

Wright's Early Grassland Architecture Style Under The Influence Of Japanese Traditional Architecture Culture

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Abstract: Starting from Wright's early life experience, this paper introduces the sprout of his early grassland architectural style, and analyzes the architectural features of his early grassland style, such as the flat facade, etc. This passage will focus on the influence of Japanese traditional architectural culture on his early grassland style architecture through the perspectives of space, shape and spirit.

1. Introduction

Frank Lloyd Wright (1867 ~ 1959) was a famous Modernist architect in America. His theory of organic architecture has exerted a profound influence on later generations. Wright had a strong interest in Japanese culture all his life, and his early steppe style architectural works were deeply influenced by the traditional Japanese architectural culture.

2. Germination Of Early Grassland Style

Wright was born in Richlandcenter, Wisconsin in 1867. When he was a little boy, he cultivated her knowledge of geometric shapes virtually with the guidance of her mother. At the same time, her sense of space and analytical ability were trained. The farm-living experience in his uncle's farm deepened his understanding of nature, which may be the source of Wright's prairie style architectural thoughts. He studied civil engineering as a professor's assistant at university, during which he learned relevant practical drawing knowledge and laid a foundation for my subsequent architectural design career. In addition, his ancestor Welsh was a god who believed in the mysterious power of nature, which is also influencing his practice and theory of "organic architecture".

In 1887, Wright went to Chicago to look for a job. While working in The Schersby studio, influenced by Schersby and his cousin, Wright started his research on Japanese art. In 1888, Wright joined the architects D. Adler and L. Sullivan. Then Wright married his first wife in 1889 and built his family home in Oak Park, in the western outskirts of Chicago. In 1893, he opened his own studio. He was invited to participate in the Chicago Fair and visited the Japan Pavilion. Influenced by the design concept of combining Japanese architecture with nature, he began to understand and fall madly in love with Japanese architectural culture. Thus his first golden period began -- the period of grassland style.

3. Introduction Of Prairie Style Architecture

3.1 Winslow House

The design of Winslow villa attaches great importance to the connection with the surrounding environment, which is exactly in line with the principle of natural form of traditional Japanese architecture. Plane composition is free and simple, seriously symmetrical but not completely symmetrical. The large pitched roof and the deep overhanging eaves around it once again confirm the influence of the traditional Japanese architectural culture in the building.

Japanese wooden buildings under the influence of the overall design geometric linear modelling, Wright, draw lessons from this point on the facade composition and internal processing bricks, horizontal and vertical combination and rectangle and polygon is quite appropriate, a layer of the facade window way very forthright, use Roman flat brick and indirectly, window frame, emphasizes the level of segmentation, and no complex decoration. The second floor facade is decorated with long sheet tiles. The combination of facade wall and sloping roof does not lose the sedate feeling of the building.

The two main features of Winslow house are the horizontal composition and the scale. And horizontal composition is exactly one of the traditional Japanese architectural styles. Winslow house can be seen as the establishment of the basic design concept of Wright's prairie house (Figure 1, Figure 2).

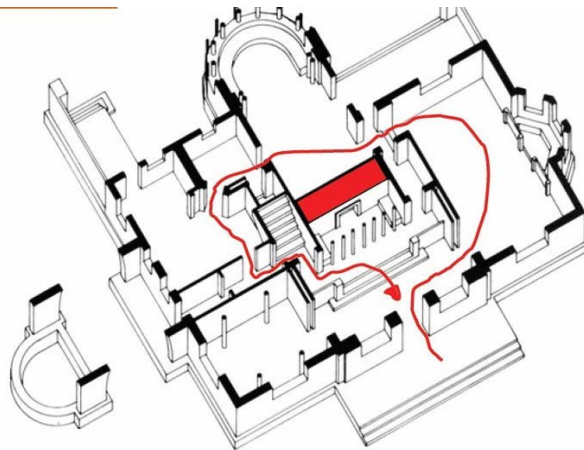


Figure 1. Winslow house plan



Figure 2. Winslow house facade with details

3.2 Willetts House

Willetts House, built in 1902, is Wright's representative prairie style building, which emphasizes the contrast between the horizontal line of the beam and the vertical line of the column, maintaining a balance with it, and the design method is applied skillfully. The broad eaves extending from the overall building are a symbol of its prairie style architecture, with low walls surrounding the building to form a band window at the corner, with abstract and beautiful geometric patterns.

