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Master of Science in Architectural Engineering

**A Study on the Tradition in Wang Shu's
Architectural Works**

- focusing on his works from 2000-2010 in the
context of Hangzhou city -

by

Feng Luan

Department of Architecture & Architectural Engineering

The Graduate School

Seoul National University

February 2014

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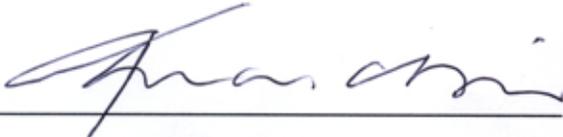
___ Focusing on his works from 2000-2010 in the
context of Hangzhou city ___

February 2014

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Abstract

A Study on the Tradition in Wang Shu's Architectural Works

- Focusing on his works from 2000-2010 in the context of Hangzhou city -

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Nowadays, with the process of globalization and urbanization, China gradually becomes an experimental field of modern architecture. The traditional buildings carrying traditional culture are disappearing gradually. In the design of Chinese contemporary architecture, there is no room for tradition. Therefore, how to inherit tradition in Chinese modern architecture is an urgent issue.

The reality of Wang Shu winning the 2012 Pritzker Architecture Prize gives us a lot of enlightenment. The award is actually a confirmation for his exploration on Chinese tradition. "The question of the proper relation of present to past is particularly timely, for the recent process of urbanization in China invites debate as to whether architecture should be anchored in tradition or should look only toward the future. As with any great architecture, Wang Shu's work is able to transcend that debate, producing an architecture that is timeless, deeply rooted in its context and yet universal." quoting from the jury citation that focuses on the reasons for this year's choice. His architecture reflects a deep-going thinking on the inheritance of tradition. Wang Shu shows a great preference to Hangzhou and the 3 most important architectural works of him –

Ningbo Contemporary Art Museum, Xiangshan Campus and Ningbo History Museum are all designed in the context of Hangzhou. By analyzing the application of traditional elements in these 3 works, we can understand his design concept and strategy on inheriting tradition, which is a good reference and enlightenment to Chinese modern architectural design.

Firstly, in Chapter 2, the practice Barragan did on inheriting tradition is analyzed and summarized. And then, Wang Shu's architectural thinking and the context of Hangzhou are detailedly introduced.

Secondly, in Chapter 3, the application of traditional elements in his three notable projects which are designed based on the context of Hangzhou is detailedly discussed from 3 aspects: architectural concept, architectural space and architectural material.

And then, in Chapter 4, his strategy on inheriting tradition in architectural design is summarized and analyzed based on the analysis in Chapter 3. In architectural design, based on the context of Hangzhou, he did a narration on tradition – traditional natural appearance and traditional lifestyle. Wang Shu is infatuated with Hangzhou's breathtaking mountain and water and the literati-style life. By architecture, he narrates the natural "shanshui" (mountain and water) and traditional life of Hangzhou, which is detailedly analyzed from 4 aspects - space, form, material and construction respectively.

Finally, in Chapter 5, based on the previous discussions, the root of Wang Shu's tradition and its enlightenment to Chinese modern architectural design are detailedly talked about.

In architectural design, he pays attention to the reconstruction of the "place" and the representation of "place spirit", providing people a sense of belonging. The tradition in Wang Shu's architectural works is not the simple collage of traditional elements, but to stimulate people's identity on the place and realize the two fundamental spiritual function of place – orientation and identification. Wang Shu's purpose on maintaining and inheriting tradition is not only for the sake of tradition, but also for the continuity of fractured time and history, making the traditional lifestyle return back to the real urban life and regional environment. Finally, "Full of merit, yet

poetically, man dwells on this earth.”

Furthermore, Wang Shu’s purpose on tradition is not protection and return, but “revival”. He learns to tradition – the traditional philosophical thinking, the great Chinese traditional landscape urban system and the traditional and folk structures, from which he searches for a much more wisdom way in order to face the severe environmental and ecological issue, making new buildings succeed and inherit the memory of history and traditional life in the ruins and helping people to recreate the identity to the “place” and “culture”. This is Wang Shu’s attitude and standpoint on tradition; it is also what we need to learn from Wang Shu’s tradition.

Keywords: Chinese Architecture Tradition, Wang Shu, Shanshui (mountain and water), Narration, Traditional Natural Appearance, Place

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Chapter 1. Introduction

1.1 Background and Objective

1.1.1 Background

1.1.2 Objective

1.2 Research Contents and Methodology

1.2.1 Research Contents

1.2.2 Research Methodology

1.3 Structure

1.1 Background and Objective

1.1.1 Background

1. Globalization¹



Figure 1-1_ Hong Kong, New York and Shanghai in the context of Globalization

The term of "Globalization" originates from the political and economic spheres and nowadays, it becomes the hot topic among almost all the fields. Inevitably, as the reflection of social progress, at the same time of improving the production efficiency, globalization also allows the Single - consumption and the Negative mode of pursuing the maximum economic benefits come into being, which are eroding and obliterating the peculiarity of the regional culture gradually. To a certain extent, globalization immerse architectural design into a predicament: on the one hand, from the Column grid pattern(commercial free space), High-level pattern(maximum land utilization) and the Assembly line production mode (spatial production efficiency), we can get a conclusion that at the global level, architectural design is becoming one way to pursue the maximum economic

1) Al-Rodhan, R.F. Nayef and Gérard Stoudmann. (2006). Definitions of Globalization: A Comprehensive Overview and a Proposed Definition.

benefits: on the other hand, architectural design should own its own way to energetically respond the topography and local culture.

2. The Disappearance of Tradition

With the process of globalization, the tradition is disappearing from our daily life gradually. Somewhere along the way, we can easily be moved by a small scene: a peddler walking through a narrow lane with a shoulder pole balanced on their shoulder, which can hardly be seen nowadays. Does this mean the death of tradition? In modern metropolis which is full of reinforced concrete forest, how long can it last and where can it go? – Survival or Death?

Of all ages, the integration and coexistence of the traditional culture and modern civilization is the eternal theme. Traditional culture, with a special charm and fascinating artistic conception, is deserved to be well experienced, protected and inherited. Actually, tradition is not an “entity” only existing in the past; on the contrary, it is more like a “process” which flow with time among past, present and future. Therefore, the real foothold of tradition should be future but not past. Without the continuity of tradition, there is nowadays’ modern civilization.

On the opening ceremony of 2008’s Peking Olympic Games, Chinese successfully gives the whole world a shock by the magical and amazing performance. It is actually an exhibition of Chinese traditional culture: the Chinese characters, landscape paintings, traditional opera, Great wall and so forth, all of them completely present the beauty of Chinese tradition. Although not all people can

understand the meaning and moral of aphorisms cited from <Confucian Analects>, they are shocked by the power contained in Chinese traditional elements and the profound of Chinese traditional culture. The opening ceremony exhibits the charm of Chinese traditional culture, meanwhile, it shows the limitless possibilities the tradition can be in modern times.

Nowadays, China is gradually becoming a crazy country which is insane about planning and building: it seems that all the things should be well re-planned and re-built. It kills all the living things which can grow and blossom like nature, leaving



Figure 1-2_ The opening ceremony of 2008's Peking Olympic Games

endless ruins. In the recent 30 years, 90% of the traditional buildings and ancient cities are destroyed and reconstructed. The traditional buildings carrying traditional culture are disappearing gradually: this is the current situation of China

Architecture is the synthesis of culture and technology; it is also the existence of the traditional culture as a physical form. The architecture formed in different period shows different characteristics, which are corresponding to the different culture and spirit features. With thousands of years' development, Chinese architecture gradually forms an individual completed system, and consequently, owns a special

characteristic. The Great Wall, Forbidden City, Temple of Heaven, etc: all of these are the examples of Chinese traditional architecture which owns a vivid traditional cultural characteristic, representing the highest level of Chinese architectural culture. Culture and architecture is an integral entity: culture breeds architecture and correspondingly, architecture is an excellent representation of culture. However, nowadays, architectural design in China ignores this most important design principle, leaving architecture separated from traditional culture and spirit. In the design of Chinese contemporary architecture, there is no space for tradition.

1.1.2 Objective

The reality of Wang Shu wining the Pritzker Prize is actually a confirmation for his exploration on Chinese tradition, which inspires people to pay attention to tradition, explore tradition and inherit tradition in modern architectural design.² Meanwhile, although some architects have realized the importance of tradition and tried to apply traditional elements in architectural design, the outcome and effect is non-ideal: without understanding and exploring traditional cultural or spiritual connotations contained in traditional architecture, many architect only pay attention to the extrinsic forms or symbols and transfer them into their exterior design, which cannot authentically show the spirit and charm of tradition.

Wang Shu does an excellent work on expressing tradition in his architecture. And also, he pays attention to explore our Chinese architecture tradition and inherit it in

2) Wang Shu (Chinese: 王澐, born 4th November 1963) is a Chinese architect based in Hangzhou, Zhejiang Province. He is the dean of the School of Architecture of the China Academy of Art. In 2012, he became the first Chinese citizen to win the Pritzker Prize.

modern architecture. Harmoniously, he integrates traditional elements with modern architectural design, conforming to the aesthetic requirement of modern times.

His architecture reflects a deep-going thinking on the inheritance of tradition. By analyzing the application of traditional elements in his works detailedly, we can understand his design concept and strategy on inheriting tradition, which is a good reference and enlightenment to Chinese modern architectural design.

1.2 Research Contents and Methodology

1.2.1 Research Contents

Wang Shu shows a great preference to Hangzhou and the 3 most important architectural works of him – Ningbo Museum of Art, Xiangshan Campus and Ningbo History Museum are all designed in the context of Hangzhou. This thesis focuses on these 3 works and analyzes Wang Shu's application of traditional elements from 3 aspects: architectural concept, architectural space and architectural material.

1.2.2 Research Methodology

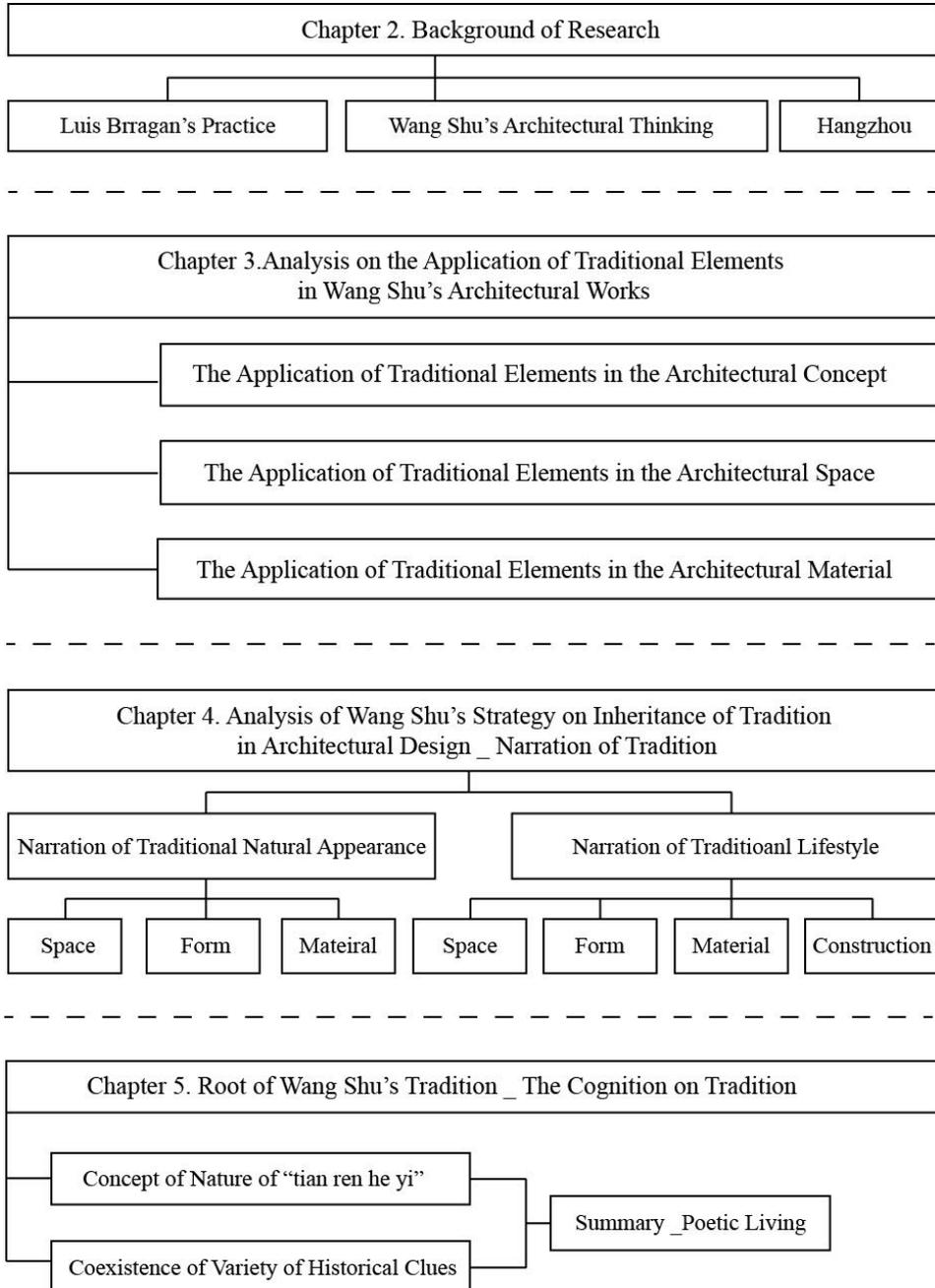
Document Analysis: In combination with related documents, the practice Barragan did on inheritance of tradition and Wang Shu's architectural thinking is detailedly summarized. And also, Hangzhou city is introduced.

Classification Analysis: The application of traditional elements in Wang Shu's architectural works is classified and summarized from 3 aspects – concept, space

and material.

Summary Analysis: By analyzing the application of traditional elements in Wang Shu's architectural works, his architectural strategy on inheriting tradition is summarized and analyzed

1.3 Structure



Chapter 2. Background of Research

2.1 Luis Barragan's Architectural Practice on Inheritance of Tradition

2.2 Wang Shu's Architectural Thinking on Tradition

2.2.1 Introduction to Wang Shu

2.2.2 Wang Shu's Architectural Thinking on Tradition

_Traditional Literati Thinking

2.3 Introduction to Hangzhou

2.3.1 The urban feature of Hangzhou

2.3.2 Traditional architecture culture in Hangzhou

2.3.2 Traditional lifestyle

2.1 Luis Barragan's³ architectural practice on inheritance of tradition

Most of Barragan's works are located in his hometown Guadalajara area, mainly private houses and residential. His works are praised as sublimation of poetic emotions. He was always inspired by white walls, quiet courtyard and colorful streets in Mexico City as well as views in countryside of North America and Spain. From his architecture, we can easily find the traditional architectural elements of Mexico – heavy color, enclosed walls and so on.

In Barragan's design methods, heavy color is the most distinct symbol. People who have been to Mexico should notice that the bright colors that Barragan used are



Figure 2-1_ Heavy colors in Barragan's architectural works

everywhere in ordinary life. These bright colors are a portrayal of Mexican traditional colors. The pinks and reds that Barragan used is the favorite colors of Mexicans and could be found everywhere in folk art. The dye, which is made of

3) Luis Ramiro Barragán Morfín (March 9, 1902 November 22, 1988) was a Mexican architect. Barragan worked for years with little acknowledgement or praise until 1975 when he was honored with a retrospective at the Museum of Modern Art in New York. In 1980, he became the second winner of the Pritzker Prize. His house and studio, built in 1948 in Mexico City, were listed as a UNESCO World Heritage site in 2004.

pollen and powers of snail by smart Mexicans, is a very common natural dye in Mexican markets. Additionally, the bright colors in his works are also a method to strengthen visual aesthetics. These colors come from the national flower of Mexico. They provided a magic halo to his works in highland climate of Mexico and became a method of self-expression.

By continuous enclosure and walls with harmonious colors, Barragan brought Mexican traditional “wall culture” back to Mexican modern architecture. He enclosed internal space by walls to form a private courtyard. Also, walls were used as boundary of land, structure of fountain, arrangement of landscape and so on. In Barragan’s design, he used face to replace volume and used walls to replace rooms. All the lives seem concentrated into the shape, color and texture of the walls. Walls separate the secular world and offer a luxury peace.

Barragan used some details to decorate, such as cross, pots, glass balls and so on. Most of them could be seen everywhere in local crafts market. Many pots are used as wine tanks in Mexican families, but Barragan used them as sculptures. He also



Figure 2-2_ Barragan House, Mexico City, Mexico, 1948

often used Mexican handicrafts. For instance, the glass balls that were blown by master in workshop have quite elegant reflection. He fully took advantage of these details of decoration to define and separate the space.

Barragan take people's life and emotions as the starting point and the center in his architecture design and lift life to the same level of art. His concise and unvarnished design that came from local life created a peaceful, emotional and poetic environment.⁴



Figure 2-3_ The abundant water in Barragan's architectural works

Barragan said, "architecture is spatial but as well as musical. Architecture is a melody played by water. The importance of walls is to separate the noise from streets. Streets are aggressive but walls provide peace for us. In this peace, the beautiful melody played by water fills the whole space." Barragan was a hydraulic engineer in his early life, which helped him become a master of using the element of water. Either big area of shallow pond, ditch in plantation, water channel or reflective small pond, he celebrated every water scape so magnificently. Many elements of water came from his memory of Childhood. The prototype is the

4) Raul Rispa. *Barragan – The Complete Works*. Princeton Architectural Press; Revised edition (April 2003)

drainage ditch and water duct of dam that he was so familiar with. All these elements from memory were carefully refined and then represented in a new language of design.

Barragan is good at using light upon the colorful walls to create exciting effects. There is a firm fundamental starting point in his design—the sky and sunshine of Mexico. The sky is quite blue and the sunshine is strong in Mexico. Both of them are significant elements in the beautiful scene of his design. He loves using refraction of light from glass to water, from water to walls. With the change of time, the atmosphere of light and shadow keeps changing subtly so that a rich landscape is formed.

Barragan loves horses. He is an enthused jockey. Mexico also has a long history of riding horse. The square of water horse is a gathering space designed for people water their horses. In many of his designs, there are stables and mangers. He not only draws horses but also uses horse fixtures in his design. In landscape design, it is not possible to always use real horses. So he arranges some statues of horse, which seems create a comparison between nature and man-made world. This personal preference brings a special surreal atmosphere to Barragan's works.

There is a natural flavor of Mexico in Barragan's design: He refined elements that are from the scenes of daily life of Mexican people based on real life. "There is memory of the pasture ran by my father in my design. My design is based on trying to bring memory of rescue and longing of nostalgia back to today's world." He

successfully captured the vigor of Mexican culture and represented in his own designs. He can learn from valuable things and integrate with local climate and daily life of Mexico to explore an appropriate way of expression. An architect said, “The most important contribution that made by Barragan is that his architecture provides Mexico another way to recognize and to be recognized.” Barragan once said, “In my designs, I always try to make those magical techniques from ancient time meet needs of daily life nowadays.” What he created is not only form or style, but living environment and spiritual world of Mexicans. His designs came from life, depended on life as well as serve life. He explained Mexican life and passion in a brand new way.

In the series of Barragan’s architectural works, we can see the traditional elements of Mexico. However, these elements had already been subservient to the emotion Barragan has to native and tradition. His inheritance on tradition deeply rooted in his personal experience and his emotion on the life in Mexico, or in other works, his cognition on a special place.

2.2 Wang Shu’s architectural thinking on Tradition

2.2.1 Introduction to Wang Shu

Wang Shu (Chinese: 王澍, born 4 November 1963) is a Chinese architect based in Hangzhou, Zhejiang Province. He is the dean of the School of Architecture of the China Academy of Art. Wang Shu is the first Chinese citizen to win the prize. The selection of him is an acknowledgment of “the role that China will play in the

development of architectural ideals.”⁵

“The question of the proper relation of present to past is particularly timely, for the recent process of urbanization in China invites debate as to whether architecture should be anchored in tradition or should look only toward the future. As with any great architecture, Wang Shu’s work is able to transcend that debate, producing an architecture that is timeless, deeply rooted in its context and yet universal.” This is the jury’s citation to him.

Inspired by his father, a musician and amateur carpenter, and his mother, a teacher and school librarian, Mr. Wang seemed to be headed toward a career as an artist or a writer, though his parents pushed him to study science and engineering. He compromised by going for an architecture degree from the Nanjing Institute of Technology, where he also earned a master’s.⁶

In 1997, after a decade of working with various craftsmen to gain building experience, Mr. Wang and his wife, Lu Wenyu, founded their own practice in Hangzhou, called Amateur Architecture Studio. The firm’s name was chosen to emphasize the spontaneous and experimental, Wang Shu said. His work has an earthy, industrial quality, with unorthodox, angular shapes that in some cases echo his passion for calligraphy. “My work is more thoughtful than simply ‘built,’ ” he said, adding that the “handicraft aspect” of his work was important to him, as a contrast to what he considers much of the “professionalized, soulless architecture,

5) The Pritzker Architecture Prize: Wang Shu – Jury Citation, retrieved 28 February 2012

6) Wang Shu. “Education/Simplicity”. *Time + Architecture*, 2001, Supplement pp.2-5

as practiced today.”⁷

His architectural design reflects his respect to tradition. “Before as being an architect, I am Chinese traditional literati.”⁸ Just what he said, he is literati living in modern society. Doing architecture as literati, he wants to revitalize Chinese architectural tradition in Modern architecture.

2.2.2 Wang Shu’s architectural thinking on tradition _ Traditional Literati Thinking⁹

Wang Shu regards himself as Chinese traditional literati (scholar) and used to say that: before as being an architect, primarily, I am literati.¹⁰ This kind of literati thinking influences him significantly, from the temperament to manner, and also, his architectural thinking. Literati activities is one of the essential thing of his life: appreciating landscape paintings, tasting the dragon well tea and touring the classical garden, etc. This life style makes him the architect who is nearest to Chinese tradition.

Authentically, he is doing architecture as literati. He says he approaches design as a traditional Chinese painter would; he studies the settings — whether cities, valleys or mountains — for about a week as the design materialize in his mind. The plan for the Ningbo Historic Museum, for example, came to him one night when he could

7) INTERVIEW WITH WANGSHU: RENEW THE IMAGED TRADITION OF CHINESE ARCHITECTURAL EDUCATION. SHI Jian, Feng Keru. World Architecture, 2012/05, p24-29

8) 造园与造人, 王澍. ARCHITECT. Vol.126. 04/2007. p82-83

9) Architectural Thoughts. Wang Bin. HUAZHONG ARCHITECTURE, Vol.27, 02/2009, p35-p37, p63

10) 造园与造人, 王澍. ARCHITECT, Vol.126, 04/2007, p81

not sleep, he said. He got out of bed and started drawing in pencil: the structure, space sizes, entrance locations and other aspects. “Then,” he said, “I drank tea.”¹¹

While many of Wang’s colleagues seem to excel in copying skyscraper projects from architectural reviews or specialize in facades for commercial architecture, Wang insists that he designs “a house instead of a building.” “When I say ‘house’ I think of something that is closer to life, closer to everyday life.” Wang’s apparent architectural fundamentalism is not supposed to create an out-of-the-world attitude but strives to attain professional and political freedom and to resist ideological and commercial purposes. Amateur Architecture is therefore “spontaneous and experimental” as opposed to “official”; “temporary” as opposed to “monumental;” “critical and thoughtful” as opposed to “built;” and “illegal” as opposed to “sanctioned.”

Wang explains that his architecture is “spontaneous for the simple reason that “for me architecture is a matter of everyday life. I criticize in modern architecture that it has not really found a method enabling architects to get back to real everyday life.” Wang does not want his architecture to be “significant” in any political sense, but rather establishes it in terms of place and local history. An architect, he insists, is first of all a researcher and scholar; secondly a craftsman; and only thirdly a builder. Above that Wang defines himself as an intellectual or a writer.

He likened architecture to creating a Chinese garden: it requires the ability to be

11) The Narration and Geometry of Natural Appearance _ Notes on the Design of Ningbo Historical Museum. Wang Shu. Time + Architecture, 2009/3, p67-80

flexible, to improvise and to solve unexpected problems. He brought this sensibility to his breakout project, the Library of Wenzheng College at Suzhou University, which was completed in 2000 and received the Architecture Art Award of China in 2004. Honoring both the environment and traditions of Suzhou, a city famous for its gardens, he was careful to make his work as unobtrusive as possible: nearly half the building is underground.

With the Ningbo history museum, a commission he won in 2004 after an international competition, he sought to evoke what life used to be like in this harbor city. The museum, which includes recycled architectural materials from the area, “is one of those unique buildings that while striking in photos, is even more moving when experienced. The museum is an urban icon, a well-tuned repository for history and a setting where the visitor comes first.”¹²

2.3 Introduction to Hangzhou

*"Heaven Above, Suzhou and Hangzhou below."*¹³

Hangzhou is famous for its abundant resource and breathtaking scenery. There is an old saying in China: *"Heaven Above, Suzhou and Hangzhou below."* When it is mentioned, the imagery of Hangzhou presented in peoples mind must be the breathtaking sceneries of the mountain and water and the ancient water town.

