

# The Combination of Chinese and Western Architectural Styles in The Guangzhou and Guangxi Regions

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**Abstract.** Since the outbreak of the Opium War in 1840, Western forces gradually penetrated mainland China, and a new wave of Western architectural styles began to emerge on the Chinese mainland. Thus a combination of Chinese and Western architecture appeared more frequently in the private sector. This article takes the former residence of Xiang Hanping and Chen Jitang's residence as examples to analyse the application of the combination of Chinese and Western architectural styles in the architecture of modern Chinese private houses in the two regions. The result is that both the former residence of Xiang Hanping and the Chen Jitang Mansion belongs to the inherited transformation style of modern private house architecture. The former home of Xiang Hanping has a green brick façade with glazed tile sloping roofs full of classical Chinese elements and is decorated with various traditional Chinese motifs. In contrast, the residence's interior is delicately decorated in a Western style, actively using new Western building materials and techniques. The Chen Jitang Mansion, on the other hand, is more daring in its construction, with a prominent 'foreign façade' combined with a magnificent interior, bringing the Western architectural style to the forefront but actively using the traditional Chinese classical garden concept in the conception and design of the courtyard, combining East and West to complement each other. The two examples are typical of the inherited transformation of the East-meets-West architectural style in the context of the same period.

**Keywords:** The Combination of Chinese and Western Architectural Styles; former residence of Xiang Hanping; former residence of Chen Jitang.

## 1. Introduction

After three decades of Western modernisation and industrialisation, the introduction of Western-style architecture was initially attempted in Shanghai in the 1870s. Led mainly by Chinese architects studying abroad and Western architects, Western-style architecture gradually spread from the coastal trading port cities to the interior of China. By the end of the 1920s and 1930s, the increase in the number of Western elements and completely Western-style buildings caused the Chinese people to feel invaded. This led to the Chinese Form outbreak, which demanded that the main aspects of the Chinese style be retained in new Western-style buildings and that the prominence of Chinese elements is emphasised [1]. Starting with public buildings, buildings combining Chinese and Western elements and Western-style buildings began to develop together in the country. For example, Ginling College and Canton Christian College are two typical universities combining Chinese and Western styles with sizeable Chinese roofs. They were designed in China under the leadership of the famous American architect Henry Murphy [2]. The style of private gardens and houses is gradually influenced. The houses that developed in folklore were often individualistic, combining Chinese and Western forms with their interpretations and preferences, thus creating a style of inherited transformation.

In the southern Chinese regions of Guangdong and Guangxi, a combination of Chinese and Western architectural forms started in the mid-nineteenth century, spread to the inner provinces and became famous. By the early twentieth century, the combination of Chinese and Western architectural styles in Guangdong and Guangxi was transformed, with inherited and transformed buildings becoming predominant. The former residence of Xiang Hanping in Pubei, Guangxi, and the Chen Jitang Mansion in Guangdong are examples of private houses that were typically inherited and

transformed in the 1930s when they flourished. They are both historically famous residences and represent the local environment and personal experiences, both of which are unique in their style. However, the two generals' private houses have many differences and adaptations in terms of structural style and building materials. This paper analyses the architectural style and structural materials of the former residence of Xiang Hanping and Chen Jitang, and investigates the application of architectural style of inherited transformation in these two regions of China.

## 2. The former residence of Xiang Hanping

### 2.1. Background

The former residence of Xiang Hanping was the largest official-level residence in Pubei, Guangxi, during the Republican period, covering a total area of about 7,800 square metres. Its owner, Xiang Hanping, was a famous general in the history of Guangxi. He returned to his hometown of Pubei in 1934 because of disagreements with his former friend Chen Jitang and therefore began to expand his residence. The former home of Xiang Hanping is located in the old town village of Poziping in the town of Shiyong and consists of the Zengchengzi and the Jiali Garden. However, as no complete buildings have been preserved in the Jiali Garden, only the Zengchengzi section is studied in this paper.

The location and orientation choice of Xiang Hanping's house is rigorous (Figure 1). The residence is situated on the higher ground in the village, facing Nanliu Lake and backed by Daling Mountain, the water on the front symbolising cleanliness and spirituality and the hills behind it blocking the wind and sand [3].



**Fig. 1.** The relationship between the location of the former residence of Xiang Hanping and the landscape of the village

### 2.2. Overall layout

The spatial layout of Chinese architecture is influenced by the Tao religion, which seeks to establish a perfect balance between practical use and natural surroundings (Guo, 2010). To reflect this balance in architecture, traditional Chinese buildings often follow the symmetry principle to demonstrate a reverence for nature.

