

Research on the Protection of Historical Buildings under the Collision of Sino-Portuguese Cultures—Taking the Zheng Family House in Macau as an Example

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Abstract: Macao is a world-renowned Asian city with multicultural integration, and it is also the only city in China that is dominated by the exchange model between China and the West. Architectural culture is the historical heritage of a city, and the architectural culture of the Historic Centre of Macao has been influenced by both Chinese and Western cultures, forming a unique and diversified architectural form and decorative style. Starting from the development and evolution of Macao's architecture, this study combines the differences between Chinese and Western architectural cultures, especially the integration of Lingnan architectural culture and Portuguese architectural culture in Macao's architecture, and summarizes the principles for the preservation of Macao's historic buildings.

Keywords: Chinese and Western architectural culture, historic urban area, world heritage, architectural preservation, Zheng family house

1. The relationship between Chinese and Western architectural culture and Macao's architectural culture

1.1 Chinese architectural culture

The evolution of ancient Chinese society has shaped the course of the development of traditional Chinese architecture, and the highly prosperous feudal social environment that has lasted for more than 2,000 years has always made Chinese architecture dominated by palace-style buildings that symbolize imperial power. God in China is just a means to flatter the imperial power, and Confucianism is the correct direction of thought.

Architectural design in China begins with a line and is presented as a flat surface when viewed as a whole. To use a drawing analogy, walls, pavilions, attics, palaces and streets, crooked guardrails, streams, ponds, and so on in a cluster of buildings are just "lines" of different lengths or widths[6]. The combination of Chinese architecture is like a beautiful oil painting in the Chinese style; Its outer boundary is a wall, which exists only as a frame and is not the main focus of viewing. The interior of the Chinese architecture is understated and deep, and the viewer perceives the dynamic beauty rather than the quiet environment: as people roam through it, each step brings a new visual experience and emotions fluctuate. Savoring the variation of these lines is one of the important elements of Chinese architecture. However, we cannot ignore the fact that Chinese architecture also contains three-dimensional individual structures, but they do not exist in isolation. In the pursuit of aesthetics, Chinese architecture is more inclined to rich connotation, attaches importance to artistic conception, emphasizes harmony and consistency, and is also more humane[1].

1.2 Western Architectural Culture

The origin of Western architecture is the faces, which present a lumpy structure with a distinct sense of volume. Admiring these Western buildings is like admiring exquisite sculptures, but in essence they are independent and perfect. Western architecture pays attention to mystery, majesty and publicity, pays attention to the perfection of a single body, and is more full of divinity.

The development of architecture in Macao is also influenced by the history of Western architecture, and many Western-style buildings have risen in the middle development stage, such as the Ruins of St.

Paul's in Macao, The Londoner in Macao, The Venetian Macao, and the Dom Pedro Theatre in Macao. These buildings are a good example of the application of Western architectural characteristics in the architecture of Macao, with high-profile luxury and intricate decoration of the façade of the building[1].

1.3 The Formation of Macao's Architectural Culture

Under the influence of ancient Chinese values, there are certain similarities and differences between architectural culture and Western spiritual culture. The precipitation of history and the intertwined integration of culture are the basis for the internationalization and diversification of Macao's architectural culture. In Macao, the fusion of Chinese and Western cultures is fully reflected in the urban space, neighborhoods and individual buildings. Many of the existing historical buildings in Macao have witnessed the spread and penetration of Western architectural culture in China, and are also the historical imprint of the cultural exchange and coexistence between China and the West for hundreds of years. As the best choice for museums of modern and contemporary Chinese architecture, Macao's Historic Centre is home to a wide variety of architectural types and appearances. These include not only traditional Chinese temples, residential areas and gardens, but also European-style theaters, forts and churches. These places showcase the architectural art that has been maintained and passed down during China's busy period, and also reflect the blending and interaction of Eastern and Western architectural cultures.

Over the centuries, as outsiders settled in the urban area of Macao, their architectural skills were introduced across the ocean, making Macao the first place to introduce Western-style modern architecture to China. In particular, the Portuguese architecture of Macao has a strong connection with the local Portuguese architecture. In fact, since the Renaissance, some major architectural types and styles have been combined with various architectural elements from other parts of Asia, and new changes have been made in Macao, forming a unique and distinctive architectural model[7]. Against this backdrop, Macao is one of the first cities in China to embrace Western architectural culture.

2. The evolution of Macao's architectural culture

2.1 Differential stage

Before the intervention of Western architectural culture in the Macao Peninsula, the architectural groups of the Macao Peninsula were still dominated by traditional Chinese Lingnan architecture. After the Opium War, the management of the Macao Peninsula was transferred to the Portuguese, who remodeled the buildings of Macao according to the Portuguese architecture, so that the Macao architectural complex was changed beyond recognition, and their purpose was simple, because for them, it was only a colony, and it should be made similar to their hometown, without considering the importance of the maintenance of historical buildings and architectural cultural heritage. The development of Macao's architectural and decorative styles was hit hard at this stage[2].

