

# A Preliminary Study on the Main Ridge Decoration of Buildings in Yuan, Ming, and Qing Dynasties in Guanzhong Area

Rui Cai\*

School of Mechanics, Civil Engineering and Architecture, Northwestern Polytechnical University, Xi'an 710129, Shaanxi Province, China

\*Corresponding author: Rui Cai, ruicai714@outlook.com

**Copyright:** © 2022 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

**Abstract:** The function of roof ridge ornament is irreplaceable in the facade modeling of traditional Chinese architecture. Taking the ornament in the Ming and Qing Dynasties in Guanzhong area as an example, this paper summarizes and analyzes the appearance characteristics, and internal cultural connotation of the ornament that is currently present in the Guanzhong area from the aspects of its decorative content, color, and grade indication. Further, make relevant discussions, hoping to supplement the research of ancient ornament.

**Keywords:** Guanzhong area; Roof ridge ornament; Color; Grade indication

**Online publication:** May 31, 2022

## 1. Research background

### 1.1. Introduction to Guanzhong region

Guanzhong area refers as the central area of Shaanxi Province, China, consist of 27 regions such as Xi'an, Baoji, Xianyang, Weinan, and Tongchuan. According to this topographic feature, Shaanxi folk houses can be divided into three categories, which are the northern, southern and Guanzhong folk houses. Guanzhong area has a flat and open terrain, fertile land, and a pleasant climate, and the agricultural development base is in Shaanxi Province.

This paper analyzes the cultural characteristics, and connotation of the roof decoration in Guanzhong traditional dwellings, by describing, and focusing on the plastic art characteristics of the roof decoration.

### 1.2. Architecture of Yuan, Ming, and Qing Dynasties in the Guanzhong area

Guanzhong area is a large area with many ancient buildings. The main research objects of this paper are the Hancheng Confucian temple, Guanzhong folk art museum, and Xi'an Mosque complex. The main type of the buildings in the Yuan, Ming and Qing Dynasties are religious buildings and residential buildings, which the regulation and management of the complex is mainly according to the folk, or traditional style.

Religious architecture includes Buddhist, architecture, and Taoist architecture, which is rich in the content. Residential buildings rely on the Ming and Qing residential buildings preserved, and relocated by Guanzhong folk art museum in Weinan area.

## 2. The function and type of ridge decoration

Chinese traditional architectures are a unified artistic, which is composed of the roof, body, and pedestal. There are many decorative styles used for the roof, and the important style is the ridge decoration, which used the roof ridge as the roof decoration, which plays an important role in the architectural form.

Since the pre-Qin period, the ridge decoration has undergone many changes, before successfully formed a roof ridge ornament <sup>[1]</sup>. In the murals of the pre-Qin and Han Dynasties, birds shaped decoration appears at both ends of the main ridge, while, the ridge decoration has changed greatly during the Western Han Dynasty, where the tail become is slightly warped <sup>[2,3]</sup>. Further, in the Sui and Tang Dynasties, the ridge decoration still has the fin and beaded patterns on the tail with the tail tilted inward, however there are no complex patterns such as dragon mouth. During the Song Dynasty, roof ridge ornaments evolved based on the Tang Dynasty and the fin tail curled were more obvious. Additionally, the image of the dragon mouth with significantly more patterns, dragon whiskers, and other styles, and the image of a sword handle appeared at the top, can be seen in the ridge decoration <sup>[4,5]</sup>.

From the birth to the development, the roof ridge ornaments have undergone multiple changes including in the functions and connotations. The two ends of the main ridge are the intersection of the vertical ridge or the berm ridge. The part which caused the leaking from the roof is the intersection between the ridges, therefore the initial treatment of the roof ridge ornament is done by using simple and a thickening cushion to prevent the water leakage, and to protect the nodes. In the evolutionary process, the roof ridge ornament is endowed with more features, such as protection from lightning, prevention from fire and roof decoration. Additionally, the roof ridge ornament is also endowed with more cultural connotation, such as dragon, bird and fish, meaning of auspicious shelter. After the dragon shape is connected and integrated into the real dragon emperor, the roof ridge ornament represents a solemn hierarchy <sup>[6]</sup>.