In terms of the plan (Figure 2), the former residence of Xiang Hanping is evident in its horizontal emphasis and principle of symmetry. The overall building does not exceed three storeys, but the flat area of the building and courtyard areas are extensive. Except for the north and south gates, both the zigzag approach to the enclosure, the overall spatial layout in terms of the distribution of buildings and courtyards, and the shape and structure of the building follow the balanced principle of Chinese symmetry.

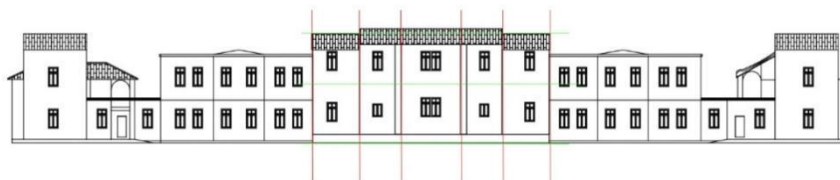


**Fig. 2.** Overall modelling of the former residence of Xiang Hanping

Moreover, the former residence of Xiang Hanping is a traditional Chinese enclosed house, with walls enclosing the whole and delineated areas. This type of house is often characterised by a courtyard (or patio) surrounded by houses [4]. The design of the entrance also takes into account the traditional Chinese idea of 'Feng Shui'. In classical Chinese house design, the entrance usually requires a screen to ward off evil spirits. Like the Xiang Hanping residence, the entrance is not directly opposite the house but through a twist of space.

The main building façade and the entire façade of the Xiang Hanpin residence follow the classical method of composition of three horizontal and five vertical sections (Figure 3). The whole building is divided horizontally into three parts: the ground floor, the first floor and the roof, and vertically into five pieces from the outermost to the central building. The façade of the main building is divided into five stages by columns and walls. Still, the symmetrical principle of Chinese architecture is also applied to the façade, but generally, the façade has more Western classical elements.

As a whole, traditional Chinese thinking dominates, and given that it is the private residence of a famous historical general, more attention will be paid to the overall framework of the country.



**Fig. 3.** The elevation of the house of Xiang Hanping.

### 2.3. Building Materials

The materials used in the former residence of Xiang Hanping include brick, timber, and concrete. The three-entry main house combines Chinese and Western materials, with the interior decoration actively incorporating Western elements such as concrete, tiles and suspended ceilings. The ear rooms on either side of the main house are mainly of Western-style brick and concrete construction.

The main house is basically of brick and timber construction. At the same time, the new building material of reinforced concrete and its techniques are also used in places such as the beams and columns, with a roof of wooden rammed bars and slab angles to take up the columns and walls made of concrete. The four sets of apartments on the upper and lower floors all have dense, uneven, honeycomb-shaped acoustic walls on the external walls. The windows use a combination of timber framing and glass, and the roof is covered with insulation. This building material was undoubtedly advanced in China at the time and reflected the prominent status of the owners.

The embodiment of these building materials reflects, on the one hand, the ideology of the house owners and, on the other hand, the characteristics of the construction of the private houses of the dignitaries in Chinese society at the time and the development of the use and evolution of Western building materials on Chinese soil. The story of modern architecture in Guangxi was mainly influenced by Western religion during the period of emergence (mid to late nineteenth century to the early twentieth century), and the construction was mostly of public buildings; during the period of

development (early twentieth century to the thirties), as a result of the opening of the four ports of Guangxi to trade one after another, Western powers gradually penetrated all over Guangxi with the port cities as their bases. Western commodities were dumped, and raw materials were plundered. Guangxi was forced to open up to trade, and follow Guangxi was forced to open up its trade and establish a customs system according to the principles of the western powers, breaking the original internal circular evolutionary process of Guangxi cities[5]. Materials such as reinforced concrete became popular in Guangxi on a large scale, but traditional Chinese architectural elements were still retained in this period, and it was at the stage of the combination of Chinese and Western; in the flourishing location (the 1930s to 1940s), modern national forms of architecture slowly took shape, and a large number of architects poured into Guangxi to build mansions for the government and the dignitaries, and the modern architecture of Guangxi under this period " The "palace style" eclectic style gradually flourished and became the architectural craze of the time. As the most significant official residence in Pubei during the Republican period, General Xiang Hanping's home was built at the intersection of development and prosperity, using the most advanced materials of the time, such as concrete, tiles, glass and heat insulation mats. At the same time, traditional materials such as Chinese sloping eaves, wooden rammed bars, slab corners and glazed tiles were retained, making it a typical representative of modern architectural forms in Guangxi.

