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Development Strategy of Soundscape in Rural Tourism Based on Tourist Perception: A Case Study of Some Villages in Jiangxi Province

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Abstract In the context of the development of rural tourism, through the field investigation of several rural tourism destinations in Jiangxi, and from the perspective of tourist perception, this paper discusses the development strategy of soundscape in rural tourism, so as to promote the inheritance and development of rural soundscape design.

Key words Tourist perception, Rural tourism, Soundscape design, Development strategy

1 Introduction

Under the overall strategy of urban and rural integration, in the expectation of "keeping nostalgia", rural tourism has become one of the most popular themes in tourism. With the rapid development of rural tourism in various places, how to explore and protect the sound environment quality, soundscape characteristics and sound tradition inheritance with ecological and cultural value so as to create a rural artistic conception and bear in mind nostalgia, has gradually aroused widespread concern from the public and experts. Jiangxi is rich in tourism resources, and 80% of tourism resources are distributed in rural areas. This paper investigates several representative rural tourism destinations in Jiangxi and discusses the development strategies of soundscape in rural tourism from the perspective of tourist perception.

2 Study on the characteristics of soundscape of rural tourism

In the process of rural tourism, the visual senses correspond to the visual landscape of rural tourism, while the auditory senses correspond to the soundscape of rural tourism. With the cross-development of architecture, landscape, ecology, environmental acoustics, psychology and other disciplines, it is generally believed that the evaluation and optimization of environment and landscape should no longer be limited to the visual dominance of materialization. The protection of traditional "local accent" and the development of rural soundscape reflect the respect for rural culture and the importance of human nostalgia in modern society.

2.1 The composition of the "local sound" of the rural soundscape

Through field investigation, combination of theory and practice, it is understood that the "local sound" of rural soundscape includes not only rural natural soundscape, but also rural humanistic soundscape, involving "agriculture, rural areas and farmers" and "production, life, ecology". It includes the soundscape and sound heritage of rural customs, agricultural production activities, farm life and folk culture. The "local sound" composition of the rural soundscape involves four aspects: geography, history, culture and psychological dimensions (Fig. 1).

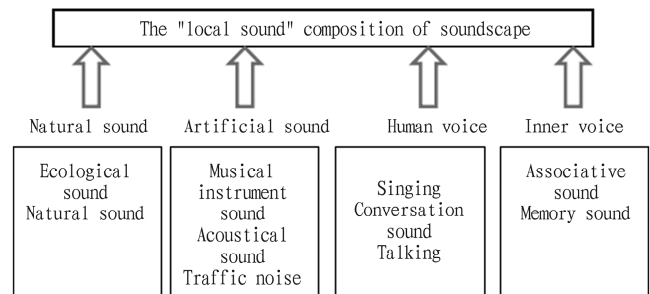


Fig. 1 The "local sound" elements of the soundscape

2.2 The "local sound" attribute of rural soundscape

From the perspective of tourist perception, the perception of soundscape is mainly divided into formal perception and content experience. The form of soundscape mainly refers to the physical attributes of sound elements, while the content conveys the cultural connotation and ecological characteristics of tourism destinations, that is, the environmental attributes of soundscape. The objective physical properties of sound, such as frequency and intensity, include the volume, tone and quality of sound, are all the physical properties of form. When sound can represent the natural characteristics and humanistic connotation of tourism destination, it forms "heterogeneity and isomorphism" with tourists' psychology like visual landscape, to strengthen tourists' aesthetic experience and form the humanistic attribute of sound. The audible, visible, tasteful, touch-

Received: October 15, 2020 Accepted: December 8, 2020

Supported by Jiangxi University Humanities and Social Sciences Youth Project (JC18210); General Project of Culture, Arts and Science Planning of Jiangxi Province (YG2020032).

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able and experiential "local sound" in the rural soundscape embodies its material attribute. The "local sound" in the rural soundscape is imaginable, memorable and traceable, which reflects the nostalgic cultural attribute of the rural soundscape.

