Research on the Regional Distribution Law and Driving Force of Tourist Experience in Ancient Towns in the Yangtze River Economic Belt

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Abstract. The ancient town is an important geographical carrier for recording history and culture. It is of great significance to study the spatial distribution characteristics of natural and cultural tourism resources in ancient towns along the Yangtze River economic belt. Traditional research perspective, generally from the resource perspective of ancient towns, from the objective characteristics of nature, humanities and so on, but tourism is the interaction of tourists, nature and culture, only from the perspective of resources, it is difficult to provide complete support for the development and integration of tourism resources. From the perspective of tourist experience, this paper studies the spatial distribution of tourist experience in the Yangtze River economic belt.

1. Introduction

1.1. Research on the Spatial Distribution of Ancient Towns and Villages

Research by Sun Feng and others found that the overall characteristics of the spatial distribution of famous tourist towns and villages with characteristic landscapes across the country have an uneven pattern of "multi-center agglomeration", which is generally distributed in bands and clusters\textsuperscript{[1]}. Tong Yuquan discovered that the spatial distribution of Chinese traditional villages is obvious, and there is an unbalanced situation among provinces. There are four areas with high nuclear density, present in Southeastern Guizhou—Western Hunan, Southern Anhui—Western Zhejiang—Northwest Fujian, Shanxi—Hebei—Henan and Northwest Yunnan\textsuperscript{[2]}. Wang Xinyue and others found that the spatial distribution of Characteristic towns in Jiangsu, Zhejiang and Shanghai forms a highly dense area, and in Beijing-Tianjin-Hebei Urban Agglomeration, Pearl River Delta, Sichuan, Chongqing, Yunnan and other places bordering on the formation of secondary dense areas. Moreover, terrain factors, resource endowment, traffic conditions and market factors are the causes of spatial distribution of characteristic towns\textsuperscript{[3]}.

The spatial distribution of ancient towns is greatly influenced by nature and social economy. Feng Wenlan et al. studied the rural settlements in the upper reaches of the Minjiang River as an example and found that most of the settlements have good water sources and traffic conditions\textsuperscript{[4]}, Zheng Wensheng and others take the rural settlements in plain water villages as the research objects, and the basic geographical factors such as rivers, topography and roads are still the most important factors affecting the distribution of rural settlements\textsuperscript{[5]}. Wang Xinyue and others pointed out that leisure villages are generally distributed along roads, rivers and remote cities\textsuperscript{[6]}. Guo Xiaodong and others put forward that the natural elements such as topography, vegetation, climate, soil and river are the basis of spatial distribution and development of rural settlements. While humanities and social factors such as population, industrial structure, economic development level and policy systems are the main driving forces for the development and spatial evolution of rural settlements\textsuperscript{[7]}. Zhang Rongtian et al. Proposed that the settlement distribution has the low altitude
location orientation; the rural settlement landscape patch area in the economic developed area is small, but the patch density is large; at the same time, the spatial distribution of rural settlements and cultivated land has a significant convergence law.

Scholars have found that the cultural characteristics of ancient towns are related to their geological and geomorphological features. Wu Bihu and others put forward that geography (geology, geomorphology, climate and ecological environment) determine the development characteristics of civilization. Famous historical and cultural towns are mainly concentrated in the Yangtze River Delta and Sichuan Basin, two nodes with relatively developed ancient commercial economy and important ancient water transportation. Li Bohua and others found that the relatively closed regional environment, dangerous terrain, inconvenient transportation and relatively backward social and economic factors provide important conditions for the protection of traditional villages. Cheng Qian et al. Summarized the main reasons for the impact of spatial distribution: first, affected by the geographical environment, there are more intangible cultural heritages in the areas with rich products and more human activities; second, it is related to the livable environment and national regionality of human beings; third, the minority inhabited areas, which are located in the frontier, are less invaded by foreign cultures, and their cultural traditions are not easy to be destroyed.

1.2. Research on the Spatial Distribution of Tourists’ Perception

Zhang Hongmei and others found that with the increase of distance, the reputation of tourism cognitive image increased, the reputation of emotional image also increased, and the awareness of emotional image decreased significantly. Chunhui and others found that tourists pay more attention to the spatial image of the destination from personality to structure, and then to meaning. Ms of structure, Gao Jun et al. Found that domestic tourists have a high degree of spatial perception of the region, and formed several gathering areas; foreign tourists have a low degree of spatial perception of the region, and the distribution is scattered.

