast of Georgia. The island
serves as the source of the generative concept that
organizes the sequence of spaces within the
monastery. The thesis proposes that light possesses the
capacity to reinforce the generative concept. This
capacity might be called a narrative use of light in
which light tells us of the intentions behind the
concept.

A narrative use of light is expressed in Louis Kahn's
design for the Unitarian Church in Rochester, New
York. Kahn employs the light to evoke a sense of
roundness within the square central room. By this
simple move, Kahn has softened the corners, thus
retaining the essence of his initial concept which
depicts the space as a circular room. His attitude
towards the light tells us of the generative concept.

The thesis is composed of three sections. The first
describes a walk through the island which collects
impressions about the nature of the island. The second
section describes how impressions of the island have
been transformed into architecture, and how light
tells a story, as one walks through the buildings. As a
reference, religious buildings by Tadao Ando and Jorn
Utzon are evaluated in the third section, as additional
sources for creating a narrative with light.

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wish you all the best.

I'M OUT OF HERE!
Introduction

Cumberland is known as a barrier island. Dozens of such islands stretch along the eastern seaboard, buffering the mainland from seasonal storms. Cumberland is associated with the Georgia Sea Islands. Carved by shifting currents, this island resembles a baseball bat: it extends north and south for a length of sixteen miles, but is only three miles wide at its broadest point.

At the turn of the century, Cumberland was one of many winter resort areas. The island saw its share of opulent development, but retained areas of wilderness. Today, the island is managed as a National Seashore. The site for this project, a monastic retreat, is located near a mansion of the Carnegies, now in ruins. The monastery straddles the wilderness and these ruins of an earlier time.

The monastic retreat is envisioned for year-round use, by religious and other groups. During the winter, the retreat would accommodate approximately thirty priests and theologians, for annual discussions about current religious issues. In the summer, private and public groups could reserve the retreat complex for programs.

The complex is composed of three classrooms, a library, sleeping quarters, a refectory, and a church. The intent of this thesis is not to concentrate on programmatic needs. Rather, the thesis is the formulation of a concept which is tied to the nature of the island, and reinforced through the narrative use of light.
You approach the island from the west.

Acres of salt marshes separate the island from the mainland. Your eyes skim the surface of the marsh, as a point of reference. Its linear disposition becomes a datum line from which the island rises.

At first glance, the maritime forest appears as a membrane, a thin veil that has been stretched across the island. Through this membrane, an occasional rip reveals the contorted forms of the trees within.
Once you've penetrated the membrane, you step into and under a dense canopy of branches. Beams of light pierce through the canopy and find their way to the floor of the forest; illuminating a thick underbrush of saw-palmettos which cover every inch of the forest. The sun light is dispersed throughout, resembling an impressionist painting, scattering your attention throughout the frame.

Along the journey, you encounter a series of voluminous outdoor rooms. Though you are conscious of the entangled underbrush and spiny palmettos as you walk into these rooms, your eyes are drawn up towards the light filtering down from the forest canopy.

Reaching a road, you realize that you've arrived at the spine of the island. This man-made spine allows for ease of travel to points north and south.
Further inland, rips in the membrane reveal fresh water ponds which are stretched along the island's eastern edge. These tranquil pools provide a visual release which is not possible underneath the forest canopy.

A low roar begins to fill the air. Sounds and smells of the ocean draw you further east. Still underneath the forest's canopy, you thirst for the ocean, to be freed of shelter and exposed to the full rays of the sun.
A mound of sand rolls into the forest, partially burying the live oaks. These mountainous mounds signal the start of the dunes. The live oaks are forced to give way to the thrust of wind and sand. They part their branches and reveal a portal of light.

You begin to rise from the floor of the forest, leaving behind its contemplative realm and confront sheer wonderment.

In one sweep, your perceptions are hoisted up and out. All obstacles are removed, what remains is pure light. You find yourself suspended, high above the dunes, atop a wooden bridge that stretches over them towards the beach.
As you move towards the beach, the dunes dance the drama of the ocean's waves, as they rise and fall. For the first time, you are aware of your relationship to the ground. Suspended above the shifting currents of the dunes, you realize how sensitive and unstable the ground really is.

Nearing the beach, the distance between you and the ground gradually decreases. The wooden bridge rams into the beach; its tail buried under layers of sand. You've reached the beach.

At this point, you may reflect on the walk. When walking across the island, your body was conscious of the ground. You looked down to plot a path, detect danger and avoid stumbling. However, your mind was elevated, sensing the environment above and probing that which the body could not reach. It was not until the end of the journey that the desire to be lifted was fulfilled as you sailed across the dunes.
This seems to be an appropriate premise from which to generate the concept for the building: a concept derived from an understanding of the island's physical characteristics. The concept calls for a building that fulfills the mind's desire to be elevated, and the body's need to be sure-footed.

