Urban Network Hotspot Consumption Space Evolution Mechanism and Crowd Differentiation Analysis: A Case Study of Lushan South Road in Changsha City

Jiali Xiong[1,a,*]

[1]*School of Architecture and Planning, Hunan University, Yuelu District, Changsha, China*

a. xjlhahaha@hnu.edu.cn

*corresponding author

Abstract: With the prosperity of the tourism industry, foreign tourists and local university students have become the main users of the university town space. The two groups have a high degree of behavioral overlap but differ in motivation due to different psychological needs. Research on urban network hotspot space needs more exploration of small-scale road sections and coverage of spatial boundary perception, social media, and other factors in space formation and evolution mechanisms. Therefore, this study will take the consumption space with the strongest interweaving of the two groups as the starting point to explore the countermeasures for spatial boundary perception with the theoretical support of scene theory. It was found that various factors such as social media, tourist experience-oriented consumption psychology, and the perception of spatial boundaries by both tourists and students influenced the drastic change in urban hotspot consumption space. This study provides some reference for understanding and guiding the development of such areas.

Keywords: Tourists, experiential consumption space, social media, spatial boundary perception, scene theory

1. Introduction

Under the influence of social media and other factors, tourists tend to choose a fast and experiential consumption mode, which further exacerbates the changes in the consumption space of urban attractions, especially against the backdrop of the "new normal"[1]. According to surveys and statistics, the number of network hotspots for consumption spaces in China has explosively increased, and many characteristic tourist spots, such as Chung Ying Street, can attract over one million daily visitors [2]. In this process, comprehensively understanding the evolution mechanism of the consumption space of urban attractions and guiding its positive development is of great reference significance for the development of attraction spaces in China and even globally and has become a topic of profound importance.

Research on network hotspots for consumption spaces mainly focuses on social and economic structures, population mobility, and other aspects. For example, Liu Xue et al. conducted a series of research summaries on the initial impact of online space on physical space, such as (1) expanding and fragmenting people's activity space, (2) transforming into physical retail space, (3) online and offline activities will promote the transformation of traditional retail space [3]. Cynthia Cabañas et al. also

explored the impact of individual and group behavior changes on urban space and predicted changes in the structure of urban space in the future [4]. Zhang Min [5]et al. used the three-dialectical relationship of "spatial practice," "spatial representation," and "representational space" in Lefebvre's space production theory to explain "social relationship construction," "symbol system application," and "cultural rebellion and obedience" in network consumption and identified the network consumption space as a "relational social space," using the three-element structure to analyze the highly overlapping phenomenon of network consumption space. However, such research lacks a perspective that focuses on micro-level road sections as research objects and discussions on sociological research between groups of people.

Informationization is a long-term and profound topic for the construction and impact of urban social space, and a highly mobile society has become the support for urban development [6]. The overlap and transmission between online and physical space form a new temporal and spatial view, and the rapidly developing social media network is also constantly shaping new urban consumption spaces [7]. However, although the data generated by Internet platforms is rich, it is often difficult to obtain, resulting in the progress of relevant empirical research lagging behind the theoretical hypotheses.

Therefore, this study attempts to use network data crawling technology, take popular social network platforms as research data, and take the "internet celebrity check-in spot" of Lushan South Road as the research object to explore the characteristics and formation mechanisms of the consumption space of urban attractions. Given the above problems, this research can promote the healthy development of urban hotspots for consumption spaces in China and globally and provide new thinking angles for studying this object.

2. Overview of the Research Area

2.1. Research Background

As a highly coveted tourist city, Changsha has quickly attracted a large number of visitors after the lifting of the epidemic situation. The layout of the open campus of Hunan University blends with the scenic area, allowing foreign tourists and university students to coexist at the same time and space, influencing each other and becoming the two main groups. Whether their perception of spatial boundaries, experience, and behavioral choices are satisfied directly affects the consumer experience of the two groups. At the same time, in a situation where social media pervades daily lives, virtual and physical spaces are intertwined, producing more diverse spatial forms and experiences. [8]

The consumption space around the university city is an area where foreign tourists and university students interact frequently. These two groups often appear at the same time and will have some communication and interaction with each other. The daily flow of foreign tourists on this road reaches up to 20,000, while the number of students around it is about 40,000. The influx of many tourists has caused many conflicts on this road. At the same time, due to the long distance and weak continuity of the street on this section of Lushan South Road, there are many water bodies and green belts between road sections, and commercial shops only appear after a certain area. Therefore, most tourists have formed a spatial node near the boundary of the research object. At the same time, they have also generated interaction with university students, asking for directions. The most asked question is, "Where do you usually eat?" Tourists need to understand spatial orientation clearly.