12) The Pritzker Architecture Prize: Wang Shu – Jury Citation, retrieved 28 February 2012

13) This phrase has a similar meaning to the English phrases "heaven on Earth" or "God's country".

2.3.1 The urban feature of Hangzhou



Figure 2-4_ Hangzhou

Hangzhou, also transliterated as Hangchow, is the capital and largest city of Zhejiang Province in Eastern China. A core city of the Yangtze River Delta, Hangzhou has a position on the Hangzhou Bay 180 kilometers southwest of Shanghai that gives it economic power. It has been one of the most renowned and prosperous cities of China for much of the last 1,000 years, due in part to its beautiful natural scenery. The city's West Lake is its best-known attraction¹⁴.

Hangzhou first appears in written records as "Yuhang" (Chinese: 餘杭; Old Chinese: *La-gang), and was incorporated into the Chinese empire in 220 BC as part of Kuaiji Commandery during the Qin dynasty. Traditional Chinese scholars interpreted "Yuhang" to mean "Yu's Ferry" (the similar-sounding Yǔháng 禹航), after a legendary account of Yu the Great gathering ancient southern chieftains near the area for a grand meeting around 2000 BC. However, this is now known to be an

14) <http://en.wikipedia.org/wiki/Hangzhou>

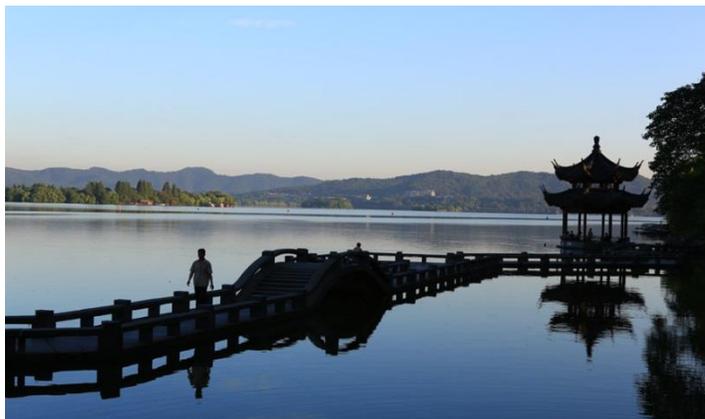


Figure 2-5_ The natural mountain and water of Hangzhou

incorrect folk etymology – Yuhang is almost certainly an ancient transliteration of an old Baiyue name.

Hangzhou is located in northwestern Zhejiang province, at the southern end of the Grand Canal of China, which runs to Beijing, in the south-central portion of the Yangtze River Delta. Its administrative area (sub-provincial city) extends west to the mountainous parts of Anhui province, and east to the coastal plain near Hangzhou Bay. The city center is built around the eastern and northern sides of the West Lake, just north of the Qiantang River. The western area, central area and southern area are of a geography feature of hilly topography, existing many huge mountains with a high elevation over 1500 meters. While in the eastern area, the elevation is mere 3-6 meters, belonging to the plain topography. The whole city is densely covered by different kinds of rivers and lakes, with a typical characteristic of Jiangnan ancient water town. Of all the city land, 65.5% area is occupied by mountains and hills; 26.4% area is occupied by plain; 8% area is occupied by

different kinds of rivers and lakes.

Hangzhou's climate is humid subtropical with four distinctive seasons, characterized by long, very hot, humid summers and chilly, cloudy and drier winters (with occasional snow).

2.3.2 Traditional architecture culture in Hangzhou

Hangzhou is not only famous for its abundant resource and breathtaking scenery, but also for its rich cultural heritage. It is featured by the Jiangnan¹⁵ culture, which is one of the most representative cultures of China. Generally speaking, “Jiangnan culture” represents spiritual quietness, cleanness and freedom of idyllic life, influencing people’s lives in this area. Meanwhile, originated from “Jiangnan Culture”, a specific architectural characteristic--- comes into being, featured as white wall, grey tile, little bridge and flowing water. All of these elements show an original charm of tranquil, harmony, concision and pretty.

Jiangnan’s architectural culture is one of the most characteristic cultures in China. Inheriting a long history, it gradually formed its own characteristics, which influenced the development of Chinese architecture enormously. Among numerous amazing natural sceneries, Jiangnan’s traditional buildings look like a series of wonderful stereographs, unfolding in front of appreciators: over a flowing stream standing a little stone bridge, white walls and grey tiles staying peacefully with a

15) The word Jiangnan is based on the Chinese name for the Yangtze, Cháng Jiāng, and nán meaning "south." The region encompasses the Shanghai Municipality, the southern part of Jiangsu Province and the northern part of Zhejiang Province. The most important cities in the area include Shanghai, Nanjing, Ningbo, Hangzhou, Suzhou, Wuxi, Changzhou and Shaoxing.

river flowing surrounding them..... As an inhabitation form harmonious with nature, the traditional architectural elements---alleys, courtyard, bridge, residential houses and so on--- have been recording history and inheriting Jiangnan culture's essence and quintessence. The most representative types are Chinese Classical Garden and the ancient water town.

2.3.2.1 Classical Garden

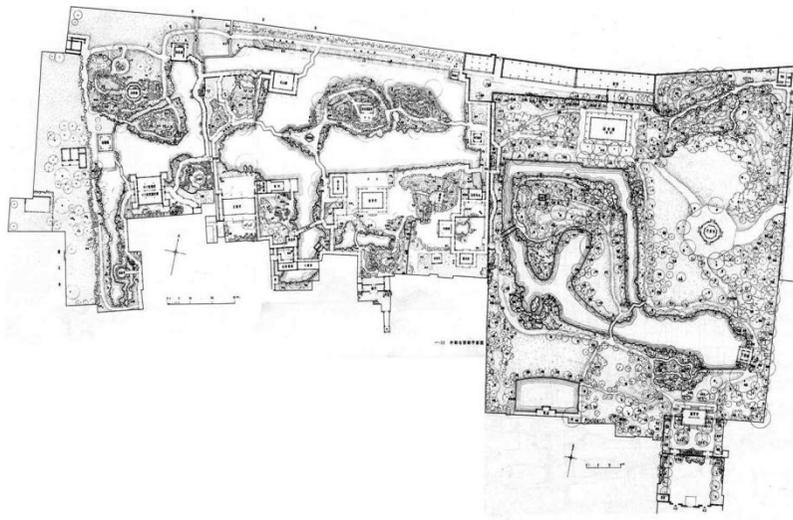


Figure 2-6_ The Humble Administrator's Garden

Chinese classical garden emphasizes the harmonious relationship between human and nature. It is nature but not human who creates the garden. Laid out in a limited area beside a house, a classical garden is a microcosm of the world made of the basic elements of water, stones, plants and traditional Chinese painting.¹⁶ It creates “urban scenery” or an amicable environment that establishes harmony between

16) Feng Chaoxiang. *The Classical Gardens of Suzhou*. pp. 3-15



Figure 2-7_ Views of Classical garden

human beings and nature. The characteristics are as follows:

Firstly, interwoven with Taoist metaphysics of Laozi and Zhuangzi, the classical gardens are laid out in imitation of natural scenery to meet the intellectual and emotional needs of Chinese. The terrestrial contours of the site are always exploited through numerous approaches, including borrowed views, barred views, opposite views, framed views, decorative and functional alteration, and abstract and concrete alteration as well. The stress is put on meandering through a labyrinth of complexity and continuous surprises. Within limits garden spaces are so ingeniously organized that the infinitude effect is generated.

Secondly, they are the re-creation of the splendors of natural scenery through the processes of the decoration of land by planting trees, shrubs and flowers, and designing and materializing mountains and watercourses. The classical gardens were designed and built by great masters in different dynasties, employing extraordinary methods and techniques. As a result, they are unnaturally natural.

Thirdly, they are an epitome of ancient exquisite and multifarious buildings in the south of the Lower Yangtze. The classical gardens have many varieties of little pavilions and large constructions with their basic beam-framing systems such

as Ting, Tang and Lang to meet the needs of different functions. With traditional Chinese furnishings, these buildings are richly ornamented with exquisitely carved door frames, windows, hangings, balustrades and screens inside and various kinds of lattic—windows, pavements and moon gates outside. In consequence, the classical gardens harmonize impeccably functional, structural and aesthetical considerations.

The classical garden is a combination of Courtyard and House, where people can travel, live and appreciate nature; it is a creative creation within the city having crowded people and concrete buildings; it is a reflection of people’s aspiration: respecting nature, keeping harmony with nature and beautifying living environment. The classical garden had been hugely influenced the layout of the cities and residential houses in Jiangnan.

2.3.2.2 Ancient Water Town



Figure 2-8_ Jiangnan Water Town

Influenced by the natural geographic feature, water town is a special village form which is only existed in Jiangnan Area.

a. Layout

In water town, river is an important element which influences its layout and texture. Overlooking the whole town, you will be always attracted by this scenery: with a wandering river quietly flowing through the whole town, numerous residential houses snuggle with each other. Along the river exists two long and narrow streets, one side of which standing close to the river while the other side facing to countless houses and stores which spread along the river for miles or even more. In order to take advantage of convenient waterway-transportation, water town's streets usually distribute along the river, which determines the whole town's layout. Consequently, two kinds of architectural form come into being: Face-to-River and Back-to-River¹⁷.

Actually, in the water town, street is the most featured thing, which works as a kind of transition space. As one of the most essential and brilliant characteristics, this kind of space plays an important role in the layout of water town. At the same time of being an extension of people's daily life, it is also a place where people can

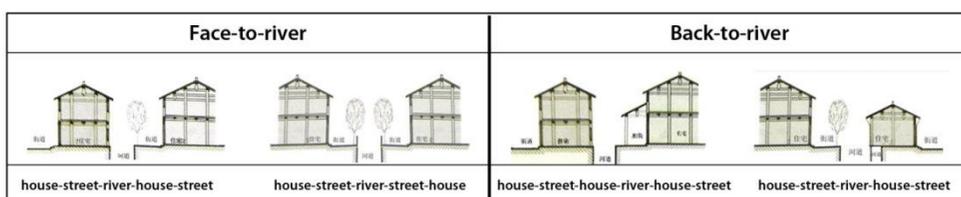


Figure 2-9_ Face-to-river and Back-to-river

attend various activities and enjoy themselves. The dismountable doors of stores, the out-facing halls of residential houses, the arcade which covers the street and the

17) Lin Feng. Jiangnan water town. Shanghai Jiao Tong University Press, Second Edition (2008/08/01). pp. 20-30

space formed by the different boundaries of buildings: all of these give street the peculiarity of transition space. In the daytime, as the doors of stores demounted, this transition space, in one aspect, attracts people to get into the stores; in another, urges residents to move out from inner house to attend different activities. While the night coming, all the activities ended, and the streets return to silence. The form and meaning of the streets, working as a whole, keep changing according to time.

b. Single building

Three-side enclosed courtyard¹⁸ is one of the main layouts of traditional houses in Jiangnan which is kind of transformation of traditional enclosed quadrangle dwelling due to the different climate and environment of Jiangnan area. In south of China, the phenomenon of western exposure is an extremely serious problem. Therefore, some measures are taken to resolve this problem: in order to avoid the bad orientation, the south-facing building is usually constructed into 2 floors working as a main building of a whole house. As a consequence, wing-rooms are much smaller and can be changed to many other types based on different demands: corridors stairs or only walls. The prolate courtyard enclosed by main building and walls is called patio, which is pretty common in Jiangnan. The patio itself is beautiful scenery of the whole house: without any trival adornment, the white walls stay quietly with some beautiful plants and flowers in front.

18) 自然与人文的交融智慧与造化的结晶——江南传统民居 [J] 中国知网

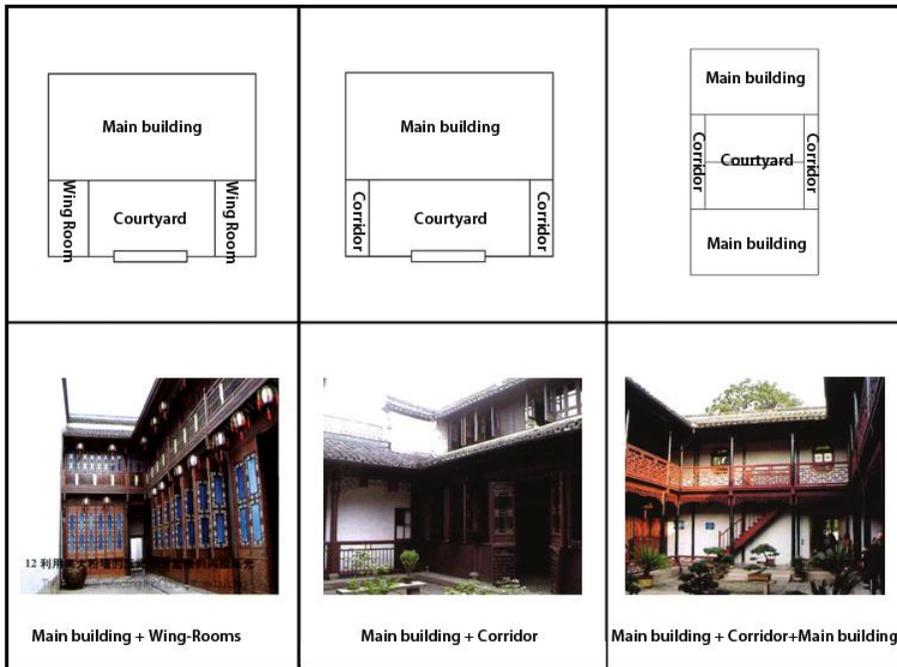


Figure 2-10_ Different layout of Three-side enclosed courtyard

One horizontal unit and some longitudinal series are the main features for the layout of traditional houses in Jiangnan. For such kind of layout, courtyard acts as the soul: as an exterior element, it is inserted into buildings, adding depth for the whole house and expanding quantity of the south-facing buildings. Therefore, controlled by this layout, residential houses are all highlighted by a few common characteristics: axisymmetric, harmonious, courtyard-centered and with eaves galleries and halls running through all the houses¹⁹.

Axisymmetric: The main building locates on the central axis and wing-rooms stand eudipleurally.

19) Lu Yuanding, Yang Gushegn. Chinese Residential Houses. SCUT Press, First edition (2004/04/01)

Harmonious: As whole, main buildings, wing-rooms, corridors and courtyards are all balanced with each other.

Courtyard-centered: Taking courtyard as a basic unit to arrange the whole house.

With eaves galleries and halls running through all the houses: the eavesgalley and hall play a critical role in the whole house, especially in bad weather conditions.

They can create good ventilation and be used as a shelter keeping rain out. Usually, in residential house, eavesgalley and hall are connected with each other, running through the whole house.

2.3.3 Traditional lifestyle



Figure 2-11_ Traditional Literati and their lifestyle

Taking advantage of the breathtaking scenery of natural mountain and water and the geographic location – far away from the political center, many scholars, poets, former government officials came here to settle, escaping from the outside world. Therefore, the lifestyle here has a strong characteristic of literati style – idyllic life. In their daily life, they appreciated poem and drew landscape paintings, losing themselves in the natural mountain and water. The classical garden and courtyard

space are the best reflection of this kind of lifestyle.

The classical garden is actually a reflection of the lifestyle literati pursue for: appreciating nature, respecting nature and living with nature. They bring the landscape painting into the real life. With constructed landscapes mimicking natural scenery of rocks, hills and rivers with strategically located pavilions and pagodas, the classical garden is a combination of Courtyard and House, where people can travel, live and appreciate nature. They are rich in literary connotations, carrying tremendous amount of information about Jiangnan culture. Intertwined with ancient Chinese philosophy, ideology and aesthetics, the classical gardens are noteworthy places with unique architectural forms carrying poetic names in plateaux and parallel couplets in excellent calligraphy with literary allusion which help to enhance the beauty of the whole property. Also, there are numerous inscribed stelae of great antiquity celebrated for their delicate workmanship and literary connotations. Indeed the classical gardens are an invaluable reservoir from which we can draw cultural substances.

If the garden is a luxurious house for some rich literati, the 3-sides-enclosed house is for ordinary beings. However, same with the classical garden, it is also rich in literary connotations. Usually, people plant assorted trees and plants in the courtyard, turning it into a condensed garden in which people can enjoy themselves with family and experience various sceneries in accordance with seasons. Jiangnan is far away from Chinese political center, making it a paradise for scholars who call for a high quality on residential environment. Paying much attention to the form and

arrangement of the courtyards, they desire their houses can possess a strong artistic taste. And so they arrange the courtyards according to their own interest and pursue to reflect their preference to natural water and mountains. Thus, the arrangement of the courtyards in Jiangnan's residential house has a tendency of afforestation. In order to construct an abundant space and achieve the artistic perfection, every single component existing in the courtyard---plant, pavement, rock and so on--- are all elaborately configured. As an exterior element, courtyard intersperses into buildings; here, the exterior and interior spaces are so ingeniously connected that the effect of infinitude is produced. This is the most profound interior characteristic of the traditional houses.

Chapter 3. Analysis on the Application of Traditional Elements in Wang Shu's Architectural Works

3.1 The Application of Traditional Elements in the Architectural Concept of Wang Shu's Works

- 3.1.1 Traditional Architectural Theory _ A landscape architectural system that covered the whole country
- 3.1.2 Traditional Architectural Theory in Wang Shu's Works
- 3.1.3 Summary

3.2 The Application of Traditional Elements in the Architectural Space of Wang Shu's Works

- 3.2.1 Traditional spatial form and its characteristics
- 3.2.2 The application of traditional spatial form in the architectural space of Wang Shu's works
- 3.2.3 Summary

3.3 The Application of Traditional Elements in the Architectural Material of Wang Shu's Works

- 3.3.1 The Application of Traditional Elements in the Architectural Material of Wang Shu's Works
 - 3.3.2 The Application of Craftsmanship
 - 3.3.3 Summary
-

3.1 The Application of Traditional Elements in Architectural Concept of Wang Shu's Works

3.1.1 Traditional Architectural Theory _ A landscape architectural system that covered the whole country

A courtyard besides the hill side river was not like a pure natural secluded life. It represented the spiritual life of those who have learnt academician poetry. But most of people couldn't do it. The garden construction of the courtyard came into existence that imitated natural reality in city families in the latest 1000 years. This kind of inside-courtyard family public space, containing topography, territory, green space and gardens, mixed with buildings, was considered the highest ideal of urban building construction. Besides, it penetrated in the exterior public space. Even on the ways connected cities, villages and on the paths leading to hill temples were constructed with booths, landscape terraces, waterside pavilions, pagodas, bridges, all of which constructed a complete landscape service system.

3.1.1.1 Landscape painting

Many critics consider landscape to be the highest form of Chinese painting.²⁰ Beginning in the Tang Dynasty, many paintings were landscapes, often shanshui²¹ ("mountain water") paintings. In these landscapes, monochromatic and sparse (a style that is collectively called shuimohua), the purpose was not to

20) Rawson, Jessica. *The British Museum Book of Chinese Art*, 2007, British Museum Press. p.112

21) ShanShui: The term landscape comes from western. Correspondingly, in China, it is called "Shan Shui": "Shan" means Chinese mountain and "Shui" means Chinese water or river. In this paper, the landscape which is detailedly talked about is Chinese mountain and water. Therefore, the word of "shanshui" is used to take the place of "landscape".

reproduce exactly the appearance of nature (realism) but rather to grasp an emotion or atmosphere so as to catch the "rhythm" of nature. Emphasis was placed on the spiritual qualities of the painting and on the ability of the artist to reveal the inner harmony of man and nature, as perceived according to Taoist and Buddhist concepts. The Mountain Water emphasizes an expression of spatial imagination: immeasurable distances were conveyed through the use of blurred outlines, mountain contours disappearing into the mist, and impressionistic treatment of natural phenomena; all of these guide people to imagine an imaginary space.



Figure 3-1_ Dwelling in the Fuchun Mountains

Images of nature have remained a potent source of inspiration for artists down to the present day. While the Chinese landscape has been transformed by millennia of human occupation, Chinese artistic expression has also been deeply imprinted with images of the natural world. Viewing Chinese landscape paintings, it is clear that Chinese depictions of nature are seldom mere representations of the external world. Rather, they are expressions of the mind and heart of the individual artists cultivated landscapes that embody the culture and cultivation of their masters.

From Wang Shu's perspective, the landscaping is an intuitional expression of the

traditional concept on the relationship between nature and architecture, which is the most important traditional architectural theory in China.

“Some people said that, in the landscape painting, what surrounded buildings is environment. However, from my perspective, it’s not our Chinese traditional architectural theory. Our traditional theory is that, compared to nature, the building existing in the landscape painting is in a secondary position, which is not a landmark thing. The nature is much more important than building.”²²

3.1.1.2 Chinese Classical Garden



Figure 3-2_ Suzhou Classical Garden

The classical garden is the most direct reflection of the Chinese traditional landscape architectural system, showing a strong characteristic of “half nature and half building”. It built for pleasure and to impress, and the more intimate gardens created by scholars, poets, former government officials, soldiers and merchants, made for reflection and escape from the outside world. They create an idealized

22) An interview with Wang Shu. “Time Architecture, 4th Issue, 2012” Li Xiangning, Zhang Xiaochun pp. 94-99

miniature landscape, which is meant to express the harmony that should exist between man and nature.

A typical Chinese garden is enclosed by walls and includes one or more ponds, rock works, trees and flowers, and an assortment of halls and pavilions within the garden, connected by winding paths and zig-zag galleries. By moving from structure to structure, visitors can view a series of carefully composed scenes, unrolling like a scroll of landscape paintings.

Chinese classical garden emphasizes the harmonious relationship between human and nature. It is nature but not human who creates the garden. Laid out in a limited area beside a house, a classical garden is a microcosm of the world made of the basic elements of water, stones, plants and traditional Chinese painting.. It creates "urban scenery" or an amicable environment that establishes harmony between human beings and nature.

3.1.2 Traditional Architectural Theory in Wangshu's Works

3.1.2.1 Half mountain and half water _ Ningbo Museum of Art

Ningbo Museum of Art is renovated from an abandoned shipping building, which itself is part of history. The old shipping building is located besides the riverside with a length of 104 meters and height of 18 meters, which is a simple cuboid volume. Similarly, the relationship between landscape and the city was taken into consideration by Wang Shu first. He remained the main building and kept its direction as same as the river, which implies the development of urban context.

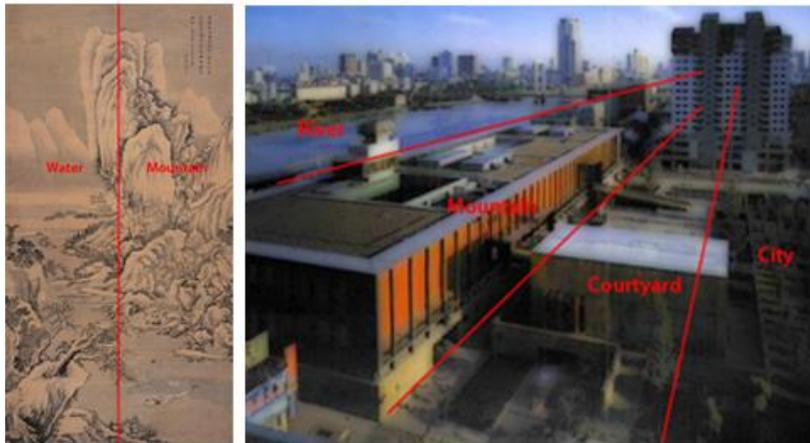


Figure 3-3_ Ningbo Museum of Art - Half Water and Half Mountain

Also, he designed a “roof courtyard” on the other side, which makes architecture harmoniously sitting between the river and the courtyard. By doing this way, he successfully integrated city, architecture with nature.

3.1.2.2 Coexistence between mountain and architecture _ Xiangshan Campus

In 2000, instead of choosing to be a part of a higher education zone which was quite popular in China, China Academy of art chose a site at east edge of mountains which locates in south of Hangzhou. Although there would be problems like lack of urban infrastructure, but all the professors, artists and architects involved in site selection argue that, based on tradition of Chinese culture, landscape is even more important than architecture during the site selection process.²³ The master plan of the campus embraces a hill called “Xiang”, which is about 50m high. Two creeks from mountains in the west pass by the site at north and south side and converge at

²³) Wang Shu. “That day”. Architecture and Culture, 4th issue, 2008



Figure 3-4_ Pagoda of Six Harmonies and Xiangshan Campus

the east of Xiangshan and eventually feed into the Qiantang River.

During the design process, how to make a large-scale campus coexist with a small-scale hill is the most principal and important consideration the architect considered.

Wang Shu said, the basic concept of the design came from an experience of climbing Pagoda of Six Harmonies²⁴. “The volume of Pagoda of Six Harmonies is huge and the hill is similar to Xiangshan. But when you enter the pagoda, the feeling of big volume disappears. In each floor, there exist six sides and 18 same windows in total. I took one photo from each window. Window is same and hill is same, but the view changes in accordance with the variation of positions. Staring at the pagoda from outside, I was shocked and deeply moved by this scenery: the eaves darken the pagoda; materials recall the hill; pagoda seems to be absorbed by the hill and even disappear when it is foggy. At that moment, I find the way “back

24) Liheta (Six Harmonies Pagoda), which is located in Hangzhou city, is a huge structure originally built during the Song dynasty in 971. The pagoda has 13 stories of rafters on the outside, but is divided into seven stories on the inside. The layout is an octagon, representing the Eightfold Path of Buddhism, with masonry and stone wall. What makes the pagoda so impressive is the floor space it occupies, several times greater than the footprint of other similarly aged pagodas in China. This is undoubtedly due to the use of two concentric octagons in the floor plan. This leaves a central niche on each floor, surrounded by a ring of halls. Wooden floors have been built jutting out from the second ring of stones, from which an excellent view of the river and the mountains can be taken in.