#### 2.4. Building Structure and Elements

While the exterior is primarily Chinese, the interior of Xiang Hanping's former residence has more Western elements, with the combination of Chinese and Western and a personal touch to the interior structure. Around the interior courtyard are wrapped two levels of external corridors, divided by brick columns on the façade, between which are half-high corridor parapets that deliver a robust perceptual impact. This portico style was introduced from European architecture and first became popular in China for official buildings and later in the early 20th century for private residences. However, the columns of the outer porch of the former residence of Xiang Hanping do not conform precisely to the European style of columns, instead opting for simple, atmospheric white columns more in keeping with his image. The walls are painted white, and the patio courtyard is enclosed by a western colonnade (Figure 4a), which consists of pillar piers, pillar bodies and pillar heads, generally 0.32m or 0.45m wide and between 1.5 and 2.1m high, with a plaque-type fence between the pillars and the pillars. The lotus flowers are carved into the pillar heads (Figure 4a), making the overall style simple and elegant. The floor is covered with octagonal flower tiles in different colours in a strict arrangement (Figure 4b).



**Fig. 4.** Veranda Style interior

The distribution and construction of the south and north gates are two tiny villa-style houses of symmetrical design. The ground floor is flanked by two bedrooms on either side of the main door, while the first floor is a two-bedroom hall. The structure of the north and south gates is symmetrical and identical, differing only in the style and pattern of the glazed tile decoration on the roof. The roof of the north gate, the hill and the four corners are decorated with flying dragon-type clouds, bats, butterflies and flowers and plants (Figure 5). The roof, hill and corners of the south gate are decorated with distorted flying phoenix-shaped clouds, meaning dragon and phoenix dance, and the two gates are symmetrically echoed (Figure 5). Upstairs and downstairs, and on both sides of the wall, are

covered with sentinel smoke and gun holes, which are the place of heavy military protection. The façade of the main house of the former residence of Xiang Hanping, from top to bottom, has a sloping roof covered with Chinese glazed tiles (Figure 5), with traditional Chinese architectural elements such as gables and ridges, and uses green bricks with the characteristics of Guangxi folk houses to pave the external walls, with distinctive Chinese architectural features.



**Fig. 5.** (a) North door ridge and cornice pattern; (b) South Gate cornice pattern

The servants' dwellings on either side of the main house are typical western voucher-arched outbuildings. At the north and south corners of the rear block are the gun towers, which have wok ears on both sides of the eaves, typical of Lingnan dwellings, and small windows to protect them from external structures. The small houses on either side of the main block are Western-style buildings of brick and concrete construction, with gable walls incorporated into the eaves. As the eaves are non-load-bearing elements, they are free and varied in form. The gable walls are generally 0.8 metres high, and the wall surfaces are carved with Chinese motifs, which enrich the changes in the contour lines of the façade and increase the contrast between the real and imaginary aspects of the façade, making the façade composition complete and more unified [5,6]. The first floor of the building is built with a semi-open balcony and a fence with Chinese openwork motifs.

### 3. The former residence of Chen Jitang

#### 3.1. Background

The Chen Jitang Residence, located in Plum Blossom Village, Zhongshan Road, Yuexiu District, Guangzhou, is a garden-style building, which was built in 1930 at the peak of Chen Jitang's political career and designed by Luo Ming radiance, a technician from the Bureau of Public Works, and became a meeting place for Chinese Nationalist Party dignitaries after its completion. The design of Xiang Hanping's residence is similar to that of Chen Jitang's residence in that it uses an eclectic mix of Chinese and Western design techniques (Figure 6).

Its owner, Chen Jitang, was a first-class general in the army of the Republic of China, the former chairman of the Guangdong Provincial Government, the first chief executive of Hainan Special Administrative Region, and the senior administrator of the presidential administration, who was the long-time ruler of Guangdong, politically a rival to the central government in Nanjing, and a great successor in economic, cultural and municipal construction, known as the "Southern King of Heaven" [7]. When he was in charge of Guangdong, he made great achievements in industry, commerce, and municipal construction, and laid the foundation for the modernization of Guangzhou.



