

Research on Decorative Patterns of Doors and Windows for Historical Architecture in Macau

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Abstract: As the commerce and trade port for cultural exchange between China and Portugal, in modern times, Macau was endowed with all-inclusive, abundant and diverse historic features. After the historical architecture in Macau was made world heritage in the year of 2005, there was a new trend for studying Macau architectural culture at home and abroad, many of which were related to the architectural decorative patterns, but less emphasis was laid on the decorative patterns of doors and windows. Under the influence of the concept of “the house is crowned by the door” for Chinese architectural culture, as the important medium between internal space and external information of architecture, the decorative patterns of doors and windows reflect the spiritual symbol and humanistic characteristics of architecture itself in an even better fashion, presenting significant social historic values.

Keywords: Macau; Cultural Heritage; Modern Architecture; Doors and Windows; Decorative Patterns

1. Introduction

From the end of the Westernization Movement in the late Qing Dynasty to the early years of the new nation, Macau has formed a unique architectural cultural heritage with the impact of modern civilization. The vocabulary of modern historical architectural design is constantly integrated in the two dimensions of ancient and modern, as well as China and Portugal, forming a diversified architectural style system. “The house is crowned by the door, if all these things are equipped, it signifies a very good omen,” As an important component of architecture, with the continuous change of demand and aesthetics, the shape and decoration of doors and windows have gradually formed a rich and colorful decorative technology, containing profound meaning and spiritual sustenance, retaining the imprint of emotional belonging in different eras, and becoming an important carrier of modern social life and folk culture. This article will expand from five aspects.

2. An Overview of Modern Architecture in Macau Under Social Changes

A large part of the unique historical charm and artistic value of Macau’s modern residential architecture is reflected in the function of carrying daily life. According to the structure, it is divided into two categories: one is “courtyard type”, with Sai Kwan Mansion as a representative; The other type is in the form of “bamboo tube houses”, the front hall is utilized for business and the back hall is for living, with the townhouse in the inner harbor area as a representative. The overall architectural foundation and style are influenced by the traditional architectural style of Lingnan, and also reflect the important influence of trade form demand on the spatial pattern of residential buildings in the period of economic and trade development. The Portuguese residential building presents a neoclassical style with southern European vernacular characteristics, the front hall is utilized for business and the back hall is for living, the triangular lintel sign at the entrance is prominent. In order to effectively carry out comparative research on the same type of architecture, Ding Gefei and other relevant researchers divided all the collected examples of modern residential architecture in Macau into two categories, Chinese style and Portuguese style, according to many factors such as the race, main layout, construction location, main style, and construction time of modern Macau architecture, in the meantime, integrating the building volume, combination method and number of households, it is divided into four types on the basis of the two major categories: Chinese-style detached house, Chinese-style townhouse, Portuguese-style

detached house, and Western-style townhouse [1]. The changes in the distribution area of modern historical buildings in China and Portugal also reflect the social and political expansion and changes of Macau in modern times.

3. The Configuration Characteristics of Decorative Patterns for Doors and Windows in Modern Buildings in Macau

3.1 Front Door

As the independent component beyond the main structure of the construction, the front door is basically based on the traditional style of floral scrolls pattern. Some front doors are above the main body of the building, the most basic form is a door bucket or porch, and the excessive space for maintaining the structure is formed by opening or semi-open, which can be sheltered from the wind and rain. As the beginning of the overall spatial sequence, the front door has also become an important expression of the architectural decorative patterns.

3.2 Room Door

The room door is also known as the inner door, generally set at the entrance of the room, there are also those of double-door style that are mostly arranged in larger houses, and the decorative patterns of the room door are mainly arranged in pilasters, storefront signboard, apron board, lintels and so on. For example, at the lintel of the Casa de Lou Kau, brick carvings are used, carved with vases, bats and other decorations. Through the architectural decoration pattern, it conveys the beautiful meaning of life.

