

# A Comparative Study of National Building Color of Mongol and Han Nationality in Songyuan City, China

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## ABSTRACT

On the basis of clarifying the color preference of Mongolian and Han people, this study collects relevant color data through on-the-spot color measurement of Mongolian and Han buildings in Songyuan, and establishes the color Hue, Value and Chroma of Mongolian and Han buildings in China used the Munsell color analysis method. The results show that there is a strong correlation between building color and national color preference in Songyuan. Because architectural color is an important part of urban color, it can be inferred that national color preference will take architectural color as the carrier, and then affect the urban environmental color.

## 1. NATIONAL COLOR PREFERENCE

The formation of national color is a process of selection, changed, re-selection and legacy from the subjective consciousness of all ethnic groups, which is influenced by living environment, culture, national beliefs and other factors. Nationalities in different regions will give birth to different color sensations, and the symbolic meaning of color is often limited within the region and influenced by nationality. National color is the precious wealth of the nation.

The living environment of Mongolian steppe and the influence of Shamanism and Tibetan Buddhism have different understanding and psychological feeling to color from other nationalities, and then form the orientation of national color which is based on nature. The color of Mongolian is white and blue, white symbolizes white clouds and sheep, blue symbolizes blue sky, red symbolizes fire, yellow symbolizes the sun, black symbolizes power, green represents grassland, and gold symbolizes power (*wu e -n PENG2007*).

As the largest ethnic group in China, the Han nationality has gradually formed an inclusive color orientation due to its wide population distribution and its constant absorption of other ethnic cultures and customs, and the influence of Confucianism, Buddhism and Taoism.

The Han nationality's preference for grey is the embodiment of national tolerance. In the book of *New edition of the whole Tang Wen* (ShaoLiangZHOU2000), there is a saying of "Han people like red." and "Red Bird" is the auspicious animal. The red in the Han nationality symbolizes good luck. Yellow symbolizes the imperial power, green symbolizes the meaning of life, blue symbolizes the integrity of the personality,

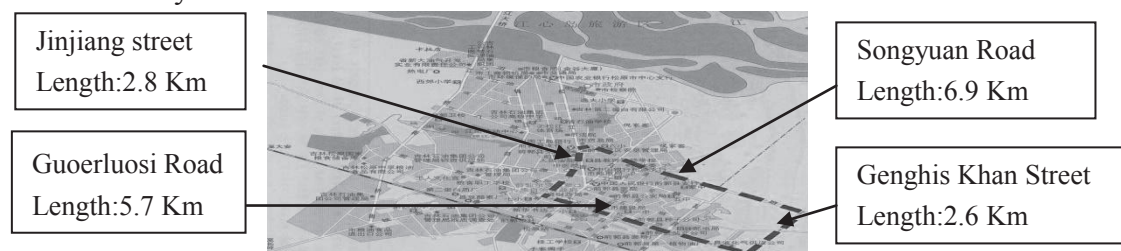
black symbolizes the mysterious nature of the night, purple as a symbol of nobility.

To sum up, the color preferences of the two nationalities have some similarities, for example, the understanding of gold is regarded as a symbol of wealth and status. There are great differences between the two nationalities in the psychological feelings of color, such as the Han white as a symbol of death, contrary to the Mongolian white meaning, rarely used in buildings.

In order to verify whether national building is influenced by national color preference. Munsell color chart is used to detect the color on the spot, and Munsell color analysis tables of Mongolian and Han nationality are established for data comparison and analysis.

## 2. METHOD OF URBAN COLOR SURVEY IN SONGYUAN

As shown in Figure 1, the blue frame is Mongolian buildings, with Han buildings outside the blue frame. There is a strong Mongolian cultural atmosphere in the blue frame. The buildings in this area still retain the characteristics of Mongolian architecture, which is significantly different from the surrounding Han architecture. The protection of Mongolian architecture in this area is relatively good, so it is very meaningful to select the buildings in this area and the surrounding buildings for color contrast study.



*Figure 1: Survey area map in Songyuan*

Based on the “La Geographe de La Couleur and Customs color” (jianming Song1999), this investigation made a comprehensive investigation of the city's history and environmental factors beforehand. While mastering the factors of environmental colors, using the Munsell color chart to measure the building color of Qianguo Town in Songyuan, such as shopping street, residential area, school, hospital and public facilities, and to distinguish the basic tone color, auxiliary color and emphasized color by building location and color proportion.



*Figure 2: Mongolian buildings*



*Figure 3: Han buildings*

Color measurements were carried out on 48 Mongolian buildings (Figure 2) and 50 Han buildings (Figure 3). In order to prevent the color measurement deviation, the unified determination time range was from 10:00 a.m. to 3:00 p.m. The Hue and Value, Hue and Chroma survey data of two ethnic buildings are also analyzed.

### 3. COMPARATIVE ANALYSIS OF BUILDING COLOR BETWEEN MONGOLIA AND HAN IN SONGYUAN

#### 3.1 Hue Analysis of Buildings in Songyuan

From the above color can seen that the Mongolian building color is richer than that of Han building, the color of the two ethnic building colors has a certain intersection, but also has a unique(Table1).

As shown in Table 1, Mongolian building Surface of the wall is dominated by white and B, of which N9 accounts for 80% and 10B accounts for 15%. The main tone 100% of the school buildings that symbolizes Mongolian building features is N9, and auxiliary color 100% is B system. Most of the ornamental colors are gold, red and green. This indicates that the Mongolian building color accords with the color preference of the Mongolian people. The Han building was mainly composed of YR and gray, of which YR accounted for 68% and grey accounted for 30%. Auxiliary color is mainly composed of Y and R.

