RE_FINE
王昭智 CHAO-CHIH WANG
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宅世代 H-Gen

草莓族 Strong Berry
Preface

"If that concept is the same two times, is the building the same both times?"

Cited from Architecture and Disjunction, Bernard Tschumi, April 2007
Abstract

Re_Fine is a compound word which means to improve, polish and carve. While the word is separated to RE_Fine, it has a different meaning.

RE is a word which has a meaning of furthermore to improve something better. Architectural design is a proceeding process to finding an appropriate answer.

Although with the same issue and concept, there are still some differences which exist about how to represent the context and contents of architecture in other viewpoints. To re-start and to find a new answer achieving a new project is an important issue in my thesis statement. Therefore, the main topic of my thesis is called RE, which means the same methodology will be used towards the persistent proceeding process of architectural creation.

RE is a starting quotation cited in every chapter, representing that research, definition, methodology, experimentation, and observation of the architectural design innovation.

RE_Vertical distribution is a chapter which discourses how to organize a vertical distribution system from the research of the Seven-Eleven service system that strikes down the limitation of traditional floor system.

RE_Embankment is a chapter which is liberating the urban wound by re_defining the embankment of the Taipei city.

RE_Combinant Complexity is a chapter which composites the programmatic organization by using the organization of Chinese thesis called The Five Elements.

RE_Branding Stone Belief is a chapter thriving on the site of Stone religion through rejuvenation of the life cycle, of the forgotten or readily available material, skill and resources, which are relevant to the original environment.

RE_Weaving Surface is a chapter discussing the methodology of the manufacture of surface through the adjustment in parameter of mathematical formula.

RE_Cords of Competition is a chapter which records what I participated in competitions of design in different categories between these two years in graduate school.

Overall, this thesis of RE_Fine, the goal which I aspire, is discussing architectural researches in my graduating works, which is in accordance with the meaning of RE.
“......I imagined it erased by rice field or beneath the water; I imagined it infinite, no longer composed of octagonal kiosks and returning paths, but of rivers and provinces and kingdoms... I though of a labyrinth of labyrinths, of one sinuous spreading labyrinth that would encompass the past and future And in some way involve the stars......”

Cited from The Garden of Forking Paths, Jorge Luis Borges, 1941
RE_01

RE_Vertical Distribution
Scattering of 7-11

Project: 01
Duration: 07 2006 - 01 2007
Advisor: Terrance Tai-Lai KAN

Architectural Multi-Linkage
Multi-linkage phenomenon

Convenient service system

Cartogram of distribution
Instead of contending for business, they get more revenue while more 7-11 are opened in an area. Therefore, 7-11 will begin to make a profit when the number of branches in a region is more than a constant. Because the nearly distance of branches decline the cost of transportation, it increased the frequency and efficiency of transport. Now, 7-11 have reached three times of routes per day.

_SYSTEM OF INNER TRANSPORTATION_

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**Uni-President-Company**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh food</td>
<td>Grain Beverage</td>
<td>Bagged food</td>
</tr>
</tbody>
</table>

**Newspaper**

<table>
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<th>Paper</th>
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**Others**

<table>
<thead>
<tr>
<th>Consign for sale</th>
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</table>

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**Inner Transporting System of 7-11**

- **Factory A**
- **Factory B**
- **Factory C**
- **Factory D**

**Transporting Center**

**Flagship Store**

- **POS system**
- **Transport system**
Compared with different area

Hua-Lian  Hsin-Chu  Taipei

Frequency

Territoriality of Service

Distance
Center VS Branches

Distribution of Inner transporting system

Horizontal Distribution

Thesis Statement
**Definition of Serving System**

Distribution condition
<Taipei - Hsin-yi Area>

Territory of service

---

**Theory of Distribution of 7-11**

After a variety of factories transported products to the transportation center, the center distribute products to every chain system of 7-11. According to 7-11’s principle of distribution, there would be a 7-11 per 5 minutes’ walk. A five minutes’ walk is about 200 meter; if there is no intervention of street system in it, 7-11’s service intensity should be circular equalization. It restarts to define 7-11’s service intensity and service domain when street system interposed.
Re-definition of Serving System

Distribution condition
(Taipei Hsin-yi Area)

