

# Further Reflection on the Protection of Cultural Heritage: The AOH Project

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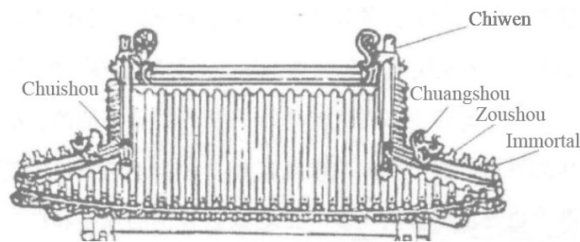
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**Abstract.** AOH (Animal Ornaments on House-ridges), as an important part of Chinese Traditional Architectural Decoration, have gradually formed a cultural system. Through the exploration of the cultural connotation behind them and the design of a serious game closely related, we hope to cultivate people's interest in AOH and achieve the sustainable preservation of animal ornaments.

**Keywords:** Material Cultural Heritage, Animal Ornaments, Serious Game.

## 1 Introduction

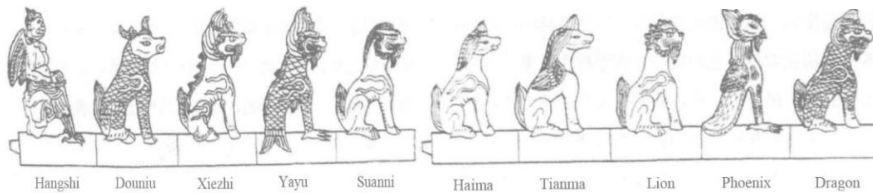
House ridge is an important part of roof in Chinese traditional architecture and it's an ideal place for decoration. Many buildings have animal ornaments on house ridges. They have different names depending on their position ( Fig.1).



**Fig. 1.** Animal ornaments on the gable and hip roof. Figure 1 from (Liu, 1900)

Animal ornaments on house ridges consist of Chiwen, Chuishou, Chuangshou and Zoushou (Ma, 2009). Located on the both ends of the main ridge, Chiwen holds the main ridge in its mouth with a sword on its back. The word Chiwen first appeared in the Eastern Jin Dynasty. As one of the nine sons of the dragon, Chiwen is believed to have the ability of spraying water to put out a fire. Chuishou sits on the vertical ridges

(Yang, 2010). As the only kind of roof having hip, the gable and hip roof has Chuangshou on its hip as decoration (Xu G. , 2003). Zoushou is a line of clay decorative carvings on the horn ridges(Fig.2). The first of it is an immortal, a man riding on a phoenix. And the rest of them are all legendary animals, such as dragon, phoenix, lion, Tianma (a horse with wings), Haima(flying house in the sea), Suanni (one of the nine sons of dragon that can bring good luck to people), Yayu(a beast in the sea that can call the rains to put out the fire), Xiezhi(a mythical animal which is just and can distinguish right and wrong), Douniu(an auspicious animal that can guard the house)and Hangshi(a money-like animal with two wings on its back and a vajry pestle in its hand) (Xu, Qian, & Wang, 2017). However, not all the buildings have all the ten Zoushou. The number of the Zoushou is decided by the social class of the owner and the use of the building.



**Fig. 2.** Zoushou on Tai He Hall (Hall of Supreme Harmony). Figure 2 from (Liu, 1900)

Animal ornaments on house ridges originated from the worship of gods and animals in ancient times. The earliest record of animal ornaments on house ridges can be seen in a book called San LI Figure written in Zhou Dynasty. It was born because of the low level of productivity development at that time. It had a strong primitive color at the beginning, then gradually evolved and was used as decorations. This is the embodiment of the combination of aesthetic culture and architectural technology. Animal ornaments on house ridges have four main functions. First, they show social class differences and the feudal patriarchal hierarchy in ancient China. There are strict and detailed regulations on size, quantity and kind. This fact is vividly confirmed by the Palace Museum, the most complete ancient palace community in China. Tai He Hall(Hall of Supreme Harmony)is the only one building that has all ten Zhoushou in all traditional Chinese architecture as it's a symbol of imperial power and occupies the highest position. It is the place where emperors hold all kinds of important ceremonies, including the enthronement and the wedding of the emperor. The Qianqing Palace, which was slightly inferior to the Taihe Palace, was the place where the emperor did his daily work and it has only nine animals. The empress's residence had seven animals. Ministers were allowed to install it as a symbol of glory only after the emperor's permission (Hu, 2011), (Xu, Qian, & Wang, 2017). Second, animal ornaments on house ridges decorate the silhouette of the building. They not only shows the artistic features of different areas and times, but also show the development of productivity. Third, they have enriched auspicious implied meaning in life and carry people's hope of praying for blessings. Last but not least, animal ornaments on house ridges have practical functions, such as waterproofing, fire prevention, seismic function and stabilizing building structure. Take Chiwen as an example. Chiwen, placed on the top of the roof, was originally used to

keep Leigongzhu(suspended column)and other load-bearing structural elements from rainwater. In some cases, it also can prevent buildings from catching fire because of lightning stroke.

## **2 Exposition of the Investigation**

The inheritance and protection of the AOH in China needs the help from both the official agencies and the civilian. For the AOH that are properly preserved in famous cultural heritages such as the Forbidden City, the existing means of maintenance have been relatively perfect. What we want to solve is how to raise people's attention to it, so as to achieve the purpose of promoting AOH culture. For this reason, we plan to use the form of game to let people more intuitively appreciate and accept the charm of AOH culture. For folk AOH, we pay more attention to its protection and inheritance.

### **2.1 The Current Situation of Folk AOH**

As an important part of Chinese traditional architecture, AOH is still widely used in modern decoration of archaize architecture. We plan to introduce from the following three aspects: technique inheritance, production situation and protection.