2.2 Detention phase

For a long time to come, our predecessors have been trying to bring the Macao Peninsula back to the embrace of the motherland, which has led to a long period of stagnation in the management of the Macao architectural complex, and there has been such a phenomenon, some of the buildings are completely Portuguese characteristics, and some of the buildings are Macao's historical architectural heritage. If these two buildings are viewed together, they are definitely incompatible with each other, and this is a stagnant stage in the evolution of Macao's architectural and decorative style.

2.3 Refactoring phase

However, since the return of the Macao Peninsula to the motherland, Macao has resumed its operation, even more so than in the Ming and Qing dynasties, because of the "one country, two systems" principle, Macao is still one of the centers of cultural exchanges between China and the West.

In fact, the process of urban construction does not lead directly to "modernization", but oscillates between the two extremes of tradition and modernization. I have thought about the question of completely abandoning traditional architecture in favor of a new modern building. This thinking has led to the integration of traditional and modern architectural characteristics in the construction of buildings,

which is the embodiment of neoclassical style, and a large number of public buildings and residential buildings on the Macao Peninsula have been dressed in neoclassical clothing.

3. World Heritage Buildings under the Influence of Sino-Portuguese Culture: A Case Study of the Mandarin's House

3.1 Definition and classification of World Heritage sites

In 1959, Egypt decided to build the Aswan Dam on the Nile, which could pose a threat to some of the ancient ruins located in the Nubian region. In order to save these cultural heritages, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has launched a project called "Action for International Conservation", the core idea of which includes two key points: first, the emphasis on "global shared heritage"; The second is to assert that "all mankind has the responsibility to assume the responsibility of protecting these precious assets". This concept not only promotes international cooperation and coordination, but also further strengthens people's awareness of the importance of environmental awareness. By the time of the conservation movement in the sixties of the twentieth century, this view was more widely supported, and natural resources, which were considered a form of heritage, were included in the scope of protection because they were related to the survival and development of humanity as a whole. The term "World Heritage" was first coined at the World Heritage Conservation Conference held in Washington, D.C., in 1965, in order to indicate that it is "the present and future rights and interests of the people of the world".

Cultural relics: buildings, inscriptions and paintings, elements or structures of an archaeological nature, inscriptions, caves and associations of outstanding universal value from a historical, artistic or scientific point of view[4];

Ensembles: groups of stand-alone or contiguous buildings of outstanding universal value from a historical, artistic or scientific point of view, in terms of architectural style, evenly distributed or in combination with the landscape of the environment;

Sites: Places of significant universal value from a historical, aesthetic, ethnographic or anthropological point of view, as well as archaeological sites, etc., which are of significant universal value.

3.2 Macao World Heritage Building: Mandarin's House

The Cheng Family House is located in the alley next to the Masai well in Macau, a typical Lingnan-style mansion. Zheng Guanying built the house before 1869 as his ancestral home, which was planned and built by his father, Zheng Wenrui. Later, due to the scattered family members, the large house was not fully restored and renovated for a long time, but the structure was preserved intact. It was not until July 2001 that the local government began a maintenance project to keep the house in its original condition.

Some of the buildings in the Historic Centre of Macao are deeply influenced by Lingnan architecture and have Lingnan characteristics. Architectural design is a part of the Lingnan cultural system, and the interior of Lingnan architecture also has the characteristics of sales, openness, compatibility, diversity, practicality, intuition, etc., far from Confucianism in Lingnan culture. Lin'an has always preserved many unique cultural traditions, which have attracted the attention of anthropology, sociology and history scholars at home and abroad. The unique social structure of this space and the influence of advanced clan rule on the architectural form, folk products, and aesthetic taste of the space are the focus of scholars.

The largest surviving Chinese-style residential complex in Macau is the Mandarin House. The Mandarin's Mansion is a combination of open spaces with different architectural forms and architectural styles, with more than 60 large and small rooms, which is a family building complex, which is very rare in Macau. It resembles the traditional Chinese Lingnan architectural complex courtyard enclosed form. The Zheng Family House, which is mainly built in the traditional Chinese architectural style, has a unique Chinese architectural technique that is reflected in the design of the roof, beams, and the use of various windows in the inner courtyard. The square architectural form is also the characteristic of traditional Chinese architecture, and the courtyard also emphasizes the symmetry of traditional Chinese courtyard.

The city of Macau also has a number of buildings with Portuguese architectural features. One example of this is the World Heritage Site of the Padre, with its yellow-green façade and tiled roof. The

architecture and decoration of this theater are elaborate and elegant, full of romance. It is a neoclassical design building that shows the luxurious design concept of the European theater at that time. The Roman columns of the theater are intricate and varied, and people can think of the charm of Western culture and how luxurious and fashionable it is.