Cholars have studied the dominant elements of spatial intention. Fan Wenyi takes Yangshuo town as an example, and points out that linear street and dot shaped public space are the dominant elements of spatial image of most small towns. Zhijie and others studied the ancient towns in Jiangnan and found that the main roads and bridges constructed the "ring" image space framework. In and others take the Redtory factory as an example, and find that the spatial structure of Guangzhou Redtory factory depends on the two attributes of industrial culture and artistic creativity. Tourists' spatial perception of artistic creative landscape is stronger than that of industrial cultural landscape.

Some scholars have studied several scenic spots and analyzed the perception differences. Lu Lin et al. Conducted an empirical study on Huangshan and Lushan mountains, and found that the tourists' perception of the tourism environment, tourism management, tourism supply and the residents of the tourist destination is less than the perception of the scenery. In and others analyzed the perception differences of 11 hot cities, and found that the city image was the second attraction factor to attract foreign tourists to the city, next to scenic spots. Nhai et al. Take the four types of street communities in Xi'an as an example, and put forward that urban planning produces perceived spatial differences, household registration types exacerbate perceived spatial differences, housing properties promote perceived spatial differences, and the historical basis of community space strengthens the perceived spatial differences. Ha et al. Analyzed the differences of tourists' perception among three types of scenic spots with different degrees of openness. In open and semi open scenic spots, tourists did not neglect the satisfaction of tourists and the harvest brought by tourism because of their free or low fees, and did not make any concession in the willingness to recommend and revisit the scenic spots.

To sum up, significant achievements have been made in the spatial distribution law of historical
towns and tourist perception law of scenic spots. However, the research results on tourist perception of ancient town groups in large areas are often case studies of individual ancient towns, lacking of large-scale comparative and comprehensive research. This study fills in the blank of the study on ancient town groups at home and abroad. This paper provides a comprehensive analysis of the spatial distribution of tourism resources and tourism resources in the ancient town of the Yangtze River by integrating the tourism data of the ancient town of the Yangtze River and the economic analysis of the ancient town of the Yangtze River.

2. Research Data and Methods

2.1. Data Source

This paper takes the largest travel strategy website MaFengWo.com as the sample collection object, and collects all the ancient town tourists’ travel notes recorded on MaFengWo.com in all provinces, cities and autonomous regions involved in the Yangtze River economic belt. There are 121 ancient towns, 21461 travel notes and 30306514 words in total.

2.2. Research Methods

(1) Large scale collection of network text:

Use network data mining tools and database software to write crawler scripts, collect all travel notes of relevant ancient towns on MaFengWo.com and input them into the database.

(2) Large scale text analysis:

The purpose of this method is to automatically count the tourist focus of each ancient town. Due to the large number of texts, it is necessary to automatically count the high word frequency data of travel notes. At present, most of the word frequency statistics of Chinese text are based on the Rost software. However, there are a large number of words that are not found in the Rost vocabulary in ancient town travel notes. At the same time, it is difficult to manually construct the word frequency statistical vocabulary. This paper adopts an innovative method (Figure 1). The advantage of this method is that it can find new words and place names on the Internet in the thesaurus, thus realizing the statistics of high-frequency words without relying on the pre built thesaurus, and solving the inaccurate word segmentation function of Google translation.

![Figure 1. Statistical word frequency method.](image)