Zoom in

Re-define the Territory of Service

Territory of serving system
Re_define the territory of service

Area of serving
Efficient Street
Boundary of Efficient Street

Mapping of distribution system

Distribution condition
(Taipei Hsin-yi Area)

Prototype of serving system

Re_Define territory of serving system
New territory of serving system
Boundary of territory of serving system

RE_01 Scattering of 7-11
CHAO-CHIH WANG
Strength of four level

Mapping of serving system

Diagram of serving system of 7-11

Strength of service

- 60%
- 100%
- 0%
- 20%
- 40%
- 50%
- 60%
- Circulation of transportation
Composite program of service Hotel

Multi-Serving system
Department store is a multi-serving center building. But in the traditional programmatic distribution, the serving system is also distributed by floor layer. There is a chance in my conceptual diagram based on the research for the distribution of 7-11. It provides a different serving system of distribution toward the new serviced building.

Traditional composition

Conceptual composition

Multi-Serving system of service Hotel
Service Hotel is a single serving center building. In the traditional programmatic distribution, serving system in Hotel limited by the floorslab. Serving center not only single but also distributed by vertical floor line. In my conceptual diagram which broke the original way of the distribution could have more chance to combine with another serving system.
Recombine the Program

Service Hotel

Sharing programme

Department Store

Re-Compose Program of Service Hotel with Department Store

To achieve the new serving system of Service Hotel which is a multi-serving center system, the distribution of serving program composition will be derived by the original department store.

Site Analysis

Sogo department store

MRT Station

Sogoll department store

Taiwan’s SOGO Pacific Department Store, which is located on Taipei Zhong-Xiao Road, is the intersection of MRT Ban-Nan and MU-Ja. Neighboring on Ding-Mei market area and sogoll, it is also the well-traveled hub of basement and ground.
CURRENT CLASSIFICATION OF FLOOR CATEGORY

This is a current situation of the programmatic distribution of Sogo department store. The classification of floor category refers that the same categorized program will be distributed by the same floor. According to the diagram of floor category, it is available to decide where sharing area should be.

ANALYSIS OF DISTRIBUTION OF PROGRAM

CONCEPTUAL PROGRAMMATIC DISTRIBUTION

According the difference of the spacial serving function, the sharing zone will be decided by the original structure of department store. Consider with the infrastructure and circulation of different system, the distribution of serving center will be changed.

The serving center is multi-function. It could be counter, restaurant, gym......etc. It can be connecting with the same serving system of the existent department store. Therefore, while the location be decided where connecting with department store, the new serving system will be efficiently operated.
<Experimentation of Vertical Distribution>

Diagram of programmatic distribution

Mapping of the longitudinal section

Add sub-circulation system

Imagination of Elevation

<Developing on longitudinal section>

Sogo floor system

New circulation system

Efficient serving territory

Programmatic distribution

Mapping to Sogo system

Location of serving center

Shaping the boundary
Section Condition

This is a current situation of the programmatic distribution of Sogo department store. The classification of floor category refers that the same categorized program will be distributed by the same floor. According to the diagram of floor category, it is available to decide where sharing area should be.

Spatial Organization

Explosion of main building

RE_01 Scattering of 7-11
Chao-Chih Wang
Spatial simulation

01 Roof garden
02 Theater
03 Gymnasium
04 Cafés
05 Restaurant
06 Underground square

Elevation of daylight

Elevation of night

01 Roof garden
02 Theater area
03 Gymnasium
04 05 Shopping area
06 Underground square
Introduction of Project

This project is about how to recreate an urban landscape with the consideration of flood happenings, and also allow the people within the metropolis to enjoy the natural wonders Taipei has to offer.

The purpose of this project is how to reconnect Taipei city with the river bank. In current situation, there is an embankment which is cutting the bank and the park over the boundary. Therefore, the basis of my topic will be for the people to experience and adventure the natural beauties of the embankment.
RE_ 02

RE_EMBANKMENT
Wander Between The Bank And The Park

Project 02
Duration 03 2007 - 07 2007
Advisor LIANG-CHYAN CHEN

Urban Landscape
SITE ISSUE

ENVIRONMENT OF TAIPEI BOUNDARY

Taipei city is the capital of Taiwan. But in this busy international city, the embankment actually acts as the Taipei boundary against the ugly images. With the purpose to resolve the typhoon and flooding problem, Taipei city creates a boundary to protect itself from these dangerous situations. Furthermore in order to facilitate the metropolis transportation system, just above the southern border, is the overhead pass. Together this expressway creates a boundary. This divides Taipei's metropolis city from the outside environment.
Introduction of Taipei City

How to get to and enjoy the natural beauties?

