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Studies on Development and Color of Tibetan Palace Architecture

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Abstract

Palace is one of the most important types of Tibetan architecture, which is a symbol of power in various historical periods, not only to show off wealth, but also to embody the highest achievements of technology and art. This article studies the development of Tibetan Palace architecture from the historical perspective and discusses forms and manifestations of typical Tibetan palace architecture color. This article reveals color system of the Tibetan palace architecture and draws the conclusion that the Tibetan palace architecture color is one of the important methods to distinguish different building levels and reflects the systematic architectural color constitute mode.

Keywords: Tibetan palace architecture development; Color; Religion; mode

1. Introduction

Tibetan architecture is extremely unique. Its layout, style, materials, structure, color, and decoration are all with unique national characteristics, geographical features, and traditional heritage. Over a long period of development, traditional Tibetan building created several types which could adapt and meet a variety of programs. The basic traditional Tibetan building types are generally divided into palace, temple, residential building, dzong building, garden building, bridge and so on. As one of the important visual elements of Tibetan architectural style, Tibetan architectural color has special efficacy, ornamentation, and identification. It is one of the most significant features of Tibetan architecture. Formed and developed in this particular geographical environment of Qinghai-Tibet Plateau and influenced by Tibetan Buddhist culture and Bon culture, Tibetan architecture created its architectural color culture and gradually evolved the color system of traditional Tibetan architect. The color composition of traditional Tibetan architecture system is an important medium which expresses the characteristics of Tibetan architecture and the surrounding geographical landscape. Palace is one of the most important types of Tibetan architecture, which is a symbol of power in various historical periods, not only to show off wealth, but also to embody the highest achievements of technology and art. In different Tibetan historical periods, palace buildings and their colors also represented the highest level in the building hierarchy.

2. The development of Tibetan Palace architecture

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According to the records of the history of Bon Religion, the Zhang Zhung tribe during the period of small states unified many tribes in the area of Pamirs and Gangdise mountains. There were the castle architectures in the areas of Bon Religion in Zhang Zhung, called "Gooka" or "Dzongkha", namely the king living Castle style palace. At that time, there was a large number of such glorious castle style architecture, and they pervaded in Ngari area and even extended to today's Shannan Prefecture^[1]. The castle style architecture in this period is the embryonic stage of Tibetan palace construction. In the ruins of Zhang Zhung, although it is difficult to find the original architectural color, the architecture type system and the scale is still visible.

"Housing is not earlier than Yungbulakang, king is not earlier than Nyatri Tsenpo" is widely circulated in Tibetan folk. The folk says that, the first King of Yarlung, Nyatri Tsenpo, constructed the first palace--Yungbulakang Palace within the territory of today's Nedong County in AD 2nd century. In fact, Yungbulakang should be only the first palace of the Yanaon tribe, the ancestor of Tubo Dynasty, and it should be the Palace of Tibetan Royal palace buildings from the embryonic stage to the forming stage.

According to the Tibetan literature, the generations of the Yarlung kings had successively constructed a lot of palaces after Yungbulakang, but only the Yungbulakang palace and Tiles Dagze Palace are famous^[2]. In Tubo Period, Songtsan Gambo built the early Potala Palace in Lhasa. It is believed that the Potala Palace in the Tubo period was the biggest and the most luxury buildings from many literature. From various temple murals, Thangka and the contents recorded and described in the historical literature, the Potala Palace followed the activeness of

Yongbulakang palace, and it enhanced the artistry of the architecture with the development of productivity. (Figure 1)



Fig.1. The Potala Palace in the mural.

After the disintegration of the Tubo Dynasty, descendants of the Tubo King had formed the two branches. The two sons of Lhang Darma occupied separate areas. One son controlled Lhada and the Samye area and other son occupied the Shannan area. Later, their descendants separately controlled Ladak, Pulan and Guge and built their own castles and palaces^[3]. The Palaces of Guger kingdom were built during this period.