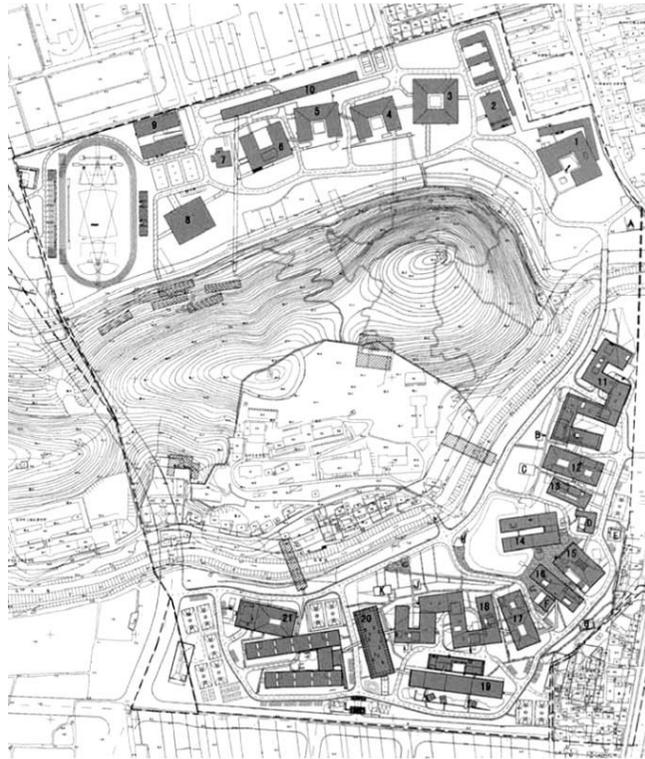


Figure 3-5_ Layout of Xiangshan Campus

to our tradition” for the campus.”²⁵

All the buildings are arranged to the outer side of the land, which is as same as the direction of the extension of the hill as well as meet the highest density that rules allow. Therefore, the master plan is more similar to traditional city planning of Hangzhou. He left large area of open space between buildings and the hill and kept the existing farmland, river and fishpond. In master plan, every single building has its own gesture, which is similar to Chinese calligraphy and shows the sensitive

25) Wang Shu, Lu Wenyu. “Xiangshan Campus, China Academy of Art”. ARCHITECTURAL JOURNAL , 2008.9.

reaction of the building to the hilly topography. In the campus, half is buildings and half is nature. The buildings twist and crack by following the hill but maintain variability and integrality at the same time. The plain site was transformed into a typical hilly topography of Jiangan area of China, which could be used to control and dissolve the huge volume led by huge area. Buildings are low. Horizontal eaves emphasize the horizontal tendency again and become a parallel construction compared to the hill.

3.1.2.3 Architecture as a mountain _ Ningbo History Museum

How people live together with a mountain is how to understand the composition of the mountain and live in a way that they should live. At least, in Tang Dynasty of China, there was a systematic theory for this thinking. Li Gefei, a Scholar in Tang Dynasty, proposed six key points, “magnificence, deepness, labor, water, simplicity, view”²⁶, and all poetic descriptions are related to physical feeling and geographic location of people in natural form, which are also related to the meaning of “the mountain”. Interestingly, in Mingzhou Park that is located in south to the site and right across to the museum, there is a tall concrete rockery, which is said that it was copied from a real mountain. So I decide to make a more

26) Tang Dynasty, Li Gefei. *The famous garden in Luoyang.*

*fake huge rockery, which could be something more closed to the true meaning of “the mountain”.*²⁷

_____ Wang Shu

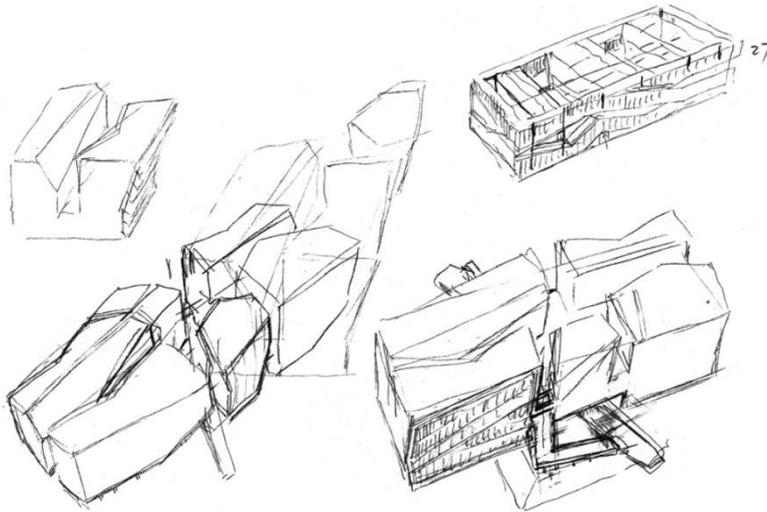


Figure 3-6_ The conceptual sketches of Ningbo History Museum by Wang Shu

The Ningbo History Museum is designed with a method which is so called “the Mountain Method”. Wang Shu got this idea from the environment of the building. The site is located in a plain area that surrounded by mountains which is functioned as a rice field not long ago. However, with the process of urbanization, they were gradually ruined and took place by the huge government office. Not far away in the south side, there existed a stretch of rice field behind a park which would disappear soon and dozens of high-rises would be built in accordance with the urban planning.

27) Wang Shu. “The Narration and Geometry of Natural Appearance _ Notes on the Design of Ningbo Historical Museum”. *Time + Architecture*, 2009/3, pp.67-80.

With dozens of beautiful villages had been destroyed, broken pieces of bricks and tiles could be seen everywhere. This is the situation of the site when Wang Shu got the project then.



Figure 3-7_ The site of Ningbo History Museum – Huge scale and fractured vibrant

Wang Shu always insists to recover and maintain the organic structure of a city. In this project, however, buildings are so far away from each other that, in his point of view, it is impossible to recover the city structure. Hence, the question turns to be how to design an object that has its own life and vitality in this inanimate site. Wang Shu said, “In order to realize this purpose, people need to learn from nature again. In China, where there exists a long tradition on this way of thinking. Suzhou Classical Gardens are a good example: facing to a city which is over man-made, people built gardens which is vitality and vibrant.”²⁸ In Lion Forest, buildings are set back and 80% of the site land is covered by artificial mountains. And also, in

28) Ningbo Historic Museum, Domus China 032, 05/2009

landscape painting, how people live together with a mountain is a theme appears over and over again. Mountain is a sacred place where Chinese can find their lost and hidden culture. Obviously, it would not work to copy the layout of Suzhou Gardens here to build a garden with an area of 30,000 m² out of the land of 4,530 m². And also, he does not intend to do that neither. Instead, he set up a vertical mountain in this site whose height is restrained to 24 meters based on the research of city mode, in which the concept is strengthened: there is something existing between man-made and nature, like a Lower City whose height is restrained in 24 meters.

3.1.3 Summary

One hundred years ago, in China, the construction of city and architecture firstly depend on the humanity and geography which is bounded by nature and the landscape poetry which is centered by “mountain” and “water”. In fact, there existed a landscape architectural system that covered the whole country. It consists of three meanings of cosmography, social ethics and academician poetry and represents three orders of national system, family tribe and individual respectively.

Wang Shu's architectural concept shows his preference to the natural mountain and water which is a typical feature of Hangzhou city. He always insists to recover and maintain the organic structure of a city, pursuing for the reconstruction of the traditional landscape architectural system and the establishment of harmonious relationship between nature and human.

3.2 The Application of Traditional Elements in the Architectural Space of Wang Shu's Works

3.2.1 Traditional spatial form and its characteristics

3.2.1.1 Traditional spatial form in Hangzhou

1. Enclosure space _ courtyard and patio



Figure 3-8_ Courtyard and patio

When talking about Chinese traditional architecture, as one of the most obvious phenomena, enclosure is an architecture form that needs to be discussed in detail. Courtyard, the most important architectural form and the most typical feature in Chinese traditional architecture, is formed by enclosure. The courtyard existing in western architecture is totally open while in orient, is closed or half-closed, working as a window by which people can communicate with nature. In traditional architecture, we can identify the personality of oriental: implicit and modest.

The courtyards, existing in Hangzhou's traditional residential buildings, during long time's development, gradually evolved into many different types and

transformations according to the size and layout of house, such as patio. The courtyard, besides functioning as a connection space of various architectural spaces, can also provide good ventilation, sunshine and drainage to the whole house. Usually, people plant assorted trees and plants in the courtyard, turning it into a condensed garden in which people can enjoy themselves with family and experience various sceneries in accordance with seasons. Hangzhou is far away from Chinese political center, making it a paradise for scholars who call for a high quality on residential environment. Paying much attention to the form and arrangement of the courtyards, they desire their houses can possess a strong artistic taste. And so they arrange the courtyards according to their own interest and pursue to reflect their preference to natural water and mountains. Thus, the arrangement of the courtyards in Jiangnan's residential house has a tendency of afforestation. In order to construct an abundant space and achieve the artistic perfection, every single component existing in the courtyard---plant, pavement, rock and so on--- are all elaborately configured. As an exterior element, courtyard intersperses into buildings; here, the exterior and interior spaces are so ingeniously connected that the effect of infinitude is produced. This is the most profound interior characteristic of the traditional houses.

Patio, a kind of transformation of the courtyard, has an “introverted” characteristic. Enclosed by buildings and tall walls, the connection between patio and exterior environment is relatively limited. In order to break through such limitation, generally, some landscape sketches are placed in it ----- stones, birdcages and the

like. In Hangzhou, the traditional building unit is relatively independent. However, even with a small size, the household is willing to spare a room in the house for patio which can work as a multi-functional space serving for the whole house. It can strengthen space sequence and space boundary between exterior and interior, making people's daily life much more well-organized and leisurely. And also, in addition to keeping privacy, it brings nature into the whole house as well.

Courtyard and patio are the main elements in Jiangnan's traditional houses. They are transition space between interior and exterior, thanks to which, nature is brought into the house. They break the conflicts between architecture and nature, making them to co-exist and develop harmoniously. Also, they are a reflection of the most important belief in China: human is an integral part of nature, pursuing the harmonious relationship between human and nature. Influenced by such kind of traditional faith, courtyard and patio become essential elements in the traditional houses and thanks to their existence, Jiangnan's architecture becomes much more delightful, livable and aesthetic.

2. Transition space _ Corridor

Transition space is widely applied in the residential houses and classical gardens. The corridor, which is widely existed in the water town and classical garden, is an excellent reflection of transition space.

In the residential houses and garden, corridor is also called "lang". It is narrow covered corridors which connect the buildings, protect the visitors from the rain and



Figure 3-9_ Different kinds of Corridors

sun, and also help divide the entirety space into different sections. While in the water town, it is a street covered by roof, most of which are connected to the adjacent houses. At beginning, the existence of the corridor is to protect people from strong sunshine and rainfall; gradually, the form becomes very multitudinous. Some with a deep depth, as well as being one part of the building, is also a public space belonging to the street, which can not only keep rain and sunlight out, but also protect wood construction; while others, with a much smaller depth, can work as a shield in summer and an entertainment area in winter. When walking in the corridor, people can enjoy external natural scenery at and attend -indoor activities in the meantime.

This kind of space, while bringing convenience to people's daily life, is also a bridge between people and nature, which can meet the intellectual and emotional needs of Chinese.

3.2.1.2 The characteristics of the traditional spatial form

1. The Continuity of Space

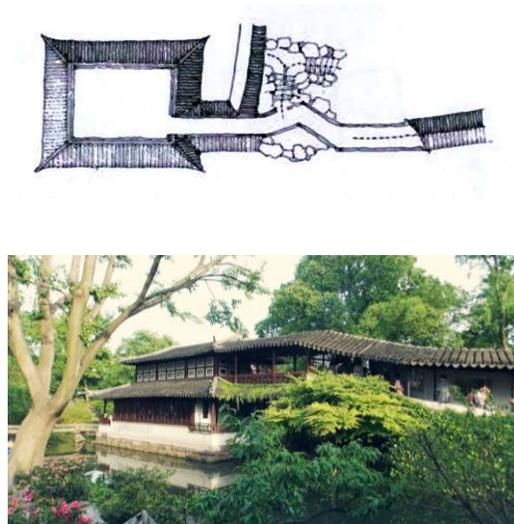


Figure 3-10_ The continuity of Space

In the traditional architecture, what people pursue is not the huge mass and gorgeous façade, but the function. When the existed building cannot afford the enlargement of the whole family, some basic courtyard units will be brought in as a way of amplifying mass to realize the functional requirement. As what we have talked about before, it is an expansion in horizontal direction. And usually, corridors will be set in the courtyard to connect each building, due to which different spaces are connected with each other without any separation. The application of corridors is the reflection of the continuity of space. This kind of continuity exists in many Chinese traditional buildings, the wingding corridor in the classical garden, the corridors in residential houses, even in some streets of the ancient water town, etc.

2. The Hierarchy of Space



Figure 3-11_ Abundant space levels

Chinese people have a predilection on hierarchy of space, which can be obviously recognized from Chinese traditional drawings and architecture. For instance, in the landscape painting, which is regarded to be the highest form of Chinese painting, how to express the different hierarchies of space is an extremely important thing. In these landscape paintings, monochromatic and sparse (a style that is collectively called *shuimohua*), the purpose was not to reproduce exactly the appearance of nature (realism) but rather to grasp an emotion or atmosphere so as to catch the "rhythm" of nature. Therefore, usually, they draw different contents in different scrolls. The trees, rocks, river, mountain, air and etc.: they form a really abundant space levels. When it is unrolled, people can view a series of carefully composed landscape scenes.

Also, in classical garden, we can feel the abundant space levels. As what has talked about before, "In Jiangnan, the classical garden is enclosed by walls and includes

one or more ponds, rock works, trees and flowers, and an assortment of halls and pavilions within the garden, connected by winding paths and zig-zag galleries.²⁹”

The space with different themes is constructed by the enclosure of well-organized architecture, plants, artificial mountains and lakes. And also, combining with rich natural features of landscape, people can always be deeply impressed by the abundant sceneries and space levels.

3. The Ambivalence of Space

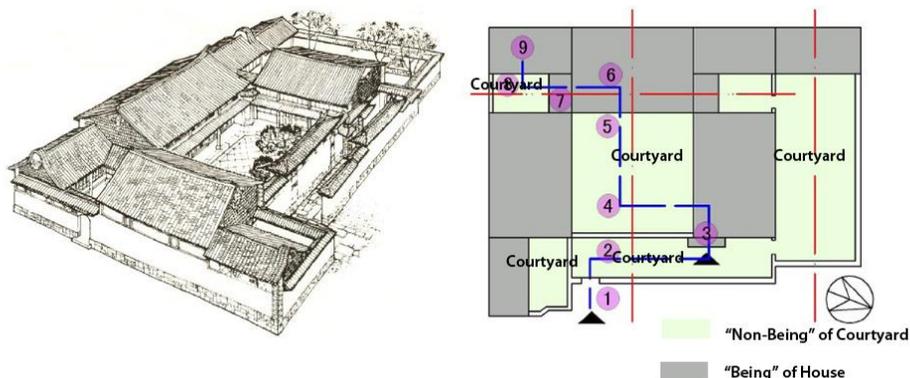


Figure 3-12_ The ambivalence of space – Being of house and Non-being of courtyard

Chinese traditional architecture, actually, is a combination of “being” and “non-being”: the connection between “being” of courtyard space and “non-being” of buildings and the connection between “being” of exterior corridor and “non-being” of interior spaces.³⁰ With reference to a Chinese building, being and non-being are never unambiguous, this is more than ever demonstrated by the use of the colonnade corridor. The interplay of being – in the interior, and non-being – in the

29) Feng Chaoxiong, *The Classical Gardens of Suzhou*, pp. 29-30.

30) Jiangnan Yuanlin Zhi (*Gardens of Jiangnnan*)(1963), pp.45-65

exterior of the corridor – articulates notions of existence and illusion. The being of interior space progressively metamorphoses as it approaches the space of the corridor; at the same time, the interior is not restricted by that which encloses it but is instead allowed to spread out through the frames, the fenestrations, into the corridor, engendering overlapping and porous penetration between the interior and exterior, being and non-being. This helps to delineate space, along with harmonizing being and non-being simultaneously (far and near, in and out), blurring the boundaries, operating as sites of particularized spatial imagining as they (adjacent spaces) become unified into a cosmic mandala.

This kind of “ambivalence” is the most important characteristic of Chinese traditional architectural space. In traditional buildings, abstract and concrete need not be dichotomous and opposing; the “being” is the response to the yearning for the incompleteness of the “non-being”, whereas the “non-being” is the limited representation of an abstract universality. Because the existing of “being” and “non-being”, traditional architectural space can present a characteristic of diversity and interactivity, which is the charm of the traditional space.

3.2.2 The application of traditional spatial form in the architectural space of Wang Shu’s works

3.2.2.1 Ningbo Museum of Art

In the Ningbo Art Museum, Wang Shu design a long gallery traversing the whole building, walking along which people experience the variation of spatial feelings

between “being” and “non-being”. In order to realize this strong spatial experience, Wang Shu designed an interior bamboo courtyard, working as a connecting of 2 exhibition halls. Guided by an exterior spiral stairs, people get to the long gallery and walk along with it, during which period a series of spatial variations take place: form the concrete space - exhibition hall - to the abstract space - courtyard space; then to another exhibition hall and at last, terminated by an balcony, on which visitors can enjoy by a panoramic view of sea. During the whole visiting process, people experienced a strong contrast and conversion between “being” and “non-being”.

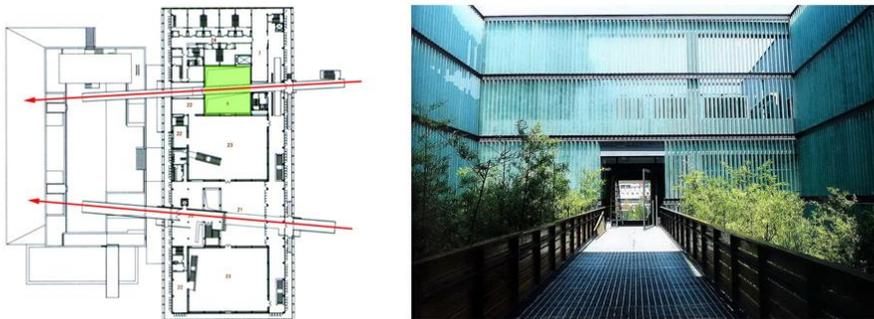


Figure 3-13_ The “being” of exhibition hall and “non-being” of courtyard in Ningbo Museum of art

3.2.2.2 Xiangshan Campus

In the design of Xiangshan Campus, the traditional spatial form – enclosure space and transition space – are widely applied, forming an excellent campus space which is full of the characteristics of traditional spatial organization.

The continuity of space is perfectly exhibited in this design by the largely

application of a series of transition spaces – different kinds of corridor. A series of walkable and connective ramps, corridors are applied to realize a continuous wandering of the whole campus. This kind of continuity cannot only be realized between interior spaces of buildings, but also between buildings and landscapes.

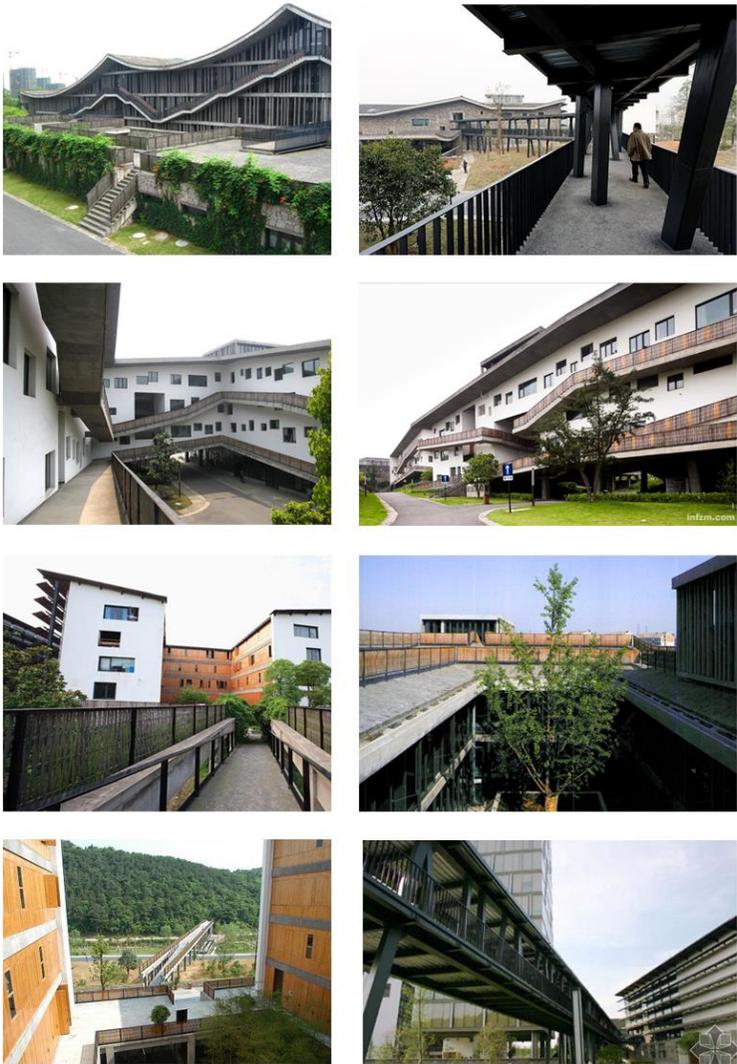


Figure 3-14_ The continuous space in Xiang Shan Campus: exterior corridor, bridge, walkable roof, etc

Meanwhile, in the spatial design of the whole campus, he sets a fine example of how garden spaces are ingeniously handled. The terrestrial contours of the site are made good use of.³¹ The graceful views of the existed mountain and farmland are introduced into the campus, contributing to a much more abundant space levels. The space design methods and techniques are numerous, including borrowed views, barred views, opposite views, framed views, the decorative and functional alteration, and the abstract and concrete alteration. The stress is put on meandering through a labyrinth of complexity and continuous surprises, contributing to an extremely abundant space levels.

And also, the ambivalence of space is realized by the widely uses of transition space and enclosure space. During the campus wandering, different kinds of spaces will show up gradually: the correspondence of the being of the enclosure and the non-being of space, the being of the buildings and the non-being of courtyard, the being of the mansion complex and the non-being of the garden, all these things are experienced in the crossing of the enclosure, the imagining boundary in the reversal of the dimension of non-being and being.

3.2.2.3 Ningbo History Museum

When design space of this museum, Wang Shu did a really good job on structuring a construct of “being” of space and “non-being” of space, which is based on his deeply understanding of the traditional spatial organization. Courtyards are widely

31) Phase 2 of Xiangshan Campus, China Academy of Art. Wang Shu, Lu Wenyu. *Time + Architecture* , 2008/03, pp.72-85

scattered in the whole building, interior, entrance and roof. They have 2 different forms: one is the typical Jiangnan bamboo courtyard; the other one is a fictitious bamboo courtyard featured by a specially-made bare concrete which take bamboo as a template. Walking between exhibition halls and courtyard space, through the whole process, you will be shocked by the conversion of “being” and “non-being”.



Figure 3-15_ Entrance space of Ningbo history Museum



Figure 3-16_ Interior courtyard of Ningbo history museum

For instance, the main entrance is a wonderful reflection. The main entrance is a long and narrow opening on a huge solid wall which is piled up by bricks. Wang Shu designed a heavy and depressed entrance space.³² However, after entering into the building, a panoramic view of green appears suddenly - an interior courtyard space which is enclosed by four-side glass curtain wall, by which way people are shocked and moved by the conversion and construct of space. Abstracted and moved by this kind of spatial organization, people finished the whole visiting.

3.2.3. Summary

32) We Recognize Notes on the Design of Ningbo Museum of Art. Wang Shu. Time + Architecture, 2006/5, pp.82-90

From the aspects of tradition spatial form and its characteristics, in this chapter, how Wang Shu inherits tradition in the design of space is detailedly talked about. There is a strong tradition spatial characteristic contained in the buildings designed by him, which shows his deep understanding on the connotation of traditional space. From these 3 works, people can experience a special spatial experience on the 2 spatial forms of traditional architecture – enclosure space and transition space, which are the two basic architectural forms of the traditional buildings in Hangzhou.

3.3 The Application of Traditional Elements in the Architectural Material of Wang Shu's Works

Most works of Wang Shu are made up of the traditional architecture materials that carry rich history and culture and were built in a traditional way of craftsmanship. The creative use of traditional material by Wang Shu comes from his deep affection for traditional culture and literati complex within his bones.