## 3. Characteristics of the ridge decoration of the Yuan, Ming, and Qing Dynasties buildings in Guanzhong area

### 3.1. Different and diverse shapes of the buildings

There are great differences and a small similarity in the appearance of the building shapes in the Guanzhong area, where the shapes can be divided into official and civilian style. The official style roof ridge ornaments pattern, material, color, and installation are made under the guidance of the government. During the old times, the official roof ridge ornaments represent the highest decorative art, and firing technology of roof ridge ornament. Meanwhile, the folk roof ridge ornament is made by folk ornament workshop owner and the staff, representing their creativity and wisdom.

The official roof ridge ornament has a fixed shape and a strict grade. In the Qing Dynasty, there were ten kinds of roof ridge ornament, each with strict regulations in the term of the roof ridge size. The official roof ridge ornament has a clear structure, especially the roof ridge ornament in the Forbidden City. During the Ming and Qing Dynasties, the official roof ridge ornament follows certain features, which are, the shape is in square, the tail tip is tilted upward and rolled inward, the back is generally inserted with a sword handle, and beast on the outside of the spine. Additionally, the body is carved with a sub dragon shape with the downward bending angle of its claws is about  $97^\circ$ , and the opening angle of its mouth is about  $60^\circ$  with a prominent eyebrow arch, divine eyes, sharp teeth, and claws <sup>[7]</sup>.

Compared to the official roof ridge, there are no strict regulations on the shape of the folk roof ridge ornament, therefore, the folk roof ridge ornament has more regional characteristics in their shape. There are a large number of folk roof ridge ornaments with various and more diverse shapes. Generally, the roof ridge ornament in the south is more dexterous, while the roof ridge ornament in the north is more atmospheric <sup>[7]</sup>. In Guanzhong area, there are two types of roof ridge ornaments, which are, the official roof

ridge ornament which follows the founder characteristics, and change accordingly and the next is to develop the roof ridge ornament vertically and appear slender.

The treatment method of the square roof ridge ornament is subjected to its affiliated buildings. A large number of folk temples and houses are decorated with simplified roof ridge ornament, with the characteristics of the dragon head were reserved, and the body and the tail of the dragon is modified. For example, in the Dongying temple in Hancheng, there is a carving marks on the dragon head and beard, and not in the rest of the parts, while the tail is only symbolically expressed, and the overall image tends to be flat. While, the Yan Family's house (**Figure 1**), the roof ridge ornament pattern was simplified, where only the appearance characteristics of the ornament were retained, similarly, simplified treatment was used for the official roof ridge ornament. In Xi'an Wangji temple (**Figure 1**) roof ridge ornament pattern, the connection between the tail and the body becomes thinner, where the pattern was changed by retaining the original square form.



**Figure 1.** The above is the roof ridge ornament pattern of Yan Family's house, Xi'an Wangji temple, Hancheng high temple, and Hancheng town God's temple

The vertically developed roof ridge ornament is varied and imaginative. The pattern is usually exaggerating and magnifying a part of the official roof ridge ornament, in order to change the original proportion and appearance. For example, in Hancheng high temple (**Figure 1**), a complete dragon image was represented by the long tail and a small head on the dragon as the roof ridge ornament. While, in the Hancheng Town God's Temple roof ridge ornament (**Figure 1**), the official snail is like curly tail stretches open, indicating a free and smart feeling <sup>[8]</sup>.

Compared with the square roof ridge ornament, the vertical roof ridge ornament has more exquisite and more complex patterns with more changes, and also have more expressiveness and vitality features.

In addition to the two types of roof ridge ornaments mentioned above, there is another type called watching beast, which is different from the official type roof ridge ornament in the term of the shape and size. This roof ridge ornament, is generally seen in the residential buildings. The most remarkable feature is that, it uses phoenix or more general animal's mouth instead of a dragon shape. The direction of the mouth opening on the outside is also very commonly used, such as in Sun's house, Cui's house and Yan's house.

### **3.2. Rich patterns and auspicious meanings of the ornaments pattern**

Glass ridge decoration developed by the Ming and Qing Dynasties, and its decorative themes were influenced by auspicious culture. It can be mainly divided into six categories, which are character, animal, plant, utensil, traditional abstract, and combined themes <sup>[9]</sup>. Among them, animals, plants and traditional abstract themes, are commonly used in roof ridge ornament.

