Analysis on the causes of Environmental Color of Jiarong Tibetan Village——Taking Ganbao Tibetan Village in Lixian County as an Example

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Abstract. In recent years, under the influence of the upsurge of rural tourism, some Jiarong Tibetan villages are facing the dilemma of losing the color of environmental characteristics. In order to maintain the regional color personality of Jiarong Tibetan village and deepen the local understanding of the environmental color of Jiarong Tibetan village, this paper expounds the impression of environmental color of Jiarong Tibetan village, and taking Ganbao Tibetan Village in Lixian County as an example, deeply analyzes the causes of the environmental color of Ganbao Tibetan village from three dimensions: the influence of natural conditions, the gestation of local materials and the expression of inner belief. On this basis, it quantitatively analyzes the main color tone of Ganbao Tibetan village and the color attribute values of Riyue Square.

1. Introduction
In recent years, under the background of rural revitalization in China, the traditional rural tourism in jiarong Tibetan village has been warming up and the tourism economic benefits have been greatly increased. However, due to the insufficient cognition of the regional environmental color of jiarong Tibetan area in the local construction, some of the environmental color features of jiarong Tibetan village have been lost. Therefore, in order to maintain the environmental characteristics of Jiarong Tibetan village, it is urgent to explore the causes of the formation of environmental color, and analyze the relationship between natural conditions, local materials, internal beliefs and the formation of environmental color. Jiarong Tibetan Village has been built by mountains and rivers since ancient times, like a stone castle. In general, its environmental color comes from nature and blends with nature, which shows a color impression of plain and colorful and with a strong sense of regional identity.

2. The environmental color image of Ganbao Tibetan village
Ganbao Tibetan Village is located in Ganbao Township, Li County, Sichuan Province. is also located in the core of the tourist line of the Tibetan and Qiang cultural corridor and on the popular tourist ring road of western Sichuan (Fig. 1). It is a relatively large-scale village with hundreds of households on the slope, showing typical mountain group characteristics. Ganbao Tibetan Village is a typical combination of Han, Tibetan and Qiang cultures, which is known as the first village of Jiarong
Zangzhai. Its environmental color fully shows the color use tradition and color aesthetic taste of the ancestors of Rongba. Ganbao Tibetan village makes full use of the stony characteristics of Jiarong area. The architecture is usually built with stone masonry, yellow mud bonding, white edge on the top, thus forming a thick grayish yellow main tone and white secondary tone of Jiarong Tibetan village. Under the influence of religious belief, the Tibetan village is slightly dotted with Tibetan five-color and seasonal colorful crops, showing a unified and intelligent color image. In addition, the architectural form of Ganbao Tibetan village combines the characteristics of Tibetan and Diqiang nationality. Dwellings, official villages and towers are scattered between slopes and forests, and organically blend with the color of the environment, fully showing the beauty of harmony in the image of environmental color. The environmental color of Ganbao is gradually formed by the long-term production and life practice of the Rongba people, which is mainly influenced by natural conditions, the gestation of local materials and the expression of inner beliefs [1].

Fig 1. Location of Ganbao Tibetan Village in the small ring road of tourism in West Sichuan.(self-drawn)

3. Natural conditions contribute to the tradition and change of environmental color in Ganbao Tibetan village.

3.1. Natural conditions affect the formation of the tradition of color use
In the process of the formation of the environmental color of Jiarong Tibetan village, the local topography, air temperature, light, precipitation conditions and other factors have played a major role. Ganbao Tibetan Village is located in the plateau of northwestern Sichuan, with an altitude of 1,800 meters, and has a monsoon climate. There is a significant climate difference in the whole year, with a minimum temperature of -3 ℃ and a maximum temperature of 28 ℃, showing a typical mountain three-dimensional climate. Because of the great disparity in altitude and the complex terrain, the dignified mountains and green trees are directly involved in the color of the environment. The change of season makes the village more natural and intelligent. In addition, the Tibetan village is located in the canyon, with cool spring, summer and autumn, severe cold in winter and spring, more precipitation in summer and short frost-free period in winter. The southern slope facing the sun has sufficient sunshine and strong ultraviolet rays all the year round, showing obvious climatic characteristics of alpine canyons, that is, from the canyon, with the continuous increase of altitude, the temperature continues to drop. Compared with Chengdu plain, the altitude of Ganbao Tibetan village is higher and the temperature is lower. Therefore, different from the light gray dominant tone in Sichuan and Chongqing, the Rongba ancestors used the warm tone of soil yellow and grayish yellow with low saturation and lightness in the color use tradition of creating environmental color. The whole village presents a warm and simple color image in harmony with the natural environment, supplemented by distinct Tibetan five colors, giving people a strong sense of visual impact and regional identity.
3.2. The change of seasons creates different environmental colors of the four seasons.
The environmental color of the Ganbao Tibetan village consists of not only the ancient castle complex, but also the exposed surface and rock, surface vegetation, water body and space color. These elements are the important part of reflecting the unique personality of environmental color. Affected by the unique local natural conditions, the gray-yellow buildings, green plants, light gray ground, colorful flowers and seasonal crops in the Tibetan village of Ganbao reflect each other with the blue sky. Blue sky, high mountains, green trees and clear water together constitute the environmental background color of Ganbao Tibetan village. With the change of the seasons, the Tibetan village is sometimes hidden in the clouds, sometimes exposed between landscapes, sometimes covered with thick fog, sometimes wrapped in white. The different mountain background colors and sky background colors of the four seasons, as well as the environmental colors of flowers and plants, vegetables and fruits, ginkgo street trees in different seasons, show a different seasonal environment color image (Fig. 2). It fully embodies the color aesthetic tradition of blending into nature and advocating nature in Jiarong area.

