

UDC 721

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## STUDY ON THE INHERITANCE OF CHINESE TRADITIONAL SPACE STRUCTURE IN SHUIANSHANJU RECEPTION CENTER IN HANGZHOU, CHINA

**Abstract:** *There are many kinds of spatial structures in traditional Chinese space, such as the courtyard which is commonly used in residential buildings, the spatial layout of Suzhou gardens, the traditional village layout, etc. These spatial structures are being applied in physical practices more and more frequently in the last 20 years. Many Chinese architects are trying to translate the traditional Chinese space structure into architectural language and add the traditional space to their own architectural works.*

*Chinese architect Wang Shu received the Pritzker Architecture Award in 2012 and he became the first Chinese to win this award. In most of his architectural practices, the native intention of Chinese architecture is often adopted. This article will take Wang Shu's architectural work – SHUIANSHANJU reception center in Hangzhou, China as an example to introduce the contemporary inheritance of Chinese traditional space structure. The paper analyzes the types of spatial structure of traditional Chinese gardens and traditional villages through the method of correlation analysis. From the three aspects of entrance space organization, internal space organization and plan space structure, this article analyzes the inheritance of traditional structure in Wang Shu's work, SHUIANSHANJU. The article also analyzes the concrete manifestation of Wang Shu's design concept in SHUIANSHANJU from a critical perspective and examines the rationality of the traditional spatial structure inheritance.*

*It is pointed in the article that SHUIANSHANJU reception center lacks objectivity in inheriting the growth randomness of traditional space-based villages and functional rationality should not be sacrificed to realize the inheritance of traditional space structures. This paper is subsidized by NSFC project which is named as <Research on Technical System of "Downtown Factory" Community-oriented Regeneration in Yangtze River Delta Region>, NO.51678412.*

**Keywords:** *inheritance, Chinese traditional structure of space, SHUIANSHANJU, traditional village.*

Wang Shu received the Pritzker Prize in 2012. As the first Chinese person to win the award, Wang Shu pushes Chinese traditional architecture to the public view. Chinese scholar Wang Xin and Jin Qiuye believed that Wang Shu subverted the preference of modern aesthetics – clear and unadorned abstract forms, and developed a unique style from Chinese traditional landscape painting and traditional architecture. However, in Wang Shu's own opinion, his design languages mostly come from ancient Chinese landscape paintings, traditional gardens and courtyard structures.

The SHUIANSHANJU Expert Reception Center at the Xiangshan Campus of the China Academy of Art is one of Wang Shu's award-winning representative works. It clearly reflects Wang's interpretation of inheriting Chinese traditional spatial structure. His ideas mainly manifested in the Chinese traditional spatial structure of villages, the space structure of classical gardens, and the spatial structure of traditional courtyards. However, at the same time, the methods applied in this work to represent traditional spatial structures also lack rationality and objectivity to some extent.

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## 1. The inheritance of Chinese traditional spatial structure

### 1.1. Entrance space structure – line

The entrance space of Chinese classical gardens has a variety of changes. Take the most prestigious Suzhou gardens as an example. In order to make some changes as much as possible in a limited space, Suzhou garden usually represses the space first and then enlarges the space to organize the route. The entrance is often compressed into linear spaces with several times of changing, twisting and turning. The fun is manifested in three aspects: sequence guidance, tortuous path, and spatial rhythm.

Taking the entrance space of the Liu Garden (Fig. 1) as an example, from the entrance hall to the *ancient wood and cross-coast*, which is one of the most famous attractions in the garden, the visitor must go through the linear space, from narrow to wide, from dark to bright, from tense to gentle, which is full of spatial interests.



Figure 1. Liu Garden entrance space



Figure 2. SHUIANSHANJU entrance space



Figure 3. Entrance space of SHUIANSHANJU

The entrance space of SHUIANSHANJU (Fig. 2 and 3) introduces people into the waterfront corridors with highly guidable trails, and then creates a changing space in the entrance corridors with similar linear techniques as the Chinese traditional gardens. A continuous path connects the openings holes below the transverse walls (Fig. 4). Each hole is followed by a small-scale riverfront rest platform, creating a linear, continuously changing sequence of spaces, which has similarities with the methods of *BUYIJINGYI*, which refers to varying scenery with changing view-points.