*Table 1. Hue tables of Mongolian and Han building elements in Songyuan*

	Mongolian building	Han building
Roof	Gold,5PB,5YR,5B,10B,N9	2.5Y,10YR,5PB,5R,N4
Surface of the wall	N9,N2,5Y,10Y,10YR,2.5Y,5BG,10R,7.5YR,5YR	N4,N7,N8,2.5Y,5Y,10YR,5R,10Y
Window	N9,N2,5BG,5PB,10B,10G	5R,N9,10G,5G,10Y
Door	Gold,N9,5R	7.5R,2.5YR,Silvery

Notes: Based on survey data from 2-7/8/2018.

#### 3.2 Analysis of the Value And Chroma of Buildings in Songyuan

The result of Value and Chroma analysis can be seen that,the Mongolian and Han nationalities in the use of building color, even if use the same color, Value and Chroma are slightly different, Mongolian building compared with the Han building color, with a high Value and low Chroma characteristics. This is basically consistent with the national color preference of Mongolian and Han nationality (Figure 4).

From the Hue-Value analysis chart can be seen that the Value of Mongolian building roof color is between 4-9, and that of Han building roof color is between 4-8. Among them, the N-series,5Y,5B-5PB of Mongolian building roof color Value is higher than that of Han building roof color Value(Figure4-a).

The Chroma of Mongolian building roof is between 1-8, and that of Han building roof is between 2-10. Among them, the Chroma of Mongolian 2.5YR, 10B and 5PB is higher than that of Han building roof(Figure4-b).

The Value of the building facade color of Mongolian building is between 3 – 9,and that of Han building is between 5 - 9 .The color Value of Mongolian building N, 5YR and 10YR is higher than that of Han building (Figure4- c).

The Chroma of the facade of Mongolian building is 1-8, and the Han building's Chroma is between 2-6. Among them, the color of Mongolia 5R and 5PB is higher than that of Han buildings. The Chroma of 5YR, 10YR, 5Y and 10Y of Mongolian

building Chroma is lower than that of Han building (Figure4- d).

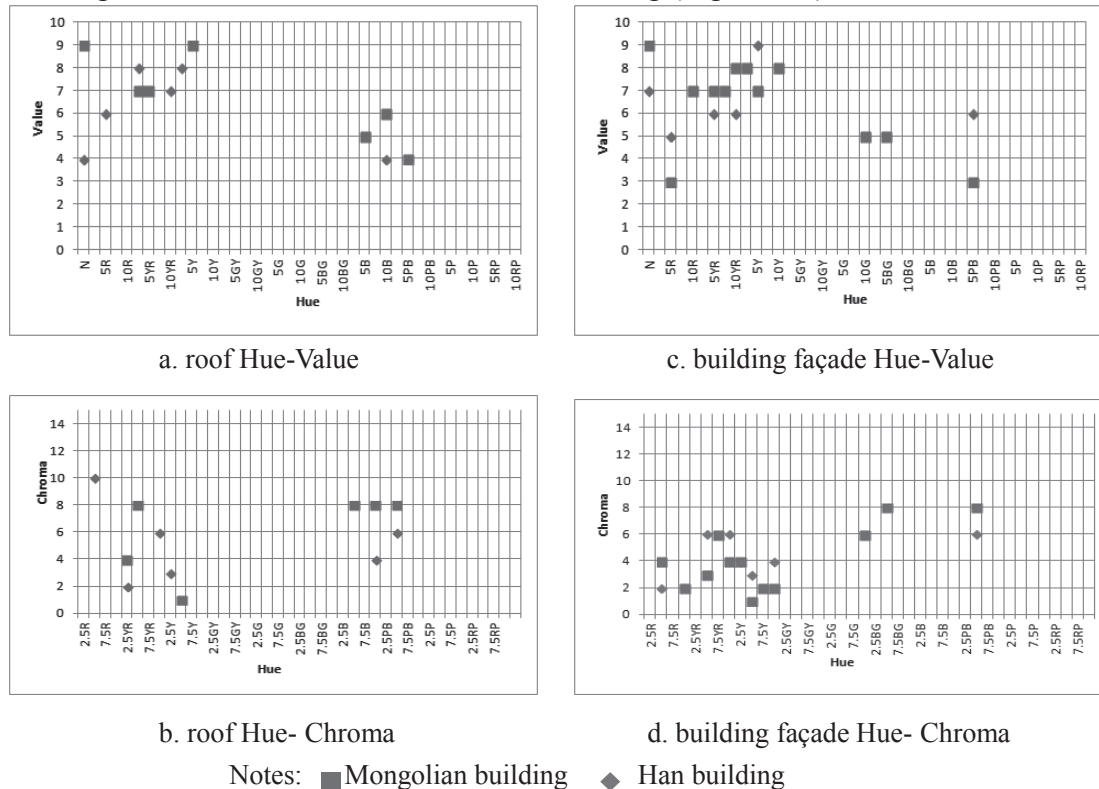


Figure 4: Hue-Value and Hue-Chroma of Mongolian and Han building

#### 4. CONCLUSIONS

According to the comparative analysis of Mongolian and Han building colors, combined with the color preference of the two nationalities, Han building color characteristics is basically the color preference of the Han nationality. Thus it can be seen that the national color takes the building color as the carrier to merge into the city environment color, and then the individuality and the logo of the city environment color.

In order to further verify the influence of national color preference on the formation of city color, it is necessary to expand the scope of investigation and conduct in-depth study on the subject.

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