

# The Symmetrical Beauty and Its Cultural Connotation of Lingnan Architecture

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**Abstract:** The symmetry is a remarkable aesthetic characteristic in the traditional Lingnan architecture. The connection between the symmetrical beauty and aesthetical principles like proportion, composition, balance, order, unity, harmony and rhythm is emphasized. Through analyzing the composition, proportion, balance, rhythm and unity of some typical examples of Lingnan architecture, the author attempts to explore its symmetrical forms and reveal its cultural connotations such as valuing the humanistic pragmatism, the open-minded social psychology, the intuitive mode of thought and the nature-admiring aesthetic ideal. Studying this issue is of great significance for the preservation of the traditional architecture as well as the modern architectural design.

## Introduction

Originated from the Greek word *summetria*, (‘to measure together’ ), the term symmetry has two primary definitions (1) the quality of having balanced proportions, or beauty of form deriving from balanced proportions; (2) the property of being symmetrical, especially correspondence in size, shape, and relative position of parts on both sides of a dividing line[1], etc. The two definitions indicate the strong relationship between symmetry and beauty, which can be traced back to Greek philosophy. According to Plato, symmetry is a universal law for truth, justice, and beauty in the world [2] and the meaning of symmetry as “due proportion” or “moderation” can be found in his *Philebus* and “suitable” or “appropriate” in his *Laws*. Aristotle argues that the chief forms of beauty are order and symmetry [*summetria*] and definiteness [3], pointing out the symmetry’s essential role as one of the elements of beauty.

However, the symmetrical beauty in the architecture can not be achieved without other aesthetical principles like proportion, composition, balance, order, unity, harmony and rhythm. As the ancient Roman architect Vitruvius states, architecture depends on order, arrangement, eurhythmy, symmetry, propriety and economy [4], which derived from the perfect proportional relationship of the human body (such as the Golden Section). Beauty has been defined as a correspondence and cohesion of parts according to a specific number, proportionality and order [5]. The accounts of symmetry have become the aesthetic bible for architecture for centuries, which have also influenced the modern and contemporary Western and Chinese architectural ideas and practices, such as that of Frank Lloyd Wright, Robert Venturi , Le Corbusier, Mies Vander Rohe and Lin Keming, Mo Bozhi, She Junnan, Xia Changshi, the representative of Lingnan architects, whose successful works exhibit a relentless pursuit of symmetrical beauty that, undoubtedly, is one of the main elements for the impressive quality of the buildings.

As a regional culture based on the natural and social environment, Lingnan culture has developed its unique features during the procedure of its self-development in the following aspects: valuing the humanistic pragmatism, the open-minded social psychology, the intuitive mode of thought and the nature-admiring aesthetic ideal. Meanwhile, as an important part of the Chinese culture, Lingnan culture also reflects the great impact of the traditional Chinese orthodox idea. Lingnan architects both absorb the essence of the traditional culture and successfully search for an innovative way of the development of Lingnan architecture. Under the theme of inheritance and innovation, the author attempts to explore the unique perspective of the Lingnan architectural aesthetics, mainly the symmetrical beauty through analyzing the symmetrical composition, proportion, balance, rhythm and unity of the remarkable examples of Lingnan architecture, and concludes the cultural connotation behind the different manifestations of it.

### **The symmetrical composition of Lingnan architecture**

Generally speaking, whether it is the commemorative building, the ancestral temple, the academy building, the vernacular dwelling or the garden, the traditional Lingnan architecture abides by the principle of symmetry, exhibiting in the symmetrical composition or arrangement by mostly adopting the traditional skill of axis symmetry. In the early 1900s, the western architectural styles and design idea were first introduced into Lingnan district with the return of some outstanding Lingnan architects studying abroad, such as Lin Keming, She Junnan, Mo Bozhi and Xia Changshi, etc. Based on the social reality, they strived to explore a creative way to achieve a perfect balance between the “traditional and national form” and the “new materials and technologies”.