3.3.1 The Application of Traditional Materials

3.3.1.1 Traditional Architecture materials of Hangzhou

Grey brick, grey tile and wood, which are traditional architecture material in Hangzhou Area, have been greatly used in his work. Most of his works were made up by these traditional architecture materials that convey history and culture of Jiangnan area.³³ The creative use of traditional material by Wang Shu comes from

33) Thorsten Botz-Bornstein: "WANG Shu and the Possibilities of Critical Regionalism in Chinese Architecture" in *The Nordic Journal of Architectural Research*, 1, 2009, 4–17

his deep affection for traditional culture and literati complex within his bones.

1. Grey brick



Figure 3-17_ Grey brick

Whether in private garden in Jiangnan area or in traditional dwellings, grey brick is widely used.³⁴ Because of that, people live with this material for a long time so that have an indivisible and special feeling to grey brick. Brick seems have its own life – the footprints of history and culture have been seared in every brick since it includes technology and aesthetics in this region at that time. Grey bricks not only bring intimacy to people in daily life, but also bring shake to people by its rich information of history and culture. People often stop in front of historical buildings to appreciate cultural fragments, taste the delicate fragrance of history and culture and experience picturesque scene and the poetic feeling.

2. Grey tile

As roofing material, besides basic functions like waterproof and thermal insulation, grey tile is quite popular because of its elegance, primitive simplicity and tranquility.

34) 《梁思成谈建筑》，当代世界出版社， p.25

It is so closely related to daily life that it has become an integral part of Chinese traditional architecture.

Grey tiles draw material from natural clay and go back to nature along with the transition from old to new of architecture. It has been a long time since grey tiles appeared that almost all roofs of Chinese traditional architecture are covered with this fine texture.



Figure 3-18_ Grey tile

3. Wood

The history of traditional Chinese architecture is the history of wood. Wood is a natural architecture material. It accommodates the requirement of traditional structure form with relative light weight and high strength. Wood carries history and records the trace of ancient civilization. Many people's impression to architecture comes from traditional wood structure. Besides load bearing and decoration, wood carries traditional culture, a sense of belonging and natural emotion.

3.3.1.2 Application of traditional materials

Most of the buildings designed by Wang Shu are constructed by recycled materials collected from demolished buildings in the process of Chinese urbanization movement.

1. Ningbo Museum of Art

Ningbo Museum of Art is a renovation from an abandoned shipping building in the old bund of Ningbo. In the renovation of Ningbo Museum of Art, Wang Shu intentionally used combination of multi traditional materials on façade.³⁵ By reorganizing the abandoned shipping building with modern architectural design principle, the original volume is divided into three geometry volumes based on function requirement of the museum. Since the original structure cannot



Figure 3-19_ Materials used in Ningbo Museum of Art – bricks, wood and so on

35) Ningbo Museum of Art. Architectural Journal, Special Collection, 2006/01,pp 44-47

accommodates regulation requirements at this stage, Wang Shu lift up the original building by using I-beam and steel as primary structural material outside, which satisfied regulation requirements without destroying original building. Modern I-beam and I-column, traditional cedar board, stone foundation, bamboo protection plate of railings, grey tile paving, all those common materials appear in the project of Ningbo Museum of Art which is not a project in huge scale. This forms a environment with comparisons between new and old, different colors and textures but in harmony at the same time and represents a conversation between tradition and modern and show his respect to traditional culture.

2. Xiangshan Campus



Figure 3-20_ The materials used in Xiangshan Campus – tiles, bricks and so on

In Xiangshan Campus, more than 3 million pieces old bricks and tiles gathered from different sites of demolition throughout Zhejiang Province from different ages.³⁶ These materials that almost were thrown away like trash now are recycled and effectively help to control the project cost. This shows a unique construction value

36) ARCHITECTURE AS RESISTANCE: WANGSHU AND HIS ARCHITECTURE. Li Xiangning. World Architecture, 2012/05, pp30-36

of Chinese architecture. This collective work with hand craftsmanship as its core is beyond personal design of architect and professional control of engineer. What decides architecture is not only the design, instead, the revise and change caused by a large amount of hand-building would decide what the final product is as well.

3. Ningbo History Museum



Figure 3-21_ The materials used in Ningbo History Museum – tiles, bricks, bamboo and so on

Ningbo History Museum by Wang Shu is made up by traditional wasted bricks, tiles and concrete.³⁷ Combination of traditional materials and modern materials was applied in the museum that collects history. Concrete has traditional texture with the help of bamboo concrete formwork, which echoes other traditional material and is in harmony with the overall image of the museum.

3.3.2 The Application of Craftsmanship

37) Ningbo Historic Museum, Edited by 秦蕾, Domus China 032 05/2009, pp47-54

In development of Chinese traditional architecture technology system, traditional craftsmen played an important role. In ancient time, there is no so-called “architect” during the construction process in China. Clients and craftsmen participated in the entire construction process. They are designers of traditional architecture. It is a significant characteristic of Chinese traditional architecture that designing, building and revising at the same time. While architecture construction process nowadays is based on construction drawing that is finished by the architects without a system that allows revising design according to special situations. That makes a fundamental difference compare to traditional architecture construction process which has a core system of designing, building and revising at the same time and allow a lot of interaction, which is the basis of traditional architecture.

In Wang Shu’s opinion, the real Chinese tradition is in the hands of those so-called “migrant workers” who are highly skilled craftsmen.³⁸ Unfortunately, this tradition has been disappearing due to less and less work. China is a developing country with huge population. We lack advanced technology but we have enough labors. We should take advantage of existing resource to build modern material by traditional craftsmanship and provide opportunity for craftsmen to make their contribution and construct architecture full of emotion. In this way, low-tech strategy that could solve immediate problems will become possible.

Many parts of Wang Shu’s work are based on hand craftsmanship, which in his opinion is far more important than any other factors. He thinks that hand-built

38) Education/Simplicity. Wang Shu. Time + Architecture, 2001, Supplement pp.34-35

buildings with familiar wasted traditional architecture material have their new life since the construction is finished. In the construction process of his work, craftsman is not only a worker, but more importantly, he or she is a designer. In masonry process, Wang Shu asked them to layer bricks in the way that they used to, instead of layering in a rigid order. The final result of this kind of “random” masonry is full of intimacy and stunning.

3.3.2.1 Overall Masonry of Architecture

Wang Shu said that he want to restore Chinese aesthetics and dignity. “A culture starts to decline from the shake of spirit and the loss of self-confidence.”³⁹ He was praised as “an architect who is full of poetry and philosophy”. His master pieces - China Academy of Art Xiangshan Campus and Ningbo Museum of History – were built mainly by wasted tile that came from old buildings that were demolished during urbanization process. Thus, sustainability is supported by the poetic skin.

In the façade design of Ningbo Museum of history, a large amount of grey bricks and tiles came from old buildings were layered in a unique way to create a rich chiaroscuro.⁴⁰ A large amount of recycled materials were used in construction process. More than 20 different kinds of materials were from local abandoned residential houses. There are square stone, broken tiles, normal grey bricks and Sixing bricks in any area. Each material comes from different part of buildings originally and has its own function, but now they play a role together as part of a

39) Go to a Translunary City . Wang Shu. Time + Architecture, 2003/5, P40-p43

40) Ningbo Historic Museum, Eedit by 秦蕾, Domus China 032 05/2009, pp.47-54

new building. In the concept design stage, Wang Shu did not think of how to organize each material in the whole building. On the contrary, he designed it in construction site and told craftsmen face to face.⁴¹ It is like a huge puzzle game finished by both architect and craftsmanship, which is quite similar to the construction of traditional residential houses that focus on craftsmanship.



Figure 3-22_ Overall Masonry in the construction of Ningbo History Museum

From 2000-2008, Wang Shu directed and experimented a series of construction methods which can reuse the recycled materials to realize a recycled construction. One of methods is learned from the traditional folk construction – “wapan wall”. It is a mixed masonry wall which can contain as much as 80 different kinds of recycled tiles and bricks. Because of this unique characteristic – mixed masonry, it can perfectly re-unite and re-express various recycled material, gradually becoming the most widely applied traditional construction method in Wang Shu’s architectural works. However, the problem lies in how to re-apply it in modern architecture, the mass of which is much huger than traditional buildings.

41) We Recognize Notes on the Design of Ningbo Museum of Art. Wang Shu. Time + Architecture , 2006/5, pp.82-90

Taking a series of small projects as experiment, he keeps exploring the possible way of the combination of traditional craftsmanship and modern technology. In 2003, he experimented a construction method of combination of “wapan wall” and modern concrete technology for the first time in a small project – 5 scattered houses. From 2004-2007, this method was carried out in the construction of Xiangshan Campus. While in Ningbo History Museum, this technique is perfectly presented. In this project, what architect considers most is how to use this construction method to construct a huge wall with a height of 24 meters, while the highest ancient wall constructed with this method is only 8 meters high. Finally this method is realized by the mixed use with bamboo-form-concrete, the combination of which forms a dialogue with a simple form but complicated meaning.

3.3.2.2 Details of architecture components

Wang Shu always spares his tireless effort and passion to traditional hand-

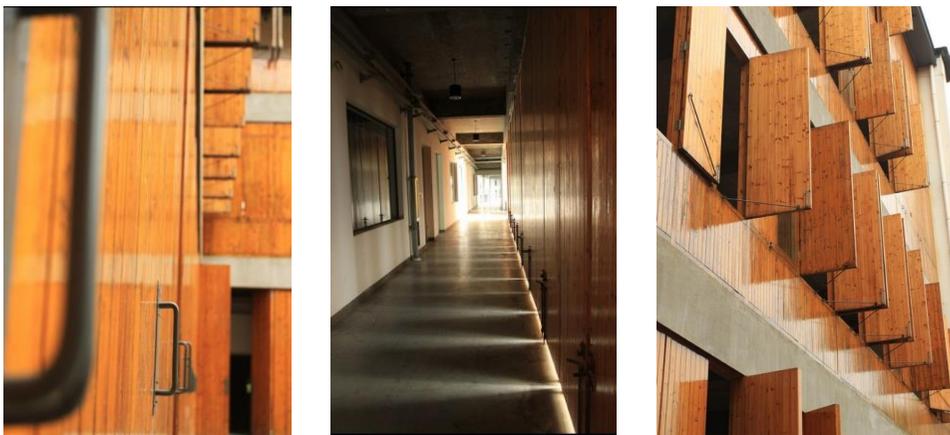


Figure 3-23_ Traditional architectural details in Xiang Shan Campus

craftsmanship techniques.⁴² The window catch, plug and door knob of Xiangshan Campus, and Ningbo Museum of Art, many small components are hand-made by blacksmiths that were found by Wang Shu, who walked through all the local streets and alleys.⁴³

All these resources are most precious, in Wang Shu's point of view, which is also truly traditional culture that is almost forgotten by the world.⁴⁴ As soon as those techniques are lost, they will totally disappear with the development of society and technology.

3.3.3 Summary

This chapter elaborates Wang Shu's solution of using traditional elements in his architectural design in terms of architecture material. From the angle of the use of traditional architecture material and the use of traditional craftsmanship, this chapter introduces the traditional elements of architecture material. Wang Shu use traditional architecture material by re-understanding the texture of materials and the combination of materials. Wang Shu also has an ultimate pursuit to traditional hand craftsmanship in terms of masonry and detail components of the architecture. "Experience and craftsmanship" is the best definition of Wang Shu's unique design strategy.

42) On Changing of Tongji. Wang Shu. *Time + Architecture*, 2004/6, pp.79-p80

43) Xiangshan Campus, China Academy of Art. Wang Shu, Lu Wenyu. *ARCHITECTURAL JOURNAL* 2008.9 pp.50-59

44) Karen Cilentto (28 February 2012). "The Local Architect / Wang Shu".*ArchDaily*. Retrieved 28 February 2012.

**Chapter 4. Analysis of Wang Shu's Strategy on
Inheritance of Tradition in Architectural Design
_ Narration of Tradition**

4.1 Narration of Traditional Natural Appearance

4.1.1 Space

4.1.2 Form

4.1.3 Material

4.2 Narration of Traditional Lifestyle

4.2.1 Space

4.2.2 Form

4.2.3 Material

4.2.4 Construction

4.3 Chapter Summary

4.1 Narration of Traditional Natural Appearance

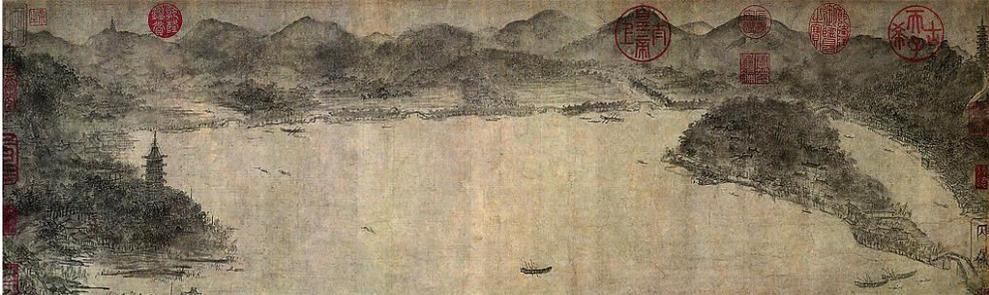


Figure 4-1_ South Song Dynasty, Li Song. West Lake of Hangzhou

As well known to all, Chinese people have a special predilection on Mountain and Water. In history, Hangzhou is a place where the literati have a deep affection on, because of the picturesque scenery of mountain and water and its unique geographic position – far from the political center. Many literati - scholars, poets, former government officials, soldiers and merchants - regard Hangzhou as the fictitious land of peace, where they can escape from outside world. Taking advantage of the breathtaking mountain and water here, they create an idealized miniature landscape, which is meant to express the harmony that should exist between man and nature. This is the original scene and context of Hangzhou which deeply existed in people's mind. However, as the process of urbanization, this “scene” has been ruined: the mountain and water is totally covered by the reinforced concrete forest. Nowadays, people can only recall the historic scene in their mind.

Showing special preference to Hangzhou, Wang Shu is based in Hangzhou. With

the perspective that “Hangzhou is the real ‘China’”⁴⁵, he asserted that the “shanshui” of Hangzhou and the Jiangnan Culture of Jiangnan area where Hangzhou located at is the best annotation of Chinese tradition. The most notable architectural works of him – Xiangshan Campus, Ningbo History Museum and Ningbo Contemporary Museum of Art are all finished based on the context of Hangzhou, all of which embody his passion and deep understanding on Hangzhou’s “Shanshui” and Jiangnan Culture. As how he oriented himself – Chinese traditional literati living in Hangzhou, he designs architecture in the way traditional literati did. His architectural works reflects his unique preference to natural appearance. Wandering in the real “shanshui” of Hangzhou, he feels this appearance; immersing himself in the landscape painting and classical garden, he endeavors to search for this



Figure 4-2_ “Shanshui” of Hangzhou

45) Chen Dongdong. “An interview with Wang Shu”. Today. 85th Issue, 2009

appearance: the harmonious relationship between nature and architecture, the abundant space levels and the marvelous form of the mountain, which are all the source of inspiration.

Wang Shu carries out a narration of natural mountain and water – “shanshui” – by architecture, by which he reshapes the scenes of “shanshui” deeply existed in people’s mind and recalls people’s memory on tradition and history. Furthermore, with this narration, he tries to re-construct Chinese traditional architectural System – coexistence and integration of architecture and nature.

4.1.1 Space

In Ningbo Museum, Wang Shu did a unique spatial design imitating the space of mountain, providing visitors a mountain-style interior spatial experience. From a flat penetrating hole which spans 30 meters, people enter into the museum. In interior, there exist 3 valleys with huge stairs, two of which are located inside and the other one outside. Around the main entrance, the main hall and the exterior “valleys”, he designed four scattered big caves – courtyards, two of which locate at central area while the other two at the austere boundary. The interior of the whole museum is covered by the walls constructed by the mixed masonry of bamboo-form-concrete and over twenty kinds of recycled materials. It is like a huge living body existing between artificial world and nature. Here, the fractured urban context is continued and the urban vitality is revived.

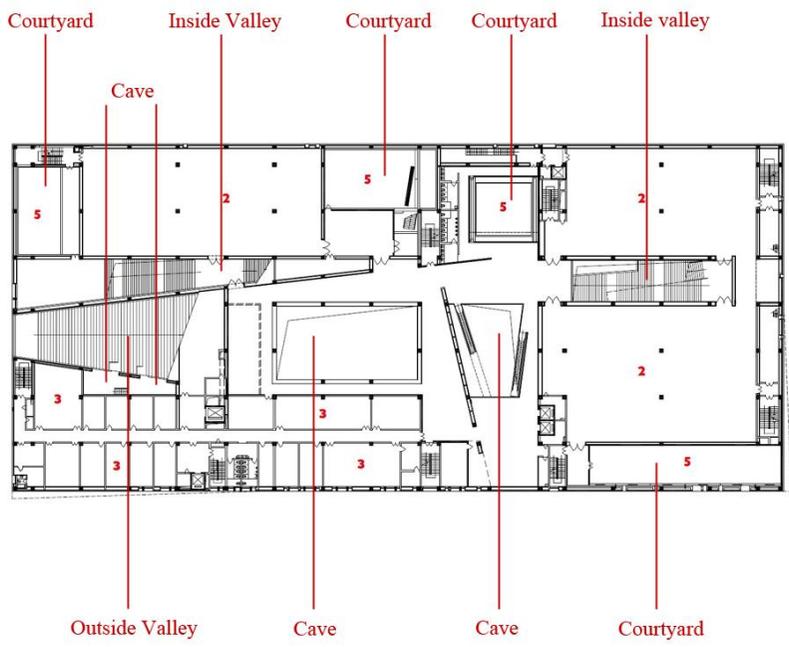
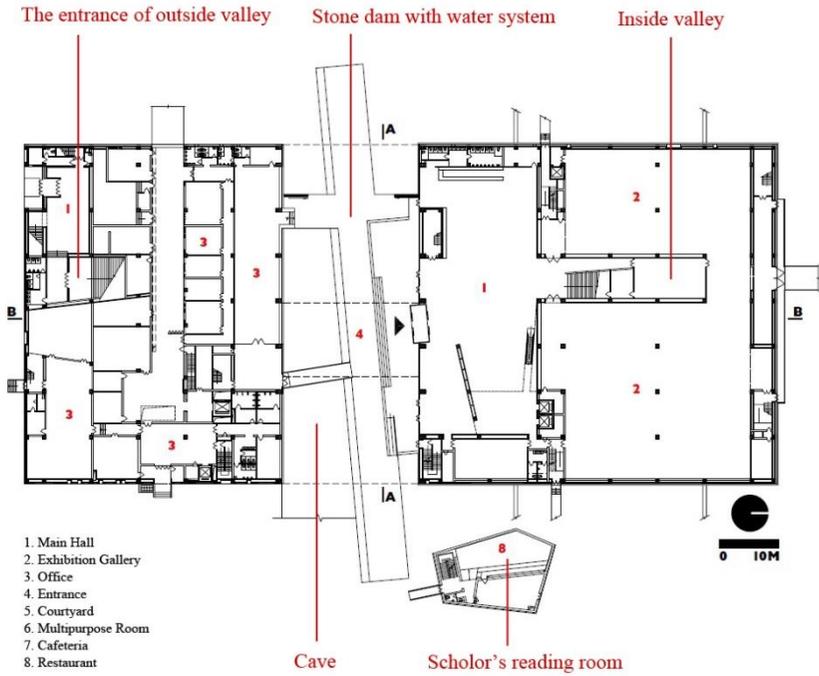


Figure 4-3_ The Ground Floor and First Floor of Ningbo History Museum _ Mountain-style Spatial Experience

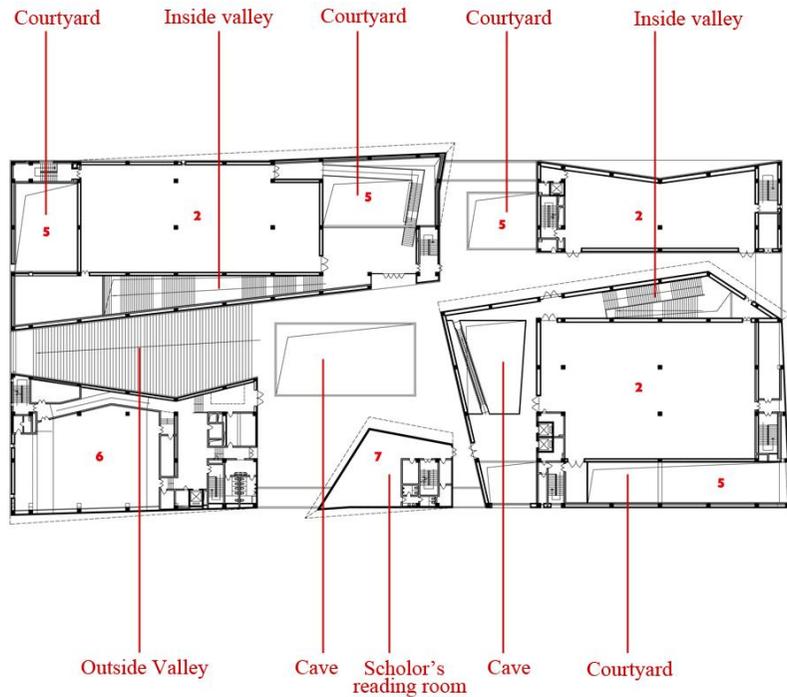


Figure 4-4_ The Second Floor of Ningbo History Museum _ Mountain-style Spatial Experience

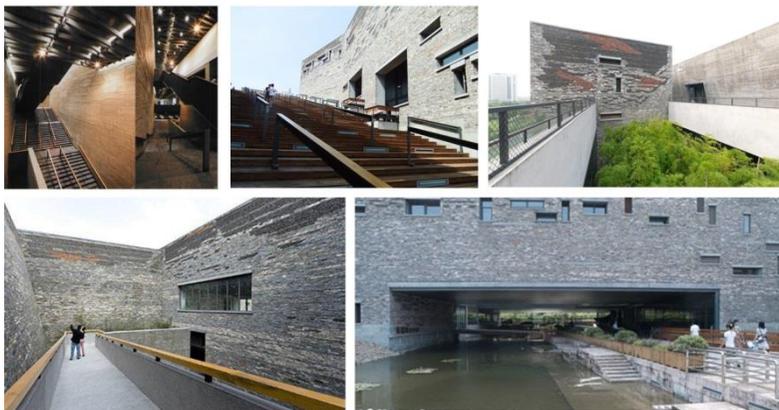


Figure 4-5_ Stairs to the Mountain and Caves,

In Xiangshan Campus, he did a narration on Xiang Mountain by buildings. In the first phase of Xiangshan Campus, the layout of the whole campus is designed and



Figure 4-6_ The narrative and diversity of courtyards

carried out to be “Big Courtyard” – a Motif Human Settlement existed in ancient Hangzhou. A “skinny” glass tower is set up at a selective position. Surrounding the Xiang Mountain, a traditional distribution pattern of “tower-courtyard style” is formed. Actually, the traditional courtyard layout can accommodate different kinds of types of function. What Wang Shu attempts here is a “free typology” of courtyard: in accordance with the mountain, sunshine and people’s inner emotion, courtyard is split and recombined, during which process it gradually becomes incomplete. What this incompleteness confirms is not only the layout and spatial form, but also the creation of “place” with a kind of diversity. This diversity can be easily recognized: although the layout of courtyards is same, the angle, the position relative to the location of mountain and the interior and exterior spaces maybe of subtle difference. In the incomplete courtyard, building occupies half and nature occupies the other. Facing to the mountain, they twist and fracture sensitively, while meanwhile considering the variability and integrality and, narrative. In the second



Figure 4-7_ Narration of Taihu Stone _ The Taihu Houses in Xiangshan Campus

phase, the new campus buildings are all set around the boundary of the site, paralleling with the extension direction of Xiang Mountain, which is similar with the traditional layout of Hangzhou City⁴⁶. A large vacant land is left between the mountain and buildings, the original farmland, river and fishpond are all well-kept here. In order to control and counteract the huge mass caused by the huge building area, the flat site is transformed into Hilly Topography which is a typical geographic feature of Hangzhou city. The height of building is lowered down, resulting to a horizontal development of the whole campus. Obviously, this kind of horizontal tendency is what Wang Shu pursues for: dense eaves constructed by tiles are applied in order to strengthen this tendency. Corresponding to mountain, it is a kind of parallel construction. Similar with Chinese calligraphy, every building swings naturally, reflecting a sensitive respond to the ups and downs of Xiang Mountain. Every building here is like a Chinese character, narrating their own

46) Hangzhou. China Today. Retrieved August 22, 2006.