- The succession of the AOH production skills has experienced three stages: master-apprentice stage, father-son stage and inner-village stage. Take the Zhang family in Yongan village, Gangu county, Gansu province, China, as an example. Zhang Hai, the first generation successor of the Zhang family, learned the manufacturing skills of the AOH animals from royal craftsmen Wang Qin and Hang Degao. After mastering the skill well, Zhang Hai trained his son as his successor. By strictly guarding the technical secrets and the principle of "only teach the son skills", they help the AOH production achieve the professional intergenerational inheritance. At present, due to the change of the inheritors' ideas and the demand of efficiency, the AOH animal production has been expanded from the family to the whole village, becoming the characteristic industry that solves the employment of most local people.
- Production situation: Currently, there are two production mode: manual production and mechanized production. Manual production is generally rich in shape, long in production time and exquisite in product, which is mainly used in the construction of famous mountain temples and scenic spots. However, with single modelling, high production efficiency and low cost, the mechanized production model mainly accepts batch commercial orders. In addition, in order to overcoming the disadvantages of decentralized management, there are also specialized AOH production parks.
- Protection: at present, the AOH production techniques have been officially identified as provincial intangible cultural heritage. However, mechanized production poses a certain challenge to the AOH production.

## 2.2 Preliminary Exploration on Serious Game of the AOH

### Game Structure

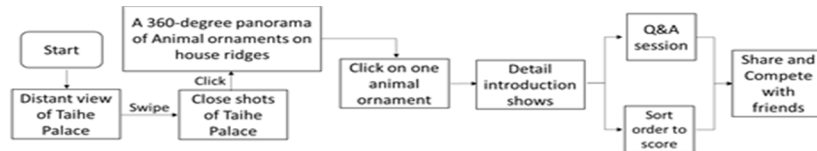


Fig. 3. Structure of the AOH game

**Game Development.** The development of the AOH Game was carried out using a rapid prototyping approach: several prototypes were developed before reaching the final stage.

Firstly, the player sees a distant view of Taihe Palace (Fig. 4.a), also known as The Hall of Supreme Harmony in China. Taihe Palace is the largest hall in Forbidden City, decorated with the most splendid ornaments (Xu, Qian, & Wang, 2017). As the amount of the AOH demonstrates the status of one building, Taihe Palace, undoubtedly, has the most animal ornaments on its ridges. This is the reason why we choose Taihe Palace as main scenes in our game.



Fig. 4. a) Homepage; b), c) Close shots of Taihe Palace

Instructions show in every page. Clicking on the homepage, the player comes to the next scene, close shots of Taihe Palace(Fig. 4. b, c), showing its splendor and especially attracting player's attention to the house ridges.

Next, the player clicks on the ridges and comes to a 360-degree panorama (Fig. 5), where he/she can closely observe the view on house ridges of Taihe Palace. The player can rotate or swipe screen to see the whole 10 animal ornaments, which exclusively show up on the Taihe Palace. Clicking on each animal ornaments, a detailed introduction shows, presenting basic knowledge of the AOH.



**Fig. 5.** A 360-degree panorama of the AOH

After an insight into the AOH, the player can choose from two sessions to have fun and compete, namely Q&A and Sorting order. In the Q&A session, the player is supposed to answer a few questions based on the previous introduction. In the sorting-order session, the player should arrange 10 animal ornaments in the correct orders, according to their status and moral.

As for the production skills of the AOH protected and inherited in the folk, we know the basic situation and protection status of the AOH through oral interview with the inheritor Mr. Zhang Qiyun.

### **3 Challenge and Future Steps**

From the interview with Zhang Qiyun, we know that the AOH is still widely used in the decoration of folk buildings. This is both a strength and a weakness. The advantage is that a large number of applications promote the inheritance and development of AOH production skills, and the disadvantage is that a large number of mechanized production of folk AOH only inherited its shape, but not its spirit. "In terms of the production of AOH, handmade production for art while mechanized production is for making

money”, Mr. Zhang said frankly. The reason why Gangu AOH is famous is that it retains a large number of traditional folk skills and the original form of folk culture, which has an important reference value for studying the inheritance and evolution of folk culture form, especially the uniqueness and diversity of local culture. But mechanical production is eroding its cultural value. Although modern technology is important, respecting and protecting its cultural connotation is fundamental to ensure the parallel development of commercial and cultural values. Only when you understand the culture behind it can you identify with the shape. We call for “no more production for production's sake, no more use for use's sake”.

There are two key points in doing a good job of inheritance: the first is to have the object of inheritance, and the second is to establish enough attention to it.

There are two levels of efforts to preserve the AOH properly: the first is to pre-serve itself, that is, to record the AOH entity itself and to preserve the entity permanently with data; the second is to preserve its close connection with the existing environment. To this end, besides the preservation of ancient buildings, we also suggest to establish digital museum or exhibitions to show animals on roofs to present these decorations.

To build people's attention to it, we have three assumptions: first, shoot documentaries to publicize the AOH, so that the cultural treasure can be systematized and systematized, leaving a complete impression in people's hearts; second, design and publicize the game works of the AOH, so that the cultural treasure can be approached to the public, especially the youth group, in an entertaining way; third, produce and publicize the cultural creation of the AOH. In this way, the characteristics of the roof beast are presented more incisively and vividly, which is well known to more people.

There are undoubtedly some difficulties in our promotion of the AOH, the most notable of which is how to make people interested in it. Therefore, we have both internal and external considerations: from the appearance of small beasts, everyone loves beauty, making fine beasts in the process of publicity and promotion will help to leave a more positive impression on people; from the connotation and implication of small beasts, in-depth study and further interpretation combined with specific examples in ancient times will help to leave a deeper impression on people.

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