

Research on the Application of Southern Jiangxi Hakka Architecture Form Based on Holistic Governance in Modern Residential Design

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***Abstract.** Traditional Introverted Space is an Important Space Form in Chinese Traditional Dwellings and an Important Embodiment of Traditional Dwellings Culture. This Inward Space Form Has a Special Internal Connection with the Geographical Environment, Reflects the Unique Space Characteristics, and Has a Positive Impact on Modern Architectural Design. Southern Jiangxi is the Cradle of Hakkas. Traditional Hakkas Architecture in Southern Jiangxi Can Be Divided into Two Types: Hall and Enclosure. It is the Main Residential Space of Hakkas and Has Extremely High Cultural Value and Historical and Practical Value. Based on the Perspective of Holistic Governance, through the Basic Understanding and Understanding of the Hakka Cultural Connotation and the Analysis of the Architectural Form, Cultural Spirit and Architectural Characteristics of Hakka Traditional Dwellings, This Paper Discusses the Significance of Integrating the Architectural Elements and Philosophical Connotation Characteristics of Hakka Traditional Dwellings into the Design of Modern Dwellings. Based on the Design Method of Modern Residential Buildings, Both Rationality and Sensibility Are Given Equal Attention to Put Forward Design Suggestions for Modern Residential Buildings in Southern Jiangxi Area.*

***Keywords:** Overall Governance, Southern Jiangxi Hakka, Architecture, Modern Residential Design*

1. Introduction

There Are a Large Number of Hakka Dwellings in Southern Jiangxi. There Are a Large Number of Hall-Type Residential Houses, Which Are Still Widely Used in Rural Areas of Southern Jiangxi Today. There is No Defense Mechanism for Enclosed

Houses in Hall-Type Residential Houses. It is a Residential Architectural Form That Has Continued to This Day Since Hakkas Settled in Southern Jiangxi. the Construction of Residential Areas in Our Country is Gradually Moving Towards Building and High-Rise Development [1]. Outdoor Space Design Pays Too Much Attention to Its Formal Meaning, Ignoring the Relationship between Residents' Communication and Space Environment, and Lacks the Space to Attract People to Stop and Stay Outside. as a Result, Most Residents Locked Themselves in Their Homes and Lost the Possibility of Interacting with Each Other [2]. At Present, the Idea of Integrated Governance is Exerting More and More Influence, So That Some People Think That Integrated Governance is Expected to Become a Major Theory of Government Governance in the 21st Century. with the Adaptation to the Natural and Social Environment, the Hakka Ethnic Group Has Gradually Developed and Become the Mainstream in the Local Area. Hakka Residential Houses Have Gradually Formed a Relatively Unified Residential Building with Unique Style and Passed Down Steadily. the Outer Door Not Only Has Prominent Defensive Function, But Also Enriches the Cultural and Artistic Image of the Building Facade, Achieving the Blending and Infiltration of the Inner and Outer Space. the Inner Door is Mainly Functional, Creating Rich Spatial Images and Enhancing Cultural Aesthetic Functions. Dwellings Are the Most Basic Buildings in People's Lives. According to the Living Habits and Cultural Concepts of the Hakkas in Southern Jiangxi Area, the Construction of Dwellings That Meet the Living Needs of Modern Hakkas Conforms to the Trend of Cultural Construction in Cities with Hakkas' Characteristics in Southern Jiangxi Area.