3.3 Windows

Windows and doors play an equally important role in building components. The existence of the window is dependent on the ontology of the building, so its development and change are synchronized with the main building. With the continuous changes in society, the initial basic function of lighting and ventilation of windows has gradually evolved into the role of art decoration.

3.4 Ornamental Perforated Window

Although the ornamental perforated window is also a kind of window, it cannot be opened. With its hollow style, the ornamental perforated window can not only communicate the interior and exterior scenes, but also divide the space to achieve the artistic effect of “seems to be connected but separated.” Compared with windows, ornamental perforated window has artistic patterns in the window frame, such as the decorative patterns of swastika and copper coins.

4. Analysis of Decorative Style for Doors and Windows Modern Architecture in Macau

4.1 Chinese Style Door and Window Decoration

4.1.1 Door Types

In accordance with the functions of the door, it is divided into the outer door and the inner door. Outer doors for defensive purposes, also known as front doors; The main function of the inner door is to separate the interior space. Making a general observation the modern architectural plan of Macau, the front doors are usually divided into memorial archway doors and concave bucket doors.

(1) Memorial Archway Door

The memorial archway door is usually used in temple buildings, such as Zhulin Temple and so on, the distinctive feature is that there is a roof set on the door, but such a roof cannot shelter from the wind and rain, it is just a decoration, and it is called as memorial archway, whose size can be measured by the number of “archways”. Among them, the smallest one has two pillars, one room and first floor, and the most common specification is four pillars with three rooms. The decorative part of is mainly distributed at the ridge of the “archway”, and the pattern is carved at the end of the upturned ridge.

(2) Concave Bucket Door

The door sunken inward at the entrance of the building is called the concave bucket door, mainly to prevent the impact of the typhoon in Macau, because rain will wet the door leaf and cause decay, the door can be protected from rain, wind and shade ^[2], as presented in Figure 1. For the “triple door” in residential buildings of Macau, the inner door is set with a plank door, the “Tanglong door” is in the middle, and a low fence door is at the outermost. The low fence door of the outer door is not only intended to divide the inside and outside, but also to block livestock and poultry, as well as to play a role in ventilation.



Figure 1: Memorial Archway Door, Concave Bucket Door and Tanglong Door (Photographed by This Research)

4.2 Window Types

(1) Mullioned Window

As a traditional Chinese window style, mullioned windows have been preserved in social changes, the window style is simple, the main feature is vertical with even arrangement of window mullions, usually are thick window mullions with 8cm diameter, which can present the simplicity of wood color.

(2) Lattice Window

If divided by materials, the lattice windows mainly include wooden windows, tile windows, glazed windows, brick windows and so on. It does not play a defensive role, but only separates the indoor space. With social changes and the influence of Western-style architecture, exquisite iron lattice windows have gradually appeared in Macau architecture, No. 7 Lobby Lane is the most representative. It is characterized by the fact that the square window is divided into four parts by the crossed iron sword, the diagonal of each part intersects to form the structure that supports the window mullion, the internal force points rely on the crossed nodes, and the flower patterns are extremely solid to support each other by welding.

(3) Partition Door and Window

The main form of partition doors and windows is joint window, and its holding frame is composed of horizontal wood and frame, divided into three parts: upper, middle and lower, with the inner part being the upper, the apron board being the lower part, and the sandwich panel being the middle. With the changes in society, the window mullions in the upper part of the partition doors and windows of Macau residential buildings have gradually been replaced by stained glass, reflecting the combination of Chinese and Western elements, as presented in Figure 2.



Figure 2: Mullioned Window, Lattice Window and Partition Door and Window Photographed by This Research

4.3 Portuguese-Style Door and Window Decoration

4.3.1 Door Types

(1) In Portuguese religious buildings, the main architectural forms of the front door facade are mountain flowers, pilasters, pillars and so on. The most typical example is the front door of Saint Joseph's Oratory of Mount Royal, in the Baroque style, the walls on both sides of the door highlight the graceful and dynamic curves of the pilasters, which contrast with the mountain flowers at the top.