(3) Content analysis method:
As the number of high-frequency words is too large, analyze visitor experience directly with more frequent words, with too many dimensions. This paper uses the grounded theory to classify the high-frequency words level by level, and uses relatively small and important dimensions to analyze the tourist experience. Grounded theory (GT) is a very important qualitative research method, which is a bottom-up method to construct theory. Its basic principle is to discover and construct the theory by coding and analyzing the data level by level on the basis of empirical data (see Table 1). As shown in the table, we first classify 4484 high-frequency words, and then classify them step by step.
| Primary coding | Secondary coding | Three level coding | Experience classification |
|----------------|------------------|--------------------|--------------------------|
| Chaotianmen    | Bayu             | Bayu               | Regional experience      |
| Mountain city  | Chaoshan         | Chaoshan           |                          |
| River crossing | Western Sichuan  | Western Sichuan    |                          |
| cableway       | ......            | ......              |                          |
| Chaoshan       |                  |                    |                          |
| Western Sichuan|                  |                    |                          |
| jiuzhaigou     |                  |                    |                          |
| ......          |                  |                    |                          |
| the Silk Road  | the Silk Road    | the Silk Road      | Cultural experience      |
| Tangfan ancient| Suzhou Gardens   | Suzhou Gardens     |                          |
| road           | Traditional means| Water town         |                          |
| Tea Horse Road | of transportation| ......              |                          |
| Huqiu          | Water town       |                    |                          |
| lingering Garden|                | ......              |                          |
| Lion Grove Garden|              |                    |                          |
| boat with a dark awning | | | |
| Water town     |                  |                    |                          |
| Small bridge water|            |                    |                          |
| ......          |                  |                    |                          |
| master         | B & B owners     | B & B owners       | Accommodation experience |
| get accommodation| get accommodation| get accommodation |                          |
| Tent           |                  |                    |                          |
| hotel          |                  |                    |                          |
| Inn            |                  |                    |                          |
| snack          | snack            | Restaurant         | Dining experience        |
| Local wine     | drink            |                    |                          |
| tea            |                  |                    |                          |
| Yogurt         | Local cuisine    |                    |                          |
| Milk           | taste            |                    |                          |
| Local cuisine  | ......            |                    |                          |
| taste          |                  |                    |                          |
| ......          |                  |                    |                          |
(4) ArcGIS spatial analysis technology

According to the table of content analysis and statistics, make a geographical differentiation map of ancient towns in the Yangtze River Economic Belt based on the tourists’ perception, so as to objectively analyze and understand the spatial differentiation rules of ancient towns in the Yangtze River economic belt, and provide support for the regional coordination mechanism of tourism development.

3. Overview of the Study Area

The Yangtze River economic belt covers 11 provinces and cities, including Shanghai, Jiangsu, Zhejiang, Anhui, Jiangxi, Hubei, Hunan, Chongqing, Sichuan, Yunnan and Guizhou, covering an area of about 2.05 million square kilometers, both population and GDP exceed 40% of the country. Promoting the development of the Yangtze River economic belt is a major national regional development strategy. In September 2016, the outline of the development plan for the Yangtze River economic belt was officially issued, establishing a new development pattern of "one axis, two wings, three poles and multiple points". Therefore, the ancient town of Yangtze River economic belt is taken as the research object of the relationship between man and land.

Table 2. Data coding.

| Province  | Ancient town                                                      |
|-----------|------------------------------------------------------------------|
| Sichuan   | Furong, Fubao, Gaomiao, Huanglongxi, Lizhuang, Jiezi, Wufeng, Langzhong, Liujiang, LUCQUAN, Luodai, Pingle, Shangli, Shuimo, Taian, TangChang, Wangyu, wufengxi, Xilai, Xianshi, Xuecheng, Yaoba and YuantongAncient town, Zhouzi ancient town |
| Chongqing | Anju, Ciqikou, gongtan, Laitan, Longxing, Lukong, pianyan, Tanghe, Zhongshan, Zhuoshui |
| Yunnan    | Baisha, Guandu, Heshun, Heijing, Jianshui, Nuodeng, Shaxi, Shuhe, Weishan, Xizhou and Yi people |
| Guizhou   | Jiuzhou ancient town, Longli ancient town, Qingyan ancient town, Tucheng ancient town, Zhenyuan ancient town, bing’an ancient town, Datong ancient town, Maotai Town, Xiasi ancient town |
There are 121 ancient towns in the Yangtze River Economic Belt in this study (see Table 2), 12 in Anhui, 9 in Guizhou, 7 in Hubei, 10 in Hunan, 11 in Jiangsu, 9 in Jiangxi, 7 in Shanghai, 24 in Sichuan, 11 in Yunnan, 11 in Zhejiang and 10 in Chongqing. Since this study is based on travel notes, some ancient towns are not mentioned by tourists, so the number of ancient towns is lower than previous statistics. The distribution map of the ancient town is shown in Figure 2.

