Master Degree Project/ Report
31.03.2010

Yuko Maki
MA In Space, Interior Architecture and Furniture Design Department
Konstfack, University College of Arts, Crafts and Design
Content
1. Introduction ...3
2. Background ...4
  2.1. Open Space and Amusement Park ...4
  2.2. Boundary ...4
3. Purpose ...5
4. Research ...6
  4.1. In Modernist Term ...6
    4.1.1. Functionalism ...6
    4.1.2. Flexibility ...7
  4.2. In Contemporary Term ...8
    4.2.1. T-House/ Sou Fujimoto ...8
    4.2.2. House N/ Sou Fujimoto ...9
    4.2.3. KAIT workshop/ Junya Ishigami ...10
5. Stating the Problem ...11
6. Choice of the Method ...12
7. Planning and Conduct ...13
8. Results ...14
9. Discussion ...15
10. Conclusion ...15
11. Sources and References ...16
1. Introduction

In my project, I researched the boundary in the field of architecture. I suppose that setting the boundary is the most primitive architectural activity. It is often said that the beginning of architecture was constructing the roof to prevent from rain. When the roof is constructed the boundary between inside and outside is generated. Setting boundary in space is, so to say making order in disorder or giving concreteness to abstraction.

A boundary divides the space into two. However, the divided two spaces share a boundary. Therefore I think when the idea of “dividing” comes up we can always find a sense of “sharing” as well. As a starting point I believed that when the notion of “connecting” is added to boundary there could be a new value in the space.

I surveyed how the idea of setting boundary in architecture has been changed through history. In my research I reached the concept of “gradational boundary” which divides a space but also connects the space at the same time. Furthermore I designed a piece of furniture which functions both as a shelf and as a room divider based on this concept.
2. Background

As an architect and a designer I have tried to create something which people who use it can interpret and use in their own way. I believe this diversity brings people richness in their use. Interactions among people and space, people and object, and space and object are important issues when I design. For me designing is always about how to explore those relations.

2.1. Open Space and Amusement Park

A Japanese architect Jun Aoki published the book entitled “Open space and Amusement Park” in 2004. In this book he categorizes the architecture using metaphors “Open space” and “Amusement Park” as a place for children to play.

He describes that in an amusement park there are facilities such as a merry-go-round, a roller coaster, a ferris wheel, which include a guideline about how to play with them. Therefore children don’t have to care about how to play. They just follow the guideline. He says the way of enjoying is already set there.

According to Aoki’s idea, architecture where activities have been previously arranged could be compared to an “Amusement Park”. It is the architecture which leaves nothing to wish for. On the other hand, an “Open Space” is in a way an empty lot. It has center and edge because it is marked off and sometimes it has some thrown away stuff left in it. Children have to create a rule of game or find out a way of playing by themselves there, reading a potential quality of the site. However, exploring the space can be enjoyable as a part of playing, Aoki says.

According to him a comparable architecture to “Open Space” is the architecture which has a lot of clues that give people a possible idea how to use the space. Beside the idea of “Open Space” and “Amusement Park” he added one more concept “A Field.” This is the space which lacks any clue about how to interpret it and requires high imagination of how to use the space.

fig.1 Empty lot
fig.2 Amusement park
2.2. Boundary

I’m very interested in this idea of “open space”, which is full of clues. Here I suppose “boundary” could be a keyword for it. I consider that the space is defined by boundary in general and people see it as a hint for interpretation of the space. Therefore I think how to set a boundary is a key to realize a variety of interpretations in a space.

3. Purpose

This report consists of a theoretical part and a designing part.

For the theoretical part, the intention is investigating how the idea of boundary could be defined in the field of architecture and figuring out a definition of boundary for today.

For the designing part, I would like to transform the idea, the new way of boundary, into a specific design.
4. Research

4.1. Modernist period

Behind the evolution of Modern architecture there was the industrial revolution and the developments of technology and engineering. Also the breaking away from classic style was a considerable part of it. However, I feel the architect in this period tried to find out a model answer for designing. A large number of famous concepts were created in this era.