The Government Offices of Guangzhou City (now the People’s Government of Guangzhou Municipality) is an exemplary case with the traditional Chinese imperial style designed by the well-known architect Lin Keming. In order to highlight its function, the site-selection is located in the principal axis of Guangzhou City and the whole building consists of the Center Block with five bays in length and four columns in a line, two watchtowers echoing each other as well as the East and West Blocks on the both sides (Fig.1). The symmetrical beauty not only exhibits in the bilateral symmetry of the spatial layout but in the facade components and the gorgeous decorations, fully reflecting the traditional ideological basis of order and rationality and the architect’s orientation of pragmatic values in the architectural practice.



Fig. 1 The Government Offices of Guangzhou City



Fig. 2 The 19th Route Army Anti-Japanese War Cemetery

In memory of Sun Yat-sen and other heroes and famous generals, a series of exquisite commemorative buildings were constructed in Lingnan area. Absorbing the essence of the traditional symmetry, the architects attached much importance to the creative form in the design, making the composition and layout more vivid and lively, such as the Sun Yat-sen Memorial Hall,

Sun Yat-sen Library, HuangHua Gang Seventy-two Veterans' Revolutionary Martyrs' Cemetery and the 19th Route Army Anti - Japanese War Cemetery (Fig. 2).

### The proportion of Lingnan architecture

The proportional relationship is one of the essential elements for the traditional Chinese architecture to obtain the symmetrical balance and harmony. There is often a multiple relationship between the architectural bays and the column spacing, and the number of the bays is generally three, five, seven or nine, etc, which is in conformity with the traditional concept of being particular about symmetry because this spatial proportion is easy to insist on the center and form the axial symmetry. Architecture is the living environment created by humans and for themselves and the proportion of a house can greatly affect the way a person feels, so proportional relationships of the human body (such as the Golden Section) are considered as the model, the perfect design, the proper proportions in architecture.

As the ancient Roman architect Vitruvius writes, "For nature has so planned the human body that the face from the chin to the top of the forehead and the roots of the hair is a tenth part; also the palm of the hand from the wrist to the top of the middle finger is as much.....The foot is a sixth of the height of the body; the cubit a quarter, the breast also a quarter. The other limbs also have their own proportionate measurements. And by using these, ancient painters and famous sculptors have attained great and unbounded distinction" [6]. He states that the architect should adopt the principles of proportion and symmetry derived from the symmetry in the human body, especially the Golden Section.

This idea inevitably evokes a strong repercussion among the modern Lingnan architects. In *Architecture for Man: on the Basic Skills of Architectural Creation and the Qualities of An Architect*, She Junnan wrote, "Architecture, composition of space and environment design are all for man. Man is the objective to be served. Man is the measurement of everything, so user-friendly buildings can only be designed through studying man, understanding man and be familiar with man"[7]. Architects try to advocate the application of the proportional relationship of human body in the architectural design. For example, the Sun Yat-sen Memorial Hall (Fig. 3) is such a paradigm case. It is a huge octagonal building whose facade reflects the perfect proportion of the Golden Section, resonating with all the qualities of the proportional beauty of the western classical architecture. With the peculiar shape and composition, the magnificent building has a strong aesthetic appear and a great visual impact [8].