2. Cultural Connotation of Hakka Architecture in Southern Jiangxi

2.1 The Fusion of Multiple Cultures

The traditional Central Plains culture is regarded as the root of Hakka culture and the cornerstone of building the whole Hakka architectural culture [3]. In Southern Jiangxi Hakkas architecture, Hakkas' inheritance of the Central Plains culture is first reflected in their transformation of the original wooden-framed dry-railing building in the south into a green brick building built of rammed earth. After the Hakka ancestors moved south to settle down, they not only spread the advanced farming techniques in the central plains, but also maintained the original traditional style of building houses [4]. Hakka residential buildings are mainly of enclosure structure, only the outer door can communicate with the outside world, especially the Hakka earth building is the most typical, with only one door in and out, which has a particularly strong defensive ability and can resist the invasion of foreign enemies. Influenced by Confucian culture, Hakkas attach importance to clans and ethical codes, which are manifested in the ancestral hall used for holding important family etiquette activities in Southern Jiangxi Hakkas' enclosed houses, which is located in the central axis of the whole building, and the focus on building ancestral hall buildings in villages. Many traditional dwellings use the scattered mountains to form different floors, with strong sense of layering and

relatively low cost. It not only makes full use of nature, but also has a strong sense of belonging and identity to nature [5]. There are also sculptures of two lions on the upper part of the door seal, which serve as a town house. These words or patterns, with the words or patterns imaginable to delineate the pursuit of the heart, lifelike, wonderful, amazing.

2.2 The Harmonious Coexistence of Man and Nature

Southern Jiangxi is a mountainous area with few plains. Hakkas usually build houses on their backs to save arable land. For the convenience of water use, they build houses near water sources. Houses facing the sun are comfortable and pleasant [6]. Therefore, Hakka residential buildings are usually built between mountains and rivers, and their unique appearance is set against the surrounding green water and mountains. Hakkas have created different living patterns and actual forms in different regions. Even the native buildings collectively called enclosed houses have different characteristics in different regions. The Hakkas are particularly picky about the choice of water in their site selection before settling down. Not only can the water quality meet the needs of life, but also the oncoming force and trend of water have certain requirements. As the geographical environment is surrounded by mountains on three sides and ravines criss-crossing, strong air currents and water currents rush straight at residential areas. The local Liao clan dug ponds and built dams together, and the steering flow and water currents dissolved the dangerous and unfavorable natural environment for human settlement. Because the enclosure is usually built by the backer, the outer gate and the main gate face relatively empty places, facing east and south more, also facing west, rarely facing north; If the mountain facing the gate is Bijia Mountain, the implication can be more literati [7]. Enclosed houses are generally selected on the hillside with the front low and the back high. The hills are the back support. Even if there is no support, the back building base should be built high and large trees should be built to line it. Hakkas believe that only in this way can “heaven above, earth below, and good luck and happiness be achieved”.

2.3 Clan Consciousness and Spiritual Belief

The life style of gathering people to live together is the most intuitive summary of the clan consciousness of the Hakkas in Southern Jiangxi. Southern Jiangxi Hakka architecture is also a manifestation of the close unity of clan space [8]. Because the outer doors of Hakka dwellings are mainly defensive, the door frames are mostly made of stone. Stone door frames are the most commonly used in Hakka areas. Stone is durable, fireproof, moisture-proof, and easy to use local materials. The allocation of enclosed rooms is based on the number of sons in each family. Living together among family members plays an important role in promoting emotional communication among family members, and avoids the problem of cold relations or even breaking off contacts after friction due to time and region. On the spatial layout, there are three

main rooms distributed along the axis inside the earth building. The house is centered on the ancestral hall. Pigsty, water well and ring building are arranged against the wall outside the ancestral hall. The ring-shaped inner courtyard between the ring building and the ancestral hall is a public space full of life atmosphere. Ancestral temple in Hakka architecture is a public space inside the building, which can be used to offer sacrifices to ancestors and patriarchs, to pass clan rules and ethics to family members, to discuss affairs within the clan, etc. Setting the ancestral temple in the building maintains the ethical order and public order of respecting the elders and caring for the children within the clan, establishes the ethical rules within the clan, and improves the cohesion of the clan [9]. Most of the daily activities of Hakka residents are completed in the public atrium space. Sharing the same activity space helps to increase the communication opportunities of users. However, this simple connection in life greatly promotes interpersonal communication and is more conducive to obtaining harmonious neighborhood relations.