**Fig. 6.** The design of Chen Jitang's residence

### 3.2. Overall layout

The entire residence is built with a combination of traditional gardens and Western-style architecture. The interior of the public house not only has a large lawn in Western style but also has Chinese garden elements such as rockery and pavilions. The main building is the center, the back building, the east building, and the west building create a floor plan with an open view, and each building is connected by a sky bridge.

The traditional symmetrical architectural layout of the central axis is continued in most of these buildings. The courtyard layout of the former residence of Chen Jitang is dominated by the central axis and relies on the courtyard to connect various sections, preserving the courtyard structure of traditional residential houses.

The former residence of Chen Jitang creates a lot of chic shared spaces through a natural and artificial blend. The garden-style architectural courtyard consists of the main building, hall, footbridge, and pavilion. It also has various artificial landscapes, including ponds, rockery, and scented flowers and trees. The building is set up with balconies, rooftops, and sky bridges in many places in the outdoor space setting, so that people can enjoy the mountains and hills outside while walking (Figure 7). The design of the outdoor space, combined with the western carved flower elements, makes the outdoor scenery from the building a combination of static and dynamic effects. Although the inside and outside of the building are connected and independent, this style of architecture is the essence of garden-style architecture. The interior and exterior of the courtyard are connected, and the middle hall and courtyard are layered with plants, ponds, rockeries, etc. The layout has a sense of hierarchy and highlights various landscape elements' continuous movement.



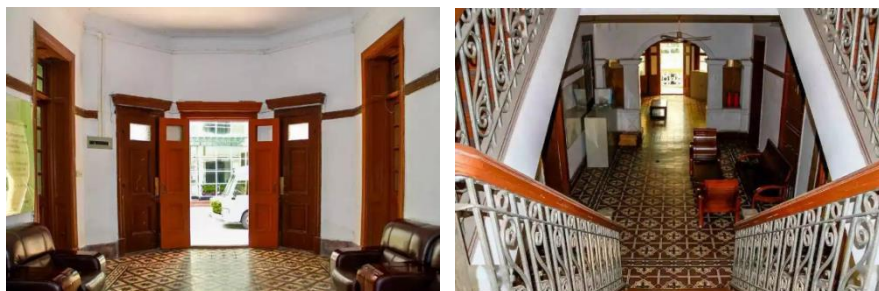
**Fig. 7.** The outdoor space of Chen Jitang residence

From the planning viewpoint, the public space of the main building is based on the zigzag plan, with the meeting space as the center, the main entrance set on the south side, and a secondary entrance between the concealed and column body set on the southeast side to meet the flow demand of different functions of people, and the rest of the public space functions are arranged around the meeting space on the first floor.

### 3.3. Building Structure

The design of the public space of the main building has a sense of hierarchy, and the entrance, stairs, doors, windows, paving, and other aspects all reflect the hierarchical structure of the design. The design of the entrance not only needs to meet people's basic needs to prepare for entering the house but also is the first-place people see after entering the house, so it is very critical. It is required a lot of attention to the scale of the entrance space and the psychological impact brought by the performance of artistic effects. At the entrance of the house, the sunlight is sufficient and the visual entrance is set up on both sides in imitation of the ancient Roman column Doric column, which enhances the sense of hierarchy of the entrance space (Figure 8) [8].

The floors are all paved with concrete flower tiles. The roof of the second floor is a rooftop, the front part is a dome roof yard, and the back part is a room. The back of the second floor has a staircase leading to the annex building, two stories in height and divided into two buildings in the east and west, all with red brick exterior walls, a corridor in the south, and rooms in the north.



**Fig. 8.** The entrance of Chen Jitang residence

The private spaces of the house are mainly concentrated on the second and third floors, which are also arranged in a circular pattern with the second-floor space corresponding to the meeting space on the first floor, forming a zigzag symmetrical plane, similar to the layout of western palace-style architecture. Each private space on the second floor has an independent outdoor space connected to

the outdoor space through a bridge, realizing the spatial characteristic of “the building is connected to the inside and the outside, but independent of each other” and enhancing the richness of spatial experience.

The doors and windows of the entrance and the second floor are decorated with white Western-style linear feet, which form a very obvious color contrast with the red brick wall of the exterior wall, revealing the combination of Chinese and Western characteristics of the public house and making it look very elegant. After the foyer of the public house, there is a staircase to the second floor, with rooms on both sides and fireplaces in the rooms. On both sides, there is a visual foyer modelled after the ancient Roman columns with Doric columns, which enhances the hierarchy of the entrance space. On the third floor, a pavilion topped with a dome is set up, revealing the combination of Chinese and Western architectural styles of the public house [9].