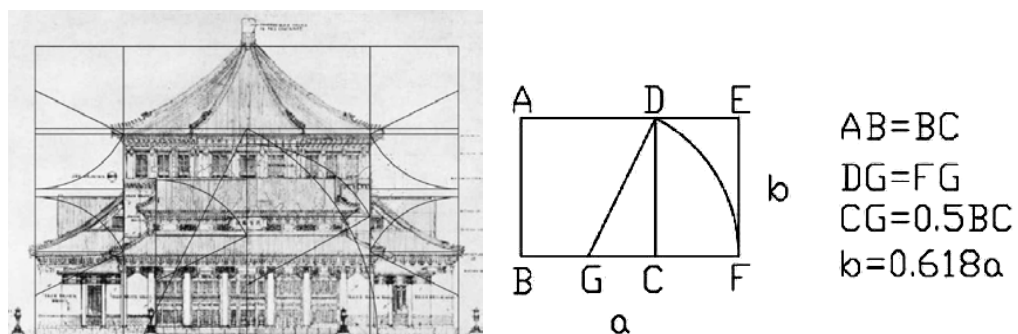


Fig. 3 The golden section of the facade of the Sun Yat-sen Memorial Hall

## **The balance of Lingnan architecture**

Symmetrical balance is another essential principle of aesthetics. As for Chinese people, the connotation of balance is comprised of two dimensions, one is the balance achieved by the symmetrical composition or shape, the both sides of a center axis appearing to have the same weight. We can say a building is balanced when it shows a sense of equal, visual weight on either side of a center axis drawn through the facade. The other is the inner balance, peace and harmony gained through the expression of people's wishes and ideals often by adopting some symbolic decorations.

We can illustrate the two dimensions of balance by analyzing the layout and styles of the vernacular buildings of Hakka, Guangfu and Shaoshan clans as well as their remarkable decorations. Most of the Lingnan vernacular buildings are courtyard-styled, the rectangular-shaped units of space joined together into whole. There are two categories of courtyard layout: one is to arrange the main building on the longitudinal axis, and then on the lateral axis, that is, on the left and right sides of the courtyard position the secondary structures as two wings which are face to face and much smaller in size than the main structure, of which the combination of the units composes a three-sided courtyard which is shaped like the Chinese character "Men" or the letter "H", the other is four-sided courtyard, namely, shaped like a rectangle or square, which is formed by adding another secondary on the other side of the longitudinal axis[9]. The four buildings are usually connected to each other by the verandas, enclosure and lights on the four corners, forming the composition of balance and harmony by abiding by the principles of symmetry. It contributes to the realization of the function of the house and reflects people's security awareness, for example, the feature of the outer closing and inner opening is effective to escape the external threat of human or nature and satisfy people's need for certain degree of privacy.

As for the decorations of traditional Lingnan architecture, the symmetrical balance first exhibits in the subjects of the decorations, which often consist of the elements of daily lives, such as the auspicious plants or flowers like peony, chrysanthemum, bamboo, pine, peach, cypress as well as the propitious animals in the legend or reality like dragon & phoenix, bats, lions, crane, elephants, camel, tortoise. Secondly, the symmetrical balance is embodied in the symbolic meaning of the balance between Yin and Yang. For example, the decorated pediments of the Chaoshan residential buildings are stunning pieces of balance. The pediments are divided into five categories named after the five elements: metal, water, wood, fire and soil. In the traditional feng-shui theory, these elements could give birth to or destroy each other in certain sequences. Affected by the idea, Chaoshan people decorate their pediments "Metal" with the pattern shaped like the Chinese character "Jin" and "Water" with the flowing curve (Fig.4), so as to achieve the good wishes of protecting the house from fire and having a safe and peaceful life by the symbolic metaphor [8]. They believe that they benefit from them and find a kind of inner balance and peace within themselves.

Inheriting the features and spirit of the symmetrical balance of traditional Lingnan architecture, modern Lingnan architects did not rigidly adhere to the accepted convention and the fixed composition of axial symmetry, but created a number of modern buildings with fresh and vivid style, such as Mineral Spring Villa, Guangzhou Hotel, Baiyun Hotel, and Friendship Theater. Take the Friendship Theater as an example, the leading designer She Junnan decided to introduce the characteristics of Lingnan gardens. The open and semi-open outdoor resting spaces were arranged to get rid of the dull form of general theaters. What's more, the stairs were not placed in the middle for symmetry but in the right of the main hall with a goldfish pond arranged in the space under the stairs. The composition of space creates a lively and balanced environment for people's activities,

close to nature and good for communication. This also reflects the flexibility of the symmetrical balance of Lingnan architecture.

### **The rhythm of Lingnan architecture**

The symmetrical beauty also exhibits in the rhythm produced by the high and low scattered buildings connected to each other into a whole, in the contrast of the red and white colors of the wall, in the sense of movement created by the upward stairs rowing in zigzag and in the neat repeated decorations echoing to each other. These rhythmic patterns give a dynamic quality to a building, making it seem to be very lively, adding visual excitement and enhancing the artistic expression to the architectural art.