3 General situation of typical rural tourism destinations in Jiangxi and the analysis of soundscape elements

3.1 Subjects and methods of investigation We made many field visits to these seven traditional villages in Jiangxi from 2018 to 2020 to comprehensively listen to and record the soundscape elements of rural tourism. Taking Jiangxi rural tourist destination as the research object, this paper selects seven traditional villages for survey and research, including Mingkou Village, Zhuqiao Village, Houbantang Village, Yantai Village, Jieqiao Village, Yongshan Village and Diaoyuan Village. In this paper, through field measurement, according to the types of sound sources, the soundscape is divided into natural sound, artificial sound, life sound and so on, and made into a questionnaire table. A total of 210 samples were collected, including basic information such as age, sex, education, personality and hobbies, and socio-economic attributes. Finally, there were 162 effective samples, with an effective

rate of 77.14%. A questionnaire survey is conducted to understand tourists' subjective evaluation of soundscape in rural tourism, including the degree of preference and coordination, the factors that affect tourists' attitude towards specific soundscape and the influence degree of various factors. The questionnaires and interviews are used to understand the characteristics of villagers' perception and evaluation of soundscape. Through the subjective evaluation results, the cluster analysis method is used to understand the attributes and classification of rural soundscape, the characteristics of tourists' expectation of rural audio-visual environment, and the changing rules of soundscape evaluation, visual landscape evaluation, gaze interest and so on.

3.2 Soundscape elements First of all, among the environmental elements of the soundscape of rural tourism, Schafer, the founder of the soundscape theory, believes that from the perspective of the environmental attributes of the soundscape, it is composed of background sound, signal sound and sign sound. The survey results show that tourists have a clear understanding of the background sound, sign sound and signal sound in the environmental attributes of the soundscape, and the expected additional soundscape elements focus on the production and life sounds that reflect the rural characteristics (Table 1).

Table 1 General situation of rural tourism and the cognitive elements of soundscape environment attributes

| Location | Overview of rural areas | | Perception elements of environmental attributes of soundscape in rural tourism | | | |
|--------------------|--|--|---|---|--|---|
| | Geographical location | Value characteristics | Background sound | Sign tone | Signal tone | Expected new soundscape elements |
| Zhuqiao Village | Shuangtang Town, Block printing base in the Jinx County, Fuzhou City | Ming and Qing dynasties | The sound of tourists playing The sound of pedestrian footsteps Store background music | The amplifying sound of the tour guide's explanation Folk performance sound The sound from a hawker | Broadcast sound in scenic spot | The sound from production of original manual workshop |
| Houbantang Village | Xiaotang Township, northeast of Fengcheng City | The typical village model characteristic of the combination of government and business in feudal society | The noise of tourists The sound of aboriginal conversation | The sound from a hawker Chirping of poultry | Broadcast sound in scenic spot The sound of car horns | The sound of aboriginal life |
| Yantai Village | Northern part of Fuliang County, Jingdezhen | Representative villages at the junction of Jiangxi and Anhui | The noise of tourists The sound of aboriginal conversation Mobile phone ringtone | The amplifying sound of the tour guide's explanation The sound of flowing water | Broadcast sound in scenic spot The sound of car horns | The sound from production of original manual workshop |
| Jieqiao Village | Fenyi Town, Fenyi County, Xinyu City | The hometown of Yan Song, the famous prime minister of the Ming Dynasty | The noise of tourists Construction sound Mobile phone ringtone | The amplifying sound of the tour guide's explanation The sound from a hawker | Broadcast sound in scenic spot The sound of car horns | The sound of aboriginal life Chirp of cricket |
| Yongshan Village | Northeast of Leping City | The stage of great originality is a model of the ancient Leping stage | The sound of tourists playing The sound of pedestrian footsteps Construction sound The sound of breath of life | Folk performance sound The sound from a hawker The sound of flowing water Chirping of poultry | The sound of car horns Broadcast sound in scenic spot | Characteristic stage performance sound |
| Mingkou Village | Southeast of Leping City, Jingdezhen | Built along the Le'an River, a typical waterfront village settlement | The noise of tourists Construction sound The sound of aboriginal conversation | The sound of flowing water The sound from a hawker Chirping of poultry | The sound of car horns Broadcast sound in scenic spot | Chirp of cricket The sound of farming |
| Diaoyuan Village | Northwest of Xingqiao Town, Jizhou District, Jian City | The eight diagrams layout has its own characteristics | The noise of tourists The sound of aboriginal conversation | Folk performance sound The sound from a hawker Chirping of poultry | Broadcast sound in scenic spot The sound of car horns | The sound of aboriginal life |