(2) At the end of the 19th century, the popular Gothic pointed arches, such as the pointed arches set at the entrance of St. Michael, the Archangel, the door opening is expanded outward with a beveled decorative band, creating a seemingly perspective artistic conception, the door leaf is also decorated with the image of pointed arch, and the decorative band of the pointed arch is used to set on the door, presenting a distinct Gothic style.

(3) Romanesque semicircular arches are also common in door types of Macau, with pilasters on both sides integrated with the door openings, and the architraves are recessed layer by layer, for example, the vertical stripes on the door decoration of Morrison Chapel, as the oldest Christian church in Macau, it is simple and rustic.

(4) In modern times, with the flourishing development of Macau, some large porches have appeared in large public buildings, all of which are large-scale, luxurious decorations, and rich in detailed carvings, such as the decorations in Central Government Office, Government House, and Dom Pedro V Theatre of Macau special administrative region all belong to this type. In particular, the second floor of the porch in Central Government Office of Central Government Office is an open terrace with triangular mountain flowers at the top, and the soaring porch is particularly eye-catching.

(5) In modern Macau architecture, there are also exotic Islamic arch pillar porches, such as the Moorish Barracks and Sun Yat Sen Memorial House and so on, on the main facade of the building, the arch pillar porches present a quiet and elegant decorative style.

4.3.2 Window Types

(1) Rectangular Square Frontal Window

With its simple form, it has become a commonly utilized window type in modern Macau. It is usually called square opening, the width is generally 1 to 1.5m, and the height is 2-3m. Applying wooden beams or stone flat arches as beams for windows, which have prominent decorative effect. The simplest window is to set a 20cm wide rectangular frame around the hole opening, protruding a little from the wall, which is the so called "architrave". The architrave is decorated with crown bands, usually with mountain flowers and stucco ornaments, the mountain flowers are mainly baroque curved mountain flowers with a theme of volute and leaf ornaments. The St. Dominic's Church are decorated with mountain flowers that have exquisite stucco patterns, which are free, bright, and the delicate mountain flowers are supplemented by sinuous skintle, presenting gorgeous decorative effects.

(2) Arched Window

Arched windows only began to be widely utilized in Macau in the second half of the 19th century, and can be divided into semi-circular arch windows, pointed arch windows, triangular arch windows, horseshoe arch windows, and onion-type arch windows according to their shapes, among which the most widely used is semi-circular arch windows. The decoration of the arched window is relatively simple, along the direction of the arch to make a circle around the architrave, it is also possible to expand the wall surface inward and outward around the window opening, so as to form the oblique plane, which not only increases the perspective effect, but also improves the amount of indoor lighting. Triangular arches are usually finished using oblique plane line angles. For example, the commercial and residential building in front of the Macau City Hall uses this form, with trimmed pilasters embedded in the walls on both sides of the window, the sill wall under the window is made in the form of balustrade, which recessed inward, deliberately making the composition of the window incomplete, and it is this incomplete decoration that attracts attention.

(3) Compound Window

The structure of compound windows is to unify the combination of two or three windows in the same decorative motif, the double window is composed of two window groups, and the triple window is composed of three windows. For example, the window in the inner courtyard of Macau Civic and Municipal Affairs Bureau is double window shared by mountain flowers and balconies, which is both

light and decorative, as presented in Figure 3. In the late 19th century, compound windows were constructed in the form of continuous arches between two large pilasters^[3].



Figure 3: Portuguese-Style Door and Window Decoration Photographed by This Research

5. Types and Implications for Door and Window Decorative Patterns in Modern Buildings of Macau

5.1 Geometric Patterns

The decoration patterns of doors and windows in Macau in modern times mainly include Taofang, Bubujin, endless knot, auspicious cloud, Fangsheng, swastika, back pattern and so on, with strong regularity, especially used in many doors and windows continuously, with a super sense of cadence.^[4]

5.2 Plant Patterns

Applying beautiful plants to convey good sustenance, which is the inheritance of tradition of modern door and window decoration patterns in Macau, for example, the four gentlemen of plum blossoms, orchid, bamboo and chrysanthemum with the meanings of elegance, the pine tree which symbolizes longevity, the pomegranate that symbolizes fertility, and the lotus flower that means purity.

