

The Beauty Of Sparrow Brace—An Ancient Architectural Component In The Confucius Temple In Qufu

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Abstract. There are many buildings used to worship Confucius in the world, and the Confucius Temple in Qufu is the largest one, regarded as one of the three famous ancient complexes in China, with a very significant position in the history of architecture in China and the world. As a characteristic component in ancient Chinese architecture, the sparrow brace has a variety of wood carvings on it, which are of high artistic value.

Keywords: component; sparrow brace; Chinese ancient architectural component; the confucius temple in Qufu

1. The cultural significance of the Confucius Temple in Qufu and its influence on architecture

As the carrier of Confucianism, the Confucian Temple is one of the most representative relics in Chinese architectural history and culture.

More than 2,500 years ago, Confucius, the master of Chinese cultural thought and the founder of Confucianism, and the Confucian school he founded, had a wide and far-reaching influence with his broad and magnificent ideology. [4] The Confucius Temple, a temple dedicated to Confucius and commending Confucianism in the feudal dynasties of all dynasties, is located in Qufu, Shandong Province, the hometown of Confucius. It is arranged according to three-way layout, nine into the courtyard, lining up upon a central axis, with symmetrical rows left and right. The entire building complex includes five temples, one pavilion, one altar, two churches and seventeen stele pavilions, with a total of 466 rooms, covering an area of 140,000 square meters, and is the largest of the numerous temples in the world that worship Confucius. It is erected in 478 AD according to the specifications of the royal family, thus enjoys a high reputation in palatial architecture and ranks as one of the three antique complexes in China. [1]

2. Sparrow brace- one of the components of ancient Chinese architecture

In the Song Dynasty, Li Jie's "Construction of Style" Volume 5 mentioned in the article "Lan'e": "The eaves are under the curtain, and the square is reduced by one third of the eaves. Three-petaled head", which may be the earliest written record of it. [5]

The sparrow brace is called "Jiaoti" in the Song Dynasty, and "Queti" in the Qing Dynasty, which is also known as "Chajiao" or "Tuomu". It is usually placed at the intersection of the cross material (beam, fang) and the vertical material (column) of the building, with a purpose to enhance the load of beam by shortening net span, lower the shear force at the joint of beams and pillars, and to further prevent the angle between the horizontal and vertical materials from tilting.[2] The sparrow brace of Confucius Temple in Qufu refers to the one that commonly used in Ming and Qing architecture.

3. The sparrow brace of Confucius Temple in Qufu

The production materials of the sparrow brace are determined by the main building materials used in the main body of the building. The Confucian Temple in Qufu is mostly constructed by wood, so the sparrow brace in the main buildings are accordingly all wooden.

Presided over by the royal family, its overall layout and individual buildings of the Qufu Confucius Temple belong to the Ming and Qing official architectural styles, so is the style of the sparrow brace. The official-style sparrow brace is relatively more abundant than the counterpart in species, and in most cases, are financed and built under the surveillance of the rulers. Therefore, its craftsmanship and patterns are relatively orthodox.

3.1 The proportional relationship of the sparrow brace in Qufu Confucius temple

"Since the appearance of sparrow brace on the buildings of the Southern and Northern Dynasties, seven styles have been further developed in the following thousand years. Before the Yuan Dynasty, most of the components of the sparrow brace were used for inner eaves, but after the Yuan Dynasty, especially in the Qing Dynasty, it was widely employed under the forehead of the outer eave. The earliest sparrow brace had a large horizontal span. In the Southern and Northern Dynasties, its length accounted for one-third of the width of the central bay and width, and gradually shortened until the Qing Dynasty, to only take up a quarter of the width of it." [5] From this, it is inferred that with the evolution of the times, the change of the length of the sparrow brace may be related to the change of its function. The function of the sparrow brace is transformed from the initial structural act to the enhanced decorative role in the Ming and Qing Dynasties, so the length will be correspondingly reduced.

According to the field investigation, most of the buildings of Confucius Temple in Qufu are rebuilt and revamped in the Ming and Qing dynasties, so the sparrow brace, to in accordance to the engineering practices at that time, is transferred to occupy nearly one fourth of the width of the central bay and width to comply with the 1/4 convention.



Figure 1. The sparrow brace follows the 1/4 convention.

3.2 The sculpture art of Confucius Temple in Qufu

Government-run building as the Confucius Temple is, and there have been a host of renovations and reconstructions in the middle, the artistic style generally reflected is unified. Most of the carving techniques of the sparrow brace in the Confucius Temple are relief sculptures, and those on the auxiliary buildings such as the apprentice are drawn to express simple and concise patterns. The rolling tendril patterns are predominantly utilized in carving.

