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The Aesthetic Research of the Ganlan Building in the Bazhai Village of Chengyang of Dong Minorities in Sanjiang

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Abstract: *Dong is one of our country with a long history of ethnic minorities in southwest China, after one thousand years of development has formed the unique national culture, which represented by dry column construction of architectural culture is a distinct performance of the national culture characteristic, the art of architecture aesthetics research dong help people further understand dong culture. From the Angle of artistic aesthetics, this paper analyzes the ganlan architecture of the Dong nationality, and makes a detailed study on the ganlan residence of the Dong nationality from five aspects, namely, the beauty of material, function, technology, form and the beauty of the unity of nature and man. Ganlan architecture is one of the most representative material forms of Dong culture, and it is the basis of studying Dong culture. The analysis of its aesthetics is helpful to the protection of Dong stilted architecture and the dissemination of Dong culture.*

Keywords: *Dong; Stilted architecture; Chengyang Eight Stockade; Artistic aesthetics; Human-Nature Unity*

Introduction

In the southwest of China, the border of Hunan, Guangxi and Guizhou provinces concentrates an ancient and intelligent ethnic minority—Dong people.Dong people, who call themselves "Gan", "Geng" and "Jin", are the indigenous people of Lingnan. In historical books, they write "Geling", which is evolved from the Dong people calling themselves and developed as a branch of the Luoyue people in the ancient Baiyue people of the Chinese nation.The Dong nationality of Guangxi is mainly distributed in the north of Guangxi, with Sanjiang County and Longsheng County being the most distributed.Among them, Chengyang Bazhai Village, located in Linxi Township, Sanjiang County, is one of the traditional villages of the Dong nationality in the Sanjiang region with well-preserved original ethnic features.

Before the 1980s, Chengyang Bazhai Village formed a natural and relatively closed independent space due to the geographical environment.In this relatively independent space, people adapt to the natural ecological environment and show the initiative of wisdom, which constitutes the two-way adjustment and balance between the object and the self, and carries on and develops the national kangliang culture with the original ecological wisdom.As a result, the rail-style buildings in Chengyang Bazhai have a strong livability and corresponding to the aesthetic value of art, thus becoming the object of aesthetic criticism [1]. Chengyang Eight Villages, an outstanding representative of the Dong ethnic group in Guangxi, are composed of eight large and small Dong ethnic groups: Ma 'an, Ping, Ping, Yan, Dazhai, Dong, Pingpu, and Jichang, collectively

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known as "Chengyang Eight Villages". There are a total of 2,000 Ganslan-style Diaojiao buildings in the eight Zhaizi counties, which are valuable treasures for the study of Dong architectural culture [2].

Causes of Dong People's Stilted Architecture

In the more than one million years of human evolution, Guangxi has a mild climate, abundant rain and abundant natural materials, which are very suitable for human's living and reproduction. Therefore, the special natural environment, climate and resources make the Dong people in Guangxi form the drape-type wooden structure building system very early.According to relevant documents, the earliest dwelling mode of Guangxi ancestors was cave dwelling, such as the archaeological sites of Liujiang Man, Zhenpiyan Site and Qilin Mountain Man, etc. Nest dwelling began to appear after cave dwelling."Nest" or perched in a tree structure by crude shacks, can effectively ensure the security of people's lives, this kind of phenomenon of the "nest", later generations as the original manual build homes, just like the north kiln is considered a cave in forms of modern remains, dry column in the south is also viewed as nest is the product of evolution and development.The ancestors of Guangxi who created Ganlan were Luoyue people, a branch of Baiyue people in the Warring States Period, Qin and Han Dynasties, and the ancestors of the Dong people.Judging from a large number of Ming ware unearthed in the Han Dynasty in Guangxi, it can be seen that by the latest Han Dynasty, Ganlan had been prevalent in all parts of Guangxi, and the development was relatively complete, with various forms [3].Gan-rail architecture can give full play to its structural advantages, adapt to the local climate of Guangxi, improve the living environment of Dong people, and become the architectural form with the most national and regional characteristics in this region, reflecting the unique national habits and characteristics of Dong people, and reflecting a lot of aesthetic value and significance [4].

