LIGHT AND SHADOW TRANSITIONS

Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Master of Architecture.

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ABSTRACT

Transition is the movement between the past and the future. In architecture, transition is both temporal and spatial. It is the interstitial space where changes happen. A thoughtful architectural transition prepares for journey ahead by intensifying aspects of space and relating it to the before and after. In the analogous the trifold structure of time and tenses, transition could be designated as the present, situated between past and future.

Transition is always assumed as a space that connects the two other spaces. The thesis claims that a building functions better with a thoughtful transition. It is based on an assumption that a well-considered transition is an architectural offering to better comprehend change.

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PROLOGUE

Transition is the process or a period of changing from one state or condition to another. Architecture has the possibility to operate with material and light to intensify the movement from one space to the next.

There are different types of transitions:

- Transition between inside and outside
- Transition between nature and the building
- Transition between inside and inside

Spatially, transitions are possible in both horizontal and vertical conditions.

In architecture, transitions can employ light and shadow, or non-physical elements such as time, history and culture in articulating the space of the in-between.

THE IDEA OF TRANSITION

The transition space prepares for the journey ahead. The transition is where the architect has control of privacy, movement, and separation between different realms.
Transition spaces are often useful and functional attributes of buildings. Transition space may, for example, wrap around a building volume to prevent direct sunlight, and operate as a mediator between inside and outside to control the temperature and other physical conditions that could impact a building negatively.

TRANSITION IN HISTORY

The transition space was important in history. The confined spaces for transition in the Neolithic period in the dwellings at Skara Brae are a great example.

In Indian architecture, the architecture of ancient civilizations were expertly constructed with the well-thought interplay of transition spaces. Hierarchy was one of the most important aspects of the Indian temples assisted through transition spaces.

Transition in Islamic culture is not only functional but also plays the role of a cultural symbol in architecture. The best example is the courtyard as a transition space that connects and at the same time separates more than two spaces and brings harmony to the house considering privacy, sequence, and hierarchy.

Hierarchy in transition spaces in Indian temples.

Isfahan Bridge. The best understanding of the transition space can be through a bridge.
The transition controls the sequence and privacy in the building. There are different types of courtyard in Islamic Architecture: inner courtyard, which is more private and used for family, and outer courtyard, which is used for guests and is less private.
ABSTRACT TRANSITIONS

Transition can have a non-physical or abstract presence such as transition in light and shadow, transition in time, history, and culture.
EXEMPLARY TRANSITION IN THE SHEYKH LOTFOLAH MOSQUE

The principle argument in this thesis proposes that space can be more intense through the use of a carefully considered transition.

The Sheykh Lotfolah Mosque in Iran offers such an intense transition which one could argue is required to enter God’s abode. This idea is thoughtfully translated into architecture by the use of contrast and hierarchy. After passing the separation of the building from the ground with a vertical transition, one enters a transition with a level of ambiguity with no indication of what is about to be revealed. A low ceiling, narrow elongated space leads to a wide, grand circular space in contrast with light and darkness. This contrast manipulates the scale of the space.
SHEIKH LOTF OLLAH MOSQUE

One of the best examples of transition in history is this mosque.
Transition spaces in modern architecture also use hierarchy and sometimes an architectural notion of ambiguity. One of the examples of this is Mies’s Riehl House. Mies largely refused a direct path from the garden gate to the front door as a strategy. The visitor is forced to turn several times at right angle before the view to the house is completely revealed. This delaying of disclosure inevitably makes a person into ambulant observer. Similarly the Muller House by Adolf Loos and the Unity temple by Frank Lloyd Wright use this transition technique to offer a gradual revealing of the architecture.
In the book Architecture Oriented Otherwise, David Leatherbarrow remarks on the Muller house transitions:

“Muller Meander: The space is visible through an irregular colonnade or pair of thick piers. The space is one part of a very complicated and beautifully interrelated group of settings.”
Unity Temple’s meandering space:

“A bank of doors leading to the entrance foyer. This foyer is striking because of its extremely low ceiling; the contrast with the expanse outside could not be greater. The main point is the delay, the partial disclosure or revealing and hiding that creates.”
THE PROGRAM

In order to show the importance of transition space in a building a light and shadow pavilion was selected as the architectural vehicle.
Different condition of light in transition space.

Low Ceiling transition space.

The idea of using contrast to make the experience of a space more intense through transition space.

Elongated Transition.

Rounded Transition.
LIGHT AND SHADOW STUDY
THE SITE

Jura Mountains, Switzerland.

Is chosen as a site because of its characteristics which has a significant distance from urban settlements and operates under extreme weather conditions.

Light freedom and seasonal transitions

Transition from earth to sky

Transition from the city life to the nature and the effort that is required
Architectural spaces that envelope us like a physical presence, simple and dense, defying description, imitation and photography, universal, yet present. The exterior is simple leading to greater levels of mystery, surprise and memory, creating poetic changes of light and shade, guiding us through its space. (Alvaro Siza)
View 3 (Third floor plan)

East Elevation
FREEDOM, ETERNITY, AND EXPANSION

Freedom, Eternity, and Expansion are three different spaces in this light and shadow gallery that each have a certain condition of contrast that happens in the transition space that leads to these spaces. The names are chosen because of the psychological effect that architecture might evoke in these spaces.
This space cantilevers from the edge of the cliff and opens up to the sky. This room is the transition that takes the visitor to an underground narrow tunnel which offers a sense of mystery not knowing where it ends. The transition suggests a sense of pressure and suffocation before reaching a wide open space with the view from the edge, perhaps analogous with relief and freedom. The transition operating with compression seeks to amplify the wide openness of the subsequent space and the transition manipulates the scale of the space.
This transition space continuously narrows toward a courtyard with a grandness that sharply contrasts. The spatial sequence of the building is organized to allow the transition spaces to intersect at certain points. The intention is to offer a degree of spatial ambiguity as an additional part of the overall spatial encounter before and after a transition and its consecutive space.
ETERNITY

Eternity is an elongated bridge that connects the west part of the building to the east part. Eternity conceptually extends the transition experience. The purpose of this space is to keep the visitor long enough in the transition space in order to make him eager for the space ahead and to clear his mind of the previous space.
CONCLUSION

Architecturally constructed transitions offer the possibility to enrich spatial perception.

They can amplify mystery, ambiguity and contrast.

Well-considered transition space is an opportunity for an architect to provide a spatial moment beyond the physical barrier that eloquently connects the multitude of spatial conditions in a building.

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