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After Yuan Dynasty unified Tibet, the central government established several local regimes such as Sakya local authority、Phagdru local authority and Ganden pho brang local authority in some positions of Tibet. These local governments were set up with the special places of administration. Since Yuan Dynasty, the Tibetan Buddhism gained not only dominance in religious belief in the Tibetan areas, but also the supreme power in politics with the support of the central government. For example, the Sakya local regime had been mastered by Kuns' monks (Kun was a noble family and the leader of religious) who created the Sakya sect. Kuns' monks became the highest governors who were authorized to manage Sakya local government by the Yuan emperor. In the Yuan Dynasty, so-called Sakya Dynasty with Tibetan theocratic was formed. Hence, the palace architecture was changed in a certain extent, and the palace began to integrate with temple and government institutions. In the Sakya Monastery, it was difficult to distinguish between temples and palaces, because the building had both political and religious functions. Thus, the Sakya Monastery was a Buddhist temple, and also was a palace, which affected the development of the late Tibetan palace. From the fourteenth to the sixteenth

century, many of these palaces and temples with theocracy appeared in Tibet. The most famous palaces were the Drepung Monastery and the (post) Potala Palace. About 1530, the Dalai Lama II set up the government agency and built the special architecture in the Drepung Monastery. The later Dalai Lama III, IV and V had lived and worked there. In the period of Dalai Lama V, the strong local regime was established and the (post) Potala Palace was built presided over by the Dalai Lama V and implemented by Sangyai Gyatso. The Potala Palace was the palace buildings that had the largest scale, the most superb construction technology, the best level of art, and the most magnificent palace style in the history of Tibet at that time.

3. Architecture color of Tibetan palace

3.1. Color analysis of typical Tibetan Palace architecture

This article focuses on the two representative of Tibetan palaces and discusses the color constitute and characteristics of palace type.

3.1.1. Architecture color of Yongbulakang

Yongbulakang palace lies on the hillside on the eastern bank of the Yarlung River in the Yarlung Valley, and it had been used as palace from Nyatri Tsenpo period of Yarlung to the end of Tubo Dynasty. The early Yongbulakang only had a small amount of watchtowers and other buildings. Until the seventh Century, King Songsan Gambo unified the plateau and moved the capital to Lhasa. The two-floor palace was built on the two sides of Yongbulakang, and the bottom layer of the palace was used as Buddha-hall, the second floor was the palace of dharma king. Yongbulakang was developed into the building integrated of Buddha-hall and temple. Later, it ever became the summer Palace for Songsan Gambo and Princess Wen Cheng stayed there in her first summer when she came to Tibet. It was used as a temple again in Yuan Dynasty and became a monumental building. It has been expanded and constructed in later dynasties. According to the records in Donggar Tibetology dictionary, the Yongbulakang was used as Shamanism Temple and added the gilding roof on the watchtower building in Dalai Lama V period. From then, red, white and yellow became the three primary colors. In addition to part of the monk's room, there is a living room for generations of Dalai Lama when they worshiped there. As the first palace in Tibet, the later Tibetan palace constructions were be impacted by Yongbulakang more or less from the location to shape and colors.

Today's Yongbulakang building is raised from west to east just like steps. The highest watchtower building (the earliest buildings built by Nyatri Tsenpo) is in the east. The building appears five stories high outside, but the actual inner space is three floors. The bottom of the building should be the original building,

but the upper part was later repaired. The wall is mainly the red, white and yellow colors, layout is typical Tibetan architectural color composition. The traditional Tibetan flat roof dedicated with various gilt talisman, single red eaves wall, and a large area of white wall from top to bottom. The west palace building is the traditional Tibetan flat roof dedicated with various gilt talisman, single red eaves wall, and a large area of white wall from top to bottom. The color of the outer walls of accessory building is simple and mainly white. The color of the entrance of the main hall of the building is rich while the color of other doors and windows is simple. Most of doors and windows are added with black pocket. The architecture color is presented followed by the sequence of architectural space and presents a strong logical sequence. The construction specification level becomes higher from the entrance in the bottom to the high scripture hall and Buddha-hall. Outer wall color changes from simple to rich and from modest to gorgeous combining with the grade and shape of the architecture. The color selection, layout, composition, and collocation of Yongbulakang buildings reflect the culture of Tibetan people from secular life to the spirit field, and present the composition of the system. (Figure 2. Figure 3)



Fig.2. Architecture color of Yongbulakang.



Fig.3. Architecture color composition pattern of Yongbulakang.

Table 1 is the composition of color system of Yongbulakang building.