The Beauty of Materials

The beauty of materials does not lie in the value of materials themselves, but in the service function of materials to the target. The Dong people in Bazhai Village of Chengyang have reached the realm of the unity of nature and man in the use of natural materials when building houses.DongMin starting the lush mountains more groups, and local materials, convenient and practical to build houses used by the material directly from the local fir trees to be planted, on the one hand, the local natural environment suitable for the growth of cunninghamia lanceolata, such as building materials, on the other hand, local proverb "18 Chinese fir", dong mountain green water under the people's livelihood of children at home near the fir tree, namely after marrying children adults 18 years later, the Chinese fir has become useful, can be building for use in children, natural forest and good customs, for dong wooden buildings laid the important material base.Wood is self-cutting, with tung oil as a simple surface treatment, basically no paint, less decorative painting, to show the texture of wood itself.Indoor wood flooring, construction is convenient and fast, exposing the texture of the wood itself, elegant and beautiful.The roof is made of green tiles, and the tiles are made of local soil, which blend well with the wooden building made of logs and the environment of the mountains and rivers. The architectural techniques of the primitive period are also commonly used in the Dong residential areas in Sanjiang. For example, the board walls of the main house are tamped by plate construction, or the technology of clamping storage is used, and the partitions or walls are bonded with bamboo rattan strips and yellow mud to effectively block the larger wet climate in the mountainous area and show the unique material texture.

The use of stone materials is also local materials. Usually, bluestone, SLATE and block stones are used for foundation construction. In addition, some people use sheet stones as tiles, showing a unique Dong style [5],as shown in figure 1.



Figure 1.

The Beauty of Structure and Function

Dong ancestors processed and transformed houses according to their own needs, forming the trunk column building system we can see today. Through the design and transformation of the building structure, the multi-functional use can be achieved and the Dong people have a rest place.The main body of the Dong wooden building in Bazhai area of Chengyang is of wooden frame structure, and the roof is of double-slope type. The front slope is slightly high and short, while the back slope is slightly low and long, which is stable with the head held up and the center of gravity leaning back.There are many buildings on the side, which can not only protect the gable board, from the sun and rain, but also expand the space of the column, reduce the load of the roof foundation and the column, but also make the column add changes in the shape of the column, and increase the aesthetic feeling of the column.Dry column form is diverse, both hanging mountain type, and the rest mountain type, there are half rest mountain type, that is, dry diaphragm for the hanging mountain type, the other side for the rest mountain type.Dong people dry rail also popular before and after the eaves of the addition of 1~2 short eaves, forming double eaves, can not only block the strong light rain on the corridor and the room of the sun and wash, but also make the tall dry rail shape rich in line changes, a stronger sense of layering, more beautiful and characteristic.The column and beam are riveted to form a dry diaphragm frame, and the column and beam form a double slope trapezoidal supporting top purlin.Dong dry column construction is in accordance with the shape of the potential, in the hillside platform, orderly densely on the vertical and horizontal symmetrical thick pillar, popular four to eight common five pillar, the method to construct with mortise and tenon joint cohesion of wear, wear wood skeleton, the various common column connection into the dry bar pillar supporting TongZhu, upper wear wood ladder form double slope shape, the top of the column and TongZhu each holds a transverse purlin wood, make the bar at the top of the dry weight evenly distributed on the pillar.The bottom of the column is cushioned with stone foundation to prevent the column from sinking or rain erosion.Then it is pieced together with boards for walls, paving boards for buildings, and then divided into small rooms along the columns with boards, and covered with small tiles on the top.The whole block wood frame has excellent material, interlocking, integrated, exquisite workmanship, compact and stable structure, and good seismic function, as shown in Figure 2.

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Figure 2.