## 4. Chinese and Western Architectural Style

### 4.1. The transformation of modern Chinese architecture

Generally speaking, the integration of Chinese and Western architectural cultures can be reflected in two forms. The first is to infiltrate the western architectural techniques and characteristics into the original traditional Chinese architecture on the basis of the style of traditional Chinese architecture. The other is to incorporate Chinese traditions or elements with local ethnic colors on the basis of traditional Western architectural styles. The two cases studied in this paper belong to the evolution style of the first form.

Architecture is a cultural symbol of a city or even a country, as well as a symbol of political culture. As famous generals in Guangzhou and Guangxi in modern China, both Heung Han Ping and Chen Jitang, having survived a number of wars for their country, were deeply committed to their country's beliefs and culture. And their inclusion of Western forms and elements on the basis of Chinese style residence not only represents their own understanding and use of Western culture, but also demonstrates China's acceptance and trade-offs with Western architectural culture in the modern period. From senior officials to rural people, they began to think about the relationship and use of Western architectural elements with traditional Chinese architecture.

Guangxi's modern architectural forms and styles are mainly expressed in Western-style and inherited transformation. The inherited transformation is a form of inheritance and development based on tradition, incorporating some aspects of Western-style architecture and complementing the East with the West. It reflects the influence of a variety of Western architectural styles while taking the traditional Chinese architectural system as its primary expression.

The former residence of Xiang Hanping and the Chen Jitang Mansion are also part of the inheritance and transformation of Chinese and Western forms of architecture. These buildings have external corridors and Western-style decorative ‘foreign facades’ on their facades, while the internal space plan still retains the traditional courtyard layout of residential buildings. In terms of detail, the former residence of Xiang Hanping uses green bricks to pave the external walls and follows the traditional Chinese sloping roof, with the eaves and ridges decorated with traditional Chinese patterns, while the internal courtyard and decoration favour the Western style such as white-washed columns, external corridors, tiled floors, glass windows. In terms of the whole, the former residence of Xiang Hanping adheres to the traditional Chinese framework, still following the structure and layout of traditional Chinese architecture. In terms of façade, it is more Western in form, and the interior design incorporates many Western architectural elements. Similarly, the exterior of the Chen Jitang Public House, from the inside to the outside, uses primarily Western architectural styles, with red brick villas, giant domes, flat roofs, and a variety of Western-style line carvings all reflecting a solid Western architectural style. Furthermore, Chen Jitang Mansion incorporates the ancient Chinese traditional garden concept to create the exterior and interior courtyards, using elements such as rockeries and ponds. It is dedicated to creating a natural and wild Chinese garden.

The form of Guangxi traditional residential architecture is influenced by the culture of the Midland, the Lingnan culture and the Minority culture.

Although Guangxi is located in a remote area and is a minority region, Han Chinese still makes up the majority of the population size. Therefore, the concept of Han Confucian culture has been preserved in architectural forms, more typical of which are Huangyao ancient town and Hakka walled houses. Huangyao Ancient Town absorbed Lingnan architectural culture, combined with the Zhou Yi feng shui concept and traditional veins such as ancestral temple culture to build a group of large ancient town clusters, which became a physical object to study the development of Chinese culture in Guangxi. The Hakka walled house is the traditional Han people's integration of the Chinese Yuan courtyard-style architectural form into the local performance of Guangxi, with the main triple courtyard; the difference is that the Guangxi Lingnan courtyard is small in scale, so it is rarely arranged with earth hills, but mainly with stone hills.

Guangxi is located in the south of Lingnan, and the influence of Lingnan culture on Guangxi is also quite great, mainly embodied in pragmatic, open, compatible, and innovative, Lingnan architecture is represented by Guangfu architecture, due to its pragmatic concept, more emphasis is placed on practical function rather than an expression of a mood; by its open and compatible attitude, it absorbs the essence of Western-style architecture, with typical representatives such as riding tower; its innovative spirit based on the local area makes the architectural forms rich and diverse Its innovative spirit based on the local community has led to a rich variety of architectural forms, which are not confined to the fixed French style, flexible and changeable layout, mainly for comfort and convenience, and decorative styles such as bamboo culture decoration, wood carving decoration, etc. are all innovative representatives.