However, there are still differences between Liu Garden and SHUI. There is an ancient Chinese poem says, a winding path leads to a hidden spot and a meditation chamber deep flowering trees. It describes the spiritual atmosphere that an ancient Chinese literary aspires to and it is used in the design of Liu Garden, which has a central spiritual space. What is different is that SHUI has parallel functional spaces. Therefore, SHUI does not have a single central space. The entrance space takes a straight-forward parallel structure (Fig. 5), connecting different functional zones in linear space.



Figure 4. Frame and Scene

No.	Region	City	Name
1	Northeast	Harbin	Lao Daowai
2	North China	Beijing	Siheyuan
3	East China	Qingdao	Liyuan
4	East China	Zhangzhou	Tulou
5	Southwest	Yunnan	Yikeyin
6	Northwest	Xinjiang	Ayiwang

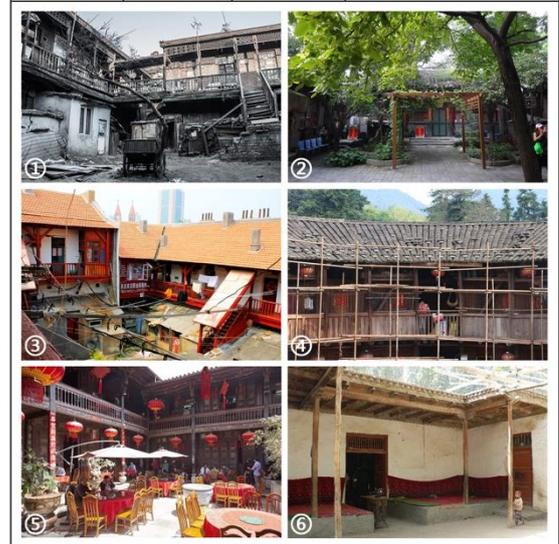


Figure 6. Traditional form of Chinese courtyard

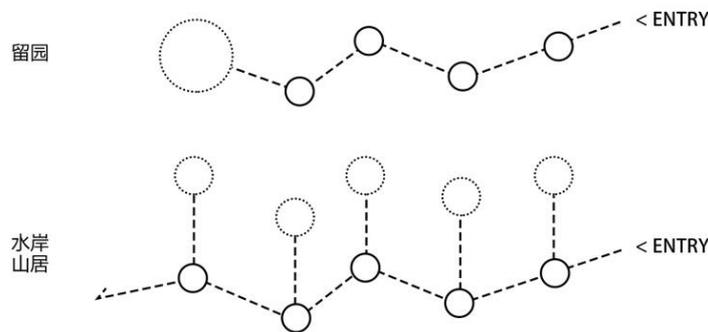


Figure 5. Spatial Organization Analysis

### 1.2. Internal space structure – courtyard

The courtyard space is one of the most commonly used spatial structure forms of traditional Chinese residential buildings, like the Harbin Laodaowai Buildings in the northeast, the Yunnan traditional building Yikeyin in the southwest, the Tulou in Fujian Province in the southeast, and the Ayiwang traditional residence in the northwestern Xinjiang. The courtyard spatial structure is extremely wide, which also reflects that the courtyard-style space structure has strong plasticity, adaptability and livability (Fig. 6)

The interior of the SHUIANSHANJU also uses the layout of courtyards. The main shape is four-sided and four-cornered enclosures, which are similar to most of the residential buildings in China. However, the sense of encirclement of the various courtyards was broken by complicated traffic flow lines and disorderly architectural space. Wang Shu did this deliberately and

intentionally and intended to introduce the so-called "intention of landscape painting", combining the architecture and nature.

As can be clearly seen from the plan of SHUIANSHANJU (Fig. 7), from the ground floor to the top floor, the courtyard is gradually weakened. Some areas are set up on the ground floor but are cancelled on the top floor. Some courtyards are converted from four-sided enclosures into four-cornered courtyards. The two long sides were interrupted therefore the sense of courtyard was weakened. The mobility and permeability of the space were strengthened.