4.1.1 Functionalism

At the beginning of the twentieth century, an American architect Louis Sullivan claimed, “form follows functions.” It was the beginning of functionalism. The principle of functionalism is that architects should design an architecture based on the purpose of that architecture. In other words architecture had to satisfy the people’s desire for living. Le Corbusier said “the house is a machine for living in.” I consider building in this period can be seen as “an amusement park” using Aoki’s theory. And I think architects had taken a dominant position in the design process in comparison to the user throughout this period.

fig. 3 Prudential (Guaranty) Building (Louis Henri Sullivan)
fig. 4 Briey (France) Unité (Le Corbusier)
4.1.2. Flexibility

However, in the middle of the modernist period the notion of “Flexibility” came to be highlighted as a reaction against functionalism.

I consider that it was at this time architects started to involve the viewpoints of users in their works. Mies van der Rohe is the one who saw a value in the notion of flexibility in architecture. “Less is More” is his famous aphorisms. He stated with extreme clarity and simplicity. He strived towards architecture with a minimal framework of structural order to achieve the freedom of free-flowing open space. He called his buildings "skin and bones" architecture. So this free-flowing open space can be defined as “flesh and blood”. He expected flexibility in this undetermined part.

However, I consider that those spaces from Mies’s works were extremely minimal and they did not have enough clues to interpret how to use the space. There were lacking communication between space and users. It is to say “a field” in Aoki’s idea.

fig. 5 Neue Nationalgalerie
fig. 6 Farnsworth House (Mies van der Rohe)
4.2. Contemporary Period

To erect a wall is to bisect a space into 0 and 1. However, a space must have intrinsically had rich gradations between 0 and 1. (Fujimoto 2008:37)

To view architecture in the resolution that spaces inherently have. When various scales connect seamlessly, those obdurate boundaries in architecture can be dissolved. All kinds of environment and architecture could then continue from each other most naturally. (Ishigami 2008:119)

I think Sou Fujimoto and Junya Ishigami are two of the most active young architects in Japan today. Their work is uniquely experimental and I’m interested in how they arrange a boundary in their works.

4.2.1. T House (2005)/ Sou Fujimoto

This is a private house for a family of four people. It has a unique plan in that the walls are scattered radially from the center. It appears to be one room but slightly divided into several rooms.

Spaces are separated and connected at the same time. All rooms are interdependent. Infinite spatial interactions were realized within the finite dimension of 90 square meters. With every step, interior view of the house transforms and new scenery appears. (Fujimoto 2008:45, 47)

I imagine that residents in this house always feel the presence of their family and see the walls as clues to make distance in between by arranging furniture. Also I think that Fujimoto planned those walls by deliberating their relations.
4.2.2. House N (2008)/ Sou Fujimoto
This is another private house by Fujimoto. In this work he examined the relation between outside and inside or domestic and urban. There are three boxes, each having a big opening, one box fitting inside another. Interior and exterior are layered gradually.

*Exteriority is not architecture. Interior is not architecture. Architecture exists in how exteriority and interiority are connected.* (Fujimoto 2008:79)

fig. 8 House-N (Sou Fujimoto)

In this house the boundary between outside and inside is very unclear. I guess the sceneries and the feeling of enclosure are changeable depending on where you are in the space.
4.2.3. KAIT workshop (2008)/ Junya Ishigami

Another architect Junya Ishigami designed KAIT workshop. It was built as a part of Kanagawa Institute of Technology campus redevelopment. It is an open working space for the students. It consists of 2,400 square meters in a one story high glass building. Over 300 thin white columns appear to be randomly placed. However, Ishigami insists that the columns are, in fact, deliberate -- the result of tireless structural calculations and design iterations.

The intention was not to plan individual space in different location of the building one by one but to create a space in which the whole and the parts are infinitely close to having equal value. Towards this purpose I planned ambiguous and at the same time specific spaces such as an entrance-like place, a work area-like place or a passage-like place. The places are created to be at all times open to the whole- the one room spreading out over 2000 square meter and at the same time to each have its own individual largeness and sense of distance. One who experiences this space can instantly see how, despite the lack of identifiable boundaries, each place has its own distinct expanse. The spaces and their largeness or smallness are results not of the columns alone, but of various combined elements like furniture and plants. I hoped to find a way to achieve an abstractness that would withstand the introduction of such concrete, non-architectural elements as furniture, tools, or plants. An accessible abstractness. A capacity to receive any kind of element, made possible by the undefined natures of the relations between individual spaces. (Ishigami 2008:28-29)