Although early architectural color of Yumbulagang cannot be learnt, the description of the historical stories of early Tibetan palace period in the the legend and the Tibetan historical materials has rich color tendency. For example, the Gnam-gyi-khri-bdun in the legend of ladder can enter into the heaven by stepping the rainbow. It is said in Clear Mirror of Royal Genealogies that seven red Mausoleum is in the sky and God without dead body like scattered rainbow. The Drigum Tsenpo after Gnam-gyi-khri-bdun was binding with black satin in his hair and binding a mirror in his forehead, hung fox carcasses on his ring shoulder and dead dogs on his left shoulder, swung sword around the head, covered with dust bag on the back of the red bull in the battle. He accidentally cut the heaven ladder, and then he was usurped the throne^[5].His son's birth is closely linked to color, only Drigum Tsenpo's Princess pillowed the white yak and dreamed that she born a prince with a white man disguised by yarlha shampo mountain-god. It can be found that the social customs were impacted strongly by the Bon Religion at that time. Color in the legends and the records was associated with Bon Religion. Obviously, the color worship and social customs of the original Bon Religion would be reflected in the architectural color. The palace architectures as a symbol of supreme power would certainly achieve the best performance through the color under the impact of Bon Religion. Due to the limit of economic and technical conditions at that time, the presentation of architectural color was in the primary stage. Although it was not gorgeous like today's architectures, it was the highest grade at that time. This color style should be the earliest model of the Tibetan palace architectural color, and has a certain impact on the color, shape and structure of the later palace architectures. The Yongbulakang color gradually became gorgeous, which shows the inner relation that the architectures develop following the social, economic, political, religious culture, and gradually formed today's customs.

Table 1. The composition of Yongbulakang building color

| Part of the building | | Roof | Eave wall | Outer wall | Door and window sleeve | Door | Window |
|----------------------|---------------------------------------------------------------------------|---------------------------------------------------------------|-----------------|-----------------------|------------------------|-------------------------|-------------------------|
| Main building | Watchtowers (The earliest part was built in the Nyatri Tsenpo period.) | Golden roof with corners tip save | Red Bianma wall | Yellow, red and white | Black | Red, yellow, blue,green | Red, yellow, blue,green |
| | Buddha hall (The earliest part was built in the Songtsan Gambo period.) | Tibetan-style flat roofs decorated with golden Buddhism adder | Red Bianma wall | White | Black | Red, yellow, blue,green | Red, yellow, blue,green |
| Dormitories of | Monastery | Tibetan-style flat roofs without decoration | | White | Black | Red, yellow, blue,green | Red, yellow, blue,green |
| Accessory building | | Tibetan-style flat roofs without decoration | | Material color | Black | | |

3.1.2. Architectural color of Potala Palace

The Potala Palace locates on the Red Mountain in the downtown of Lhasa, Tibet autonomous region in southwest China. Potala is the transliteration of Sanskrit "Putuo", originally referring to the island where kwan-yin bodhisattva lives. Potala Palace was built by the thirty-second generation of tsenpo, Songtsan Gambo, during Tubo Dynasty. It was known as Red Mountain palace. There were three independent nine-layer palaces in Potala Palace. Its center was the Royal Palace, and the harems of one princess of Tubo and Wen Cheng princess from Tang Dynasty, locate at both sides respectively. The scale of the Potala Palace at that time was much smaller, but considering the technical level of Tibetan regime, there was no doubt that it was the epitome of architecture technology and art in the historical period, representing the highest level of architectural art. As seen from the mural of the Potala Palace, the earlier building of Red Mountain palace was characterized by the decorative features of later generations of Tibetan Architecture. The decorative motif was deep red Bianma grass with the decorative ornament on ribbons. The external walls were mainly white while those of important building were red. The window had a ladder shaped black border. The parapet wall was decorated with dhvaja. More detailed decoration can't be got from the diagram.

In the 17th Century, the fifth generation of Dalai Lama reconstructed a grand palace on the former site of Red Mountain Palace, which was named as the Potala Palace. Since then it had been the center of politics and religion in Tibet. The fifth generation of Dalai Rosann Gyatso wrote a poetry praising Potala Palace. It was said that the golden pennant shines the earth like a flame on the top of the palace, and the sun-god fled to the north at night with a shy look. There was a Brahma with four heads who wanted to look for a palace comparable to Potala Palace in vain. Finally, he can only fall into the eternal cycle of reincarnation.

The Potala Palace reconstructed by the fifth Dalai Lama is a typical Tibetan Palace. In terms of size, style, shape, and space, it is the masterpiece of Tibetan architecture. The entire palace was designed according to the rules of mountain and sunshine. The roof and floor were covered with Aga soil. The internal palace was decorated with carved beams, painted column, and murals. The wall was wide and battered. The top of the palace was decorated with goldentop in a different shape. All these elements make Potala Palace a treasury of Art. It embodies the achievements of ancient Tibetan architecture and a concrete manifestation of the outstanding achievements of Tibetan architecture. The use of color is to contrast the architectural style, distinguish architectural level, express religious emotion, and other important functions, which become a synonym for the image of Potala Palace. The main buildings are named Red

Palace and White Palace according to their colors. The color of each individual building in the building group and even the whole building group shows a clear law and order, which is a model of the architectural color of Tibetan Palace.