3.3 Color painting grades of the Confucian Temple in Qufu

In the northern part of our country, the imperial power was extremely concentrated and the official-style buildings prevailed at that time. Under the shackles of the royal official-style system, the colors of the sparrow brace on the buildings varied for the color of the main body of the building. The shapes of the paintings on the ancient buildings of the Confucius Temple included Hexi, Xuanzi and Su-style paintings. Among the three types of painting, Hexi was the highest grade, followed by the Xuanzi, and the lowest grade was the Su-style painting. [1] The Dacheng Hall, Dacheng gate, Chongsheng Temple and so on were all painted of the highest grade Hexi, with a

large amount of gold, which was equivalent to the position of the emperor. Therefore, the sparrow brace of these buildings were not only large in size, complex and delicate in patterns, but also bright and blazing in color.

3.4 Outline of the sparrow brace of Confucius Temple Qufu

What is demonstrated from this picture is the change of the sparrow brace's outline throughout several dynasties. In the Song and Yuan Dynasties, as shown in the picture of the sparrow brace in the main hall of the Ping'an Confucian Temple, the sparrow brace's overall proportion was slender, close to a long strip, and the abdomen was a straight line or that like a cicada belly. During the Ming Dynasty, the sparrow brace began to convert towards a right-triangle and was shortened as a whole. The reason was probably that the decorative effect of the bird was enhanced, while the structural effect was pared down. The position where beneath the sparrow brace head had also developed dingtong gong, which greatly attributed to the abundance for the style of the sparrow brace. With the development of the times, the decorative role of the sparrow brace was strengthened, and the shapes and patterns were ever more flexible.

As most of the Qufu Confucius Temple's sparrow braces were repaired and rebuilt in the Ming and Qing dynasties. The style of it in the Ming and Qing Dynasties followed the mainstream-dingtong gong. The specific shape will be explained in detail later.

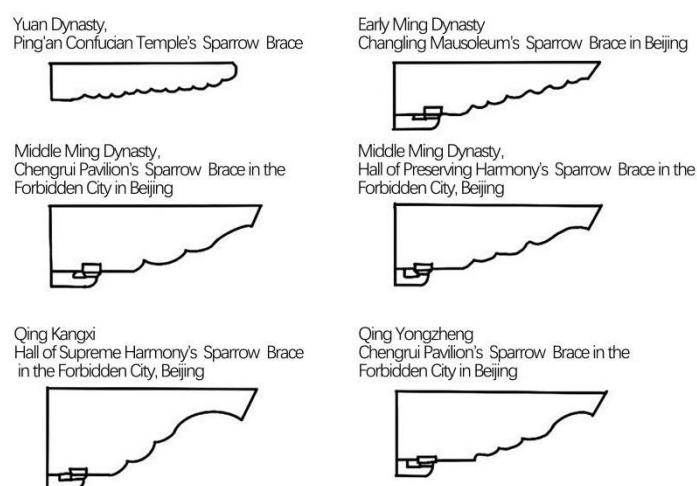


Figure 2.Changes in the outline of the sparrow brace

3.5 Aggregations of sparrow brace in Qufu Confucius Temple

I will take the sparrow brace of the main buildings of the Confucian Temple in Qufu as the principal research object. Through investigation, it is found that the constructs in Qufu Confucian temples involving the sparrow brace are Hongdao gate, Dazhong gate, Kuiwen Pavilion, Dachengmen, Jinshengmen, Yuzhenmen, Thirteen Steles Pavilion, Dacheng Hall and Sleeping Hall. The following are the relevant pictures taken on the spot and brief descriptions.

Table 1. The first group.

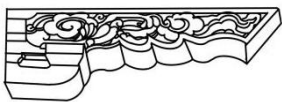
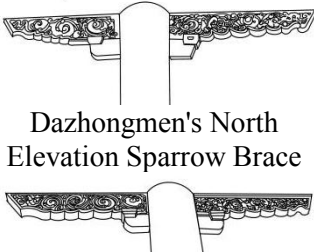

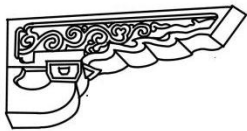
Name	Hongdao Gate	Dazhong Gate	Kuiwen Pavilion
Pictures Of Sparrow Brace	<p>North Elevation Sparrow Brace At Hongdao Gate</p> 	<p>South Elevation Sparrow Brace At Dazhongmen</p>  <p>Dazhongmen's North Elevation Sparrow Brace</p> 	<p>South Elevation Sparrow Brace At Kuiwen Pavilion</p> 
Construct ions' Age	Ming Hongwu ten years (1377)	It was the gate of the Confucian Temple in the Song Dynasty, and was later rebuilt in the Ming Dynasty. The existing one was built in the Qing Dynasty.	It was built in the second year of Song Tianxi (1018 AD) and rebuilt in the second year of Mingchang (1191 AD).
Construct ions' Type	Door	Door	Pavilion
Types	Official Sparrow Brace	Official Sparrow Brace	Official Sparrow Brace
Patterns	Rolling grass pattern	Rolling grass pattern	Rolling grass pattern
Color Painting Grades	Xuanzi color painting	Xuanzi color painting	Xuanzi color painting
Material	Wood	Wood	Wood
Carving Technique	Relief	Relief	Relief
Contour Character istics	The bottom is the shape of a three-bellied belly, and the end is the shape of an olecranon.	The bottom is the shape of a three-bellied belly, and the end is the shape of an olecranon.	The bottom is the shape of a three-bellied belly, and the end is the shape of an olecranon.