These rhythmic patterns can be found in the traditional Lingnan gardens such as Ke Garden in Dongguan, Yu Garden in Panyu, Liang's Garden in Foshan, etc. Lingnan garden integrates buildings and floras with rockeries and waters, combining natural beauty and artificial sceneries in one and is famous for its style of purity, freshness, simplicity and liveliness [10]. When we experience it and taste it, the rhythmic beauty is before our eyes and sinks into our brains.

Covering only an area of 2,200 square meters, Ke Garden has reasonable overall arrangement and delicate style. There is one tower, six storey-pavilions, five pavilions, six terraces, five ponds, three bridges, nineteen halls and fifteen houses, connected with each other by porches, front verandas, passing halls and corridors, forming a successive broad and rhythmic building complex arranged in the high and low scattered order.

Besides, the rhythm is also manifested in the rich and unique decorative patterns of the windows in the back cabin of Boat Hall and the interior arrangement of the Exquisite Waterside Pavilion in Yu Garden (Fig.5). The repeated patterns, the echoing colors and the smooth, elegant lines outline the contours of symmetry, resulting in a sense of fantastic rhythm.

### **The unity of Lingnan architecture**

The unity of Lingnan architecture mainly manifests as follows: firstly, the unity of the architecture and nature; secondly, the ancestral idea of unity of the people in the clans. The two aspects reflect the two dimensions of Lingnan culture, that is, the relationship between man and the nature; and the social relationship between one person to another.

During the construction of the urban and rural settlements, Lingnan people show a strong sense of respecting and conforming to the nature, wishing to build a harmonious relationship with the nature. "The unity of the heaven and humanity" means that the heaven is the nature, and human is the integral part of the nature, which composes a symmetrical relationship of human and nature in harmony and balance. To achieve the environmental ideals, the ancestors emphasize the appropriate orientations and locations of their dwellings and form an ideal environmental model of "Five Orientations with Four Spirits". In their opinion, a favorable site must face south and be embraced by surrounding hills or mountains. In front of the site is an open space containing either a lake or a meandering river. For example, Hakka people rely on the ideal "feng-shui" model for a peaceful, stable and happy life and believe villages or houses supported by the surrounding mountains with rivers in front would bring prosperity to them.

The idea of "the unity of the heaven and humanity" encourages the modern Lingnan architects to examine the relationship between the geographical position and climatic feature and architecture, creating a series of nature-adapting works. That also shows the spirit of Lingnan culture, that is, the nature-admiring aesthetic ideal and the pragmatic value.



The second dimension of the connotation of unity is mainly revealed in the architectural styles like the ancestral temples and the academy buildings, etc. Ancestral temple has a profound cultural connotation, largely representing the development and prosperity of the clan, so it is often located in the center of a village or a building complex. Take Hakka architecture for an example, whether it is the Hakka Enclosed Building, Hakka Round-dragon House, Hakka Square Building, or the Hakka Wu-feng Building, all share the common characteristics of symmetry with the ancestral temple positioning in the center of the building, which is a bond for the common belief and the social life.

The second meaning of unity inspires the modern Lingnan architects to explore the cultural identity, cultural adaptability and social adaptability of the architecture. Only when the architecture represents its adaptation to the natural conditions and mirrors its cultural and social features can it have the long-lasting vitality and realize sustainable development.



Fig. 4 the pediments of “Metal” (left) and “Water” (right) of the Chaoshan residential building, provided by Professor Tang Xiaoxiang

