A Study of Architectural Design of Pinpu Tribe of Taiwanese Aborigines through Genre Paintings of the Ching Dynasty

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Abstract: Genre paintings usually depict people’s lifestyle and are characterized by observational accuracy and documentary credibility. For governance needs, the Ching Dynasty sent painters to portrait the lifestyle of Pinpu tribe, aborigines in Taiwan. These genre paintings not only record what historical documents did not mention but also provide the image data with the value of the times. With an aim to interpret the concept and outlook of architectural design of Pinpu tribe, the present work used genre paintings and historical written documents as the research foundation. This study found that the environment factors result in different regional features between the north and south. In addition, Pinpu buildings emphasize the mechanism of defense, access to local construction material, water resistance, the efficiency of the construction, and the design of tribal garden plants. It is hoped that the genre paintings with the aids of historical written documents can clarify the concepts underlying Pinpu architectural design in Taiwan.

Key words: genre painting, architecture design, Pinpu tribe

1. Introduction: the viewpoint toward the records through Genre paintings in Chinese history

Taiwan was part of China since 1683 in the Ching Dynasty. In the past, because the aborigines did not record their history, the researchers had to study base on the other people’s historical records. The ruler of Ching Dynasty sent officers and painters to Taiwan to record their daily lives, so those paintings provided the foundation to study the aborigines of Pinpu tribe in Taiwan. While studying the aborigines through genre paintings of Ching Dynasty, we have to understand the characteristics of Chinese historical records. Chinese rulers knew of the importance of collecting and recording folk customs. The main purpose for rulers to collect folk customs was to stabilize the country. However, sometimes written documents along were not enough, so people also painted for recording history. After all, a picture speaks a thousand words.

Because of the rise of historiophoty (the representation of history in visual images), the value of the genre paintings is especially significant before camera was invented. As the emperor Chien-Lung in Ching Dynasty said: “Our Dynasty rule the mainland with all the tribes we have conquered. They present different appearances and life styles. Although we have a few paintings about them, they are not enough. Therefore, the governors have to portray all the appearances and life styles of Miao, Yao, Li, Tong and other tribes. Then return them to the Ministry of Defense and file the collections.”(Jhang Huei-Cheng, 2006) Through these evidences, we know that the genre paintings were reliable. The study analyzed the historical documents and the genre paintings, and
the purpose was to interpret the concept and outlook of architectural design of Pinpu tribe in Taiwan.

2. The basic knowledge about the Pinpu tribe

The Ching Dynasty separated aborigines into “wild/ uncivilized savages” and “tamed/ civilized savages”. Usually, civilized savages denoted Pinpu tribe. In the past, scholars divided aborigines into two groups: those who lived in the mountains, and those who lived on the plains. Pinpu literally meant plain or ground in Chinese. In fact, aborigines who lived in the plains tend to interact with Han Chinese and therefore to be civilized easier. However, it was not entirely correct if we define Pinpu tribe as the aborigines who lived on the plains. Besides, the Pinpu contains more than one single tribe. Nevertheless, according to the documents, “the westside of Taiwan consists of plains and the eastside faces the ocean. The aborigines who pay the tax and to be ruled by Ching Dynasty are named the Pinpu civilized savages.”(Chen Lun-Jyong, 1730) Thus, it was much more suitable to define Pinpu tribe, wild savages and tamed savages according to political factors and the degree they were influenced by Han Chinese.

3. The overview of Pinpu architecture design in Taiwan through genre paintings of Ching Dynasty

There were lots of Pinpu aborigine records in Taiwan during Ching Dynasty. According to the genre paintings, the architecture styles could be recognized as the military base, watchtowers, the main house, storerooms, the cottage, and the plant design.

3.1. the military base at strategic locations and the bamboo fences

Houses located at a crucial passage of the military base (figure1.) and the bamboo fences were the defensive facilities. In the past, aborigines often fight with each other. The Pinpu tribe built the military bases and the walls to prevent attacks from bandit and the other tribes. They also planted bamboo surrounding the houses. The thorns of bamboo were depicted as sharp as eagle’s claws; therefore, the Pinpu aborigines planted bamboo widely as defensive devices.

3.2. Watchtowers

Watchtowers (figure2.) were high buildings for inspecting. According to the record (Huang Shu-Jing, 1747), the broad use of watchtowers was to defend against the wild savages, to protect the crops, and to maintain the security of the community.

3.3. The main house

In the early years of Pinpu society, the aborigines adopted “swidden agriculture” or “slash-and-burn”. When the land was not fertile anymore, they removed to another place. Thus, the Pinpu tribe’s attitude toward housing was temporary, and they sufficiently used building material from the nature. Documents recorded that all the aborigines in a tribe worked together to build a new house, and drank together for celebration of completing the new one.

There were many characteristics of Pinpu architecture. Firstly, we could analyze the main building as two types: “the high-ground dwelling” and “the pile dwelling”. Secondly, the doors of the main houses set at the gable. Thirdly, the whole building shaped as a trapezoid that the roof was bigger than the floor.