Among the overlapping courtyards, the most distinctive parts are the two relatively complete courtyards in the middle. The spatial image is tall and narrow with the first floor tiled and decorated with a pair of rattan tables and chairs and an altar of water. The atmosphere of the space is quite smooth and peaceful. However, the inadequacy lies in the fact that space is too narrow (Fig.8). Visitors can feel lonely when being in it and it feels just like in a patio.

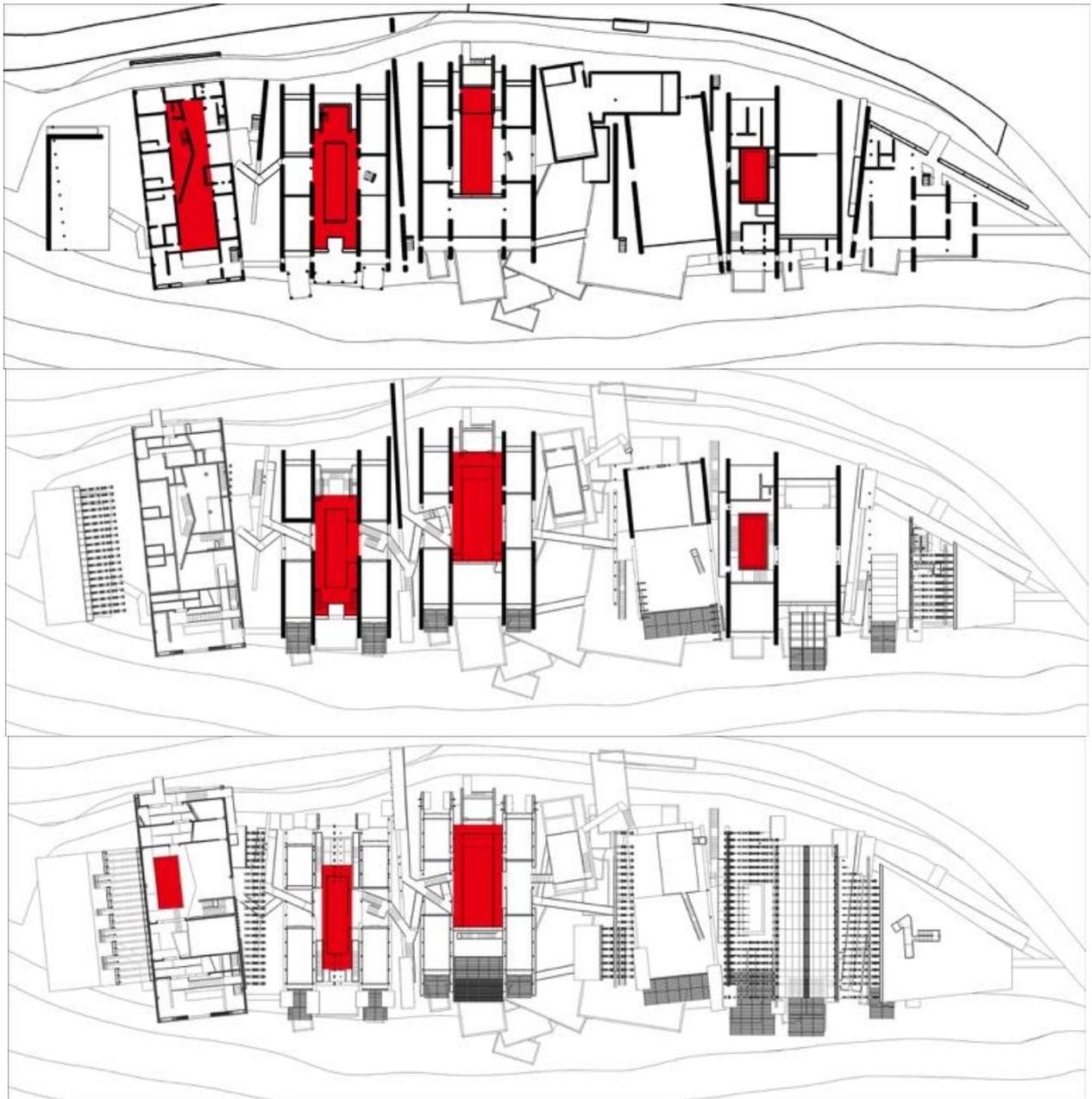


Figure 7. Spatial Organization Analysis

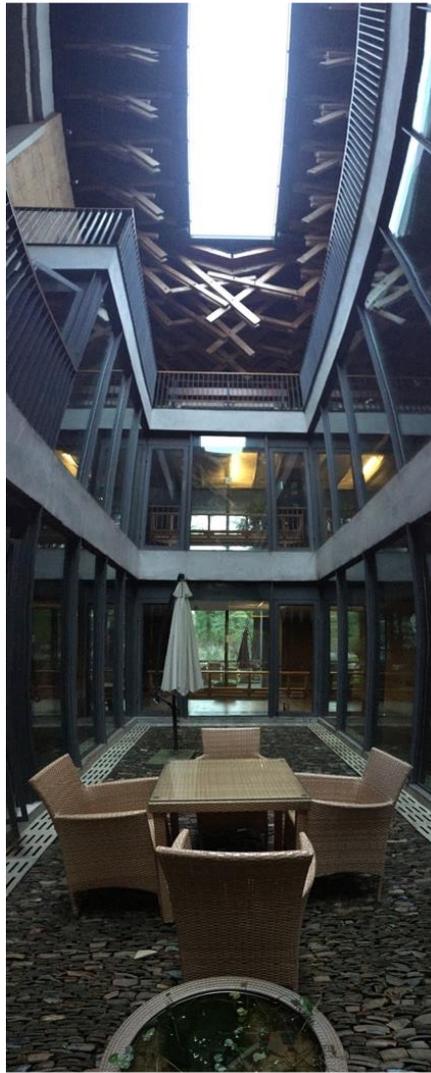


Figure 8. Courtyard

### 1.3. Plane Spatial Structure – Village

The geographical conditions of “Waterside Mountain Home” are similar to that of traditional Chinese villages and its plane spatial structure also draws on the shape of traditional villages to some extent.

When reviewing the field surveys, the author constantly recalls the dwelling villages in Southern Fujian in 2015 (Fig. 9). The spatial structure of SHUIANSHANJU is similar to the local dwellings. The main points are as follows:

#### 1) External Space – Back to Mountain and Facing Water

Building a house on the north side of the mountain is a habit that has been practiced by human beings for thousands of years in China. It is conducive to water intake and food acquisition. It also helps to shield people from the north wind and avoid flooding. The SHUI reception center is also built facing the water and back to the Xiang Mount. However, in most of today's architecture projects, river is usually regarded as architectural advantages. From a bird's-eye view, SHUI is well integrated into the surrounding environment under the shelter of Xiang Mount behind it.

#### 2) Internal Structure – "Street-Alley-Courtyard"

Traditional waterfront villages often fall along a river, and the alley extends from the gap between the buildings inwards and upwards. The residential courtyards sit on both sides of the roadway, thus forming a planar spatial structure of the entire village.