The animal theme is mainly used an imaginary mythical creature, as the dragon image. The dragon is a supernatural creature created by human beings. It's believed to "prosper clouds and rain, and benefit all

things,” and it was recorded in the book of changes ‘as early as Dragon flight, is also a great success. The emperor called himself the son of heaven representing the real dragon. When decorating the roof ridge, the dragon is transformed into an idea, as a symbol of imperial power, it also represents the hierarchical system of the glazed ridge ornaments in the Ming and Qing Dynasties<sup>[9]</sup>. Dragon shaped ornament is commonly used in the official and folk ornaments<sup>[10]</sup>.

Next, the theme of plants is representing the China’s agricultural society. Plants represent morality or beautiful moral, and it’s commonly used as a dragon shaped auxiliary decoration. Although, there are many kinds of plant themes in the glazed ridge decoration of the Ming and Qing Dynasties, they are basically divided into two plants which are the rhizomes and flowers. The rhizome theme is mainly represented by the curly grass pattern, combined with the Ganoderma lucidum and lotus leaves. There are many kinds of flower themes used which are peony, lotus, Baoxiang, and chrysanthemum<sup>[9, 11]</sup>, such as Hancheng Yuwang temple (**Figure 2**)<sup>[12]</sup>.

In the mosque, the main decoration that is used are the plant theme, due to the religious reasons, where the images or patterns of people, or animals cannot appear on the wall of a building. Plant, geometric, and Arabic patterns have become the source of mosque decoration patterns<sup>[13, 14]</sup>, which makes the architectural decorative art of the mosque presents the characteristics of abstraction, as the results of the prohibition of idolatry in Islam, Islamic art has developed into symbolism and decoration<sup>[15]</sup>.

In China, the mosque pattern was designed by merging the Chinese culture, leading to a mosque construction with the Chinese architecture as the bone and Halal decoration as the skin. This is reflected in the ornament, which retains the outline of the official ornament, and replaces the animal pattern with the plant pattern, such as the Xiaopi Lane mosque (**Figure 2**).



**Figure 2.** The left is Hancheng Yuwang temple, the right is Xiaopi Lane mosque

### 3.3. Color coordination of the ornaments

In the Ming and Qing Dynasties, variety of colors were used for the ornament, including yellow, green, blue, black, red, and other colors. The official ornament is made of solid colors and different colors have their own meanings. For example, yellow symbolizes dignity, therefore most of the glass ridge decorations on the palace buildings are in yellow, while green symbolizes fortune, therefore the glazed ridge decorations in the royal palace and the mansion is mostly in green, and most of the glass ridge decorations on sacrificial buildings are in blue because blue symbolizes mystery.

The color of the folk style ornament reflects the characteristics of harmony. From the combination and collocation of colors, there are three combinations which are commonly used yellow-blue, yellow-green, and red-blue which are more commonly used in the Ming and Qing Dynasties. In collocation, the color selection, and color ratio was selected to form a strong contrast, vivid and lively ornament image, such as the Town God’s Temple Hancheng ornaments<sup>[16]</sup>.

### 3.4. Expression level, rank, and order of the ornaments

In the concept of ancient Chinese society, imperial power is supreme and official architecture has an obvious hierarchy. The ornament on roof ridge is also the embodiment and represent the ancient Chinese hierarchy. In the Ming Dynasty stipulates, during the ninth year, the prince's palace, veranda, and gate tower were all covered with blue glazed tiles. While, the princess's house was decorated with the patterns of animal ridges, and during the early Ming Dynasty, the Baiguandi, officials, and people's house were forbidden to carve the shapes of ancient emperors such as sages, sun, moon, dragon, phoenix, lion, unicorn, and rhinoceros. In the 26th year of Hongwu, officials' houses were constructed using with blackboard tiles and the ridges beam, and buildings were decorated with animal pattern tiles, while dougong, eaves and jue painted decorations were used. For the grade one and two, the building was constructed with five halls, nine shelves, the roof ridge with animals' tile, and the beams, building, dougong, eaves and jue are painted in green. Three doors, five shelves, green, animal face, tin ring. While, for the third to the fifth grade, the building is constructed to have five halls, seven frames, the roof ridge is made of tile animals, and the beams, building and the eaves are painted in green [17].