The Beauty of Form

The formal beauty is reflected in the harmonious relationship between the whole image of the building community and the natural environment, and between the whole building and the local details.On the one hand, the structure and form of the column building have achieved harmony and unity, and it is the most common type of cross frame structure in Southwest China.On the other hand, large and small slant dwellings are built along the mountains. Numerous buildings with flexible layout and distinct priorities stand in the complex terrain, which are integrated with the mountains and rivers, just like a beautiful picture of ancient villages.

Dong people mostly live in areas surrounded by mountains and rivers, and it is a common feature of Dong villages to be built near mountains and rivers.Therefore, the most important architectural feature of the Dong ganlan wooden buildings is the perfect integration of topography and landform with the structure of the wooden buildings, which is quite different from the buildings in the northern central region that are mostly built on the flat ground.According to the different forms, the gan-column wooden buildings in Bazhai Village of Chengyang can be divided into three categories: high-foot buildings, stilted buildings and low-foot buildings, which are classified according to the different terrainforms built and the ways of combining them with the terrainforms.Generally speaking, tall buildings are about 2 meters from the ground, and short buildings are about 2 feet, in order to separate moisture from the ground.In addition, most low houses do not have front porches, and they usually enter the main room directly through the eaves of shallow corridors, or have steps in front of the building[6].

Each block dry diaphragm has upper, middle and lower three layers, the lower layer used as a circle of breeding livestock fence.The middle level is the living layer of the family, which is divided into small rooms by wooden boards along the columns. The front one is a corridor type, which is the place for the family to receive visitors, textile, embroidery or rest at noon.The middle is generally used as a kitchen, with a fire, is a family daily cooking cooking, eating, fire or play camellia hospitality;Bedrooms are on the left and right. The floor of the population is located in the side of the dry diaphragm, with a fixed wide wooden ladder for people up and down the floor.Upper layer is not spaced commonly, basically use to place grain or other sundry, the family with much children, will upper layer also be separated into small as a bedroom.From the direction of depth, the wide corridor between the front eaves column and the Jinzhu is the main living space for the Dong people.The second and third entrances are respectively placed in the fire room and the bedroom. Most of the stairs are arranged on both sides of the gable, which is a single wooden running form.With this

plane as the basic prototype, according to the size of the family population and the functional needs, a variety of planes are derived, usually in the way of the variation in the bay, such as two, four, five.Also because the geographical position of each household is different, the land is limited, there will be some changes on the plane, such as building a side building or in the basic neat plane out, in order to increase the space area and do not increase the area of land, can be carried out along the gable, can be carried out along the back, also can be carried out around the building, see figure 3.



Figure 3.

Beauty of Technology

The beauty of technology refers to a kind of aesthetic consciousness reflected in the process of using wisdom to transform nature and use nature. The appearance of this consciousness is usually accompanied by the emergence of material forms and things, so as to show the beauty of technology.Technology is usually composed of two aspects, one is the material means of technology, namely tools and equipment;The second is the skills, experience and skills displayed by the laborers [7].In the long historical process, the Dong people have already developed their own unique technical means for the design and manufacture of the gantry building.They use local materials use native wood, stone building, making tools are also used by DongMin also reflects the wisdom, they don't have a standard scale, each ink division has its own unique sense of scale, to the design of the building of this already, their wisdom and experience in the dry bar reflected on the building, the beauty of the natural formed technology.The construction techniques embodied in the ganbar building are the wisdom crystallization of the Dong ethnic culture and a bright star in the traditional Chinese wooden structure building system, as shown in Figure 4.



Figure 4.

The Beauty of the Unity of Man and Nature

Among the undulating, tree-covered hills and clear streams, there are many gate, stilted buildings, pavilions,

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stage, drum towers and wind and rain Bridges in the flexible layout of numerous villages, forming a beautiful picture of ancient villages.Based on the local climate, historical tradition, building materials and people's spiritual aesthetic needs, the architectural building group with graceful shape, rational use function, scientific structure treatment, local materials and reasonable economy is created [8].