Wang Shu inherited this traditional spatial structure feature in the works of SHUIANSHANJU. Water Street is translated as a linear corridor on both sides of the north and south; the roadway is translated as a narrow corridor between the roughly parallel walls: the courtyard is relatively completely inherited, and further developed and changed. (Fig 7).



Figure 9. Houses in Southern Fujian



Figure 10. Perspective of SHUIANSHANJU

Different from the traditional village spatial structure, SHUIANSHANJU uses a huge sloping roof to connect adjacent courtyards. This method can be seen as the transformation from the “village” to the “building” volume. Wang Shu operates on the fifth facade, the “roof” element, and transforms the group relationship into a single body mass, thus completing the inheritance and development of the traditional spatial structure.

### 3) Traffic Flow – Wingding and Zigzagging

One of the most significant characteristics of the overall spatial structure created by traditional villages is spontaneity and randomness. The construction of villagers is often based on the needs of each village, and is adapted to local conditions. It grows organically according to the characteristics of the site itself. The transportation space brought about by this organic nature is

often staggered, but because the space it connects to has a distinctive character from the point of view of life, it is a lost experience while walking through it.

SHUI inherits the complicated and tortuous transportation system of traditional villages in a certain sense, especially the vertical transportation system. Different levels are built up with complicated stairs, and you can reach the roof from the ground. This gives people a rich sense of space, but because of its large differences in spatial attributes and content from traditional villages, spatial orientation and interest are greatly lost. From the floor plan (Fig. 11), it can be seen that within the entire volume of the building, the architect has set a large number of stairs, with different angles, scales, and forms. Therefore, the author thinks that the transportation system of SHUI has only got traditional shape, but did not spread its meaning.