Table 2. The second group.



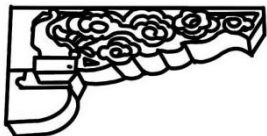


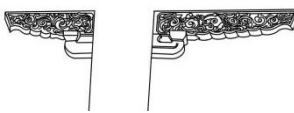
Name	Dacheng Gate	Jinsheng Gate, Yuzhen Gate	Thirteen Steles Pavilion
Pictures Of Sparrow Brace	South Elevation Sparrow Brace At Dacheng Gate 	South Elevation Sparrow Brace At Jinsheng Gate (The two buildings are the same, take Jinsheng Gate as an example.) 	Thirteen Steles Pavilion's Sparrow Brace 
Construction's Age	Song Tianxi five years overhauled it.	It was built in the third year of Song Chongning (1104). Reconstructed after the fire in the second year of Yongzheng in the Qing Dynasty (1724).	The age is unknown.
Construction's Type	Door	Door	Pavilion
Types	Official Sparrow Brace	Official Sparrow Brace	Official Sparrow Brace
Patterns	Rolling grass pattern	Rolling grass pattern	Rolling grass pattern
Color painting grades	Hexi color painting	Xuanzi color painting	Su-Style Color Painting
Material	Wood	Wood	Wood
Carving Technique	Relief	Relief	Relief
Contour Characteristics	The bottom is the shape of a three-bellied belly, and the end is the shape of an olecranon.	The bottom is the shape of a five-bellied belly, and the end is the shape of an olecranon.	The bottom is the shape of a five-bellied belly, and the end is the shape of an olecranon.

Table 3. The third group.

Name	Dacheng Hall	Chongsheng Temple	Sleeping Hall
Pictures Of Sparrow Brace	North Elevation Sparrow Brace At Dacheng Hall 	South Elevation Sparrow Brace At Chongsheng Temple 	South Elevation Sparrow Brace At Sleeping Hall 
Construct ion's Age	Song Tianxi five years overhauled.	It was build in the 23rd year of Emperor Kangxi of the Qing Dynasty (1684).	It was built in the second year of Song Tianxi (1018) and rebuilt in the eighth year of Qing Yongzheng (1730).
Construct ions' Type	Hall	Temple	Hall
Types	Official Sparrow Brace	Official Sparrow Brace	Official Sparrow Brace
Patterns	Rolling grass pattern	Rolling grass pattern	Rolling grass pattern
Material	Wood	Wood	Wood
Carving Technique	Relief	Relief	Relief
Contour Character istics	The bottom is the shape of a three-bellied belly, and the end is the shape of an olecranon.	The bottom is the shape of a three-bellied belly, and the end is the shape of an olecranon.	The left side is the shape of the olecranon.The bottom is the shape of a five-bellied belly.On the right side,the end is the shape of the olecranon.The bottom is the shape of three-bellied belly.

4. Conclusion

The sparrow brace is an indispensable component in ancient Chinese architecture. It not only has the structural role of supporting beams and fangs, but also has a crucial decorative function in the later development. Small as the sparrow brace is, it occupies an essential part of ancient wooden architecture.

Through the research on the sparrow brace of Confucius Temple and the field survey of that from the Qufu Confucius Temple, it is found that the species of it is unified in kind, and the single decorating and sculpture art lead to a sense of neatness and uniformity of the overall building complex, appearing to be soberly solemn and conspicuously decorous. which is in alignment with features of monumental buildings that worship Confucius. Of course, this is as well the inevitable stereotype of official architecture. As "the epitome of the imperial palace", the sparrow brace of Qufu Confucius Temple's, compared with those in the Forbidden City in Beijing, the two can be said to be exactly the same, whether in terms of type, pattern, carving art, or the color painting. It's just that there is still a small amount of Hua Yazhi in the Forbidden City in Beijing to adorn the solemn air of the palace.

Assuming the role of displaying the architectural rank, the sparrow brace further embodies the feudal rank. As an ancient architectural component, its historical value cannot be ignored. It renders

us an access to a deeper understanding of the cultural connotation behind it and the technical level at that time, worthy of future generations to study, inherit and develop.

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