Schafer believes that background sounds play the role of "stage background", such as traffic noise, wind and rain sound, and become the tone and foil of other sounds. The signal tone is that the sound elements play the role of warning by making use of high tone, such as car horns, scenic spot broadcast sound, and air defense alarm sound. The sign sound is the most characteristic sound in a certain area, which often plays a role in marking the tourism environment, such as the sound of flowing water, the sound of forest leaves, and the sound of birds and insects in the natural landscape, as well as the sound of temple bells, and the sound from a hawk in the cultural landscape.

Secondly, in accordance with the relevant standards of the

classification of rural tourism resources, the soundscape of rural tourism is generally divided into two types: natural soundscape and humanistic soundscape. The questionnaire shows that tourists favor the natural sound, including bird song, wind sound, rain sound, water sound, plant sound and so on. There are different preferences for some artificial soundscapes, such as radio sound, fountain sound, cruise ship sound and music sound. The comparison of data from 7 villages shows that the soundscape is evaluated and ranked in 162 samples. Based on the selection and comparison of the sample data, the most popular and unpopular soundscapes of rural tourism and landscape among tourists are selected (Table 2).

Table 2 Evaluation results of soundscape by rural tourists

| No. | The most popular soundscape | | No. | The most unpopular soundscape | |
|-----|-----------------------------|--|-----|-------------------------------|--|
| | Component | Soundscape | | Component | Soundscape |
| 1 | Natural sound | The occasional song of birds and insects | 1 | Artificial sound | Traffic noise |
| 2 | Natural sound | The gentle sound of flowing water | 2 | Artificial sound | The sound of car horns |
| 3 | Natural sound | The swaying sound of leaves | 3 | Artificial sound | The noise of tourists |
| 4 | Natural sound | The sound of the breeze | 4 | Artificial sound | Construction sound |
| 5 | Natural sound | The gurgling sound of spring water | 5 | The sound of life | Mechanical equipment sound |
| 6 | Natural sound | The bells of the temple | 6 | Natural sound | The cry of a crow |
| 7 | The sound of life | The sound of children playing | 7 | Natural sound | The cry of a beast |
| 8 | The sound of life | The sound of a cruise ship | 8 | Natural sound | The sound from merchandise selling |
| 9 | Artificial sound | Folk culture performance sound | 9 | Natural sound | The sound of strong wind and torrential rain |
| 10 | Artificial sound | The background music of the scenic spot | 10 | Artificial sound | Broadcast sound in scenic spot |

Thirdly, the physical element of soundscape design of rural tourism is one of the core indicators. The survey results of seven villages show that tourist perception of sound comfort is the most important. The comfort volume should be within the range that the human ear feels comfortable, and the human ear can accept the sound whose intensity is from 16 to 160 dB. The most popular natural sound meets the requirements of sound intensity comfort. However, there are different expectations for the suitability of different soundscapes created for different nodes. 45% of the samples think that the soundscape elements of the same node should be controlled in a certain number. In 78% of the samples, natural sound and artificial sound are in harmony with each other, which is a kind of enjoyment and makes people feel happy.