3.2.1 Architectural form

Although the main elements of the Mandarin's House are Chinese style and shape, its interior is full of unique features that blend Eastern and Western cultures. For example, its roof design is traditional Chinese and includes a variety of complex window layouts and corridor gates; Interior finishes such as the decoration of the ceiling, the form of the door and window frames, the details of the cornice line and the stucco on the exterior walls are all inspired by Western and other countries.

The hall on the second floor of Yu Qing Tang is the most noteworthy part of the whole building. The first three rooms on the second floor are connected by symmetrical units, and the last two rooms are divided into two smaller rooms by carved doors with horizontal curtains. Here we can see the attitude of the owners and Chinese craftsmen towards the two representative forms of roof trusses at home and abroad, as well as the cautious attitude towards trying new things. Most of the remaining buildings are load-bearing walls, which not only have the wall stacking method of traditional Chinese architecture, but also arched walls, arched lintels, and even arched buttresses. With so many masonry arch structures and construction methods, it is not difficult to conclude that there was a time when Western-style arch architecture began to be used in Macau. Some of the courtyards and garden buildings are in Western style, and many Western-style design techniques are incorporated into the architectural details.

3.2.2 Decorative style

From the perspective of the functional division of the whole building, the main residential part of the Zheng Family Mansion tends to maintain the traditional Chinese style, and the cloister facing the courtyard and the triangular pavilion facing the garden are used as the main elements of the Western-style structure. The pavilions on three sides maintain a traditional Chinese façade, while the annex overlooking the garden has a cantilevered portico and thin Western-style walls. In the traditional Chinese architectural category, residential architecture is a part of the "li", which is a product of the feudal ritual system and the embodiment of Confucian ethics.

Lingnan brick carving is an intangible cultural heritage and an attribute of tangible cultural heritage. Among the ancient architectural sculptures, brick carvings occupy an extremely important position. The production process and key point is the use of high-quality gold brick grade green bricks for surface treatment. Deep sculpture is a traditional folk art in China for hundreds of years. In the common Lingnan building complex, brick carving is often used as one of the building components for the decoration of courtyards, houses, building walls or eaves, delicate and delicate, and most of the brick carvings have a certain story in it, in order to praise and convey culture, the story theme is wide, and the carving shape is vivid and expressive[3]. The brick carvings of the building mostly tell local allusions and homely stories, which are inherited as intangible cultural heritage and as an important representative of Lingnan art. In the process of architectural decoration, in addition to using various creatures and natural materials to decorate the environment, designers are also good at combining them and recreating them according to their own creativity and customer needs, by adjusting the layout and sequencing of patterns to produce a new visual experience and enhance the overall aesthetic [5], common patterns in the Zheng family's mansion such as carp jumping over the dragon gate or Fu Lu full hall, etc., This sophisticated design not only gives the entire building group and its family members a prestigious status symbol on the outside, but also enriches the inner world of people.

4. The principle of protection of historic buildings

Emphasizing the visibility of historic sites and their surroundings is one of the key factors in maintaining and improving their surroundings. Especially in the new construction or renovation of these places, we need to use the architectural language to show and clearly convey the history, culture and character of the heritage itself. This approach is considered to be an effective means of successfully preserving and improving such culturally rich heritage areas and their surroundings [8].

4.1 Protective principles

In the protection and planning of historical and cultural heritage resources and the surrounding built

environment, the first principle is to observe conservation. When planning and designing, we should prioritize the heritage itself, and make the preservation of the heritage itself a top priority.

4.2 Principle of subjectivity

When planning and designing historical and cultural heritage and its ancillary environments, it is crucial to prevent new or expanded elements from taking over the dominant position, or from submerging the heritage itself in new or added parts due to excessive imitation of the surrounding environment.

4.3 Principle of Comparative Coordination

In the historical and cultural relics and in the social context of the new era, the conflict between the old and the new is always present. Therefore, there is no need to hide this contradiction in the planning and design of its surroundings. Only by truly showing their respective attributes can we meet the needs of objective logical development.

4.4 Principles of sustainable development

Although the ruins of the complex are the crystallization of the past and history, while respecting the history, we also need to rely on the development of modern technology and culture to promote the continuous progress of the historic urban complex. Viewing the heritage value and protection and management of the building complex from the perspective of sustainable development is the guarantee for the long-term preservation and development of the historic urban complex.

5. Conclusion

Exploring the integration and specific application of Chinese and Portuguese architectural cultures in Macao's World Heritage Buildings, we can better understand the reasons why Macao is known as a city of cultural exchange between China and the West. The seemingly disparate architectural culture of Macao is beyond the ideal fusion, which also strengthens our recognition and support for the maintenance and restoration of the World Heritage buildings in the Historic Centre of Macao, because the protection of integrated historic buildings is not only the unilateral mission of the city, but also the responsibility of each of us. In the historical and cultural districts of Hong Kong and Macau, Chinese and Portuguese people have built various living communities together. The district and architectural design not only showcase the Chinese and Western architectural styles of Macau, but also reflect the integration of religious beliefs, traditional culture and life between the Chinese and Portuguese peoples.

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