The Red Palace is the main building, which is the stupa and various kinds of Buddhist prayer room, as well as the main places to hold religious activities of each generation of Dalai Lama, which is the part of the temple of Potala Palace. The White House is the daily living palace for the living Darai Lama, with the East Hall, the Sun Temple, the bedroom of Confucian classics teacher of the Regent and the Darai Lama, and the office room of Gasha government. Since the fifth generation of Dalai Lama was canonized by Emperor Shunzhi of Qing Dynasty in 1653, the ceremony of enthronement took over the reins of government upon coming of age. Canonization were all held here and hosted by grand minister resident of Tibet of Qing Dynasty. Below the White Palace is the Snow building group, with the functions of government agencies, school of administrators of the Sangha as well as and prisons, printing house, farm, and stables within the palace. While the Red Palace represents the supreme spiritual world, the White Palace represents the secular life of leaders in the spiritual world. The level and status in the building could be clearly determined from their functions. The architectural color decoration is undoubtedly subject to the needs of building function, and the need for this grade division is intensified with forms. (Figure 4.)

The middle part of the Red Palace is high and solemn with symmetry. The top of the temple is Tibetan gilding. Five bright and gorgeous gold-plating decorations of consecutive layers of window and roof construct the composition of a picture. The three parapet under the roof is the red Bianma wall, the height of which is 2 meters. It is the most recognizable in the construction group, presenting the highest level of rank.



Fig.4. Architecture color composition pattern of the Red Palace in Potala Palace.

The white palace adds shading around the Red Palace at both sides and the bottom. The wall of the white house is built on natural rocks, and the whole building seems to grow out of the ground. The three paths rise along the mountain. The zigzag parapet is successive. The higher windows are greater with more complicated decoration and gorgeous color, forming a

gradual change rhythm from simplicity to complexity, reality to imaginary, and plain to colorful. Thus the Potala Palace is a tall and sedate, rising with root in the ground. The building and the mountain integrate with each other, presenting the spectacular beauty of art. (Figure 5. Figure 6.)

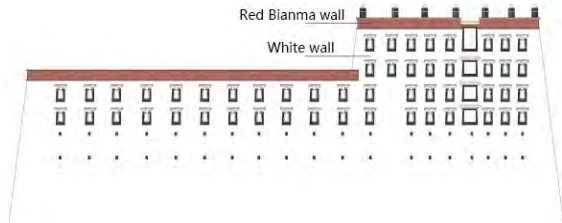


Fig.5. Architecture color composition pattern of the White Palace in Potala Palace.

In the Snow construction group, the external wall decoration is also different with various functions. For example, Government office is decorated with the single layer red Bianma wall, and the walls of other buildings with lower standard levels are simply white.

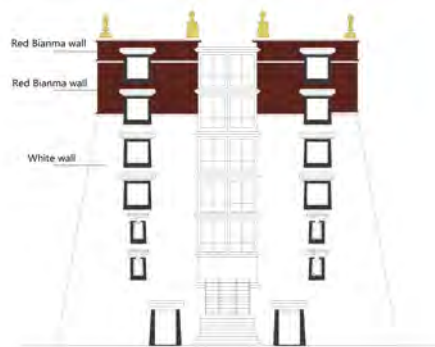


Fig.6. Architecture color composition pattern of the White Palace entrance in Potala Palace.



Fig.7. Architecture color of the Potala Palace complex.

There are some buildings with yellow walls in the Potala Palace, indicating the dignity of the interior space of the building. These architectural spaces are mostly housing of some famous monks and living buddha or important temples. Within the building in the west of the Potala Palace. There are rooms for the people who offer birthday congratulations to Dalai

Lama. Yellow is quite eye-catching in entire palace building as the dotted color of the overall color.