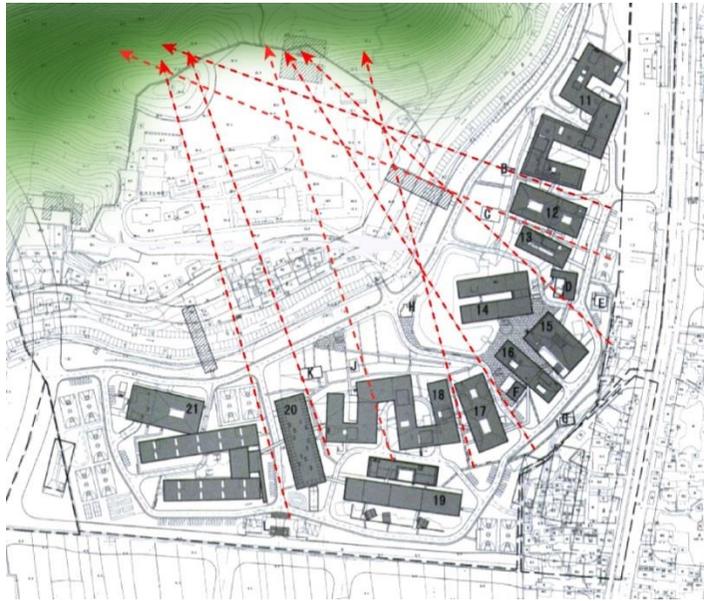


Figure 4-8_ Layout of Second Phase of Xiangshan Campus _ Blanks between Characters

stories in the face of Xiang Mountain. And, the blank between each character is elaborately designed: they look back to the Xiang Mountain again and again during contemporary interruptions. By architecture, he did a narration of the Xiang Mountain, by which the Xiang Mountain is renewedly defined.

4.1.2 Form

In Xiangshan Campus, the pitched roof as a roof type is widely applied. It is not only a simple and direct imitation of Chinese traditional roof type, but also is a narration of the rolling mountains. With architecture, he did a narrative annotation on natural appearance, integrating nature and architecture harmoniously. The wall extends upward to the roof and then extends and overhangs outward, forming a continuous interface. The ups and downs of roofs echo to the shape of landform,

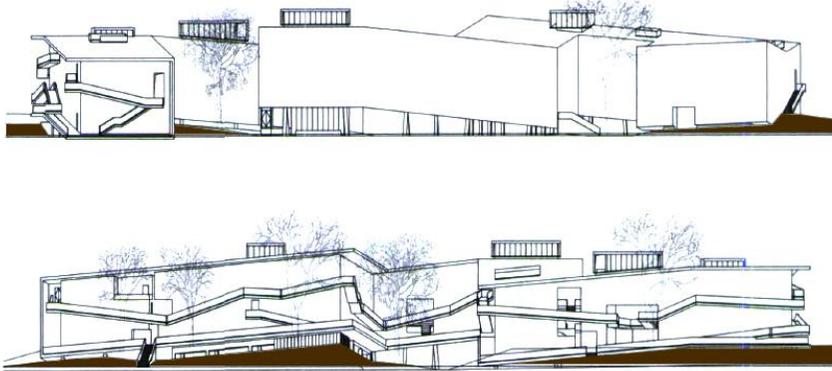


Figure 4-9_ Echoes between Architectural Form and Site

forming another continuous interface and motion of form. Corresponding to the variation of roof and form, the original flat site is restructured to be a “hilly”, as a metaphor of the environment. The ups and downs of the site and buildings result to an interesting and meaningful dialogue between architecture and landscape. Wang Shu is always obsessed with this kind of relationship: the overlap between architecture and landscape. The motion of architectural form makes this kind of echo natural and dramatic, like a drama.

The façade of Ningbo History Museum is designed to be a fragment of mountain which is uninterrupted, like the vital urban structure.⁴⁷ This mountain has a square boundary formed by manual cut. With a gesture and trace of cutting, it seems to be remained here and gradually forgotten by people. However, from this forgotten fragment, we may imagine the recreation of a continuous urban structure. The second half the building is a simple rectangular. Seen from a distance, it’s a cube, or

47) Wang Shu. “The Narration and Geometry of Natural Appearance _ Notes on the Design of Ningbo Historical Museum”. *Time + Architecture*, 2009/3, pp.67-80.



Figure 4-10_ Façade of Ningbo History Museum

piles of broken tiles piled up in a huge memorial square. However, while walking closer, the first half of the building gradually disrupted to be a mountain. It is a narration of how a rigid cube disrupted to be a natural appearance.

4.1.3 Material

In architecture, what Wang Shu uses is a kind of natural material, which can breathe. He has a special preference to the traditional materials existed in Hangzhou – bricks, tiles, wood and etc.⁴⁸, which are widely applied in his architecture. To Wang Shu, material is an annotation of the vitality of nature. After Ningbo History Museum completed, he said, “50 years later, when plants and trees grow from the ‘Wapan wall’, this “mountain” can be really integrated into nature and history.”⁴⁹ From

48) Yi Na, Li Dong. An interview with Wang Shu. Architect, 2012.05.29

49) Ningbo Historic Museum, Domus China 032, 05/2009



Figure 4-11_ Natural Materials which can breath

Wang Shu's perspective, for a building, the most brilliant and shocked scene is not the brand new appearance when it is completed, but the historic appearance after it itself become a part of history. This process, however, cannot be designed and constructed. After interacting with nature and life, the vitality of the buildings will be presented: the tree will grow up; the moss will penetrate out from the gap of bricks; bamboos and trees will overlap gradually with environment. This kind of reality is the reflection of the vitality of architecture.

4.2 Narration of Traditional Lifestyle

4.2.1 Space

4.2.1.1 Recreation of spatial experience of Traditional Dwellings

In Xiangshan Campus, the basic unit is courtyard: the whole campus is a "Big Courtyard" while every single building is a smaller one. In each courtyard, Wang Shu creates latitude difference by stone bases, forming various sinking courtyards, the inspiration of which is from the traditional patio existed in the traditional buildings of Hangzhou. In these courtyards, he brings the living atmosphere of

traditional life: the elaborately planted bamboos and trees, the ground paved by ancient gray bricks and the moss grow from the gap of the gray bricks. Wang Shu always looks forward to a scene: years later, after the trees grow up, students can read books in their shadows.

In Ningbo Museum of Art, the 2 main spatial forms existing in Hangzhou are applied in a certain sequence. In the morning, people climb up to the long gallery, walking through the exhibition space and courtyard space successively, and at last, getting to the U-shape-corridor which is along the river; meanwhile, the 180 huge wood doors are totally open. Seemingly, people passed through to the past: they walked out from the living room, walked through the courtyard and get the street. By the series of the traditional spatial imagery, he revived a traditional living ritual.

Similarly, this kind of spatial experience is also realized in Ningbo History Museum, where the courtyards are widely scattered. Walking through the courtyards, people finally will get to the roof space which is with a strong imagery of ancient town's street.⁵⁰

4.2.1.2 Recreation of Spatial Experience of Classical Garden

In the design of Xiang Shan Campus, Wang Shu focuses on the setting of routes, realizing a garden - style wondering through the whole campus. Combing with the

50) Ancient town's street is a place where plentiful activities take place. Although the layout of the streets are all regular and linear, on account of abundant activities, when walking on them, this kind of regularity and linearity can be broken along with people's irregular activity, showing subtle shrinking, magnifying and bending. These kinds of transformations and non-linearity attach much more initiative and motility to the streets, giving people an illusion that the whole street is a continuous polygonal space but not a linear one. Even walking through a linear street, people cannot feel the existence of linear space. This contradiction---between whole and part ---- integrates the whole streets in an enormously active and interesting way.

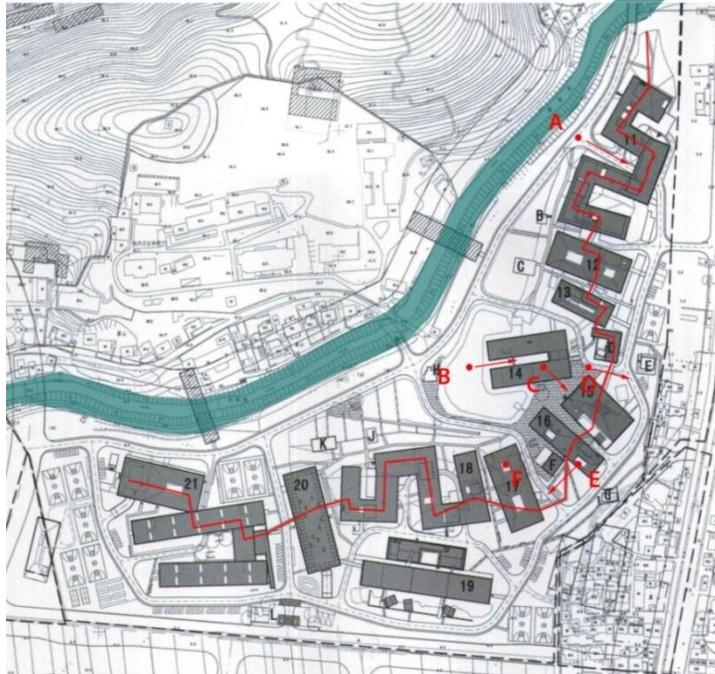


Figure 4-12_ The layout of Xiang Shan Campus and the route setting

creation of abundant space levels, he successfully creates a garden-style spatial experience. In the whole campus, the wandering can be realized between buildings and buildings, between interior spaces and between buildings and landscapes. Authentically, the free wandering comes true here, as travelling in a garden. In order to carry out this crazy idea, he designs a series of walkable and connective ramps, corridors, courtyards, halls and even, roofs. In the process of wondering, people finished their visiting of the whole campus.

And also, Wang Shu took use of the natural environment and plants. Combining with some special view-making method, for instance, frame view, borrow view and so on, he creates an abundant space levels. Deliberately, he lay out all the buildings

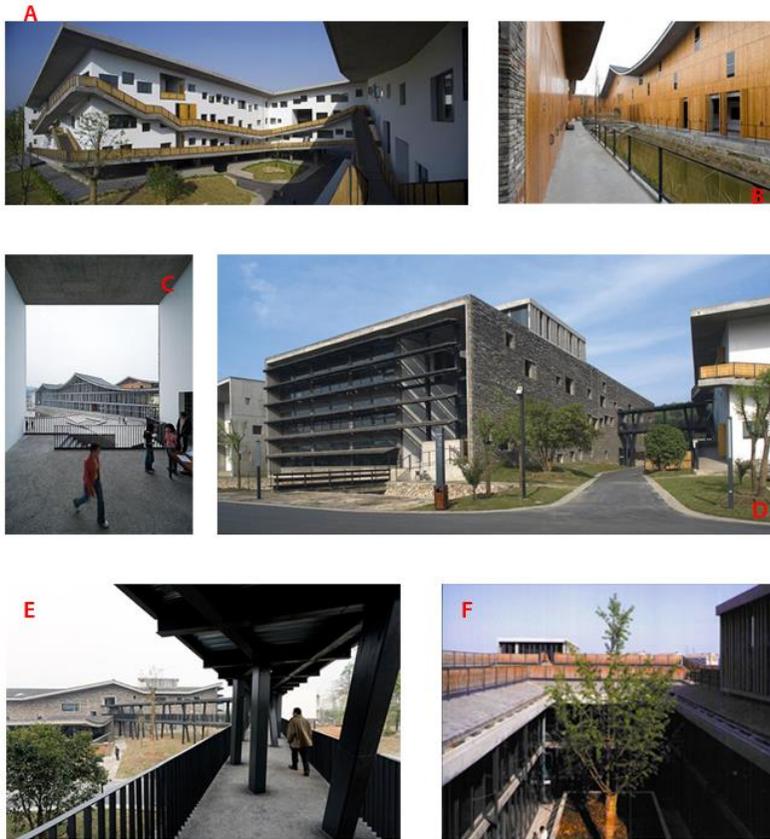


Figure 4-13_Different stories of Xiangshan Campus

close to the site boundary. Around the Xiang Mountain, he designed an empty core. Keeping the existed farmland, he returned almost 50% of the campus space back to nature and land. Here, the distant mountain and the nearby plants and water, they form an abundant space levels together with the buildings, which shows a characteristic of strong hierarchy. And also, plenty of view-making methods are applied in order to create a penetrability of different space levels, contributing to a much more abundant space level, among which frame-view is a most widely applied method. In this method, Windows and doors are an important component.

Sometimes they are round (moon windows or a moon gate) or oval, hexagonal or octagonal, or in the shape of a vase or a piece of fruit. Sometimes they have highly ornamental ceramic frames. They window may carefully frame a branch of a pine tree, or a plum tree in blossom, or another intimate garden scene. By this way, the spaces of landscape and buildings are inter-infiltrated, forming a rich visual and spatial experience. At the same time, buildings and landscapes are harmoniously integrated with each other.

Choosing one entrance, one route and one direction, walking follow it, a series of well composed sceneries and spaces will gradually show up, endlessly and continuously. When setting the route, Wang Shu pays attention to the “concealment and surprise”. The whole campus was not meant to be seen all at once, it was laid out to present a series of scenes. Visitors moved from scene to scene either within enclosed galleries or by winding paths which concealed the scenes until the last moment. The scenes would suddenly appear at the turn of a path, through a window, or hidden behind a screen of bamboo. They might be revealed through round "moon doors" or through windows of unusual shapes, or windows with elaborate lattices that broke the view into pieces. The whole campus is a series of excellent and splendid segments integrated by the continuous route.

In the design of Ningbo Museum, the route setting also reflects this kind of “wondering”. He designs a mazy circulation: from the ground floor to the top floors, it is gradually bifurcate. In this labyrinth, there exist 2 kinds of circulations: one is stairs for walking, the other one is escalators. Wang Shu did an elaborate



Figure 4-14_ Interior circulation of Ningbo Historic Museum

arrangement on the landscape element and spatial element people can experience when wondering – water, tiles, bamboo and courtyard. These elements, which are all the special symbols of Ningbo city, are elaborately arranged by Wang Shu to guild visitors recall the historical memory. A rhetorician from ancient Roma once asserted that “no matter how many people want to remember, all the images should be connected with each other according to one certain sequence, in which way some mistakes can be avoid.” Analogously, these elements arranged elaborately in accordance with Ningbo’s city attitude, city rhythm and city spirit, creating a special “memory palace”. After experiencing this series of different space feeling, the museum’s space itself transfers into one special imagine belonging to Ningbo, becoming one part of people’s memory.

4.2.2 Form

In architectural design, Wang Shu is used to use the traditional symbols which exist in a special place, which can imply and reflect people's life-style, for instance, architectural symbols, cultural symbols and so on. These traditional symbols usually contain the unique regional cultural essence, and also they are full of people's memory, because of which the symbols themselves are the narrations of tradition. Wang Shu intersperses them in the narration of space, recalling people's memory on past scenes.



Figure 4-15_The architectural symbols contained rich traditional living atmosphere

In the design of Xiang Shan Campus, the application of traditional eaves form is based on people's behavior pattern. Wang Shu said:" when raining, students can appreciate a scene that rain drops drop from the eaves uninterruptedly. What a familiar scene! Seemingly, we are back to the past." This is a reappearance of the traditional scene, which reshape the scene existed in people's mind and recall the memory on past. And also, traditional types of corridor, roof and eaves are widely used. Combining with the garden-style route setting, he creates a series of narrations during the process of wandering. Successfully, he combines the tradition and modernity.

If the narration of form in Xiangshan Campus is realized by the application and organization of traditional architectural symbols, the narration carried on in Ningbo Contemporary Art Museum is about a translation and re-expression of the cultural symbols existed in people's mind. "One of the most excited scenes, when I was a child, was the setting afloat of new ship. With the cable cut off, a huge mass, like a huge shadow, slides into the river gradually."⁵¹ Therefore, he separates the whole building into 2 parts: the upper "ship" and under "pedestal". This form is from Wang Shu's memory; it is also from the context of this unique place. The Ningbo Contemporary Art Museum is located in the Ningbo Port area and is, as Wang affirms, "a typical example of good cooperation with regional politicians" because the local government actively supported his ideas about regionalism. Most parts of the historic port buildings had to be destroyed for security reasons. Still, Wang



**Figure 4-16_Ningbo Museum of Art
_ upper "ship and under "pedestal"**

51) Wang Shu. "We Recognize Notes on the Design of Ningbo Museum of Art". *Time + Architecture* , 2006/5, pp.82-90.

attempted to rebuild a “Chinese ceremonial space” by dividing the building perpendicularly into upper and lower parts, which corresponds not only to Chinese tradition but also responds to contemporary economic needs. The lower part of the museum is reserved for commercial exhibitions while the upper part holds art exhibitions. Along the river, there is a group of caves laid with bricks containing Buddha figures, which evokes the historical fact that the building had once been the starting point for pilgrimages.

4.2.3 Materials

Traditional material is the carrier of the history and culture of one city. It itself is a main body of the narration. Most works of Wang Shu are made up of the traditional architectural materials that carry rich history and culture and were built in a traditional way of craftsmanship. They staying there, quietly and peacefully, narrating a story about history and traditional life.



Figure 4-17_ Gray Tiles and Jiangnan

Tile is the most representative one which is widely applied in his project. Tile is a special material extensively existing in the residential buildings of Jiangnan Area, full of history and memory. Tile is a representative of Jiangnan's architectural culture and social culture. When facing to the tiles, what we can imagine is the misty rain of Jiangnan; is the elegant of the ancient water town; is the people's hard working in the paddy field...In Xiang Shang Campus and Ningbo History Museum,



Figure 4-18_ Tiles in Xiangshan Campus

tiles are widely used and we can see the graceful figure of tiles everywhere: roof, eave and even, the body of building. When talking about the reason for the widely application of old tiles, Wang Shu said:" As soon as my campus is constructed, it owns a history of 50 or even 100 years!" The application of tiles, actually, is a reflection of Wang Shu's interpretation on history, on regional culture and even, himself inside.

In Ningbo Museum of Art, traditional materials are widely used to imply the history



Figure 4-19_ Materials of Ningbo Art Museum

of the city. The gray bricks that are used for the foundation of the main building are original bricks salvaged from the destroyed building; the steel and timber elements in the upper part, on the other hand, suggest an affinity with ships and harbor buildings.

4.2.4 Construction

As what we have talked about in Chapter 3, craftsmanship is one of the most important elements in his architectural works. At the same time of being an architect, he is also a Chinese craftsman: he has his own construction team which is composed of the craftsmen from the southern folk of China; he worked with them, communicated with them and learned from them. This is an important life experience which influenced his architectural design significantly.

The role that craftsmen played in traditional architecture is to create artificial shelter to meet people's needs with construction solution, exterior strategy and plane layout that inherited from their masters. During construction process, they not only

follow the way of their masters, but also improve designs according to actual situations. They have flexible technique and novel ideas, which is the secret of traditional construction. The arrangement process of Chinese traditional gardens is quite similar to architecture construction process, but gardens need an overall control of the layout from client. In other word, the success or failure would greatly depend on the aesthetics of clients. By inheriting generation by generation and practicing time after time, craftsmen summarized a large amount of experience and have techniques and strategies correspond to either overall construction of the building or detail treatment. Because of this inheriting and accumulation of experience, they created such magnificent Chinese traditional architecture.

Craftsmanship of architecture is an inseparable part of craftsmen's life and it is the base on which they live. The process of hand-building is the process that craftsmen pour their emotion into architecture through their techniques. Hence, compare to architecture built by modern machines, architecture built by hands has rich humanistic feelings and living atmosphere. As what we have talked about in Chapter 3, "wapan wall" and bamboo-form-concrete are widely used in Wang Shu's architectural works, which are, actually, all changed the history of architecture. In the process of casting, the transform of the concrete is inconceivable. And also, although Wang Shu detailedly drew a colored façade for each "wapan wall" and explain the different ratios and distinguishes, the construction process can never be precisely overall controlled. In the huge site, with dozens of operation points all hided within the safety net, there is no way to stipulate the exact distribution of

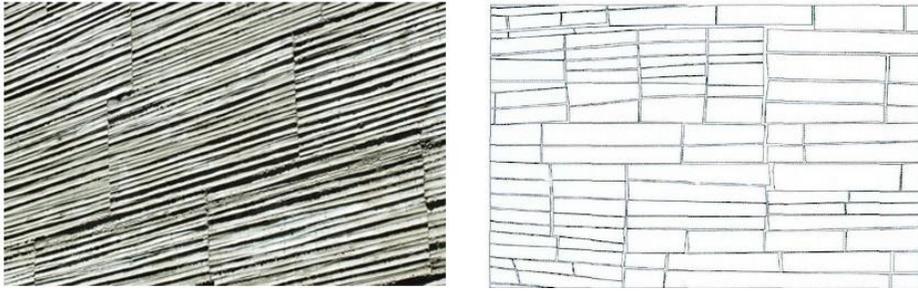


Figure 4-20_ Bamboo-formed-concrete and its inconceivability

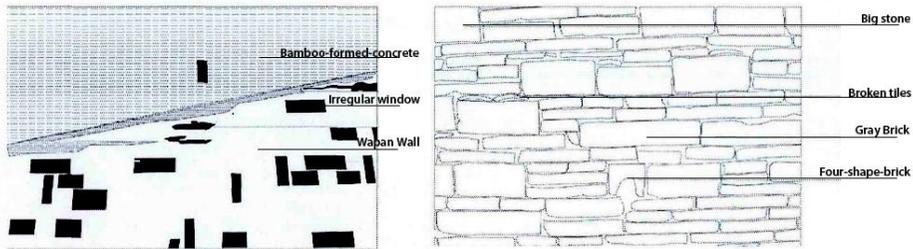


Figure 4-21_ Wapan Wall and its inconceivability

various materials and tracking the masonry technique of each craftsman. Guided by the detailed rules Wang Shu made, craftsmen constructed the “wapan wall” in their own way which is uncontrollable, forming different kinds of natural appearances formed by the dark-red cylinder pieces, which is motivated while at the same time, is out of the expectation. Wang Shu said:” It is not my work, it is the overall wisdom of the craftsmen.”⁵²

He invites the active participation of architects and artists and remains open to spontaneous changes. In particular, Wang developed the “free design process,” a design able to adapt itself constantly in response to the conditions of the

52) Ningbo Historic Museum, Domus China 032, 05/2009

environment as they appear during the building phase. The craftsmen are motivated by the traditional materials and construction mode which they are familiar with. Many construction methods applied in Wang Shu's work is from the craftsmen. In principle, "free design" is the method of creating a Chinese garden, explains Wang, for the simple reason that a Chinese garden cannot really be designed:

A Chinese garden is the result of a construction process. I would like to make this a principle of modern architecture. When I build something I am always free to change certain things. Incidentally, this is also typical for the Chinese situation. Lots of unforeseeable things happen here all the time and you have to improvise. It is useless to make a precise plan but it is better to solve problems at the moment they arise.

What Wang Shu creates here is a random, accidental and vital construction mode which grows spontaneously, imitating a folk construction mode which is out of intervention and interference of design. In this process, there only exists time, geographic features and living and work, but no design. The building constructed in this new mode is full of humanistic, in which people can have a strong belongingness.

"I simply think that architecture should work hand in hand with time. Sometimes I like to use cheap material that can be exchanged when it is damaged. And I like to associate buildings and plants. When buildings and plants come together it becomes most obvious that, as long as time keeps running, architecture is subjected to

constant changes.” Compare to architecture built by modern machines, architecture built by hands has rich humanistic feelings and living atmosphere. Actually, this kind of construction is a narration: the process of construction is like our daily life, working, communication and entertainment. From this kind of narration, we seem to go back to history, experiencing the traditional life.

4.3 Chapter Summary

Wang Shu’s tradition is not the simple collage of the traditional elements – the traditional symbols, styles, forms and so on, which are all “dead” things. What Wang Shu focuses on are the living things – the living “shanshui” culture, the living natural material, the living craftsmanship, by which he did a narration on tradition – the traditional natural appearance and the traditional lifestyle- according to the special sensibilities Chinese people have on natural “shanshui” and the unique and indelible memory people have on a special place.

Here, we can briefly find out the common ground in Barragan and Wang Shu’s architectural works on the inheritance of tradition, the common root which is concealed by the appearance. The tradition in their architectural works are all deeply rooted in the special place – Mexico and Hangzhou city, and their inheritances on tradition are all rooted in their cognition on place, based on which they carried out narration, on nature and on life. Although their cognition on “place” is different, in architectural design, they all emphasize a continuity of the context of “place”, providing people an experience of space, re-calling people’s memory on

the place and pursuing for a harmonious coexistence among people, architecture and nature.

Once, Barragan said, “I don’t think that my architecture should be imitated, because it is not a style but a personal experience. From my perspective, if you want to learn my architecture, you should understand the source of my design. And then, instead of copying the outcome, you can do the reasonable analysis.” Similarly, this is also the attitude we should keep to Wang Shu’s architecture: explore the root of his design – his cognition on “place”.

Chapter 5. Root of Wang Shu's Tradition

_ The Cognition on "Place"

5.1 Conception of Nature of 'tian ren he yi'

- 5.1.1 Coexistence of Architecture and Nature _ Fusion of Emotion and Natural "shanshui"
- 5.1.2 Non-being of Space
- 5.1.3 Summary

5.2 Coexistence of Variety of Historical Clues

5.3 Chapter Summary _ Poetic Living

Norwegian architecture scholar Norbert Schultze introduced phenomenology into architecture. His research made “place” become a core concept of contemporary architecture theory. In the book of “Genius Loci – Towards a Phenomenon of Architecture” in 1976, he argues that place is space with unambiguous characteristics, which is a living world composed by specific phenomenon. The role architecture plays is to make the place to be a concrete and visual space.⁵³ In other words, architecture separate space from external environment by the application of various materials and structures, aiming to form a “place”. The place is a significative entity as an outcome of the combination of artificial environment and nature.