The large environmental area is just outside of the embankment. People within the city find it difficult to get to and to enjoy this nature’s wonder. Therefore, it is necessary to create a new landscape to allow the people within the metropolis to enjoy the natural wonders Taipei has to offer.

Diagram of analysis of Taipei city

Figure ground  Green and blue  Green zone
Site Introduction

The site is surrounded by residential communities. The main recreational attraction is the youth park with surroundings of fast-paced roadways. The highway overlooking the embankment with Huan-He south road. There is a cut between the natural environment and the artificial youth park.

Aerial View of Location

Using Google Earth's aerial view, we are able to view the distance relationship between Xin-Dian River, riverbank, Huan-He South Road as well as the youth park.
Introduction of Taipei City

If there is no expressway and embankment?!

If one were to view from Taipei's
Opposite shore - Xin-Dian and
there is no buildings and embankment
dividing Xin-Dian River.
Truthfully, the view would be of Yang-Ming Mountain.

Perspective view from the opposite shore

- Yang-Ming Mountain
- The Youth Park
- The Riverbank
- Xin-Dian River
- Huan Ho N Rd
- The Expressway
**Compare with the Constitutions**

Pattern of artificial

Pattern of nature

From base pattern, I discover there are mainly two kinds of elements constitutions
On the side of the youth park there is a broken line
On the Xin-Dian river bank is a curved line

**Analysis of site**

Pattern

Water zone

Main vehicl circulation

Pedestrian

Grass and Trees

Building area
Transition of Taipei Boundary

River Bank  City  The youth park

The contrast

artificial  nature

Three unique specialties

From these base analysis one may discover that there are three unique specialties:
Artificial youth park
The natural riverbank
And the city’s infrastructure
Strategy of the Natural Bank

With the consideration of flood happenings, this project's greatest focus. Therefore, the basis of my topic will be for the people to experience and adventure the natural beauties of the embankment.

Circulation Rules

Diagram of Section

The new landform also extending the riverbank and combine with the embankment.
Strategy of the Artificial Park

Experimental with Cellular Skin System

Experiment with cutting sheet of different cut to create a kind of landform which is composed of broken spline toward the artificial pattern. It also reform a new landform to integrate the original pattern in the Youth park.

The Rules of Transformation

Sequence of Analysis

Combine the same figure in illogically way can create a new figure which broke the prototype and the original rule. In the variable type, it creates a new slope and also produces a new sized platform. The different slope can also provide for different activities and different character.

Analysis of Consequence Model

Inconsequent Composition

Analysis of Different Slope

Different slope for different character.
I try to experiment the combination of two elements to strengthen the contrast between the bank and the park.

**Space Organization**

The transition of spatial sequence strengthens contrast between the bank and the park.
Transition of space

Layer 1: City
Layer 2: The youth park
Layer 3: River Bank

Exit of city
Exit of artificial
Exit of nature

Transition of pattern
Transition of texture
Programmatic transition

Wander between the bank and the park

artificial

The zipper

City
nature
<Consequence>

<Longitudinal section>

<Top view>

<Distribution of program>

<Re_02 Wander Between The Bank And The Park>

Chao-Chih Wang
The new mountain of Taipei – for the civilians of Xin-Dian

The civilians of Xin-Dian look out at Taipei and discover that people will be able to walk between the mountain and river, penetrating the circular tunnel land can see the true beauty of Taipei's metropolis scenery.
GROUND

Use the mountain image to link the inside and external environment.
Introduction of Project

The concept of the five Elements is used in ancient Chinese cosmology (Include: Metal, Wood, Water, Fire, Earth)
The Five Elements can grow and decline in circulation and also composed of the Ten Heavenly Stems.
Using the system based on the Five Elements relationship can develop a Series of methodology of special recombinant complexity.
In the end, the whole building no matter from the composition by program, and configuration of spacial unit, to the circulation system even in the pattern in Elevation, are created and formed by the system from the Five Elements.
This is an exercise by the logical design process based on different research.