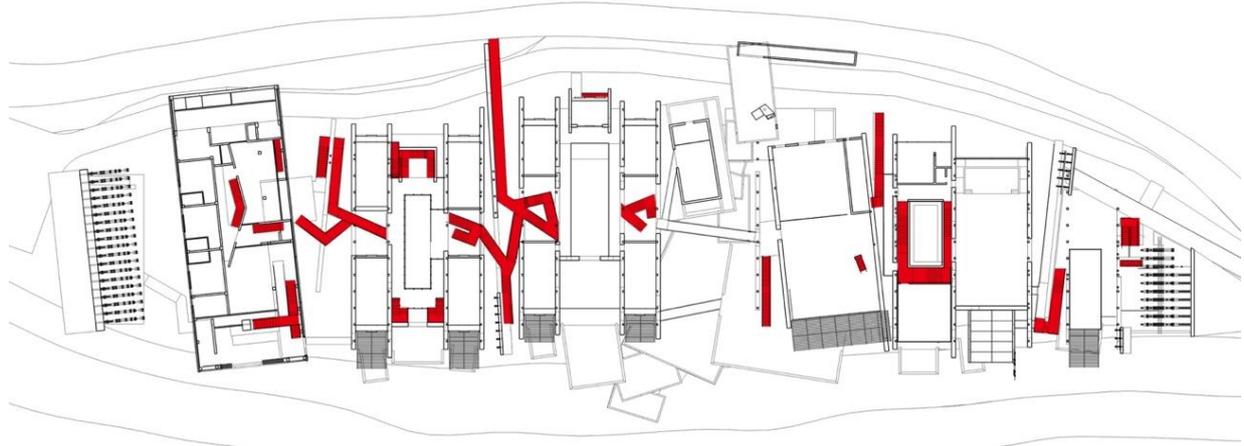


Figure 11. Stairs in SHUIANSHANJU

## 2. Irrationality from a critical perspective

Based on the foregoing analysis, it can be said that this piece of work by Wang Shu reflects his architectural design concept to a certain extent, but there are still many contradictions worthy of discussion in the design, mainly in the following two points:

### 2.1. Contradiction between Subjective Consciousness and Random Growth

The concept of natural and indigenous that Wang Shu emphasized in his design has one thing in common: the randomness of its occurrence. For example, when the expression inherits the structure of village flat space, Wang Wei sets the angle between adjacent courtyards to  $6^\circ$ , which is intended to create a natural growth of randomness. However, the designer's spatial shaping is inevitably accompanied by architects. The subjective sense of the subject, regardless of how it stresses the randomness and flexibility of the creation, is still in stark contrast to the spontaneous construction of the villagers and cannot be convincing. The inheritance and development of spatial structure do not require the purpose of connecting abstract thinking and perceptual world.

It cannot be denied that Wang Shu's interpretation of native architecture is to a certain extent inherited from the traditional spatial structure, but this only gives an alternative answer. The existence of modern architecture cannot escape the subjective consciousness of the architect himself. Therefore, when overemphasizing the nature in the architecture, the contradiction becomes apparent.

### 2.2. Contradictions between reference intention and architectural function

From the perspective of an architectural student, to observe this architectural work, often with a certain degree of non-objectivity – commonly used "visit the museum's perspective" to visit all architectural works, so when its function is also examined too deliberately, that is to refer

to the contradiction between the intention and the visit to the building. However, Wang Shu's intention of placing traditional villages in hotel buildings is somewhat reasonable and worthy of judgment and reflection.

It can be said that Wang Shu's subversion of "a clear and unadorned preference of modern aesthetics" is, to a certain extent, an inheritance of the traditional spatial structure. However, this subversion is sacrificed with functional rationality. The spatial structure complexity is much more than the traditional village, but the space is not as interesting. Therefore, the design concept of "subversion of modern aesthetics" has provided new answers to the inheritance of traditional space. However, what kind of answer is the best solution is still worth continuing research and discussion.

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