Wang Shu has his own cognition on “place” and this cognition, to a large extent, is a spiritual cognition, which is significantly influenced by the Chinese traditional philosophical thinking of “tian ren he yi” and his personal emotion. This cognition is full of Wang Shu’s preference to the natural “shanshui” and the respect to history. The tradition in Wang Shu’s architectural works is rooted in this special cognition.

5.1 Conception of Nature of “tian ren he yi”

“Tian ren he yi” is a traditional Chinese philosophical thinking which significantly influenced Chinese people and the development of Chinese culture, society, urban and so on. In the “new interpretation of ‘tian ren he yi’”, Ji Xianlin asserted that “tian” is nature and “ren” is human beings; the relationship between “tian” and “ren”

53) Christian Norberg Schulz. GENIUS LOCI TOWARDS A PHENOMENOLOGY OF ARCHITECTURE. Interpreted by Shi Zhiming. pp. 1-10

is actually the relationship between nature and human; “tian ren he yi” emphasizes the harmonious relationship between human and nature both of which are closely related with each other and indivisible.⁵⁴ In Chinese culture, nature (自然) is integrated by two parts: “self” (自) and the material substance of the surrounding world (然). In this system, human being and the elements of nature – mountain, water, plants, animal and so on – are in the same position and hierarchy, which establishes the thinking basis of the harmonious relationship between human and nature. This concept significantly influences Wang Shu’s cognition on natural “shanshui” and space.

5.1.1 Coexistence of Architecture and Nature _ Fusion of Emotion and Natural “shanshui”

How Nature is perceived varies from culture to culture. In China, the landscape or even the world may be understood as “shanshui” or literally “mountain and water”; mountains, hills and highlands cover about sixty-six percent of the nation’s territory.⁵⁵ Mountain, furthermore, were perceived as living entities; they were the embodiment of the natural order, having the largest bodies, and popular as a locale for the manifestation of paranormal forces. At the same time, when perceived in isolation, mountains were dynamic. Nature, viewed holistically, is epitomized by the mountain’s permanence, this tensed against the transience of mankind. Consequently, mountains also offer respite in times of difficulty as the spiritual

54) Zhu Wenyi. *Space•Symbol•Urban*, 1993, pp.198-199

55) Ji Jiangjaing. *Chinese National Geography*, 2005, pp. 10-20

symbol of stability.

The bond between the Chinese and their natural environment, distilled both out of a sense of emotional engagement, as well as an aesthetic contemplation with its implication of distance and reflection, is one of resilience. The Chinese depiction of Nature is not about Nature in and of itself; works of Art only represent a type of subjective perception of Nature by man, which in some ways collectively informed us about characteristic of Chinese culture. The landscape painting is an excellent embodiment: the purpose was not to reproduce exactly the appearance of nature (realism) but rather to grasp an emotion or atmosphere so as to catch the "rhythm" of nature. The Chinese landscape painting is a perfect reflection of the fusion of landscape and emotion. Chinese landscape painting is not a truly depiction of the real mountain and water, but the representation of "artistic conception" (Yi Jing) referring to "an artistic realm that can lead the readers to an imaginary space through vivid artistic description with the fusion of emotion and scene." Artistic conception is not only an indispensable aesthetic concept in Chinese classical aesthetics, but also the essence of Chinese painting theory. It has been widely used in Chinese poetry, painting, and calligraphy, becoming a significant element of aesthetic creation, particularly in landscape poetry and painting.

Wang Shu is a traditional scholar who owns a unique emotion on traditional landscape painting and mountain and water existed in Hangzhou. Wang Shu is deeply influenced by Chinese landscape painting, some technique of which inspired him significantly. He approaches design as traditional Chinese painter would. "In

my studio, there exist 4 landscape paintings – “xia ri shan kou dai du tu” by Dong Yuan in the Five Dynasties, “Early Spring” by Guo Xi in the northern Song Dynasty, “Travelers amid Mountains and Streams” by Fan Kuan in the Northern Song Dynasty and “Whispering Pines in the Mountains” by Li Tang in the Northern Song Dynasty.” Many times, he gets inspiration from landscape paintings and draws the conceptual sketches quickly after appreciating them. Like what we have talked about in Chapter 4, the plan for the Ningbo History Museum, he studies the settings



Figure 5-1_ The layout of the first phase of Xiangshan Campus

– whether cities, valleys or mountains – for about a week as the design materialize in his mind. Therefore, like the landscape paintings, in his architectural works, there exists an interaction between real realm and virtual realm, an interaction between sensibilities and “shanshui”. In the Phase I of Xiangshan Campus, most of the buildings are in the form of courtyard blocks in which the courtyards are enclosed by both architecture and natural surroundings. Although the buildings seem to be loosely dispersed in the campus, their alignment and positions follow sensitively the

undulating profile of the mountain. Apart from having openings facing the mountain in different angles, the scale and proportion of the buildings are compatible with the mountain to establish a co-existing relationship with the natural landscape. As clearly shown in the composition of traditional Chinese landscape paintings, houses only occupy a small part within the natural landscape, so Wang Shu aims to design his architecture not as dominant objects, but as a harmonious part of the overall setting. To him, “humanistic atmosphere of a place is more important than architecture”.

Furthermore, in architectural design, what Wang Shu applies is not the western Euclidean Geometry, but a kind of geometry of natural appearance which is deeply rooted in Chinese tradition. This natural appearance, instead of being a mirror of the real natural landscape, is an extension of interaction between landscape and a unique emotion - as landscape paintings. In Ningbo history museum, he successfully re-presents the marvelous appearance of the mountain depicted in



Figure 5-2_ The south façade: the contrast between the current status and the imagination, which shows the artistic conception of the painting “Whispering Pines in the Mountains” by Li Tang in the Northern Song Dynasty

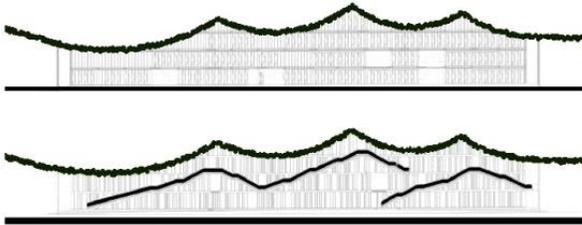


Figure 5-3_ Painting of the wonderful views of Xiaoxiang (North Song Dynasty, Mi Youren) and Roof type in Xiangshan Campus by Wang Shu

landscape painting “Whispering Pines in the Mountains”. And also, the twilight of the sun is fixed on the top of this “mountain”. In Xiangshan Campus, the application of pitched roof and winding corridors is not only a reappearance of the traditional architectural form, but also an emotional sublimation of a natural appearance of the mountain.

Wang Shu is traditional literati who is significantly influenced by the concept of “tian ren he yi”. From the angle of architecture, Chinese traditional literati think that the significance environment has to architecture is not the simple landscape, but a relationship of coexistence. In Chinese traditional architecture, something is much important than “building house” – a creation of a world; a creation of a beautiful world in which human and nature is harmonious coexistence with each other. In architectural design, Wang Shu is always pursuing for a design method to coexist architecture and nature, regaining the vitality of urban and architecture. His architecture is produced through the description of landscapes; the sensibilities and landscapes blend and interact with each other and constitute a verbal picture filled with sensibilities. His architecture is actually a “Chinese landscape poetry”, which presents landscape into poetry as the main source of poetic imagery and from which we can feel an artistic conception of Chinese “shanshui” culture and “tian ren he yi”.

5.1.2 Non-being of Space

Traditional spatial form –courtyards and corridors, are widely applied in the architectural space of Wang Shu’s works. Instead of the simple representation, his

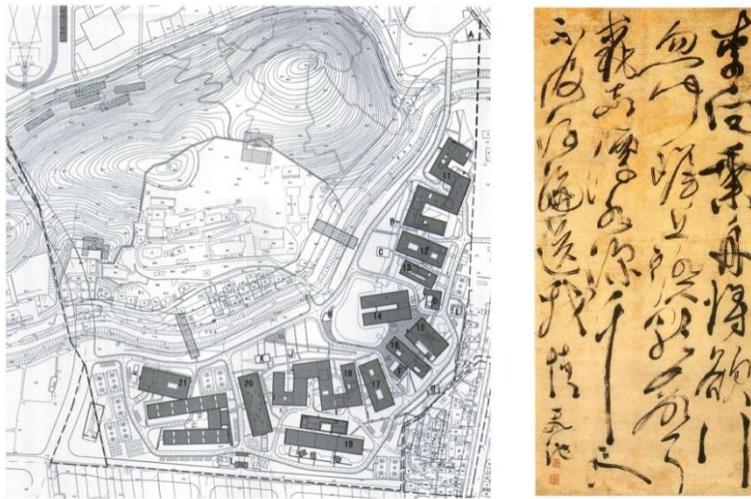
application shows his deep understanding on the essence of Chinese traditional architectural spatial form – non-being.

In Chinese traditional architecture, non-being or emptiness is an important characteristic. As what we have talked about before, enclosure is a main spatial form of Chinese traditional architecture, which is a kind of representation of non-being. Combining the real realm and virtue realm, non-being is an important way for Chinese people to pursue for the realm of “tian ren he yi”. It can be said that Chinese traditional architecture is constructed by “non-being” – traditional courtyard space, corridor space, pavilion and so on.

Furthermore, in Chinese landscape culture, non-being is an extremely important element, for instance, the phenomenon of “blank-leaving”. In the unique Chinese landscape culture, there existed a phenomenon of “blank – leaving”. “Blank-leaving” (Liu Bai) is an important technique and principle in Chinese traditional aesthetics, which originates from Lao Tzu’s (571 BCE – 471 BCE) Taoist philosophical notion of “interaction between being and non-being.” On the basis of Lao Tzu’s philosophical thoughts, Chuang Tzu (286 BCE -369 BCE) proposed the idea of “Xiang Wang,” the combination of the real realm and the virtual realm. Combined together, these ideas have had a profound impact on Chinese traditional aesthetics by emphasizing not only images (being and the real realm), but also the blankness beyond images (non-being and the virtual realm). Therefore, as a method of creating artistic conception, blankness and blank-leaving have played a significant role in the theory and composition of traditional artistic forms such as

calligraphy, poetry, and painting. This phenomenon of “blank – leaving” is widely used in Wang Shu’s architectural spatial organization. It is not absolute emptiness, but rather blankness full of rich implications and philosophical thought. “Blank-leaving” allows a reader the space to create their own imaginative interpretations of the architectural spaces. Wang Shu is good at landscape painting and Chinese calligraphy. Blending this skill of “blank-leaving” in his architectural design, the “non-being” can be easily perceived in the architectural space. Wang Shu approach architectural design as a traditional scholar; the means of archaistic expression of landscape painting and calligraphy is rooted his mind and influenced his architectural design. For instance, the layout of the second phase of Xiangshan Campus is like a creation of Chinese calligraphy, in which “blank leaving” plays a much more important role. In the layout of whole campus, as slopes, twists, and turns occur on site, the building twists and transforms accordingly, and thus addresses uniformity and variability at the same time. The inevitable bulk of the buildings are purposefully lowered and the horizontal sun-screen slope emphasizes the horizontal extension of the corresponding mountain range, just like the writing of Chinese characters. The blanks are left between each character: during a temporary disruption, they look back to the mountain again and again. In accordance with his emotion, he did a narration of Xiang Mountain by architecture.

In the spatial organization, Wang Shu pays attention to a combination and interaction of the “being” and “non-being” of space. As what we have talked about before, there is strong contrast between “being” and “non-being” in the spatial



**Figure 5-4_The second phase of Xiangshan Campus and Calligraphy
– The beauty of Blank**

organization of his works: the being of enclosure and non-being of space, the being of the building and the non-being of the courtyard, the being of the mansion complex and the non-being of natural setting. In his architectural works, he guide people to experience by means of the defined enclosure which is tensed towards impending departure or arrival, movements from a space to another. Space experienced in his architecture is experienced through moving one's being through it. In the spatial organization, Wang Shu integrated two different subject behaviors: in-moving viewing and in-position viewing. On one hand, “non-being” - with a dimension of time - is integrated into the “being” of space; on the other hand, a sense of time is formed by the continuous shifting of space. What he emphasizes is about to undertake a change; in spite of this, the change never really take place, opening instead onto an idiosyncratic dimension of time, wherein time is incessant – the physical space doesn't change, the perception of that physical space change with

the changes of one's spatio-temporality in that space.

Non-being is the essence of Chinese traditional philosophical thinking “tian ren he yi”. And also, it is the essence of Wang Shu's architectural spatial design: by non-being of space, the boundary of architecture is blurred, taking advantage of which architecture is harmoniously integrated with nature. How to design and create the “non-being” in architecture and how to take use of the interaction between the “being” and “non-being” of space to stimulate the imagery and memory existed in people's mind on traditional space, recreating an artistic concept of “tian ren he yi” and authentically integrating human, place, architecture and nature with each other is an extremely important issue needed to be contemplated. Wang Shu's architectural works gives us a lot of enlightenment, and also, this is what we need to learn from traditional culture and architecture.

5.1.3 Summary

The highest aesthetic principle of Chinese traditional architecture is harmony, pursuing for an ideal condition of the integration of human and nature. Therefore, Chinese traditional architecture doesn't emphasize the visual impact of the single building, but intends to the creation of the infinite artistic conception by the harmonious blending of architecture and nature. In essence, Chinese people consider that in order to attain the maximum aesthetic pleasure, people must live with nature, achieving a realm of ‘tian ren he yi’. Wang Shu did a successful attempt: the harmonious coexistence and blending of architecture and natural

“shanshui”, the infinite artistic conception of space.....

In China, there existed a great landscape culture and landscape system – landscape painting and classical garden. How to revive this system in modern urban design to realize the harmonious coexistence of architecture and nature and how to return back to the realm of ‘tian ren he yi’: Wang Shu did an excellent exploration on it and gave us a lot of enlightenment. This is the direction on which Wang Shu is exploring and also, this is the issue need to be deeply considered.

5.2 Coexistence of Variety of Historical Clues

Italian architect Aldo Rossi, in his book of “*The Architecture of the City*” in 1966, argues that cities exist based on their images⁵⁶. They are real form that is closely related to certain people life in time and place, including history. They are also an expression of social and cultural values of human beings. Place is not only decided by space, but also by the events that happened in this space. The spirit of a city comes from its history and as soon as this spirit has its own form, it becomes the symbol of the place. Wang Shu endeavors to keep the historical atmosphere of the special place by architecture. His architectural design is actually an interaction of his emotion on history and the events existed in “place”.

Every time, Wang Shu starts his design from “memory”, where he searches and organizes different kinds of events and clues. This depends on his understanding on house, and also depends on his understanding on the “place” house located at. What

56) Aldo Rossi. *The Architecture of the City*, MIT Press, 1984. pp. 1-20

he interested in is the special event. “Actually, no matter it is historical and modern, what I face with are only bricks, tiles, concrete, steel and wood; door, window and column – they are all common materials.” For Wang Shu, his work is to re-weave these materials to create a new possibility for a specific place, hinting a special event. Because it hasn’t been decided, it doesn’t even have an explicit meaning. Maybe we can call it a kind of simple event, which revive the “place” and people’s memory. In Ningbo Museum of Art, according to a certain mnemonic cue, he restructured a series of “tradition” of Ningbo – material, landscape and spatial form, carrying out a narration on “place”. He restructured the historic events happened there by architecture, succeeding a life ritual in modern society which has already been fractured. In the Ningbo History Museum, the courtyard, together with water and tiles, reflects a special culture and style which only belongs to Jiangnan area. Just like what he said, “The house locates there as an entity of the physical world, whose appearance is only a combination of rigid symbols. However, it is waiting there, waiting for a right person to read it, by which the place and events get reviving.”

Different from the universal and present-tense concept of space-time in Modernist architecture, the time that people experience in his architecture is “present perfect,” which is realized by the mixture and overlapping of building materials from different historical periods. He endows architecture with a dimension of history. Wang Shu plays time in his architecture, realizing a temporal paradox. In

the design of Xiang Shan Campus and Ningbo Historic Museum, he applied millions of recycled materials from different period and applied it by a new compound mode, showing a historic dimension of modern architecture. In this disorderly time sequence, people miss themselves in history. Maybe, 50 years later, when green plants grow from the recycled materials and the façade covered by green, the building is really integrated with history and tradition.



Figure 5-5_ Time experience of “present perfect”

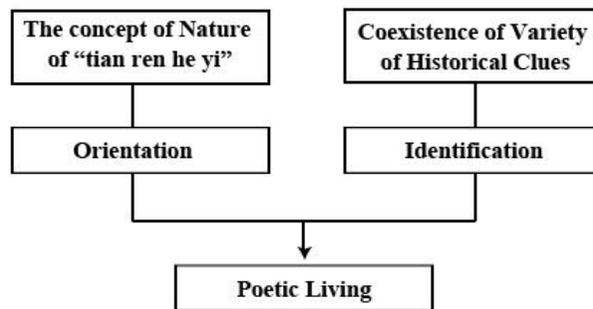
In architecture, Wang Shu unfolds a series of orchestrated events gradually, taking the traditional elements- space, symbol, material and etc., as a scene where the narration of time takes place. The interaction and combination of different scenes are usually not a real reaction of the historic events and the objective time. However, it can outline an event or a course of life episodes. During this process, the traditional scene existed in people’s mind is represented, recalling people’s memory on “place”. The fractured time and life rituals are succeeded.

Inheritance of tradition in architectural design should be on the premise of

respecting the special history of the place. A good building should be a place where the coexistence of variety of history and time cues exists.

5.3 Chapter Summary _ Poetic Living

In the book <GENIUS LOCI – TOWARDS A PHENOMENOLOGY OF ARCHITECTURE>, Norway architect Christian Norberg-Schulz asserts that “place” possesses two fundamental spiritual function: orientation and identification. Orientation is a sense of alienation and homeless, which making people to be one part of nature; while identification means belongingness, being friend with special environment. The “genius loci” is presented in the development of these two kinds



of spiritual function. When people can feel this spirit, building is realized its ultimate purpose: settlement. Based on tradition, Wang Shu’s architecture realized the two fundamental spiritual functions of place and help people “poetically dwells on the earth”:

Orientation: Deeply influenced by the traditional Chinese philosophical thinking “tian ren he yi”, he pursue for the coexistence of nature and architecture. Integrating

architecture and nature with each other, he creates an attractive and fascinating artistic conception, providing people a feeling of living with nature.

Identification: Wang Shu unfolds a series of orchestrated events gradually, taking the traditional elements- space, symbol, material and etc., as a scene where the narration of time takes place. During this process, the traditional scene existed in people's mind is represented, recalling people's memory on "place" and providing people the sense of belongingness.

The tradition in Wang Shu's architectural works is not the simple collage of traditional elements, but to stimulate people's identity on the place and realize the two fundamental spiritual function of place – orientation and identification. Wang Shu's purpose on maintaining and inheriting tradition is not only for the sake of tradition, but also for the continuity of fractured time and history, making the traditional lifestyle return back to the real urban life and regional environment. Finally, "Full of merit, yet poetically, man dwells on this earth."

Furthermore, Wang Shu's purpose on tradition is not protection and return, but "revival". He learns to tradition – the traditional philosophical thinking, the great Chinese traditional landscape urban system and the traditional and folk structures, from which he searches for a much more wisdom way in order to face the severe environmental and ecological issue, making new buildings succeed and inherit the memory of history and traditional life in the ruins and helping people to recreate the identity to the "place" and "culture". This is Wang Shu's attitude and standpoint on

tradition; it is also what we need to learn from Wang Shu's tradition.

Chapter 6. Conclusion

This thesis did a study on the application of traditional elements in Wang Shu's architectural works. From 3 aspects – Concept, space and material, Wang Shu's three notable projects which are designed based on the context of Hangzhou is detailedly analyzed. And then, his strategy on the inheritance of tradition – narration of traditional natural appearance and narration of traditional lifestyle - is summarized and analyzed. Based on tradition, he creates a unique spirit of “place” which is deeply rooted in the context of Hangzhou.

With the process of globalization and modernization, Chinese tradition is gradually disappeared. Nowadays, although many Chinese architects gradually realize this issue and did many experiments, the outcome is not quite ideal. Many architects don't have an adequately understanding on Chinese traditional architecture and the culture contained in it, due to which they focused on the traditional architectural form too much. Unilaterally inheriting tradition by applying traditional architectural symbols, they ignored the inheritance of something which is much more fundamental for instance, the culture and spirit. From Wang Shu's exploration on Chinese tradition, we can learn a lot.

Based on tradition, he endeavors to reconstruct a Chinese Native Architecture, which emphasizes experience and humanistic training. Building house with craftsman, he learns from them; indulging in the natural mountain and water and the traditional literati atmosphere of Hangzhou, he learns from landscape painting and the literati garden. Based in Hangzhou, he did a series of exploration on Chinese tradition by architecture, endeavoring to recreate the “place” and memory, which is

deeply rooted in people's mind. By architecture, he did a narration on tradition, echoing the traditional imagery existed in people's mind and recalling people's memory on the "place" and events. He created an emotional experience of place, which is related to Chinese concept of mountain and water; related to Chinese concept of space; related to the special memory and imagery on certain place existed in people's mind, recalling the almost forgotten memories. By the recreation of traditional spatial imagery, the guidance of traditional life-style, the influence of the atmosphere, Wang Shu endeavor to wake people up, to return back to the authenticity.

Wang Shu's purpose on maintaining and inheriting tradition is not only for the sake of tradition, but also for the continuity of fractured time and history, making the traditional lifestyle return back to the real urban life and regional environment.

Nowadays, more and more architects pay attention to issue of the continuity of tradition in modern architecture, as a resistance to the globalization and urbanization, like Wang Shu and Barragan. Their practices give us a lot of enlightenment. In architectural design, they all emphasize a continuity of the context of "place", providing people an experience of space, re-calling people's memory on the place and pursuing for a harmonious coexistence among people, architecture and nature. Once, Barragan said, "Don't focus on what I am doing; focus on what I am focusing at!" From my perspective, this is also what we should learn from Wang Shu. The tradition Wang Shu focus on is not the simple collage of the traditional symbols, styles, forms and so on, which are all "dead" things. What

Wang Shu focuses on are the living things – the living “shanshui” culture, the living natural material, the living craftsmanship. Representing these kinds of living tradition in modern architectural design and making people closely related to the nature and real life is the core of the inheritance and tradition.

From the tradition in Wang Shu’s architectural works, we need to re-think about the harmonious relationship between human, architecture and nature. In China, people want to live with nature and the significance nature has onto architecture is not only the landscape. There exists a traditional architectural concept – “tian ren he yi” which emphasizing the co-existence of architecture and nature. In Chinese traditional architecture, something is much important than “building house” – a creation of a world; a creation of a beautiful world in which human and nature is harmonious coexistence with each other. Not restricted in the design of architecture, but lay importance on the design and creation of a new world which is full of diversity and differentiation, exploring a way back to nature and regaining the identity to the special place: this is what we need to learn from Wang Shu’s exploration on tradition.