On the floor plan, the living room of the Willetts house is an open living space with a fireplace in the center. A cross-shaped symmetrical space is arranged around the fireplace, extending in all directions and connecting with each other. The fireplace frontage is the living room, the service space at the back, the dining room on the left and the entrance, stair hall and reception room on the right. The hall is set in the overlapping part of the space to facilitate the flow of people. For example, the entrance hall cannot be reached directly to the dining room, and a detour is required. Interior space design dislocation, non - axis symmetry, breaking the traditional square box building

shape.

There are also changes in the design of the building facade. The facade along the street is symmetrical and the entrance is set on the axis. The garden facade is asymmetrical, with entrances at the corners and not easily noticeable. The horizontal lines and vertical lines of the facade, with the stiffeners and wood bars crossing, reflect the wood skeleton inside. The large overhanging eaves on the upper and lower floors and the rows of Windows reflect the maturity of the exploration of the early prairie style architecture. This treatment method is also adopted after Winslow's house to treat the Windows as the basic components of the structure. The combination of the Windows and walls makes the integration of indoor and outdoor space more appropriate (Figure 3, Figure 4).



Figure 3. Willetts House

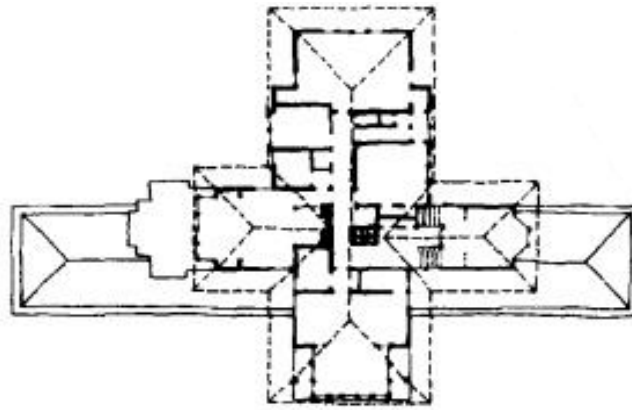


Figure 4. Willetts House plan

The functional zoning of the willetts house around the massive fireplace in the plane layout is largely influenced by the Japanese residential shrine, while the facade has the taste of Japanese wooden dwellings. Even in 1908 Wright spoke of three sources of inspiration for his architecture, the chief of which was the Influence of Japan.

3.3 Robin's House

In 1903, Inspired by the Japanese pavilion at the Chicago Exposition, Wright absorbed more elements of traditional Japanese architectural culture and emphasized the dominance of horizontal lines. The representative building was the Robin's Villa built in 1909. Construction with 33.5 meter long steel tube make the cantilever roof line, plane layout of two staggered rectangle, building space more emphasis on continuous liquidity characteristics, living space will improve the height of the layer, through the living room and dining room can see outdoor scenery, continuously such design does not affect daylighting can avoid direct sun. The outdoor wall of children's entertainment space is covered by a cantilever balcony on the second floor. The ground is paved with stone road, which is very characteristic of the traditional Japanese courtyard (Figure 5, Figure 6).



Figure 5. Robin House

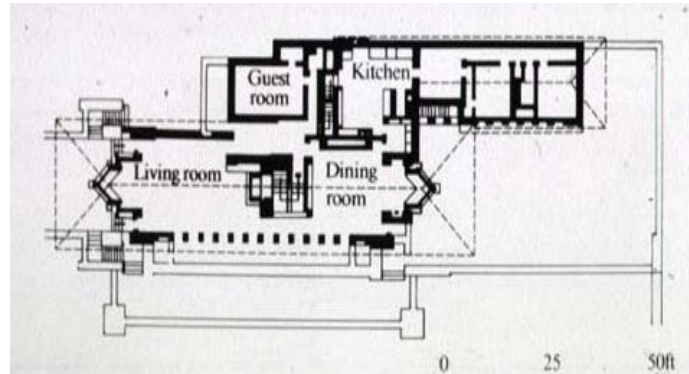


Figure 6. Robin house plan

4. Japanese Elements In Steppe Style Architecture

4.1 Spatial level

In traditional Japanese architecture, push-pull wooden door frames and wooden Windows of papered paper are commonly used to open up the space and increase the fluidity of indoor and outdoor space. This inspired Wright to rethink the sense of physical enclosure of indoor and outdoor space. Attempts to eliminate the wall as a wall have been emphasized throughout the early prairie architecture period, leading to its weakening as a barrier, as a means of open space. Performance on the Wright building layout is scattered square box function layout, break through the traditional static spatial layout, construction such as willetts residential fireplace centered around like radiation each function space, abandon the traditional walking type layout, can be to maintain the independence of each space function at the same time is closely linked, the flow space design with traditional Japanese fuzzy characteristics of architectural space.