You approach the monastery from the south. The building appears as if assembled on flat earth, but then raised to level height above the ground. This act recreates the datum line of the leveled salt marshes which greeted your arrival to the island.
At first glance, the building appeared as solid boxes sheathed in a corrugated metal membrane. Yet, a series of openings have been cut into the membrane and folded back to act as shading devices.

Strips of openings stretch across the front facade, introducing a band of light into the spaces. These intricate bands are the building’s eyes into the landscape.

From these initial impressions, you can identify a number of similarities between building and island. Consider that the building is layered, like the island, as you proceed through it.
Once you've pierced the corrugated metal membrane, the skeleton of the building is revealed. What appeared as solid boxes become fragile tents, anchored to the ground by a rigid concrete framework.

The building is designed as a collection of rectangular rooms which increase in volume, as they extend away from you. Like the forest, the rooms allow your eyes to pass through them.

They grow in height and expand in width to accommodate group activities. The refectory is nestled between the classrooms and library, envisioned as a place to share thoughts before and after meals. The library and classrooms are set aside for in-depth meditation and research.
In the next layer, the exposed concrete framework resembles a spine. The rooms cling to it for support. You return to the spine to reach adjoining rooms. The spine, therefore, becomes the organizing element for circulation and support.

However, the spine is not merely a means of circulation. At times, a section of the spine extends into a room to define zones of use. For instance, this section straddles the zone of the library that houses the stacks.
Eventually, the concrete framework steps down, adjusting its height to support the community of cells which extend the full length of the complex. This next layer of rooms encloses the spine, which seem as the heart of the complex.

Despite deliberate gaps which serve as visual releases, the sense of containment within the spine heightens your anxiety. You desire to move out to the edge and be freed of shelter.

The individual cells are shuffled along the perimeter. An internal path meanders between the cells and occasionally expands into a porch. The cells part, creating portals of light which draw you closer to the edge.
The building has allowed your mind to float above the ground, while giving your body a secured structure to walk through. Looking down, you begin to wonder how your body might descend, in a way which celebrates the act of returning to the ground.

This is best accomplished within the church.

You've reached the edge.
Here, the stages of the Mass sequentially draw you to the ground. In addition, the light entering at the ground level heightens the procession.
Once inside, you can almost imagine a surge of light entering from below, inflating the space, and forcing the roof and walls to part.
Wooden stairways lead you onto concrete platforms rising from the ground.
Now, closer to the ground, and looking into the light, you receive communion.
Finally, you step down onto the ground and into the light of God.
"I am inspired by the clouds and have created a space that fades upward."

 Bagsvaerd Church, Jorn Utzon

Europe's northern region is renowned for its clouds. Generations of Scandinavian and Dutch artists have drawn inspiration from these clouds. Consider as an example a painting by the Dutch artist Jacob van Ruisdael: the shadows cast by the clouds reveal a sparsely lit landscape with the sun's light focused on the painting's foreground. This painting illustrates the quality of light commonly found under the clouds of northern Europe.

The capacity of clouds to scatter light, to provide a soft luminous canopy, is what inspired Jorn Utzon to make an analogy to clouds in the design of his church. Utzon wished to capture the feeling of being underneath clouds. He conveyed his intentions through two figural sketches.

Utzon's first sketch is similar to that of a seventeenth century landscape painter with its one-point perspective, which emphasizes the presence of the sky. Utzon's sketch depicts a group of people underneath a band of clouds; the presence of light is suggested by the streaks drawn between the clouds. The congregations appears to be directed towards the horizon beyond, where the earth and heaven meet. Thus, they find themselves poised between that which is soft, the heavens, and that which is hard, the earth; a dichotomy which is further explored in the next drawing.

In this second sketch, Utzon begins to draw "architecture". The expansive horizon is framed between the ribbed walls of the church. Centered on this internalized horizon, a cross is placed at the point where heaven and earth met in the first sketch, perhaps suggesting the unification of heaven and earth, soft and hard. In fact, the soft broken lines of the initial clouds have become rigidly etched vaults of concrete, transforming the sky into a ceiling. However, the essence of passing beneath soft voluminous clouds has been effectively retained and reproduced as one moves into the actual church.

The entry is compressed as one passes through the courtyard into the church. Pale white vaults begin to roll upward, enlarging the volume of the church. Light enters primarily form above, its source tucked behind a bulging concrete cloud. From here, a radiant glow illuminates a passage into the church. Unveiled, the path leads the congregation to the altar and to the cross which recalls the image depicted in Utzon's second sketch.

The space between the congregation's seating area and the altar is shortened in an attempt to increase interaction during the service.