3. Analysis of Hakka Architecture Characteristics in Southern Jiangxi

3.1 The Spatial Organization of Hakka Architecture in Southern Jiangxi

The hall-and-house combination residence is the most important residence form of Hakka people in Southern Jiangxi [10]. It is distributed in all counties in Southern Jiangxi, with the northeast being the most representative. The hall-and-house combined residence comes from the central plains courtyard residence. The site is close to the mountain and has a reasonable layout. It skillfully uses the narrow flat land in the mountain and the local building materials such as raw soil, wood, pebbles, etc. to form a self-contained type of raw soil building with the characteristics of economy, firmness, strong defense and great aesthetic feeling. The three panels on the top of the door and the two panels on the left and right of the door can form a combination of three panels in a group, totaling three groups. The proportion is about five for each group, three for the middle panel, and one for the top, bottom, or left and right panels. One of the most important characteristics of introverted space is that this kind of introverted space can arouse residents' sense of belonging and security and meet users' requirements for privacy. Looking at the form of folk houses alone, this kind of folk house originates from the residence style of the central plains and is produced in combination with the humid and rainy climate and geographical environment in the mountainous areas of Southern Jiangxi. The whole residential building presents a pattern of axial symmetry, which is composed of halls and courtyards. These independent units together form a common settlement space. From the ancestral hall to the entrance hall, the space is also a gradual transition from public to private when entering each door, lobby, open hall and upstairs bedroom. The hall has good lighting and ventilation, and it is the only way in and out of the enclosure door. Benches or tree barrels, stones and other seats are provided on both sides of the hall. Good conditions make it the main place for daily communication among ethnic groups.

3.2 Building Materials for Hakka Buildings in Southern Jiangxi

The building materials of Southern Jiangxi Hakka buildings include rammed earth, brick, tile, stone and wood, all of which are taken from local sources. These building materials are all processed from natural materials, and each has the characteristics of heat preservation, ventilation, strong tolerance and the like. They are very environment-friendly and can be harmonized with the surrounding environment. The core spirit is to respect natural ecology, respect history and culture, attach importance to science and technology, and face future development. The foundation of a landscape city is the naturalization of the residential environment with the largest urban area and the closest relationship with people's life. The collection of rammed earth materials usually comes from fields or mountains. When necessary, rammed earth can be directly transported to the construction site. For rammed earth that has been used but is not needed, it can also be directly transported back to its original place or converted into farmland soil to be used as fertilizer. In particular, circular earth buildings are prone to noise focusing effect due to strong centripetal force, and noise is effectively reduced by means of wall plate building technology and wood frame technology. The decoration of the inner door is mainly on the door leaf, the lower part of the door leaf is the door leaf, the decoration is relatively simple, while the upper part of the door leaf is highly decorative, generally transparent, which is conducive to ventilation and lighting; The materials are mainly Chinese fir, and the patterns are mainly geometric and mosaic patterns. It is people's requirement for living environment to integrate the concept of Hakka residential buildings and environment into the design concept of "mountain and water city" so that buildings can be harmoniously integrated into nature. There is nothing special about roof paving, which is similar to the green tiles in Central Plains. A small amount of blue bricks are also used as wall surfaces or paving in buildings, but only for the wealthy.

3.3 Decorative Art of Hakka Architecture in Southern Jiangxi

In the interior space of Hakka buildings, furniture such as screens, partition fans and grilles are often used as shields to block the visual field, wind and sound insulation and enrich the space level in the limited interior area. At the same time, it is also used as an interior decoration, echoing the overall shape of the building. The partition fan is a great invention of ancient Chinese architecture in the field of doors and windows. Different from other buildings, partition fans are used in Hakka residential buildings in rows, and the materials, carving techniques and themes of partition fans also have different local flavors. The space infiltration between the inward courtyard and the internal space enriches the space level of the building. Walls are often decorated with ash sculpture, murals, wall books and brick carvings. The ground decoration of Hakka buildings can play a role of anti-skid, moisture-proof, comfortable and beautiful. In Southern Jiangxi Hakka residential buildings, the ground is usually compacted with rammed earth, and the more exquisite method is to spread stone slabs, bricks and pebbles on the ground. Hakkas attach great importance to the teaching of culture and