![Fig 2. Color of Ganbao Tibetan Village in different seasons(self-photographed)](image)

4. The local materials give birth to the environmental color personality of Ganbao Tibetan village.

4.1. Materials and skills have established a natural dominant tone.
Different climate and geographical environment give birth to different regions of soil, stone and wood and other building materials. Natural conditions directly affect the characteristics of local materials, which is the source of color texture of traditional residential construction materials [2]. Due to the limitation of transportation conditions, most of the traditional Tibetan villages are built in accordance with local conditions, using local materials. The building basically retains the color of the material itself. Tibetan color is originally based on the original color, which is the imitation and reproduction of the natural color [3]. All Tibetan buildings in Ganbao Tibetan Village prefer to use natural stone and wood, and the color tends to the local natural color on the whole. Partially apply the logo decoration color with regional personality. Ganbao is located on the slope and there are no rocks to be mined. Its dwellings and official villages are all built of stone, most of these stone houses are made from granite washed down in the river and local yellow clay. In the past, almost all the men in the Ganbao Tibetan village were stonemasons. The masonry of the stone wall do not need to hang ink lines, only with eyesight and experience, you can build a flat, straight, angular stone wall. The masonry of the stone wall is easy to come by, which lays a sufficient technical condition for the stone utilization of the Ganbao stone tribe. Originating from the main materials taken locally and the exquisite masonry technique, the overall main tone of the Ganbao Tibetan village is a grayish-yellow main tone close to the local pockmarked stone and clay color (Table 1). It is organically integrated with the background colors of the natural environment around the sky, mountains, water and so on. The roofs of the
buildings are all painted with white lines, so that the unified white top line becomes the auxiliary color tone of the village. The details of the doors and windows are mostly decorated with Tibetan five-color paint, while some parts show five-colored colorful embellishment colors.

4.2. The difference of the material itself enriches the color texture of the environment.

Due to certain color differences in the natural stone itself, the stone walls constructed with striated stones present a slightly different color rhythm in the gray and yellow color tone. The stone can be subdivided into yellowish brown, cyan gray and brick red (Table 1), forming a color rhythm to enrich the walking experience and visual appeal. In the masonry process of the stone house, it is made of local clay and woven with straw mats woven by local technology to flatten the surface of the wall, which make the building walls and roofs of the Tibetan village form a harmonious and unified pockmarked stone texture and a color order full of regional personality. In addition, the architectural colors of Tibetan villages in different areas, or even different families in the same Tibetan village, may vary slightly due to different construction time, wood varieties and treatment methods. After the passage of time, stone and wood may also change color to a certain extent, coupled with their plasticity, which can form a variety of texture on the surface, adding possibility and richness to the environmental color of the Tibetan village [4].

| Stone Photo | Color Pictorization | Hue Extraction | Saturation Value Lightness va | Stone Photo |
|-------------|---------------------|-----------------|-----------------------------|-------------|
|             |                     | 6 / 6 / 5 / 3   | 69 / 65 / 65 / 47           |             |
|             |                     | 19 / 21 / 22 / 3 | 71 / 72 / 64 / 58          |             |
|             |                     | 33 / 35 / 36 / 36 | 74 / 68 / 63 / 63        |             |
|             |                     | 2 / 8 / 8 / 8    | 86 / 63 / 43 / 48        |             |
|             |                     | 2 / 15 / 17 / 12 | 76 / 53 / 42 / 28        |             |