3.3.1. The two types of the main building: living in harmony with the nature

A. The high-ground dwelling

According to the record, “the foundation was built by stones and soil; the house was constructed on the foundation.” (Zhou zhong xuan, 1717) This record matched some genre paintings, such as “picking the betel nuts” (figure 3.) and “building the house” (figure 4.). From the pictures we knew the high-ground dwelling
distributed in southern Taiwan. There were many earthquakes and floods in the south, however, the high-ground building could take advantage of its merit to withstand earthquakes and resist floods.

**B. The pile dwelling**

The pile dwelling (figure 2.) was the house raised on piles over the surface of the ground in order to avoid humidity, flood in rainy season and snakes or other creatures. It was the main feature of ancient culture in South East Asia. According to the record, the pile dwellings were usually found in northern Taiwan. The missionary George Leslie Mackay and Japanese Toriiruyuzoo had the same writing and photographs as well. Thus, we deduced that the primary function of the pile dwelling was waterproof, and the use of extra space by raising house was a subsidiary benefit.

**C. Some of the houses relied on ladders or wood board to enter and exit**

Because of the terrain in Taiwan, the rivers were short and rushing. In addition, since Taiwan is located in the subtropical monsoon zone, there are lots of typhoons and storms in the summer. Hence, the Pinpu aborigines developed a special life style relying on water while staying away from water. Both the high-ground dwelling and the pile dwelling were the results of experiences gained from getting along with the nature for a long time. Those houses usually required ladders or board to enter and exit. Estimating from the genre pictures, the height of the foundation was about 30 to 100 cm, and most of the foundations were 50 cm high.

3.3.2. **The front door was usually set at the gable of the architecture, except those influenced by Chinese**

In the past, scholars seldom mentioned the architecture style of setting doors at the gable. However, from the paintings such as “picking the betel nuts” (figure 3.) and “Kang Si Taiwan map”, we could discover that the front door was mostly set at the gable of the Pinpu’s buildings.

Nevertheless, some buildings influenced by Han Chinese would possibly set the door at the facade of the house; for instance, teaching institutions and sugar refinery. From the documents, we knew the Pinpu tribe had neither written language nor schools. Moreover, the sugar refinery was built by bricks with tile-covered roof which was not commonly afforded by people at that time. Hence, the two institutions could be regarded as a symbol that Han Chinese extended their economic influence to Pinpu society.

3.3.3. **The main house shaped as a trapezoid that the roof was bigger than the floor**

There was no concrete explanation about the shapes of the houses in written documents during Ching Dynasty in Taiwan. But we could see in genre paintings, the appearance of the main house was upside-down trapezoid and the roof was bigger than the floor. (figure 2. and figure 3.) It was easier and more reasonable to build a vertical house rather than upside-down trapezoid one, as the latter was harder to be built and the additional space was limited. However, analyzing from the architecture viewpoint, the extended roof not only increased the waterproof area but also protect the house and foundation from the rain. Furthermore, the bigger roof could prevent the sun damages. Thus, the upside-down trapezoid houses were widely applied in both the high-ground dwelling and the pile dwelling. Besides, the design of the architecture presented the diverse use, “there is space between the foundation and house, where people can cook, sleep, or store farm tools.” (Yu Yong He, 1698) In addition, some of the houses had balconies (figure 5.) for people to rest or work under the hot weather.

3.4 **The storeroom for grain and the hut for farmers**

The storeroom raised above ground to prevent grains from moist. The Pinpu’s storeroom was similar to the one of Han Chinese, but the difference was: the Pinpu weaved bamboo as walls and the Han Chinese used clay
to cover the bamboo wall. We deduced because the aborigines pestled grains for only a day and hung up the rest for drying, the storeroom was designed as an adequately ventilated form.

The official document recorded: “the Pinpu’s huts were built by woods and bamboos near the farmland. Farmers would live there in the harvesting season.” (Zhou zhong xuan, 1717) Accordingly, we knew the functions of the hut were for resting and defending.

3.5. The plant design in aboriginal tribe

The Pinpu aborigines regarded the blossom of erythrina variegata as a symbol of a year. Thus, erythrina variegata was one of the necessary flowers in Pinpu society. (figure 6.) Another crucial plant was areca. People also grow plants for everyday use around houses. There was a common feature among paintings—the painters usually draw aboriginal houses, areca, jackfruit, coconut, pineapple at the same picture, which matched the real life of the Pinpu tribe. Documents in Ching Dynasty recorded that people thought “If areca is planted with coconut, the fruits may be bloomed.” (Huang Shu-Jing, 1747). Besides, pineapple and jackfruit were popular food for aborigines. As a result, it composed a reasonable picture which we saw form the genre paintings.

4. Conclusion

As the society changed, aborigines were assimilated by Han Chinese. The Pinpu architecture in Ching Dynasty no longer exists. Fortunately, the genre paintings recorded the past, and left the evidences. While studying the architecture techniques, construction and space design of Pinpu aborigines with analyzing the historical pictures, we found there were practical wisdoms hidden beyond those simple houses. For example, because of the subtropical monsoon weather, aborigines developed some specific methods to overcome the bad natural condition under the threat of a large amount of typhoons and storms. Pinpu buildings emphasize the mechanism of defense, access to local construction material, water resistance of the pile dwelling and high-ground dwelling and the efficiency of the construction. Above all, those characteristics, concepts and techniques may contribute to the contemporary study of sustainable development and sustainable design.

Reference