In this architecture Ishigami intends that people discover the appropriate area for their intended purpose, within the uneven order of the pillars. They can sense the different distances between the pillars and locate the space they need for their activity. And additionally furniture and plants are also important elements to generate spaces.

fig. 9,10 KAIT workshop (Junya Ishigami)
5. Stating the Problem

Comparing those modern architectures to contemporary architectures I see the decisive
differences between them. When I focus on boundary, it is strongly set in modern architecture,
stuck to function and the architect did not hesitate to clearly define the outline of the space. On the
other hand, Fujimoto’s works and Ishigami’s work have an "uneven boundary", which divides the
space but also connects the division at the same time. I define this sort of boundary as “gradational
boundary”. And I think that those architectures can be referred to as “open space” in Aoki’s
concept.
6. Choice of the Method

Based on this supposition I designed a piece of furniture, which functions as a shelf and also functions as a room divider. It can often be seen that a shelf is used to divide the space into several spaces. EXPEDIT from IKEA might be one of the most typical shelves used as a room divider. I’m interested in this specific situation that one piece of furniture has two different functions at the same time. I consider that it has a potential to be a gradational boundary. I suppose when the activities such as arranging things and dividing a space are mixed together the new quality of gradation will be found in space where it is placed.

Diagram

fig. 11, 12 EXPEDIT/IKEA (Tord Björklund)
7. Planning and Conduct

This piece of furniture has two different systems, a modular system and a slide system. Both systems enable different kinds of flexibility. The modules can be extended both vertically and horizontally. And each module consists of fixed panels and sliding panels.

Drawings

![Diagram of furniture system]

Image

![Image of furniture installation]
8. Results

Everyone can feel free to arrange the way of using by interpreting the hints given by the movable parts and fixed parts depending on the situation and purpose. Its aspect is indefinite. The user’s own activities lead this piece of furniture to be more personal object. The various elements and their various arrangement generate each user’s “gradational boundary.”
9. Discussion

Interestingly when I designed this SLIDE I realized that its form reminded me of the “domino system” from Le Corbusier and the “universal space” from Mies van der Rohe although I didn’t intend it to be like them.

However I’m more interested in happenings inside of the shelf rather than its form because I think those happenings also turn out to be part of design. I suppose when SLIDE is shared from each direction small territorial activities would happen everywhere on shelves by the position of sliding part and the stuffs on them. These activities, moving sliding parts or building modular parts, are very architectural and they are always related to the object, the people and the space. Thus the gradational boundary is set by the users depending on those relations.

I regard this SLIDE as a piece of furniture, an element of space or architecture, and even I regard itself as a small architecture.

10. Conclusions

_The world is the totality of facts, not things._

_/Ludwig Josef Johann Wittgenstein. Tractatus Logico-Philosophicus_

I do believe that activities which happen in a space are essential elements of its architecture. This issue is considerable for today’s architecture, however I don’t think this idea is completely unrelated to the modernist period. I recognize that the focus of attention in architecture has been shifted from forms to happenings or from functions to relations.

I define the gradational boundary as a starting point trigger happenings and relations. Function and forms are redefined by happenings and relations. The gradational boundary of the furniture or architecture bears great possibilities and can get closer to the individual ideal of the people who use it.
11. Sources and References

Furuya, Nobuaki 2002. *Shuffled*

Ishigami, Junya 2008. *Small Images*

Fujimoto, Sou 2008. *Primitive Future*

Aoki, Jun 2004. 原っぱと遊園地 (Open Space and Amusement Park)

Aoki, Jun 2008. 原っぱと遊園地 2 (Open Space and Amusement Park 2)

Speyer, James 1968. *Mies van der Rohe*

Kenchiku Bunka Vol.53 1998. *Mis van der Rohe Vol.1*

Leymarie, Jean 1968. *Who was Le Corbusier?*

Forty, Adrian 2000. *Words and Building*


Special Thanks to...

Vesa Honkonen
Karin Nyrén
Anna Odlinge
Lars Stensö
Inger Bngtsson
Karin Tyrefors
Martijn Van Den Bosch
Naoto Nakamura

Kristina Berggren
Lotten Ceder
Hung-Ming Chen
Lies-Marie Hoffmann
Joakin Nyström
Maria Vång
Annie Wallér
Lucas Dahlén
Annica Wigers
Ninna Kapadia
Hanna Karlsson

and My Family