It can be seen from above that, the ornament can directly reflect the level of architecture. Accordingly, the larger the volume and the higher the level of the building, the larger and more exquisite the ornament.

There is a central axis in ancient Chinese architectural complex. The buildings on the central axis are the main sequence of the buildings of the group and important buildings are built on the axis. Due to the different functions and positions of buildings, the specifications, and grades of each building are different. As a roof decoration, the ornament on the roof ridge consists of all kinds of decoration. Among them, the ornament on the central axis is more complex and beautiful, compared to the buildings on both the sides.



Figure 3. The above is Lingxing gate, Dacheng hall, and Zunjing Pavilion

Hancheng Confucian temple, is a well-preserved building complex of the Yuan Dynasty in Shaanxi. Due to its long history, it has been repaired many times, however, the basic shape and the structure of the building is still retained (Figure 3). Hancheng Confucian temple, is mainly built on the axis of Lingxing gate, halberd gate, Dacheng hall, Minglun hall, and the Zunjing Pavilion [12,18]. As the main gate of Confucian temple, Lingxing gate is composed of three wooden archways, similar as the Aconitum gate. There is a small ornament facing out of Longkou, and single color was used mainly gray and black.

The halberd gate leads to the flow of people to Dacheng hall, and it's not frequently used. Therefore, the shape of the ornament on this gate is simple and only single color was used. The simple ornament of halberd gate sets off the ornament of Dacheng hall which is behind it. Dacheng hall, as an important part of the Confucian temple, has the highest specification. The ornament of Dacheng hall is square in shape, with the main content of the decoration is dragon mouth, body, and its tail. The Dragon whiskers are carved vividly, as it is dancing in the wind, and the tail decoration is mainly beaded. Glazed material is yellow and green in color, indicating a noble atmosphere, highlighting the important position of Dacheng hall [19].

As a main hall, Minglun hall is inferior to Dacheng hall. Therefore, its ornament is not as gorgeous as Dacheng hall, but in appearance, the shape of two dragons highlights his special position, with square shape and exquisite carving which is rich in the details.

Additionally, the overall color of Zunjing Pavilion ornament is single, the form is slender, the dragon tail is hollowed out, the proportion of the dragon mouth and tail is similar, and the shape is free and lively.

Compared with the primary and secondary buildings of Hancheng Confucian temple, its ornament reflects two styles, where the secondary ornament is simple, while the main ornament is complex and beautiful. Among the main buildings, the most important building is the Dacheng hall, which looks colorful, solemn and luxurious. The different shapes reflected the role of the ornament in highlighting the level, or the status of the building.

#### **4. Summary**

The evolution of the roof ridge ornament lasted a long time, and reached its peak in the Ming and Qing Dynasties. The roof ridge ornament has diverse in functions, including protecting the roof and also the role as lightning protector and fire prevention. The roof ridge ornament was in an eye-catching position. Craftsmen gave the ornament a beautiful appearance as a roof decoration. From fish, bird to dragon, however, its role as protector has not changed [20].

The decorative content of the ornament developed in the Ming and Qing Dynasties, are represented by official ornament and the folk ornament. The official ornament was well made, and also rich in color, but limited to regulatory restrictions and the shape changes. Although the production technology of the folk ornament didn't reach an official level, the beautiful folk ornament with diverse shapes, rich colors, and a large number reflects the folk's pursuit of beautiful things and the creativity of the working people.

Official style and folk style ornaments have distinct characteristics in color the processing, but whether it is single color or mixed, both the color has successfully made the ornaments reflect a harmonious and orderly posture in creating a beautiful and practical ornament image.

In addition, to being a tool to protect the roof, the creation of craftsman art, and the representative of the feudal hierarchy, different levels have different styles of ornament, and such characteristics are particularly obvious in the building complex, which makes the main buildings of the building complex prominent, and the buildings of the building complex rich in changes.

Lastly, more detailed research has to be conducted regarding the ornament designs in Guanzhong area. The numbers and the types of ancient buildings in Guanzhong area are rich, therefore joint research with other scholars may provide more details and information.