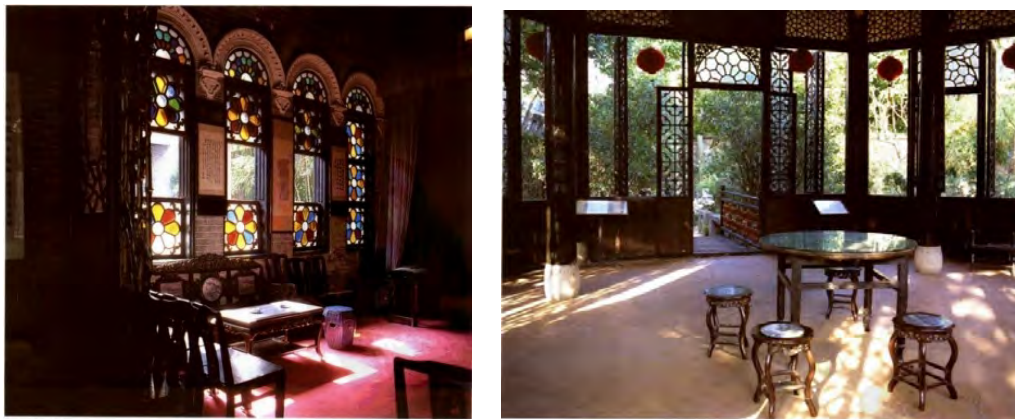


Fig.5 The decoration in the back cabin of Boat Hall(left) and the inside of Exquisite Waterside Pavilion (right) in Yu Garden,

From Lu Qi, Art of Lingnan Gardens.

## Conclusion

In a word, the symmetry is a remarkable aesthetic characteristic in the Lingnan architecture. The symmetrical beauty mainly exhibits in the composition, proportion, balance, rhythm and unity of Lingnan architecture. Through analyzing some typical examples, the author explores a unique perspective of the lingnan architectural aesthetics, which also reflects the basic spirit of Lingnan culture, such as valuing the humanistic pragmatism, the open-minded social psychology, the intuitive mode of thought and the nature-admiring aesthetic ideal.

Symmetry is not just a kind of technique or a form of expression, but the driving force and

source of the development of modern architectural design and the prosperity of the society. Based on the essence of the traditional culture, modern architects successfully search for the innovative way of the development of Lingnan architecture. Therefore, we should reconsider the significance of symmetry as a world wide cultural phenomenon, which will enable us to better understand their own culture and spirit to achieve the balance and harmony outside and inside of ourselves.

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### **References**

- [1] Merriam Webster's Collegiate Dictionary 1266 (11th ed. 2004).
- [2] Klaus Mainzer. *Symmetry and Complexity: the Spirit and Beauty of Nonlinear Science* [J]. World Scientific Series on Nonlinear Science. Series Editor: Leon O. Chua Series A Vol.51 (2005). Published by World Scientific Publishing Co. Pte. Ltd
- [3] William Ross [1908/1928] 1966, 1078b; Aristotle, *Metaphysica*, M (XIII).3, 1078b1. Quote from a secondary source: Giora Hon, Bernard R. Goldstein, *From Summetria to Symmetry: the Making of a Revolutionary Scientific Concept*, *New Studies in the History and Philosophy of Science and Technology*. Vol. 20 (2008), p.96. Published by Springer Science Business Media B.V.
- [4] Patrick Suppes. *Rules of Proportion in Architecture* [J]. *Midwest Studies in Philosophy*, XVI (1991), pp.352-358.
- [5] Alberti, Leon Battista. *De re aedificatoria (On the art of building in ten books)* [M]. (Translated by Joseph Rykwert, Neil Leach and Robert Tavernor). London: MIT Press (1988).
- [6] Granger (ed. and tr.), *Vitruvius, De architectura*, III.1, 2. For opposition to this theory of beauty, [1931] 1962, 1: 158–161.
- [7] She Junnan. *Architecture for Man: On the Basic Skills of Architectural Creation and the Qualities of An Architect* [J]. *Architectural Theory*, 1994-2013:2-4. China Academic Journal Electronic Publishing House. (In Chinese)
- [8] Tang Xiaoxiang. *Modern Lingnan Architectural Culture and Aesthetics* [M]. Beijing: China Architecture & Building Press, 2010:124. (In Chinese)
- [9] Liu Dunzhen. *History of Ancient Chinese Architecture* [M]. Beijing: China Architecture & Building Press (1984). (In Chinese)
- [10] Lu Qi. *Art of Lingnan Gardens* [M]. Beijing: China Architecture & Building Press, 2004: 3. (In Chinese and English)