**Figure 2. Distribution of ancient towns in the Yangtze River Economic Belt.**

### 4. Cluster Distribution Characteristics of Ancient Towns in Yangtze River Economic Belt

| Province  | Ancient Towns                          |
|-----------|----------------------------------------|
| Hunan     | Fenghuang ancient town, Jinggang ancient town, banliang ancient town, Biancheng Town, Furong Town, Hongjiang Ancient mall, Liye, Nanshan Town, Gantang Town, Zhangguying town |
| Hubei     | Mufu ancient town, Yidu Qingjiang ancient town, Yunxi Shangjin ancient town, Longgang Town, Quijawan Town, Tusi City, Yanglouldong town |
| Anhui     | Chaji ancient town, Hongcun ancient town, Sanhe ancient town, Tunxi ancient town, Chengkan, Guanlu, Lucun, Nanping ancient town, Qiankou Town, Tachuan ancient town, Tangmo ancient town, Xidi ancient town |
| Jiangxi   | Yaoli, Fuliang, Hekou, Huangling, Jiangling, Lichuan, Shangqing, Wucheng, Yiqian |
| Jiangsu   | Gusu, Hexia, Huishan, Jinx, Lili, Luzhi, Mudu, Qiyang, Qintong, Tongli, Xuntang |
| Shanghai  | Fengjing, Jinze, Nanxiang, Qibao, Xinchang, zhaojialou and Zhujiajiao |
Figure 3. Distribution of natural word frequency standardization in ancient towns of Yangtze River Economic Belt.

Figure 4. Distribution chart of cultural word frequency standardization of ancient towns in Yangtze River Economic Belt.

Figure 5. Distribution map of word frequency standardization of ancient town museums in Yangtze River Economic Belt.

Figure 6. Distribution map of word frequency standardization of ancient towns in Yangtze River Economic Belt.
Figure 7. Distribution chart of word frequency standardization of ancient buildings in Yangtze River Economic Belt.

Figure 8. Distribution chart of word frequency standardization of ancient town houses in Yangtze River Economic Belt.

Figure 9. Standardized distribution map of folk words frequency in ancient towns of Yangtze River Economic Belt.

Figure 10. The ancient town of the Yangtze River Economic Zone.

Figure 11. Standardized distribution map of celebrity word frequency in ancient towns of Yangtze River Economic Belt.

Figure 12. Distribution map of frequency standardization of cultural and creative words in ancient towns of Yangtze River Economic Belt.
Figure 13. Standardized distribution of art word frequency in ancient towns of Yangtze River Economic Belt.

Figure 14. Distribution map of religious word frequency standardization in ancient towns of Yangtze River Economic Belt.

It involves visual viewing of geography and construction environment, as well as local residents. Visual consumption means that tourists use and consume every place or environment they can gaze at. In this paper, ArcGIS spatial analysis technology is used to make the regional distribution map of tourists' experience (see Figure 3). The content analysis of travel notes shows that karst landform is the focus of tourists' visual consumption. "Karst in southern China" is concentrated in Chongqing, Guizhou and Yunnan, "Wulong" and "Libo" are very frequent, and Libo in Guizhou is the gathering place of Buyi, Shui, Miao and Yao minorities. In addition to the "stone forest" which is widely loved by tourists, the spectacular red soil and the real Hani terrace are also well received. In addition, "Danxia" appears frequently, and Danxia landform is distributed in many provinces and regions of the Yangtze River economic belt. Wolong, Siguniang mountain and Jiajin mountain range in Sichuan are rare "living fossil" giant panda habitats in China, and Sichuan has Jiuzhaigou and Huanglong, the core cultural attractions in Aba Tibetan and Qiang Autonomous Prefecture of Sichuan Province, accompanied by snow mountains, waterfalls, virgin forests and canyons. In addition to Danxia Landform in Hunan, Wulingyuan, a world natural heritage site, is also widely mentioned by tourists.