In terms of village layout, the Dong people in Chengyang Bazhai live peacefully in accordance with the natural landscape environment. They can not only benefit from the natural river water, but also avoid the harm caused by the flood, unlike the Central Plains, which suffer from the flood every year.The dwellings were built according to the mountain condition and local conditions, completely different from the ideological constraint of "square foundation" formed in Han region for thousands of years. The castles and houses were all enclosed in large and small square Spaces, completely isolated from nature.Instead, the building is built in nature surrounded by mountains and rivers, which is similar to the design concept of Suzhou Garden, which immerses people in nature to experience and comprehend life.Studying the history of ancient Chinese civilization, we can find that as early as the Zhou Dynasty, the Taoist school represented by Laozi had recognized the philosophical thought of "unity of man and nature", that is, believed that "the way of heaven" and "humanity" are the same way, thus influencing the development of Chinese traditional culture for thousands of years [9].The simple understanding of the inseparability of man and nature is clearly demonstrated in the Dong village architecture.They have a clear concept of geomantic omen and pay close attention to the evil of the environment. The layout of the village shows that they recognize the restriction of the natural ecology on the human living environment. They are well aware that the good or bad of the environment is related to the fate of the villagers, future happiness and misfortune, family prosperity and failure and social safety.From the construction of small village houses, the layout of drum towers and the location of wind and rain Bridges all have the idea of microclimate environment and geomancy [10].

Taking the Eight Villages in Chengyang as an example, the Drum Tower is the most obvious symbol of its centrality. It is the soul of the Dong people and is mostly located in a more prominent position of the Dong village. Its space is wider than the residential space, which is a highly unified social organization structure and spatial structure of the Dong people.Each stockade of Chengyang Eight Villages is an independent group, which develops around its own drum tower and follows the trend of mountain shape and water, forming a rich village space landscape.The wind and rain bridge is a symbol of the boundary of Dong villages. When conditions allow, Dong villages usually set up a wind and rain bridge at the mouth of the village to "lock water and wealth", and at the same time, it also meets the needs of convenient travel and rest.There are a total of five traditional wind and rain Bridges in Chengyang Bazhai, among which Yongji Bridge, Helong Bridge and Puji Bridge are distributed across the Linxi River from south to north.In addition to the drum tower and the wind and rain bridge, village gate, the ancient ones, well pavilions, water wheel, flag red, the ancient stage, dai ping, fire pool, sacrificial altar, ancestral land and other public buildings and facilities in eight village dotted, by winding path leading to a secluded spot, walk change scene, free the lanes of the road system together, and houses, water surrounding the mountain together, create beautiful dong pastoral scenery.Fengshui concept or environmental awareness not only plays an ecological and physiological role in the environment, but also contains the content of people's psychological aesthetics, which plays a good role in the construction of Dong villages. See Figure 5 (from Gulou and Wind-Rain Bridge in Sanjiang Dong Autonomous County, Guangxi).



Figure 5.

Conclusion

Although the Dong people have no script of their own and have used Chinese characters for thousands of years, the splendid architectural entity created in the closed mountains here is an extremely precious physical history book of brick and wood.With its solid image to the Chinese people and the world to tell the Chinese traditional architecture of a very creative minority.Some aspects of Dong architecture can be described as the living fossil of the ancient construction culture and skills long lost in the Central Plains.Some techniques of Drum Tower and Wind and Rain Bridge were once widely used in the Central Plains. However, with the passage of history, the change of conditions, the development of science and technology and other reasons, they were no longer used in the later period.At present, in some provinces in southern China, especially in remote and inconvenient areas, there are still some entities that are very similar to Dong buildings built in Song, Yuan, Ming and Qing Dynasties, but they are not as concentrated as in Sanjiang County in Guangxi. Due to the local special social and natural conditions, Sanjiang County in Guangxi retains and flourishes the highly characteristic Dong architectural culture, which is a good example of multi-ethnic interaction, learning and flourishing creation in architecture in China [11].

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