The minority groups in Guangxi are mainly Zhuang, Dong, Yao, Miao, etc. To adapt to the hot climate, the South Vietnamese have chosen to live in the dry-pen style, which is light and airy, since ancient times. However, the architectural forms of dwellings differ according to the economic level and location of each ethnic group. The Zhuang live in areas with superior topographical conditions such as flatlands and basins and are more closely integrated with the Han Chinese, so the degree of Hanization of architectural forms is higher. The Dong ethnic group is the second most powerful, often living on slopes or in relatively gentle areas with better material conditions, and its dry-rail architecture appears as a single entity with larger scale and volume, such as drum towers and wind and rain bridges. The Yao and Miao are the weakest, often living in the deep mountains, and their dry-pen architecture is the most typical, and the scale and volume are not as large as those of the Zhuang and Dong. The architectural culture of the minority groups follows a typical zonal principle.

However, the regional characteristics of southern China are mostly reflected in the materials and architectural forms and patterns that adapt to the climate characteristics of the south. For example, in the middle of Xianghanping, moisture-proof green bricks are selected as the facade materials, and courtyard construction is used to ensure lighting. In addition, when analyzing western elements, it can be found that most of these elements are presented with Chinese subjects, such as adding verandas in courtyard complexes, selecting thermal insulation pads, tiles and other materials to adapt to the humid and hot weather in southern China. Therefore, in this period, western architectural styles and features played a role of "icing on the cake".

#### **4.2. The evaluation of the transformational style**

In the above analysis of the specific embodiment of Chinese and Western styles in practical cases, the combination of Chinese and Western architectural styles and a mixture of Chinese and Western architectural decoration in China's modern development process complement each other, inheriting the transformation of the type of architectural forms also in the flood of the times burst out of a variety of expressions and ideas [10].

In a turbulent and unsettled modern society, where a wide range of cultures and ideas competed, the determination of the architectural style of private houses was influenced by the personal preferences and culture of the owners, and the combination of East and West in architecture also

endured more subjective ideas and concepts, making the humanistic background particularly important. The Chinese style was the main focus of most buildings, and the Western style was the central concept.

From the level of traditional Chinese architecture, buildings were mostly made of brick and timber, the use of large quantities of wooden materials accelerated the consumption of natural resources. It was not easily preserved, and the tedious mortise and tenon construction and production processes consumed a lot of time and workforce. The choice of simple Western style in terms of structure and materials was in line with the social ethos, the needs of the people and the changing times of architectural forms in the context of industrial development. From the perspective of the penetration of Western architectural styles into modern Chinese society, in the process of absorbing and digesting Western techniques, people selectively filtered and chose the best, complying with industrial development and the policy reforms of the times, treating the introduction of foreign cultures with an open mind, and colliding and integrating with their traditions, accelerating the determination of modern Chinese architectural styles and laying the foundations of contemporary Chinese architecture.

## 5. Conclusion

The diversity of traditional residential architecture in Guangxi is representative in the country, thanks to the complex topography, diverse climatic conditions and multi-ethnic and multi-cultural synthesis of the local area. Under the general trend of global integration, the architectural style of modern cities in China has become more and more "uniform", and it has become a value demand to maintain the characteristics of local architecture. In the pursuit of personalized design today, although a variety of strange architectural firms have emerged, none of them needs to be verified by history in order to remove the falsehoods and keep the truth. Returning to the essence of architectural forms and starting from the design concept of traditional architecture can undoubtedly become the source of local architectural design and provide an effective way for the innovation and development of architectural forms.

Guangxi modern architecture is an intermediary link in the history of Guangxi architecture and an important part of the cross-confluence of Chinese and Western, a product of the collision and friction, encounter and integration of Chinese and Western cultural concepts and architectural culture in modern times, a witness and portrayal of the development of modern society, which records the social, political, military, economic, scientific and technological, cultural, artistic and folk customs of Guangxi in modern times and shows the evolution trajectory of Guangxi traditional architecture to modern architecture. Guangxi modern architecture, as the precious cultural heritage of Guangxi, not only reflects the influence of western architectural culture on Guangxi since modern times, but also reflects the inheritance of traditional features in modern architecture, which has important typical significance in the history of Guangxi architectural development.

This article takes the former residence of Xiang Hanping and Chen Jitang's residence as examples to analyse the application of the combination of Chinese and Western architectural styles in the architecture of modern Chinese private houses in the two regions.

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