In addition, grey Spaces such as corridors often appear in Japanese traditional architecture. As a transitional space within the interior, the corridor is elevated and drops off the ground, with the upper part covered by an overhanging eave. In Wright's early works, the use of gray space is reflected. In 1889, the oak Garden house was designed with a large platform in the front of the house and enclosed by a low wall instead of a railing, forming a gray space. In the subsequent designs of the Heurtley House 1902 and the Cheney House 1904, the grey space evolved into a small patio in front of the living room, enclosed by low walls. The use of grey space makes the design of indoor and outdoor space more circulating.

4.2 Modeling layer

Because of Japan's rainy climate and the characteristics of wooden buildings, its traditional buildings are often protected by sloping roofs. Wright prairie style building is often flat and extended eaves of the roofs, even oneself also don't think Wright DaWuDing protection is not real housing, through this way to the ratio of long and short relations to adapt to the Midwest prairie environment, in order to pass the horizontal extension to achieve harmony with nature. This fits in

with the Japanese architect's idea of harmonizing buildings with the environment.

A straight line is a widely used element in traditional Japanese architecture. It was also a prominent feature of Wright's early steppe style architecture, with a preference for straight lines in architectural appearance, interior decoration and even the design of furniture. The reasons can be roughly explained in two aspects: first, Wright's attitude towards machines. He did not oppose the use of machines, but did not agree with the abuse of machines, calling for machines to be "tools in the hands of artists" instead of using machines to imitate previous manual processes. As a result, Wright designed furniture in straight strips to minimize wood waste. Second, his understanding of straight lines was mainly influenced by His cousin Van Norrosa and his student Arthur Dow.

In addition, the "black wood and white walls" had a direct influence on Wright Prairie style architecture. Wright's early prairie style architectural color is divided into two characteristics: one is black and white. It is a common color matching method in Japanese traditional architecture. The other is mostly warm colors, which are influenced by Ukiyo-e prints in Japan. Wright says in his autobiography that he became interested in Japanese prints at oak Park, Illinois, and learned a lot from them.

In general, Wright's buildings have black wooden posts and beams, deep overhanging eaves, white partition fans between dark wooden frames, multi-level streamline relations and the building's close connection with nature. The open interior space, sliding doors, the alternations of space and line, the horizontal division of the door head and so on are all deeply influenced by traditional Japanese architectural methods.

4.3 Spiritual level

Wright's early steppe style architecture was also greatly influenced by Japanese ideas. "Shrine" is often the place where traditional Japanese dwellings hold ceremonies, and it occupies the core position of the family. While the design elements commonly seen in steppe style buildings with similar spiritual functions as shrines are often located at the core of the entire family gathering, dominating other functional Spaces to strengthen family cohesion. Fireplaces and chimneys often use brick and stone materials to reveal people's residential properties. Wright's rational design evolution may also be influenced by Japanese ideas.

Conclusion

Western modernist architect Wright early influenced by Japanese traditional architectural culture, the western architecture, space and spiritual reflection from the appearance to create, to change its original static model of the space, create harmony with natural grassland type organic architecture, its reflection is also an era of change, the mutual learning of globalization and regional architectural culture, the improved construction will be gradually rooted in the native thinking and practice.

Reference

- [1] Kevin Nute, Frank Lloyd Wright and Japanese Art: Fenollosa: The Missing Link, Architectural History, Vol. 34, 1991 (1991).
- [2] Wu Yunxia. The Way of Japanese Architecture [M]. Heilongjiang: Heilongjiang Fine Arts Publishing House, 1997
- [3] Editorial Department of The Master. Frank Lloyd Wright [M]. Wuhan: Huazhong University of Science and Technology Press, 2007
- [4] Jing Qimin, ZHANG Lian. Architecture Master [M]. Jiangxi: Jiangxi Science and Technology Press, 2000
- [5] Xiang Bingren. Famous foreign architects series -- Wright [M]. Beijing: China Building Industry Press, 1996
- [6] Zhu Renzhou. Research on Oriental Factors in Wright's early Works [D], Nanjing: Nanjing