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Appendix

Appendix a_ Relevant Drawings of the three Projects analyzed in this Thesis – Ningbo Museum of Art; Xiangshan Campus, China
Academy of Art, Ningbo History Museum

Appendix b_ Relevant Chinese Landscape Painting

**Appendix a_ Relevant Drawings of the three Projects
analyzed in this Thesis – Ningbo Museum of Art, Xiangshan Campus,
China Academy of Art, Ningbo History Museum**

Ningbo Museum of Art

Design Period: 2001-2002

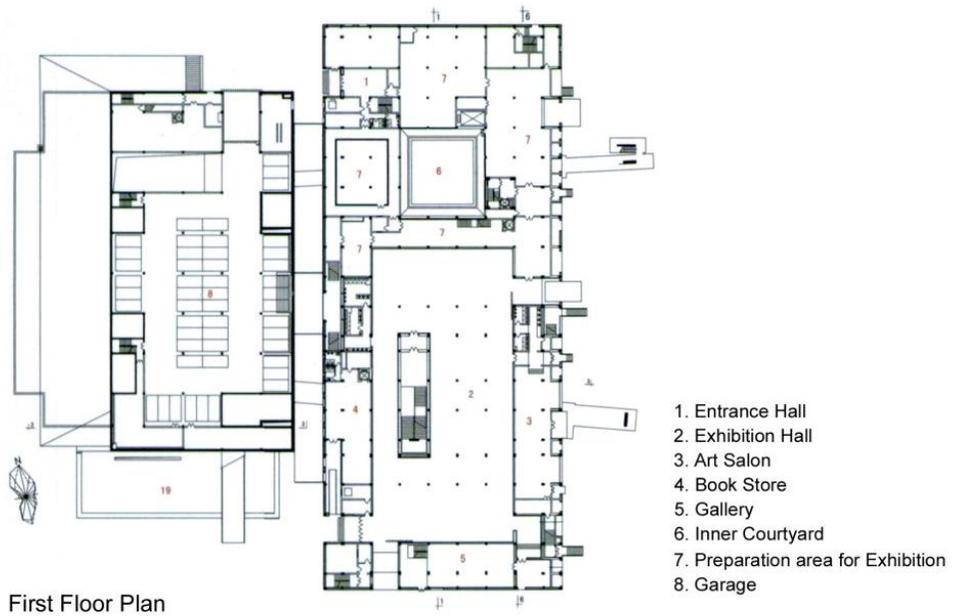
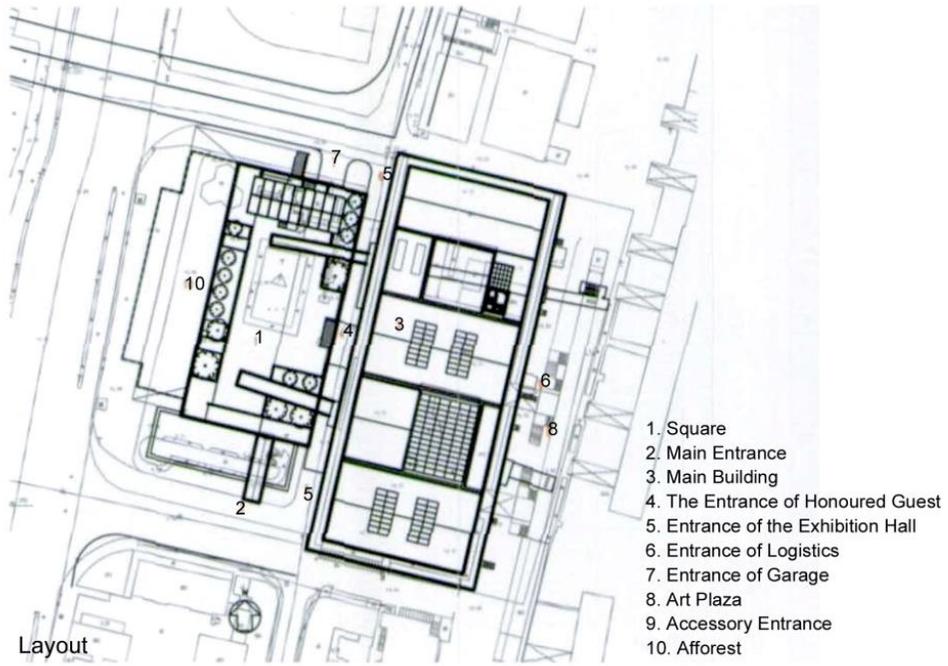
Construction Period: 2002-2005

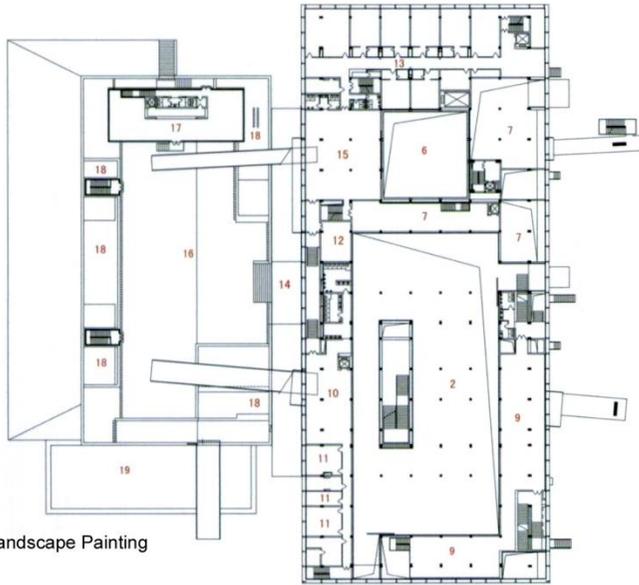
Location: Ningbo, China

Site Area: 12,000 m²

Building Area: 24,000 m²

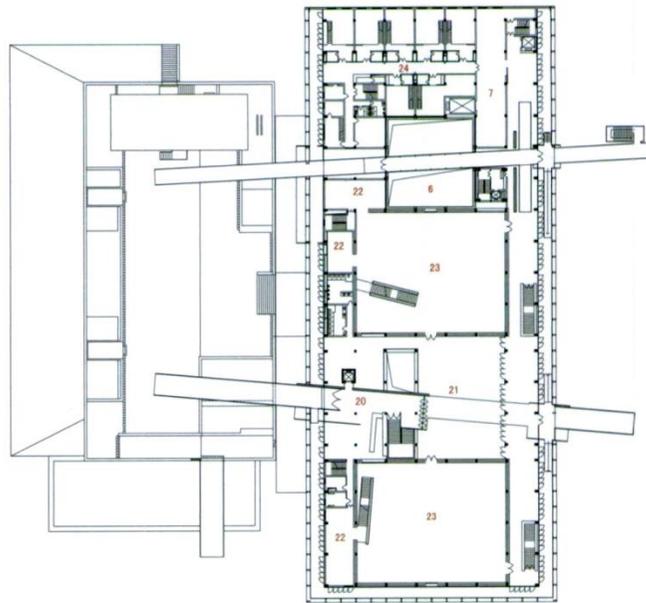






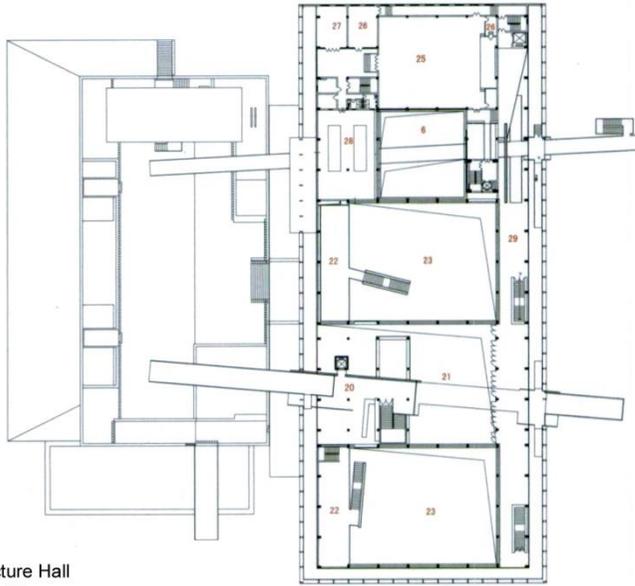
Mezzanine of First Floor Plan

- 9. Exhibition hall of Chinese Landscape Painting
- 10. Hall of Training Center
- 11. Training Center
- 12. Reception Room
- 13. Office Area
- 14. Entrance of Honoured Guest
- 15. Reception Room
- 16. Roof Platform
- 17. Bar
- 18. Garden
- 19. pOol



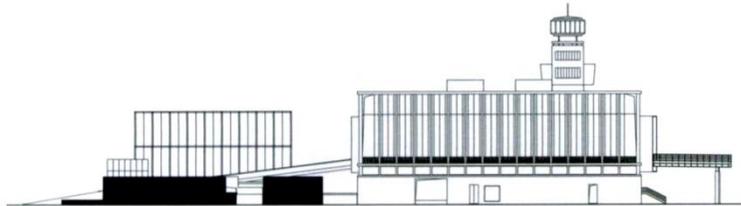
Second Floor Plan

- 20. Entrance Hall
- 21. Hall
- 22. Small Exhibition Hall
- 23. Main Exhibition Hall
- 24. Studio

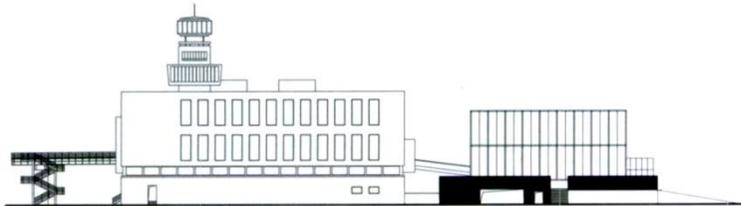


- 25. Lecture Hall
- 26. Rest Room
- 27. Meeting Room
- 28. Roof
- 29. Overhead

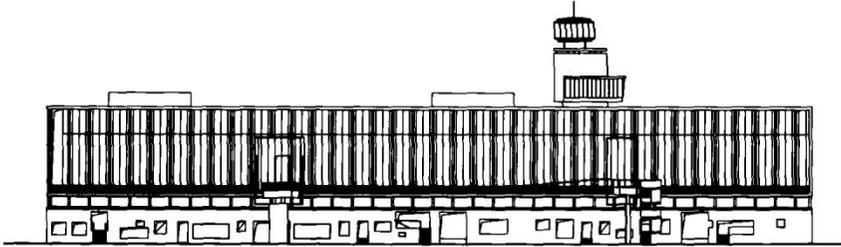
Mezzanine of Second Floor Plan



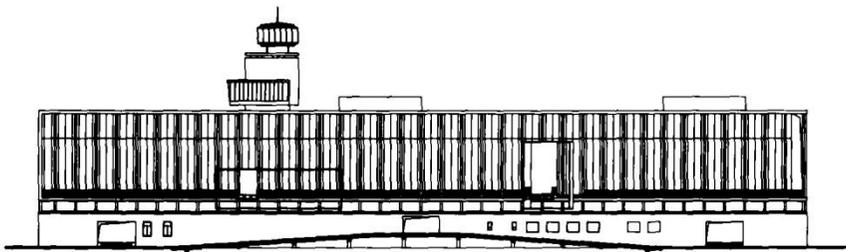
South Elevation



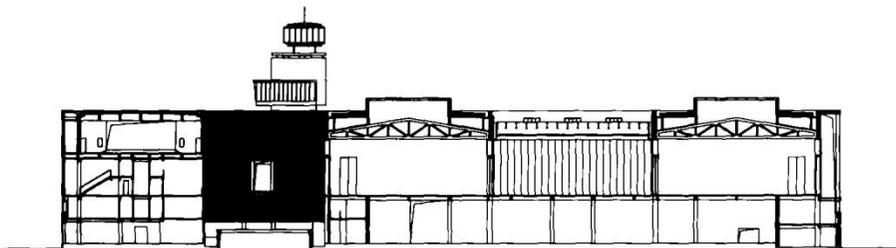
North Elevation



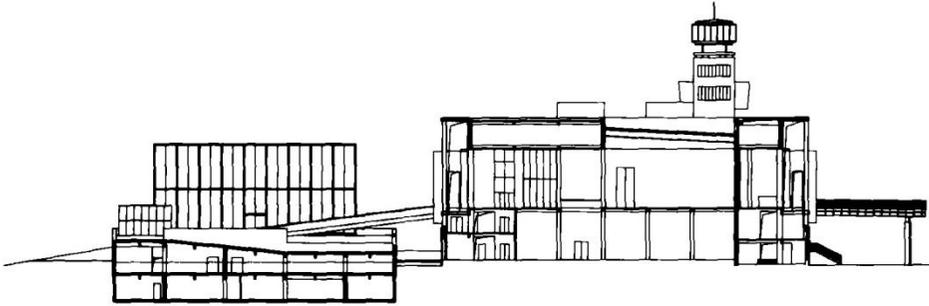
East Elevation



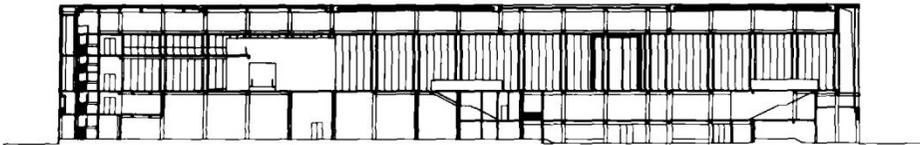
West Elevation



Section



3-3 Section



6-6 Section

Xiangshan Campus, China Academy of Art

Design period: 2001-2003 (Phase 1), 2004-2006 (Phase 2)

Construction period: 2002-2003 (Phase 1), 2006-2007 (Phase 2)

Location: Hangzhou, China

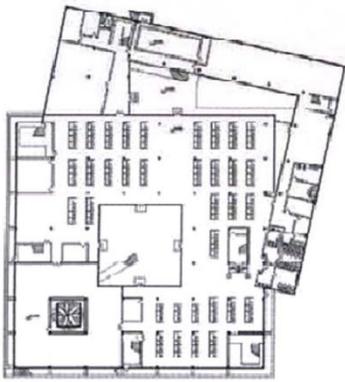
Building Area: 70,000 (Phase 1), 75,000 (Phase 2)



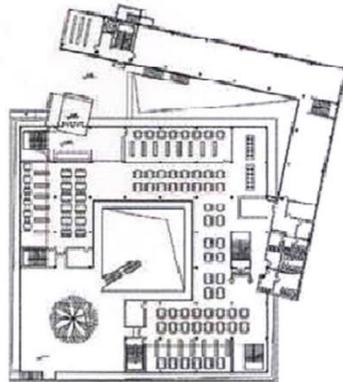


Layout:

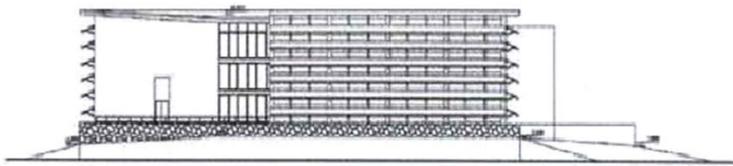
The First Phase: 1. Library; 2-6,9. Teaching Building and Studio; 7. Office Building and Art-studio; 8. Stadium; 10. Museum
 The Second Phase: 11. Experimental Center; 12-19. Teaching Building and Studio; 20. Stadium; 21 Dormitory



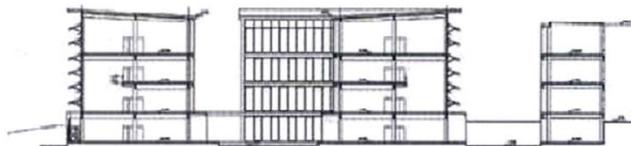
1# Bld. Ground Floor Plan



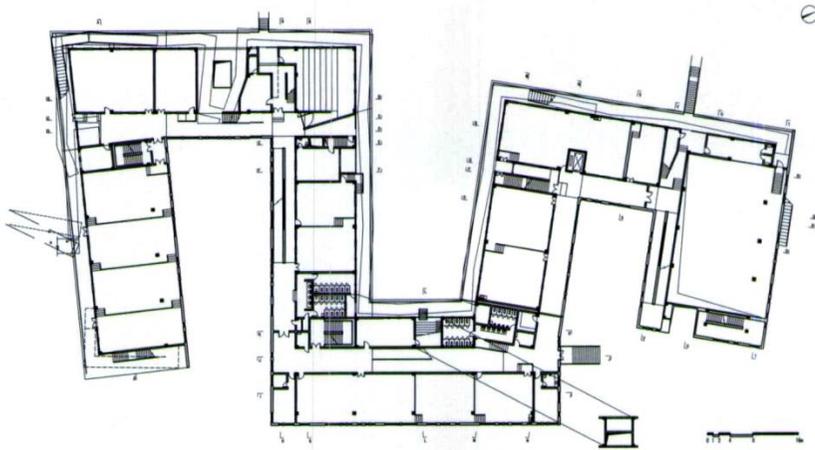
1# Bld. First Floor Plan



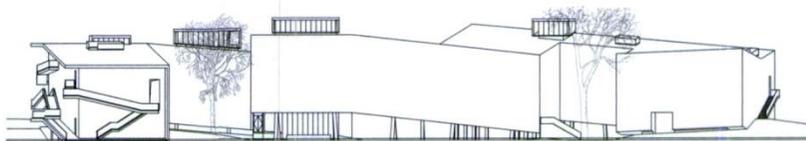
South Elevation



North Elevation



11# Bld.
First Floor Plan



East Elevation

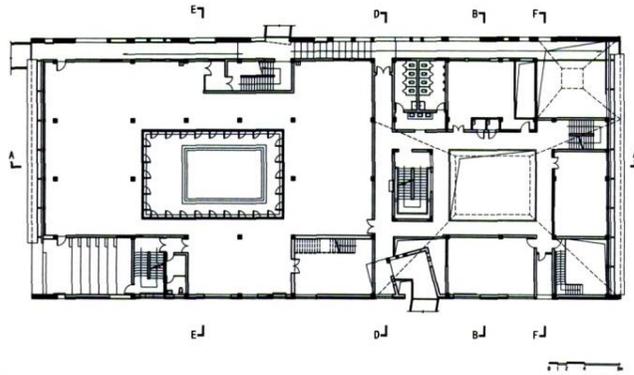


West Elevation

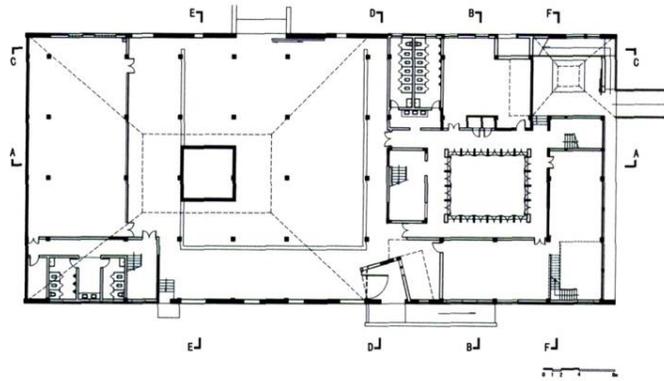


South Elevation

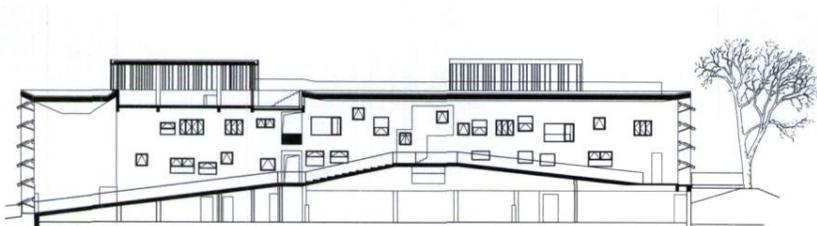
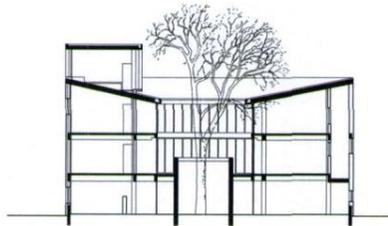
North Elevation



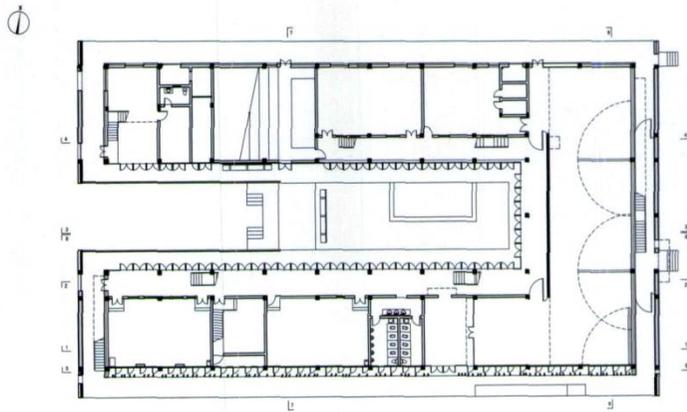
12# Bld.
Second Floor Plan



12# Bld.
First Floor Plan



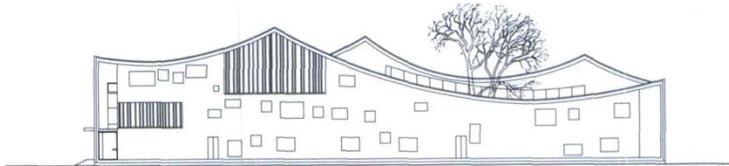
Section



14# Bld.
First Floor Plan



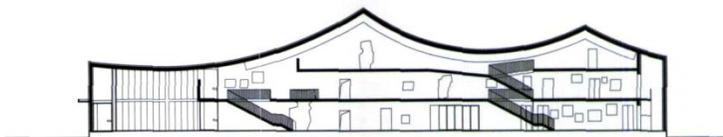
South Elevation



North Elevation

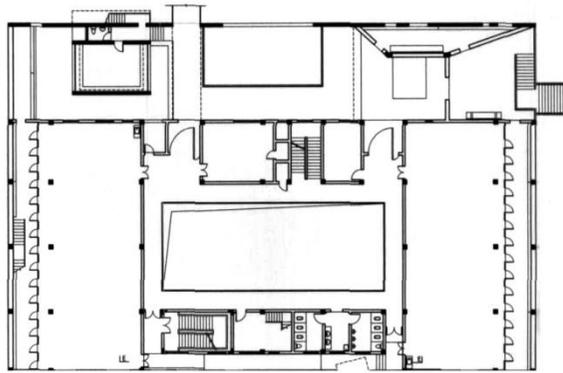


Section 1-1

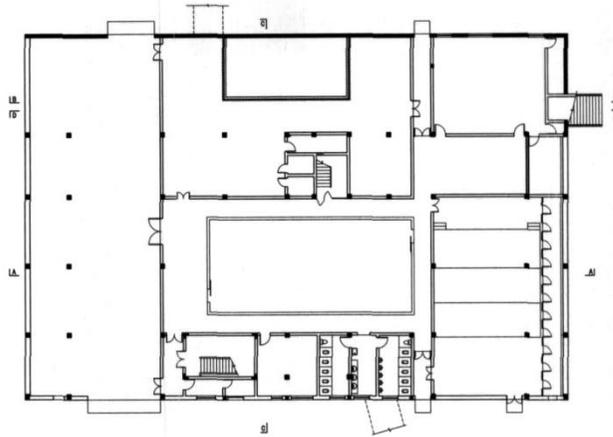


Section 2-2

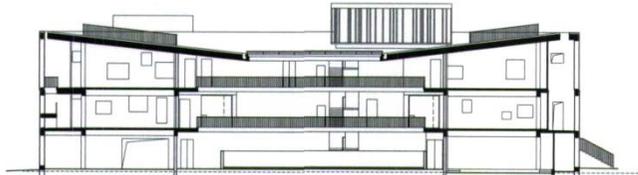
15# Bld.
Second Floor Plan



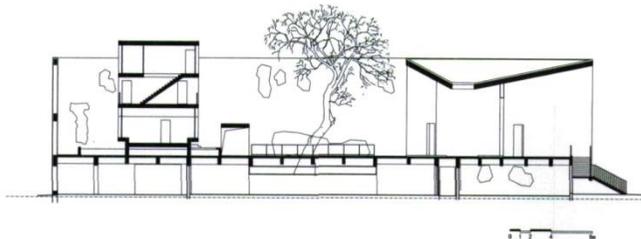
15# Bld.
First Floor Plan

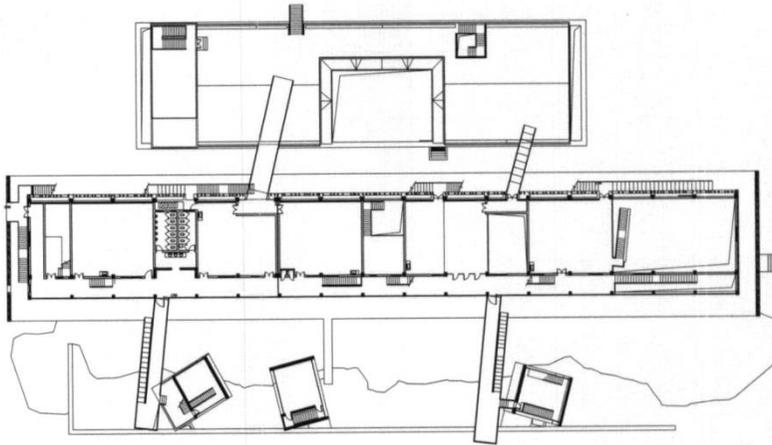


Section A-A



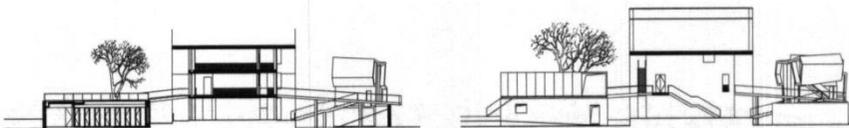
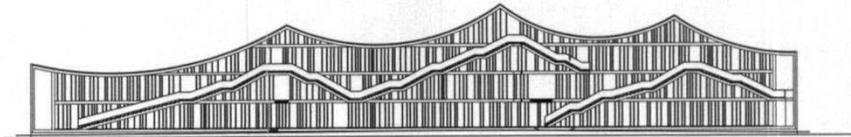
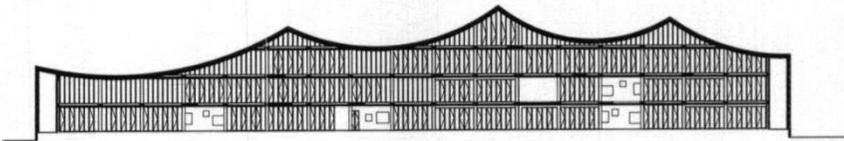
Section B-B





19# Bld.