the cultivation of talents. Setting up academies to teach collectively is the cultural cultivation method of large families for their descendants. The smaller study room and the study room for personal use are all expressions of worship of Wen. It has the preciseness of northern quadrangles and the beauty of southern gardens. It is a product created by the Hakkas in their long-term production and life. It embodies the Hakkas' thoughts of striving for harmony and unity with nature, putting people first and keeping pace with the times.

4. Inspiration to Modern Residential Design

4.1 Division of Space

The structure of the old residential buildings is relatively simple, resulting in a very single residential function, which only has the most basic residential function. The residential houses built by extension in this form are relatively disordered in regional location and lack integrity. In order to improve the defense function and practical function of the doors in Hakka dwellings, Hakkas choose different materials for the outer door, the inner door and the partition: the outer door is made of a cross-cut frame and a thick wooden door panel covered with iron sheet, which is strong and durable, theft-proof and moisture-proof, while the inner door and the partition are basically made of wood. As a way to solve problems, holistic governance is a strategic response to the decline of traditional public administration and the serious “fragmentation” caused by the process of new public management reform. During the design period, designers did not deliberately learn the introversion space form of Hakka earth buildings, but through the analysis of the architectural nature and the surrounding environment, the introversion space form was finally obtained. The space used for living meets the ideal living area of local residents in the survey. According to the method of reconstructing the position in the space, it is still divided into four levels. According to this, the first level space is the hall (living room) with shrine, the second level space is the living space, the third level space is the additional space, and the fourth level is the walkway and courtyard space. For example, Hakka-featured horse-headed walls, windows, cornices, white walls and grey tiles, dragon-enclosed planes, etc. The elder's room is located on the south side of the first floor, close to the courtyard, living room and toilet, giving priority to the needs of the elderly. Two generations of bedrooms are not placed on the same floor, which also avoids the embarrassment caused by insufficient privacy protection. It is not a simple application, but under the condition of meeting the functional requirements of modern architecture, it can flexibly use Hakka elements to design a building scheme with Hakka characteristics.

4.2 The Modeling of Residential Houses

There are three kinds of window designs from the residence. The first is the window with window lintel corresponding to the main entrance building. The second is the window with lattice center in the traditional Southern Jiangxi Hakka residence. The third is the modern sliding glass window. The first two have practicability and decorative effect consistent with the overall residential modeling, while the third has full practicability and the modern sense of introducing modern residential window modeling (Figures 1 and 2).



Fig.1 Modeling of Windows with Lintels in Residential Buildings

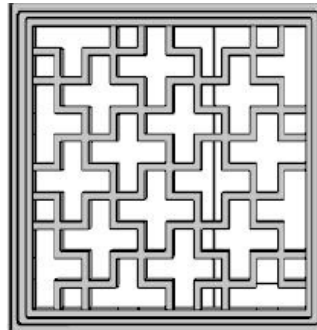


Fig.2 Modeling of Windows with Lattice Centers in Residential Buildings

The gables of traditional Hakka dwellings in Southern Jiangxi are in the shape of a “convex” ladder, which is worth preserving with local characteristics. In the center of Xinmin, the gable wall, which is more complicated than the traditional form, is simplified according to modern architectural aesthetics to form a harmonious ratio of “narrow line” to “wide surface”. For example, the door frame of the gate can be made of marble or granite, or made of metal materials, such as stainless steel, copper, etc.,