5. The environmental color of Ganbao Tibetan village is the expression of inner belief.

5.1. Environmental color is the expression of Jiaron national belief.

Different countries and cities have different preferences and worship for colors due to different national beliefs, history and customs, thus forming environmental colors with different styles and characteristics. The environmental color of Jiaron Tibetan village is not only the silent expression and silent symbol of the aesthetic taste and aesthetic habits of Rongba ancestors, but also the personalized interpretation of Jiaron Tibetan cultural tradition. The Ganbao Tibetan village was formed because of religious belief and avoiding the chaos of war. The formation of its environmental color is the process of inheritance and development of Jiaron Tibetan culture, just like a silent history quietly recorded the reproduction of this nation, of which nothing is more far-reaching than religious belief. It reflects the culture, psychology and emotion of Jiaron Tibetan. The color that the Rongba people like has a strong religious meaning, contains rich and profound symbolic language, and permeates the potential collective consciousness of the nation [5].

5.2. Environmental characteristic color is the expression of religious belief

Inspired by nature and endowed with the most natural and primitive symbolic meaning, the environmental characteristics of Ganbao Tibetan village are Tibetan five colors with classical
symbolic significance, which are attached to the Wind horse flag, prayer flags, simmering mulberry tower, high towers, dwellings, etc., and can be seen everywhere, becoming the most direct and vivid externalized expression of the religious belief of the Rongba people. The navy blue in the large murals of King Gelsa in the Ganbao Tibetan village symbolizes the sky (Fig. 7) and represents auspiciousness and prosperity. The simmering mulberry tower on the mountain gate and hillside, as well as the four corners of the dwellings roof are white, symbolizing white clouds and snow, is the most beautiful and noble color. Sun Moon Square is an important place for turning scriptures and simmering mulberry in the Tibetan village of Ganbao, in which the yellow symbolizes light and hope (Table 2). Red symbolizes flame, which is similar to the color of the gate of dwellings in the village, and has the meaning of auspiciousness and exorcising evil spirits. Green symbolizes rivers and lakes, etc., is close to the civilian color of the public, closer to life and the vast agricultural and pastoral areas. The people of Ganbao in the ancient were semi-pastoral and semi-agricultural, who were good at farming, so there are more green color in the village than other Tibetan villages, which fully reflects the most significant environmental color feature that Jiarong Tibetan Village is different from others. In addition, the Wind horse flag with five-color prayer flags is hung between the Tibetan village buildings, and the details of doors and windows, thangka and murals are decorated with auspicious eight treasures patterns (Fig. 3). They are rich in color and high in purity. There are pure white, bright red, emerald green, lake blue, purple and so on, all with a yellow edge and white background, with a strong contrast and a strong sense of religious identity.

Table 2. The Ribbon and Color attribute value of Sun Moon Square

| Architecture / color | Tone | Saturation | Lightness | Visual effect | Real Scene and Ribbon |
|----------------------|------|------------|-----------|--------------|-----------------------|
| Wind horse flag      | 0    | 0          | 1.00      | strong       |                       |
| Flag                 | 118  | 0.22       | 0.71      | medium       |                       |
| Prayer wheel         | 23   | 0.47       | 0.84      | strong       |                       |
| Railing              | 51   | 0.67       | 0.84      | strong       |                       |
| Ornaments            | 207  | 0.6        | 0.87      | strong       |                       |
| Flag                 | 347  | 0.54       | 0.75      | strong       |                       |
| Ornament             | 4    | 0.37       | 0.88      | strong       |                       |
| Flag                 | 358  | 0.30       | 0.36      | strong       |                       |
| Ornament             | 212  | 0.56       | 0.35      | medium       |                       |

Fig 3. The colorful auspicious eight treasures pattern (self-photographed)

6. Conclusion
The environmental color of Jiarong Tibetan Village is gradually formed by the Rongba people in their
long-term production and life practice, which is mainly influenced by natural conditions, the gestation of local materials and the expression of inner beliefs. The specific topography, climate characteristics and seasonal changes of the Ganbao Tibetan village have created its unique color use tradition, showing different seasonal environmental colors of the four seasons. The differences in pockmarked stone, masonry technology and natural materials themselves give birth to a uniform and rhythmic main color tone of gray and yellow in the Tibetan village. The village environmental color is not only the externalized expression of Jiarong national belief, but also the concentrated embodiment of Tibetan religious belief. In order to have a deeper understanding of the natural and cultural factors that affect the development of environmental color of Jiarong Tibetan village, it is necessary to further investigate and analyze more different types of jiarong Tibetan villages in the future, so as to obtain more abundant first-hand information on the environmental color of jiarong Tibetan villages, as well as help the sustainable development of environmental color in jiarong Tibetan areas.

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