RE_03 The Five Elements
王昭智 CHAO-CHIH WANG
Project: RE Combinant Complexity
Duration: 07 2007 - 01 2008
Advisor: Po-Ting Tseng

The Hybrid Architecture
Prefatorial Foreword
<Theory of the Five Elements

五行相生

Earth

Wood

Fire

Metal

Water

五行相克

<Definition of the Five Elements

The theory of the Five Elements is used in ancient Chinese cosmology. The Five Elements can grow and decline in circulation.

<The Five Elements vs The Ten Stems

天干相剋

庚辛金 克 甲乙木
壬癸水 克 丙丁火
甲乙木 克 戊己土
丙丁火 克 庚辛金
戊己土 克 壬癸水

天干相合

甲 陽木 + 己 陰土 = 乙
乙 陰木 + 壬 陽金 = 丙
丙 陽火 + 辛 陰金 = 丁
丁 陰火 + 壬 陽水 = 戊
戊 陽土 + 六 陰水 = 己

<The Five Elements vs The Ten Stems

The ten Heavenly stems stand for the Yang ("陽") and Ying ("陰") in the Five Elements. The Five Elements are composed of the ten Heavenly stems. The subtractive relation between ten Heavenly stems are based on the five elements circulative system.

<Definition of the Five Elements Parameter
According to the theory of the Five Elements, different attributes of spatial contents could be corresponded to the Five Elements. In compliance with this principle of classification, we can correlate spatial contents which are in existence with the Five Elements.
Site analysis

Site is a parking area near the Far Eastern Mall which is a highly commercial area present sleek and vertical structure. This parking area located on the Duen Hua-Nan. Rd and An-Hen Rd. This area is integrated resident and commercial character.

Introduction of site

Site analysis with the five elements

Diagram of site with the five elements
According to the theory of the five elements which circulated each other, and also has the gravity and repulsion with each other, creating the rule of the nine space theory. This rule is a composition of programmatic distribution. In the nine space rule, each space has its own character which is decided by the element of other side.
The spatial character in my building will be affected by surroundings environment. Therefore, each area will have different program character. This programmatic content in whole building are composite by the methodology of the five elements.
透過五角蜂巢形體的研究分析，找出規律比例
幾何關係，產生出空間光實形態，空間透過五
角蜂巢形體產生新的空間形式，另外透過不
同proportion的分隔，讓空間彼此之間相互轉換，數
量形成不同的機能，空間層次
住宅的構成，要運用五角蜂巢細部分隔，
讓空間彼此形成三維結構和空間層次。透過開
口部的控制及空間動線的串聯系統，同一種住
宅單元有三種變化，以此構築出建築環境空間

< Module creation system

<< The composition of the housing area

Because of the constitution of the pentagon module
To apply different function and lighting
Each slab can be rotate in the same degree

< Analysis of the configuration of pentagon module

RE_03 The Five Elements
CHAO-CHIH WANG
Development with Pentagon System

Shaping the Site Plan by the Five Elements

Conceptualize the Elevation Pattern

Because of the constitution of the pentagon module and the rule of the Five Elements, it leads me to create a system no matter from the slab system to the elevation pattern system, even the programmatic distribution also follow the research of the Five Elements. Using the system based on the Five Elements relationship develop a series of methodology of special recombinant complexity.
LONGITUDINAL SECTION OF THE EARTH AREA

Program distribution

Classification of program with the Earth element

Museum of Modern Art
Service apartment

Spatial impression of the Earth area
Floor levels of whole building

Floor level 11
Floor level 10
Floor level 9
Floor level 8
Floor level 7
Floor level 6
Floor level 5
Floor level 4
Floor level 3
Floor level 2
Floor level 1.5
Floor level 1
Floor level 0.5
Floor level -1

Floor level 11
Floor level B
Longitudinal section of whole building

Spatial impression
Manipulation of Model

<Capability experiment model
**Perspective renderings**

**Interior**

**Exterior**

**Forecourt**

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**The Hybrid Museum**

In the end, the whole building no matter from the composition by program, and configuration of spacial unit, to the circulation system even in the pattern in elevation, are created and formed by the system from the Five Elements.