5.3 Animal Patterns

This type of door and window decoration pattern is the use of animals to imply good luck and wonderful things, such as magpies, lions, butterflies, phoenixes, mandarin ducks, unicorns, carp, cranes and so on. Bats are also widely utilized in garden window decoration in Macau, because one of the Chinese characters of “bat” has the same pronunciation of the word of “luck”, so the bat means “lucky mouse” in architectural decoration, which also manifests the spiritual change of people in social changes.

5.4 Character Patterns

In the doors and windows decorations of modern buildings in Macau, various decorative patterns such as calligraphy, couplets on pillar, and poetry are nothing new. Among them, the gray sculptures are more often decorated with couplets on pillar, glass paintings and wooden works are usually decorated with poetry and calligraphy. The meanings of couplets on pillar and poetry on the doors and windows decorations of building are consistent with the style of buildings, therefore, it will help visitors to have a more comprehensive understanding of Macau’s architectural culture. The Chinese characters on the glass painting, because they can be observed on both sides, can be completely constructed through artistic calligraphy to create the same artistic font on the front and back.

5.5 Utensils Patterns

Including vases, bronzes, musical instruments, ceramics, ancient coins, dan furnaces and so on, besides, religious objects are also the subject of decorative patterns of doors and windows of buildings, for example, the magic weapons utilized by the eight immortals are often applied as a symbol of the appearance of the eight immortals in the decorative pattern, since they are not the real eight immortals, they are called as “alternative eight immortals,” including a percussion instrument made of bamboo (Yugu), jade plates, swords and so on. In the meantime, the eight treasures and auspicious objects of Buddha also constitute the best themes: Buddha beads, diamond mirrors, wormwood leaves, golden coins,

rhino horns, Fangsheng, books, chime stone and so on.

5.6 Men and God Story Patterns

In the decorative patterns of doors and windows of buildings, they are mainly based on historical figures or fairy stories, including the eight immortals, heavenly palaces, the god of longevity and so on. Thereinto, the most commonly used stories include “the eight immortals offer birthday congratulations” and “the eight immortals crossing the sea.” While the character stories applied in decorative patterns are mainly historical allusions to ordinary people, such as three generations under one roof, surrounded by grandchildren, plowing the fields and so on.

5.7 Landscape Scenery Patterns

In the decorative patterns of doors and windows of modern buildings in Macau, the decorations of wooden works, gray sculpture and glass mostly use the theme of landscape scenery. With the changes in society, two or more themes have gradually begun to be mixed, for example, “present luck and treasure” is composed of the meaning of lucky rats and golden coins, and the alternative eight immortals combined with auspicious characters. It is easy to see that the decorations of modern buildings in Macau inherit the traditional expression of artistic design, and constantly innovates in the continuous social changes as well as the integration of Chinese and Western cultures, manifesting universal philosophies, subjective intentions, folk customs and aesthetic consciousness [5].

6. Conclusion

In constant social changes which are moving forward and differentiating horizontally, in the early 20th century, the modernization process of architectural style in Macau was almost accomplished, the derived historical buildings in Macau possessed rich and profound implications as well as unique features, while modern architectural culture constitutes its important part. Under the influences of life style, economic change, family structure change and social system change, doors and windows have already surpassed their original simple functions as architectural component, which carry the spiritual ballast of people to certain extent. By means of analyzing the architecture characteristics of decorative patterns, styles, types and implications of doors and windows in modern Macau, integrating with the social changes, deep elaboration was made on the decorative style of historic buildings in modern Macau, so as to explore the specific types of decorative patterns for doors and windows, and how the material object works in social daily environment. From the perspective of enriching the whole architectural culture heritage of Macau, researches regarding decorative patterns of doors and windows make a supplementary for architectural historical materials and expand the research boundary, which provide reference for improvements and breakthroughs coupled with applications and practices for decorative patterns design of buildings in historic urban area of Macau.

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