"We chose a certain broad angle toward a place which is not so stagelike, but where what's going on happens lengthwise."

By giving the room this configuration, Utzon explains how he envisions its usage:
"... many people, good acoustics and a certain peace which is not theatrical; not a dark room facing a stage of a high altar, but something you are in together and sharing."

The sharing Utzon describes goes beyond a sharing of religious services to the sharing and experiencing of what it would be like under the clouds.

In addition to the formal analogy of clouds, Utzon managed to capture the quality of light which one associates with clouds. The light within the church, like the light under clouds, is perceived to have a soft, even presence. This quality is further intensified by the brightness of the materials inside the church, where white-washed brick and concrete bathe the space with reflected light. An evenness of light is reinforced by the curving vaults which distribute a uniform light from the skylight above. Additionally, bleached wood is used throughout in the doors, trim, and pews. All of these elements combine to remind one of the qualities of light beneath the clouds.

Now the question arises: what clues does this example provide in deciding on the quality of light within a space?

The Bagsvaerd Church demonstrates how clouds were used as an analogy to derive the theme and form of the building. More importantly, it illustrates how Utzon had envisioned a narrative depiction of the quality of light within the church. Thus, Utzon was able to carry the generative idea from conception to realization, through drawings, of his northern European sensitivity for the light beneath the clouds.
"It is my wish that this quiet space... will come to life through light and have an impact on people.”
Mt. Rokko Chapel, Tadao Ando

The Japanese term “oku” refers to the innermost depth of a space. In architecture, oku is achieved through a distancing of built forms, an erecting of spatial layers that screen the innermost space. For instance, the distancing of a traditional rural Japanese village from its surrounding mountain shrines reflects the hidden virtues of oku. The village’s linear organization is set perpendicular to the religious axis that leads to the remote shrines within the mountain’s depth. By their remoteness, the unseen shrines acquire a deep sense of importance.

Oku is still being explored, as seen in the work of Tadao Ando. His modern version of the mountain shrine, the Mt. Rokko Chapel, exhibits attributes of oku through its manipulation of sunlight. Ando choreographs the light to heighten the perception of distance or closeness between spaces and objects. In addition, his deliberate “distancing” evokes a sense of contemplative withdrawal from the profane. Ando argues that “to approach God one has to distance oneself from the rest of mankind.”

High above Osaka Bay, the chapel was built with a commanding view of the port town of Kobe. The chapel is situated on the grounds of the Mt. Rokko Oriental Hotel. A winding path leads you from the hotel to the remote chapel grounds. The chapel is comprised of three distinct components sequentially arranged to establish a processional path.

The first component is a concrete framed colonnade sheathed with frosted glass walls and vaults. Entering into this colonnade, one is immediately aware of the soft, even light emitted through the glass. Though obscured, the patterns and sounds of the surrounding landscape and sky are still perceptible within this “tube of light”. By softening the surrounding light, this shadowless colonnade serves to prepare one for the act of worship. Its forty-meter long stretch terminates at the entry to the actual sanctuary, the second component along this ceremonial path.

The body of the sanctuary is comprised of two connected cubes measuring 6.5 meters on each side. Access is gained through a dark steel door which opens into this rectangular prism. Since the end walls of the sanctuary are only thirteen meters apart, Ando introduces a slit of light above each wall to heighten the sense of distance between planar elements. As a consequence, the light-washed walls begin to pull away from the center of the space. In the wake of the repelling forces, a central window unfolds, enveloping the innermost space with direct sunlight.

Overall, the sanctuary’s light quality exhibits a definite sense of direction which Ando states as his major goal:

“The theme of this design is directionality leading from light to shadow; that is, the contrast between light and darkness.”

By dissolving the box in contrasting light qualities, Ando demonstrates the immateriality of
the form,

"The meaning of a space can change simply by controlling the amount of light. Rhythms are created by alternating spaces having large amounts of light with spaces having less. ... I feel that the space contained is the primary concern, and not the walls, floor and ceiling which bound it."

The final component cannot be reached on foot, but is visible from the sanctuary. The central window provides a view of a sloping bank of grass. This ascetic garden is enclosed by an L-shaped concrete wall that reflects some of the dimensions of the sanctuary. Thus, the final portion of the journey returns to the true light of nature.

Again, one must consider what clues this example provides when deciding on the quality of light within a space.

The Mt. Rokko Chapel demonstrates how light is used to heighten the sense of distance or proximity between spaces and objects. The drama of withdrawing from nature is accomplished through a layering of spatial experiences. By intensifying the layering of these experiences through varying light qualities, Ando creates a sense of anticipation for the innermost space, oku.
ILLUSTRATION SOURCES

All illustrations used in this thesis are given their source below, with reference to the page number in which they appear in the thesis.

pages source

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