#### **Acknowledgments**

I would like to extend my sincere gratitude to my supervisor, Chen Xin, for her instructive advice and useful suggestions on my thesis. I am deeply grateful for her help in the completion of this thesis.

#### **Funding**

Supported by the National Undergraduate Innovation and entrepreneurship project of Northwestern Polytechnical University (Project number: S202010699657).

#### **Disclosure statement**

The author declares no conflict of interest.

## Author contributions

C. R. conceived the idea of the study and wrote the paper.

## References

- [1] Feng, SY, 2011, A Study on the Origin of the Chiwen. *Archaeology and Culture Relics*, 2011(01): 58-63.
- [2] Liu JQ, 2021, Research on Roof Ridge Ornaments of Ancient Chinese Architecture. *Brick and Tile Magazine*, 2021(09): 43-44.
- [3] Li SW, 2016, The Xuan Fish as the Incarnate of the Hero Gun and the Origin and Evolution of Chi's Tail. *Ethnic Art Studies*, 2016(04): 135-141.
- [4] Zhang ZT, 2017, The Study of Chiwen Zoomorphic Status in China around Ming and Qing Dynasties. *Design*, 2017(15): 62-63.
- [5] Xu H, 2009, The Research of the Chinese Ancient Times Constructs Ridge Adornment: M.A. Thesis. Zhengzhou, Henan University.
- [6] Qu XH, 2010, From the Symbol of Fire-Fighting to the Architectural Decoration: The Discussion of the Development of Chiwen in Huizhou. *Journal of Anhui University of Technology*, 2010(01): 66-67+87.
- [7] Hong S, 2014, Study on Chiwen Art During the Ming and Qing Dynasties: M.A. Thesis. Hunan, Hunan University of Technology.
- [8] Wang YP, 2019, Study on the Application of Traditional Residential Buildings in Guanzhong Area, M.A. Thesis. Xi'an, Xi'an University of Architecture and Technology.
- [9] Li YJ, 2020, Study on the Decorative Characteristics of Glazed Ridge Ornaments in the Ming and Qing Dynasties, M.A. Thesis. Jingdezhen, Jingdezhen Ceramic University.
- [10] Yang W, 2010, The Study on Decorative Art of Vernacular Architecture in Guanzhong Area, M.A. Thesis. Xi'an, Xi'an University of Architecture and Technology.
- [11] Wu T, 2016, Research on the Art of Inlaying Porcelain on the Ridge of Traditional Temple Buildings in Guangdong, Fujian and Taiwan, M.A. Thesis. Jingdezhen, Jingdezhen Ceramic University.
- [12] Li HG, Lu X, 2012, Investigation, Protection and Development of Ancient Architectural Art Relics in Hancheng. *Arts Exploration* 2012(06): 111-114.
- [13] Wang YX, 2018, Study on the Characteristics and Application of the Architectural Decoration Art of Xi'an Mosque According to National Aesthetic, M.A. Thesis. Xi'an, Xi'an Polytechnic University.
- [14] Ma Q, 2014, Mosques of Xi'an Art Building Decoration Research, M.A. Thesis. Xi'an, Xi'an Academy of Fine Arts.
- [15] Xu QQ, 1999, Research on Uighur Architectural Culture. Urumqi, Xinjiang University Press.
- [16] Kong RY, Chen SL, 2017, The Investigation Report on Dexin Hall, Lingyou Hall and Hanguang Hall of Hancheng Town God 'S Temple. *Architecture & Culture*, 2017(06): 71-73.
- [17] Zhang T Y, 1974, History of the Ming Dynasty. Beijing, Zhong Hua Book Company, 68(44).
- [18] Li YF, 2004, Study on the Architecture of Confucian Temple in Hancheng, M.A. Thesis. Xi'an, Xi'an University of Architecture and Technology.
- [19] Liu EY, 2009, Study on the Architecture of Ming and Qing Confucian Temple in Shaanxi, M.A. Thesis. Xi'an, Xi'an University of Architecture and Technology.

[20] Jian, XK, 2019, On the Roof Culture of Ancient Chinese Architecture. *Modern Horticulture*, 2019(08): 134-135.

**Publisher's note**

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.