strong, thick and modern. Hakkas attach great importance to the education of future generations to ensure the healthy and orderly internal communication. In addition, it has formed a cultural connotation with emphasis on culture and education, cultivation and reading, family transmission, respect for ancestors and ancestors, and contributions and achievements as its core. Overall governance is to some extent the reflection of the political trend of “the third way” on the level of administrative reform. The third way tries to surpass the traditional left and right binary opposition thinking mode to meet the needs of the current social situation and development. Many entrances to traditional Hakka dwellings in Southern Jiangxi use complex gatehouses. At the top of the main entrance there is a door list, which is used as decoration and shows the family style and character. The design of the main entrance of the new residence still uses the representative gate house, with a gate list above the main entrance. Facade modeling aesthetics, reflecting the horizontal and vertical, straight and inclined features, in contrast to form lively and dynamic modeling. Its concise and dynamic appearance reveals a stable and elegant aesthetic feeling, reflecting the simple Hakka customs and the pursuit of a better life. The plan is rich in spatial levels, and it is specially set up to blend with the external environment, making the building and environment dialogue, no longer a single object. Traffic flow lines are also more flexible. The spatial arrangement is not only a simple progression, but also increases many spatial changes.

4.3 Colors and Materials

The colors of the new residential buildings are the primary colors of the materials as far as possible. There are mainly four colors: dark gray of gray tiles, cyan gray of blue bricks, log color of anticorrosive wood, and white wall color (Figure 3). Installing a partition between the living room and the balcony can lead the outside scenery to the interior and expand the visual effect. A partition board is installed in the middle of a large banquet hall, restaurant or other functional hall, which is a large space when rows of partition boards are opened and can be changed into two independent spaces when the partition boards are closed. The inner courtyard provides the owner with a space to enjoy the nature. Different from the interior space of the Hakka earth building, the building has changed from a single interior courtyard to a space form combining various interior spaces, thus fully integrating the interior courtyard with the interior space. The holistic governance theory is also a revival of the traditional cooperation theory and holistic thinking mode. The hall number and couplet of Hakka traditional residence have profound local cultural connotation, which can be used as a special symbol in residential construction to add local cultural color to residential areas. The source of color is mainly extracted from the color of traditional Hakka dwellings. The reason for following the traditional color tone is that by inheriting the color characteristics of traditional Hakka dwellings in Southern Jiangxi and maintaining the consistency of architectural color of new and old dwellings on the basis of continuing the characteristics of their dwellings, the new dwellings can be integrated into the original residential buildings and be in harmony with the old dwellings.



Fig.3 Disposition of Color in Residential Buildings

5. Conclusion

Through the investigation and study of Hakka architecture, the author found that the unique introverted space form of Chinese traditional dwellings, which combines the crystallization of the wisdom of several generations, has the significance and value of existence and has important guiding significance for modern architectural space design. Southern Jiangxi area, as an important transfer station for Hakka migration, has left such beautiful historical material marks as Southern Jiangxi Hakka architecture. The core idea of holistic governance lies in that, with the development of information technology in the digital era and based on the holistic thinking mode, through the network governance structure, coordination, integration and trust mechanisms are cultivated and implemented to give full play to diversified and heterogeneous public management. So as to provide seamless public products and services to meet the needs of the public faster, better and at lower cost. Both the earthen buildings and the enclosed houses have concentrated the unique history and cultural course of the Hakka ethnic group, with profound cultural connotation. On the one hand, it is influenced by the Central Plains culture, such as clear primary and secondary, left-right symmetry, north-south axis, etc. On the other hand, it is deeply influenced by the geographical environment in mountain areas, such as the upper and lower structure, the former low and the latter high. The inheritance of Hakka architectural culture should first be directly promoted in public welfare buildings and cultural buildings in the region. Secondly, the metaphor and symbol of symbols can be indirectly applied to modern architecture, which has a wider world. After combining with the design theory, the design practice is made from both the inheritance of traditional Hakka residential space form and the practicability of modern residential space.

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