Tibetan buildings often use color and decorative walls to contrast the atmosphere and match with the level of the whole building. The mountain steps and walls of the Potala Palace are decorated with red entablature, creating magnificent momentum with the building group. Table 2 is the composition of the Potala Palace complex color system. (Figure 7)

3.2. Factors analysis affecting Tibetan palace architecture color

Tibetan palace architecture color was influenced by the three main factors of secular life, religious and Theocratic political system. First of all, the early color aesthetic came from secular life under special circumstances. Tibetan people living on the Qinghai-Tibet Plateau which is harsh natural environment and color in the nature is also relatively simple and pure, therefore, the Tibetan people favored warm and bright pure colors from very early. At the same time, the primitive religion appeared in Tibetan, and later developed into Bon religious. Color worship was a particular content in the Bon religious. Red, yellow, blue, white, green which exist in the nature have a corresponding meaning and usage with these colors in the Bon. For example, Bon worship believes everything in the nature has the corresponding god and every god has its own unique color body sculpting. Tibetan ancestry chose and used the special colors to make their original deities, totem and fetish modeling. The Zan God owns the highest one in Bon, which was given red color because the red is the symbol of terror, majesty and the power of infinity. So Zan God modeling always wears a red helmet and ride the red house. Himalayan mountain has five main peaks and everyone has a corresponding female godis. The five female gods were given white, green, yellow, red and blue body color to express their special symbolic meaning and styling features respectively. When Buddhism was introduced into Tibetan areas, it took a compromise stance to Bon to a certain extent and Tibetan Buddhism absorbed many of the contents from Bon, especially including the use of every color. Buddhism color has its special meaning and their own color use has special requirements. Finally, color use of Tibetan Buddhism and Bon merged together to form the Tibetan Buddhism unique color style, which affected every corner of the Tibetan society. Color performance in architecture becomes prominent. For example, Mandala often was used as a prototype in Tibetan religious architectures. According to the Tibetan Buddhist mandala color representation, the Tibetan religious buildings were endured in white, red, green and yellow respectively in the four different directions, while the central building was ended in blue. The Tibetan theocratic political system reinforced this use of color. Rulers divided the different social classes and

strengthen the social status of different social classes through the use of color. The use of architectural color was one of the best means. The most colorful building must be the highest level building in Tibetan buildings. Tibetan palace under a theocracy is both a palace and a temple which demonstrates the social hierarchy as well as meet the requirements of religious doctrine. Tibetan palaces used color attached to the building, building function, and layout to reflect the performance of the social hierarchy class system. With the development of history, the architecture color of Tibetan palaces had a strict hierarchy limited and gradually formed a systematic pattern^[6].

4. Conclusions

The influence Bon religion prompted the folk color has been developed into a color system, while the Tibetan social hierarchy under theocracy system reinforced the function of ethics and social norms of color. In Tibetan architecture, the building color system was improved gradually and formed a unique use of the color system. At the same time, the impact from the religious made the significance of building color richer. Tibetan palace belongs to the highest rank in Tibetan architecture building, therefore, its color is the highest grade and specifications. Even in the palace complex, the buildings with the different functions were used in different colors in order to distinguish the status of the buildings. The paper selects the earliest Tibetan palace buildings as well as the largest and highest level of art palace buildings to analyze its use of color. The building with higher level is decorated with a gorgeous color, presenting warm-toned. The main color combination of external walls includes combination of red and yellow, as well as red and white. Doors and windows are black. The

level of a building can be identified through the existence of golden top. The openings of main doors and windows are often decorated with abundant color and pattern. The buildings are all traditional Tibetan color utilization pattern from the eaves, wall to the openings of doors and windows. Color with the building monomer and groups are utilized to divide different levels with rich and gorgeous levels. Various colors also express the moral meaning of religion, creating a well-proportioned and unique artistic effect of architecture.

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Table 2. The composition of the Potala Palace complex color system

| Part of the building Building | Roof | Eave wall | Outer wall | Door and window sleeve | Door | Window (Blind window) |
|----------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------|------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------|
| The Red Palace | Golden roof with corners tip save | Red Bianma wall (Three Layer red l or double Bianma wall added one layer eave wall) | Red, white and local yellow | Black | Golden, red, Yellow, blue, green,black. The main entrance with rich patterns and bright and gorgeous colors | Red-based |
| The White palace | Tibetan-style flat roofs decorated with golden Buddhism adder | Red Bianma wall (Double or one layerl) | Red, white | Black | Golden, red, Yellow, blue, green,black. Rich patterns and bright and gorgeous colors | Red-based |
| The Snow | Tibetan-style flat roofs without decoration | Red Bianma wall (one layerl) or no eave wall | White | Black | Relatively simple decorative pattern or sigle color without decoration | Blue and green-based |
| Accessory building | Tibetan-style flat roofs without decoration | no eave wall | White or material color | Black | Sigle color without decoration | Blue and green-based |