4 Development strategies of soundscape design under the perception of tourists

4.1 Optimization strategy of natural soundscape

The rural tourism with high participation and return rate of tourists is folk tourism featuring "living in a farm house, eating farm food, doing farm work and enjoying farm happiness". Frogs croaking, cicada chirping and birds singing in the mountains is the expectation of tourists for the natural soundscape of rural tourism. This kind of soundscape includes not only the sound of natural landscape, forest, wind and rain, but also the sound elements of humanized nature, such as farmland, tea garden, fruit forest, poul-

try, and livestock. Therefore, if we want to make the streams babble, deer sing and cranes sing, and protect the sounds of nature, we must first protect the natural ecological environment of the countryside, make the river not be polluted, protect the ecological environment of the rural soundscape, so that tourists can listen to the precious natural soundscape, and establish the harmonious unity of the original ecological nature and humanized nature in the countryside.

4.2 Optimization strategy of humanistic soundscape

Zhuqiao Village, Yongshan Village and Yantai Village are better in the development of humanistic soundscape in the survey. Zhuqiao Village is the base of block printing in the Ming and Qing dynasties. There are mountain houses that display and experience block printing in Zhuqiao Village. The Zhaomutang stage in Yongshan Village has created ingenuity and still retains long-term opera performances. Now the "ancient stage lecture theater" preached by the township government has also gone deep into the hearts and minds of the people and added more elements of cultural activities. First of all, the optimization of humanistic soundscape should be performed from the point of view of noise pollution control. Noise pollution mainly comes from human factors. Too much noise will confuse people's understanding of human space. At the boundary between the countryside and the city, we can plant multi-layer plants to form a natural sound insulation corridor, to the greatest extent to avoid the harsh traffic noise, the noise of the

crowd, reducing noise pollution to people's body and mind. Secondly, the "local sound" heritage is in urgent need of rescue and protection, including folk soundscape, dialect soundscape, folk vocal music and so on, and it is necessary to organically combines the rural soundscape with the rural environment and rural life to protect the "local sound" memory.

4.3 Development principle of the coordination of soundscape and visual landscape In rural tourism, the most characteristic tourism soundscape should be selected, and the soundscape and visual landscape should be coordinated and unified. According to the different functional zones of the visual landscape, the sound theme of each zone is different, and the artistic conception reflected is also different, such as green mountains and clear rivers, small bridges, flowing water and households. Through rural performances and interesting activities of farmland, it is an important way to extend the visual guidance of landscape planning to people's hearing. It is necessary to use the guiding bionic sound to guide people's hearing, so as to achieve the artistic conception of hearing before seeing the scene, and increase the tourists' artistic perception of the soundscape.

4.4 Development approaches of soundscape tourism products In the construction of beautiful countryside, in order to protect and develop the local sound of "remembering homesickness", the key is to organically combine the rural soundscape with the rural ecological environment and local social culture. It is necessary to protect and develop the ecological environment, life style, traditional cultural sound and "local sound" of the rural soundscape, and develop many "local sounds", including the natural sound of the countryside, the sound of bells in the ancient temple, the opera sound of the ancient stage, the hawking sound in the streets, the oral account of traditional arts and crafts, and so on, into tourism products with econom-

ic, social and environmental benefits.

5 Conclusion

In short, rural tourism is the booster of rural development, and to enhance the attractiveness of rural tourism destinations, soundscape is an important way for tourists to perceive tourism destinations in an all-round way. Only by allowing the symbiosis of the ecological environment and humanistic connotation of the rural soundscape, the resonance of the traditional culture and the spirit of the times, and the integration of humanistic folk customs and residents' life, can the "local sound" really have new vigor and vitality.

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rural charm of southern Jiangxi, creating a characteristic village in southern Jiangxi, enhancing the cultural self-confidence of the country and the nation, promoting the construction of a new socialist countryside and realizing the diversity of cultural protection.

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