Second Floor Plan



Section

Ningbo History Museum

Design period: 2003-2006

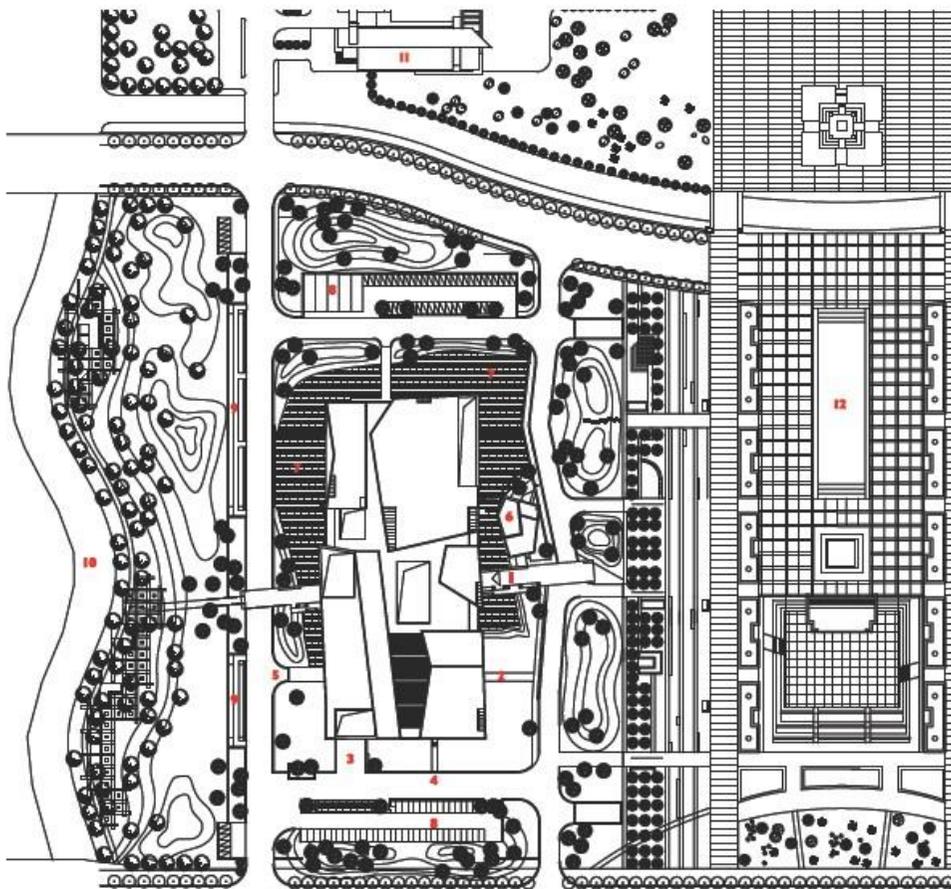
Construction period: 2006-2008

Location: Ningbo, China

Site Area: 45,000 m²

Building Area: 30,000 m²





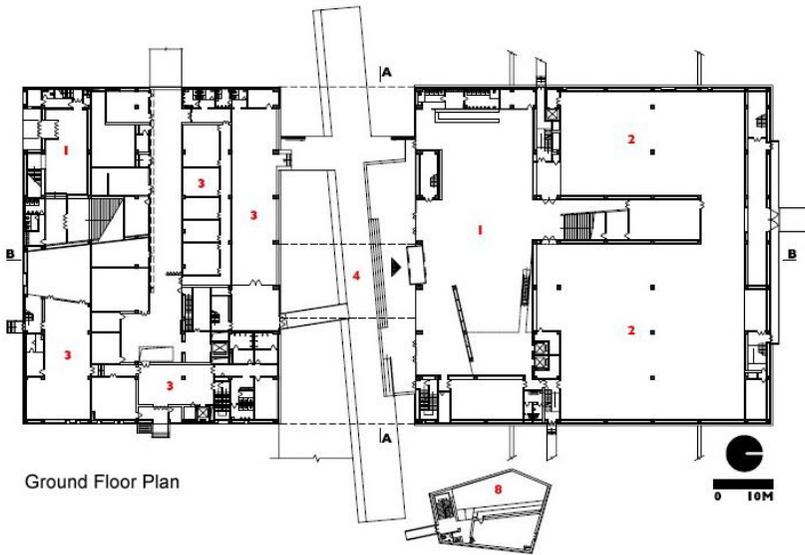
基地平面
SITE PLAN



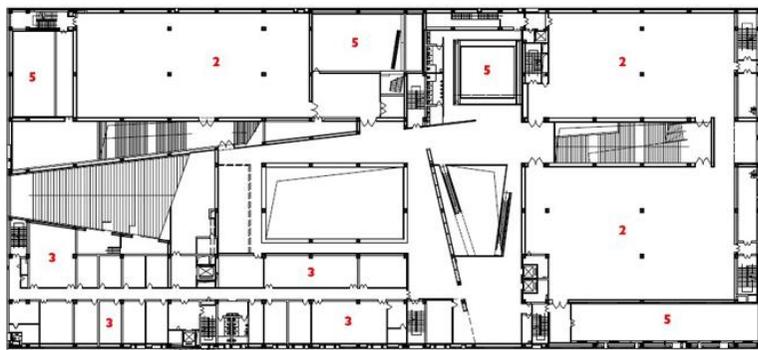
- 1 主入口
MAIN ENTRANCE
- 2 行政人员入口
ADMINISTRATION
ENTRANCE
- 3 次入口
SECONDARY ENTRANCE
- 4 办公区入口
OFFICE ENTRANCE

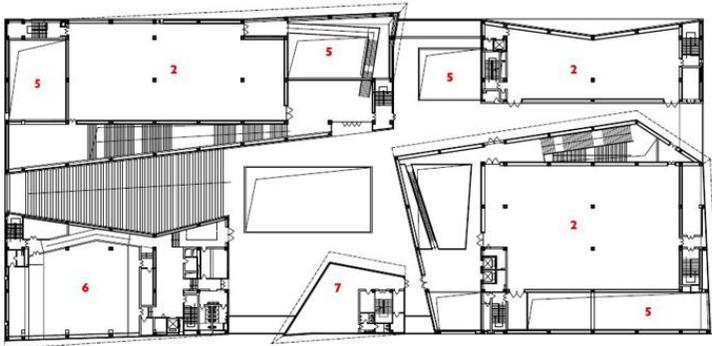
- 5 运货入口
STORAGE ENTRANCE
- 6 餐厅
RESTAURANT
- 7 池塘
POND
- 8 停车场
CAR PARK

- 9 自行车停放处
BICYCLE PARKING
- 10 河流
RIVER
- 11 政府大楼
MUNICIPAL BUILDING
- 12 广场
PLAZA

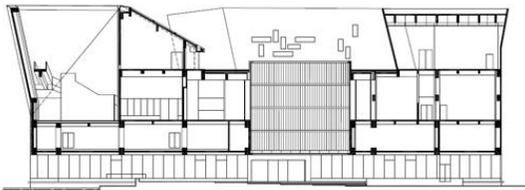


- | | |
|-----------------------|---------------------|
| 1. Main Hall | 5. Courtyard |
| 2. Exhibition Gallery | 6. Mutipurpose Room |
| 3. Office | 7. Cafeteria |
| 4. Entrance | 8. Restaurant |

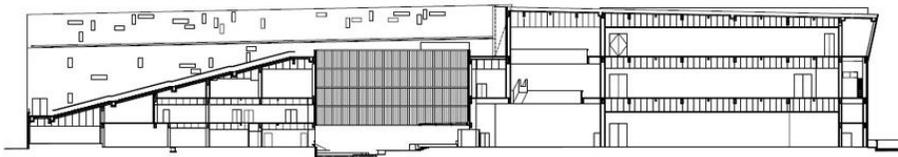




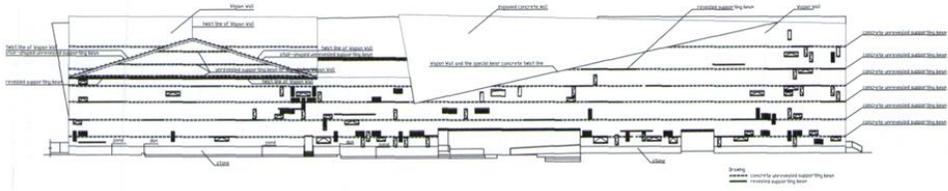
Second Floor Plan



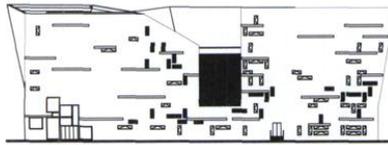
Cross Section



Longitudinal Section



Draqing of RC beams on and inside the exterior wall



South Elevation

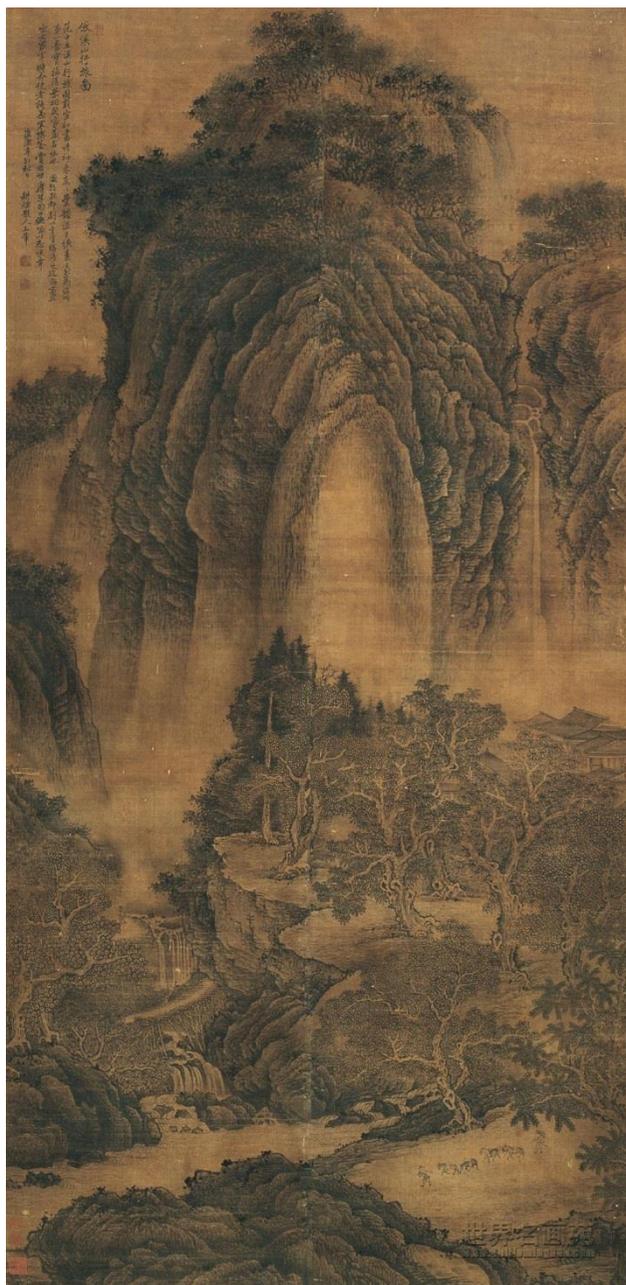


East Elevation

Appendix b_ Relevant Chinese Landscape Painting

Travelers amid Mountains and Streams
by **Fan Kuan** in the Northern Song Dynasty

《溪山行旅图》 北宋 范宽

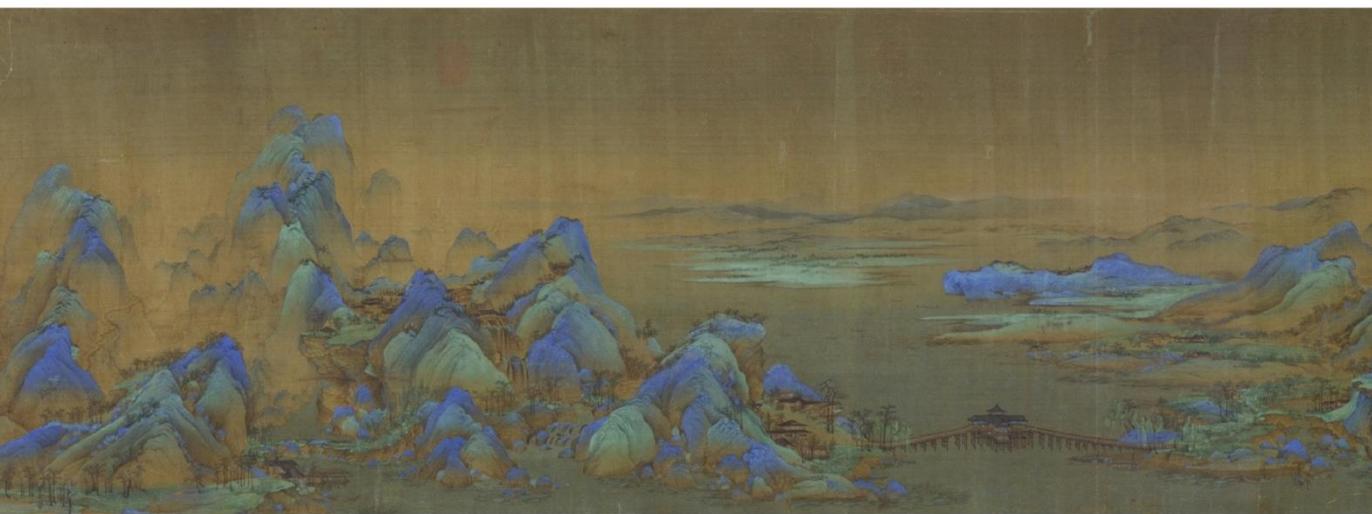


Thousands of miles of Mountain and Water

by Zhang Ximeng in the Northern Song Dynasty

《千里江山图》 北宋 张希孟

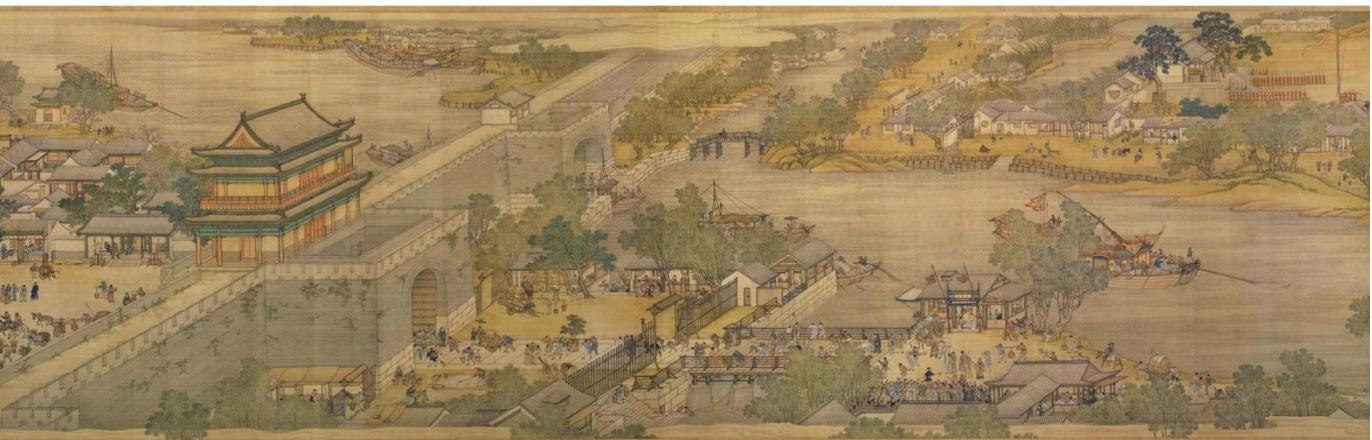


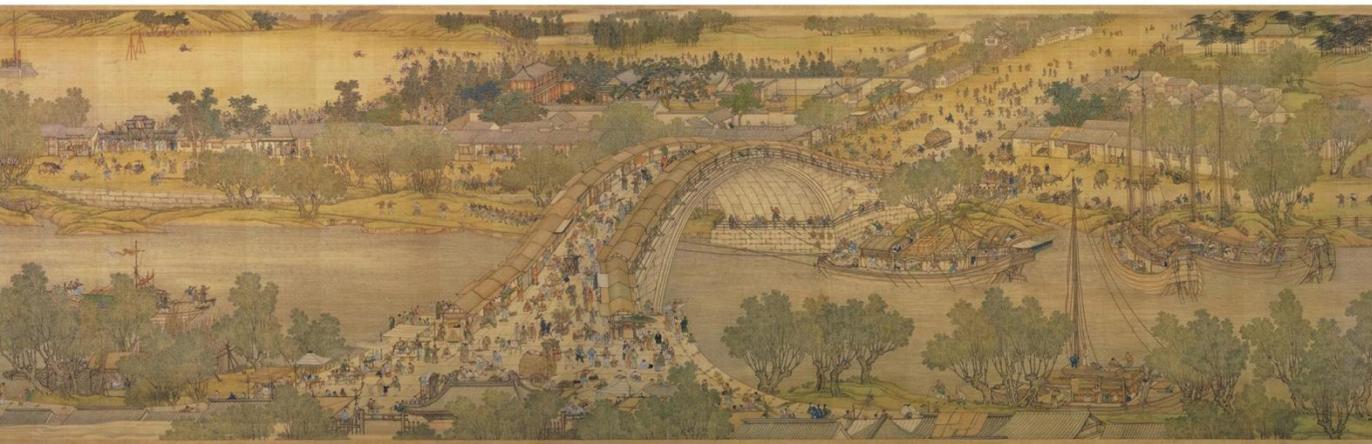


“Riverside Scene on the Pure Brightness Festival”

by Zhang Zeduan in the Northern Song Dynasty

《清明上河图》 北宋 张择端

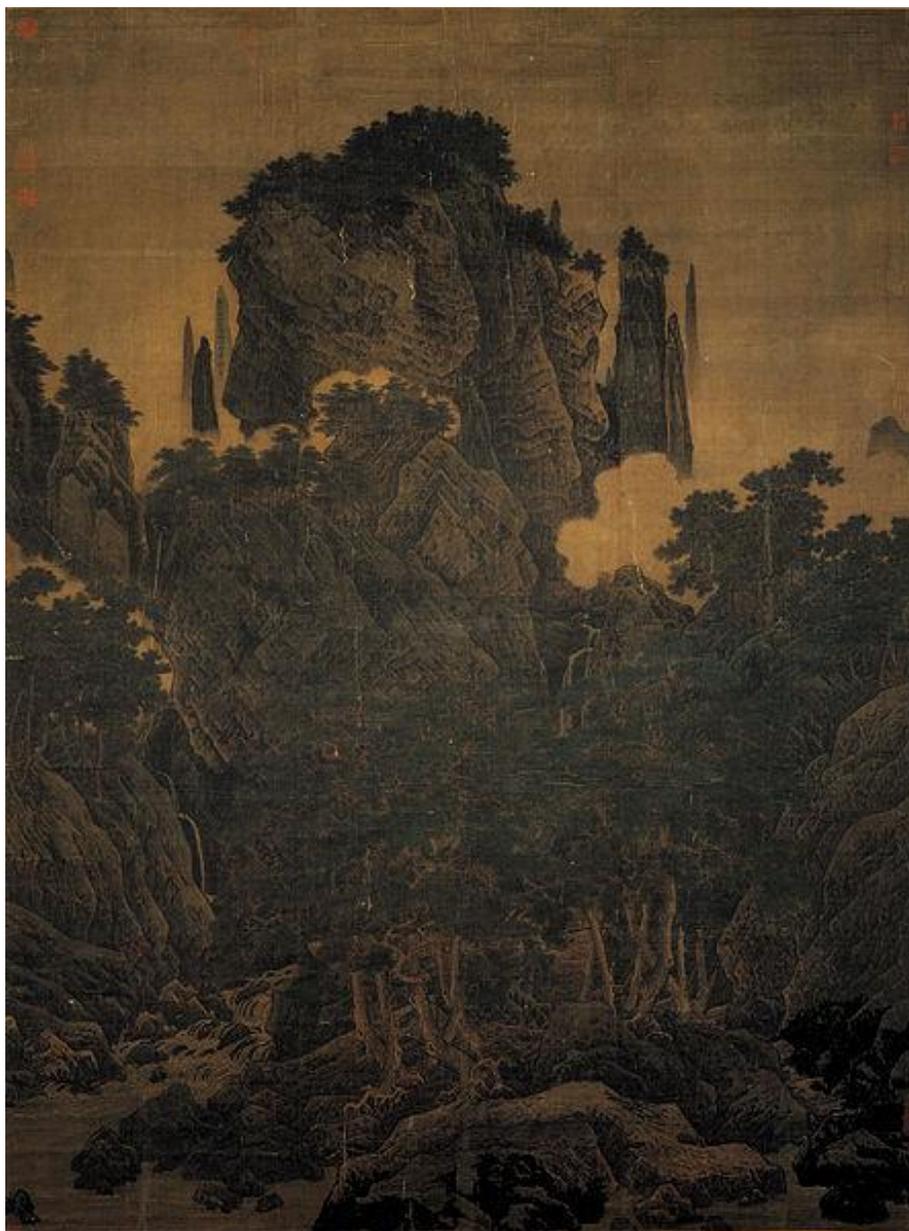




“Whispering Pines in the Mountains”

by Li Tang in the Northern Song Dynasty

万壑松风图 北宋 李唐



국 문 초 록

왕슈 건축 작품 속의 중국 전통성에 관한 연구

서울대학교 대학원 건축학과

풍 란

지도교수

최 두 남

지금, 국제화와 도시화의 발전에 따라 중국은 점차적으로 현대건축의 실험장으로 변하고 있다. 전통문화를 지니고 있는 전통건축은 점점 사라져 가고있고 근래의 중국건축설계에서도 전통공간을 찾을 수가 없다. 따라서 전통 건축의 계승 문제가 중국현대건축의 주요 이슈 중의 하나로 대두되고 있다.

왕슈의 2012년 프리츠커상 수상은 중국건축계에 의미 있는 전환점이 되었다. 중국전통건축을 중점적으로 탐구하는 왕슈가 세계의 인정을 받은 것이다. 심사위원들의 말에 의하면: 과거와 현재 사이의 적절한 관계를 논의하는것은 현대의 주요한 문제이다. 현재 중국 도시화의 발전과정에 있어서, 건축이 반드시 전통에 기초를 두어야 하는지 아니면 미래만을 보아야 하는지의 사안을 상기시키기 때문이다. 모든 위대한 건축과 같이 왕슈의 작품들은 이러한 문제를 초월하는 건축이다. 보다, 전체적인 맥락에 뿌리를 두기 때문에 세월이 흘러도 변치않는 보편적인 건축이다. 그의 건축에서는 전통 계승에 대한 깊은 혜안이 돋보인다. 왕슈는 특히 향주에 깊은 관심과 애정을 보인다. 그의 대표작 - 宁波美术馆, 中国美术学院象山校区, 宁波历史博物馆은 모두 향주를 배경으로 설계하였다. 위의 세계 작품에서 드러나는 전통적 요소의 응용법을 분석함으로써 그가 전통을 어떻게 계승하고자 하는지의 설계 컨셉과 방법을 추출할 수 있다. 또한 이는 궁극적으로 우리에게 중국의 현대건축설계 방향을 제시

해준다.

2장에서는 루이스 바라간이 건축에서 어떻게 전통 계승을 표현하는지에 대해 분석 및 정리하였다. 또한 왕슈의 건축사상 및 항주시의 배경에 관하여 설명하였다. 3장에서는 전통요소의 응용, 건축구상, 건축공간과 건축재료 등의 세 가지 카테고리를 통해 왕슈의 건축작품을 분석하였다. 4장에서는 3장에서의 분석을 근거로 왕슈의 건축에서 드러나는 전통계승 방법을 분석하였다. 5장에서는 앞서서의 분석을 통하여 왕슈의 전통적 근원 및 중국현대건축에 던지는 메시지를 탐구하였다.

왕슈는 설계 과정에서 장소의 재건 및 ‘장소 정신(place spirit)’ 재표현에 집중하는데, 이는 사람들로 하여금 장소에 속해 있다는 느낌을 준다. 왕슈의 건축에서 전통이란, 단순히 전통요소들의 집합이 아니라 사람들의 장소성에 대한 감각을 자극하여, 장소를 구성하는 방향성과 인지를 실현하는 것이다. 왕슈의 전통에 대한 계승과 탐구는 오로지 전통을 위한 것이 아닌, 끊어진 역사와 시간을 이어주어 전통생활방식을 다시금 실제의 도시생활과 환경에 도입하는 것이다. 즉, 사람들을 시적인 분위기 속에 거주하게 하는 것이다. 정리하자면, 왕슈는 전통을 ‘부활’시키는 일을 하였지 간단한 보호작업을 한 것은 아니라고 할 수 있다. 그는 전통철학사상, 전통경관시스템, 전통민간건축에 대해 공부하며 전통을 탐구함으로써 더욱 지혜로운 방법을 계속하여 찾아가고 있다. 특히, 현대의 생태환경문제를 직면하고 대응하는데에 목적을 두고 있고, 새로운 도시건축의 패러다임 속에서 역사와 생활의 기억을 받아들여 장소성과 문화성을 재정립해나가자는 왕슈의 전통에 대한 태도는 우리가 명심해야할 점이기도 하다.

주요어: 중국 전통 건축, 왕슈, 산수, 내레이션, 자연적인 외관, 장소

정신

학 번: 2012-22532

A Study on the Tradition in Wang Shu's Architectural Works

___Focusing on his works from 2000-2010 in the context of Hangzhou city___

지도교수 최두남

이 논문을 공학석사학위논문으로 제출함

2014년 2월

서울대학교 대학원

건축학과

풍란

풍란의 석사학위논문을 인준함

2014년 2월

위원장



부위원장

최두남



위원

원