The cultural sense at the border of provinces is generally strong (see Figure 4): the frequency of words at the junction of Chongqing, Guizhou, Hunan, Hubei, Jiangxi, Anhui and Jiangsu, Zhejiang and Shanghai is relatively high. In addition, from the view of topography, the cultural sense of plain area is stronger than that of mountain area. In this paper, the cultural experience is divided into ten modules: Museum, historic site, ancient architecture, folk custom, nationality, celebrity, cultural creation, art and religion (see Figure 5-14).

The historic sites and museums in the north are more impressive to tourists. Sichuan is the second largest Tibetan area in China, the largest Yi and the only Qiang ethnic group, so it has the strongest sense of nationality. There are 25 ethnic minorities in Yunnan, of which 15 are unique to Yunnan. Naxi, Bai, Mosuo, Tibetan and Dai are the most frequently seen in travel notes. Although there are many ethnic groups, according to the text analysis, the water splashing Festival and Torch Festival are the most popular folk activities for tourists. The water sprinkling festival originated from India and was later absorbed by Buddhism. The Dai people combined it with national myths and legends, giving the festival more magical meaning and national color. The walking marriage of Mosuo people and Dongba culture of Naxi left a deep impression on tourists. The eastern part has a stronger sense of art, and the eastern celebrities have a deeper impression on tourists, most of whom are Lu You, Wang Xizhi and Lu Xun. There were many Jiangsu literati in Qin and Han Dynasties. During the southern and Northern Dynasties, the economy of the south of the Yangtze River was developed. In addition to the war at the end of the Tang Dynasty, the northern literati fled to the South and formed the culture of the Central Plains. When they visited Yangzhou, they first thought of Zhang Ruoxu's masterpiece "moonlit night on the Spring River". Due to the war in the Southern Song Dynasty, Hangzhou was the capital, which brought comprehensive prosperity to the culture.
and culture of Zhejiang Province. Therefore, the tourism development of ancient towns in Jiangsu, Zhejiang and Shanghai triangle can highlight the cultural heritage with history as the main line.

In addition, due to the topography of mountains and rivers, most of the traditional dwellings in Bayu are located on the slopes with ventilation and easy drainage along the river. According to the analysis of travel notes, Diaojiaolou is one of the residences mentioned most by tourists. In Chongqing Guizhou area, we need to protect the characteristics of traditional dwellings and dig deeply into the culture behind them, such as the pan Ba culture behind the column buildings. The traditional towns and guildhalls form the imprint of immigration culture in Huguang. Sichuan and Chongqing ancient town group can carry out a series of cultural exploration around Ba culture.

As the ancient towns in Yunnan and Guizhou are located in mountainous areas and are relatively remote, religion, traditional folk customs and ethnic minority flavor are the focus of tourists' visual consumption. Around these, we can increase the interaction between tourists and local residents, and design mysterious sacrificial ceremony experience.

5. Driving Force of Tourist Experience Intensity Distribution in Ancient Towns

The intensity of tourism in ancient towns is directly proportional to the number of tourists: first, core ancient towns or core cultural attractions with strong influence. The Yangtze River Delta area with the junction of Jiangsu, Zhejiang and Shanghai as the core is the area with the highest distribution density of historical and cultural towns. There are ancient towns in Jiangnan such as Tongli, Jinxin and Mudu in Jiangsu, Wuzhen, Tangqi, Qiantong in Zhejiang, Fengjing in Shanghai, etc. Suzhou garden is also a high frequency word in travel notes. Second, geographical unit (geographical junction). The cultural sense at the border of provinces is generally strong: the frequency of words at the junction of Chongqing, Guizhou, Hunan, Hubei, Jiangxi, Anhui, Jiangxi, Jiangsu, Zhejiang and Shanghai is relatively high. Third, the first mover advantage of ancient town tourism. Fourth, the consistency of resources and economic growth of ancient towns. The high density area of famous towns in Sichuan and Chongqing is the concentrated embodiment of Bayu culture and the special social and economic structure of Sichuan Basin. Sichuan Basin is known as "Jinchi Tangcheng, fertile land, land of abundance", with abundant reserves. Bayu region is located at the confluence of Yangtze River and Jialing River, becoming an important waterway connecting inland area and southwest China, and gradually forming an ancient transportation hub in the traffic node location.

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