2.2. Research Object

Part of Lushan South Road, from Hunan University Library to Yawan Wharf, as shown in Figure 1. Eighty percent of the coverage area is street shops, and eighty percent of the shops sell food, which is a high-frequency dining place for Hunan University students and a gathering area for popular online

shops. Research Object Population: Foreign tourists and local university students. Foreign tourists are more inclined to try local specialty foods to increase their travel memories and experiences. At the same time, university students pay more attention to the convenience and affordability of daily life. They are more inclined to choose nearby restaurants to meet their nutritional needs.
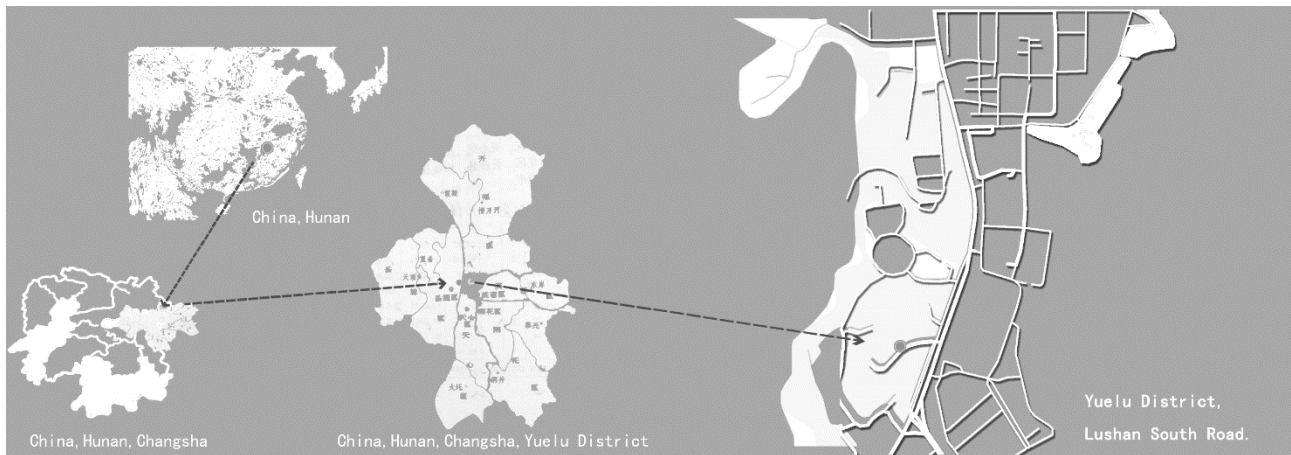

Figure 1: Location and Surrounding Situation Diagram of Lushan South Road Section.

3. Analysis Framework and Data Sources

3.1. Analysis Framework

3.1.1. Scene Theory

Psychologist Jerome Bruner proposed in 1990 that the **theory of scenes** explains that an individual's behavior and personality are not only shaped by their traits [9] but also influenced by the environment in which they are located. At the same time, it also reveals that people may exhibit different behaviors and attitudes in different situations. Our research uses the theory of scenes as the main theoretical framework. In this context, social media is an environmental factor that can shape behavior and guide people's consumption behavior and habits.

3.1.2. Experiential Consumption

Driven by technological progress and changes in production methods, people's focus on consumption has shifted from traditional physical goods to **experiential consumption** [10]. Business space has also become an important part of consumption. At the same time, when consumers make shopping decisions, they rarely make them in advance but are often inspired by occasional flashes of inspiration. The concept of experiential consumption space can explain this phenomenon well. Therefore, the consumption environment can trigger changes in consumer attitudes, affecting consumer behavior [11], thus constructing a mutual influence cycle between the consumption environment and the consumer's consumption space experience.

3.2. Discrimination and Manifestation of Related Concepts

User-generated content (UGC) is one of the components of the Web 2.0 concept. After the end of a tourism activity, tourists will share their travel experiences on social media, becoming UGC [12]. The rapid development of information technology has led to social media no longer being just an ordinary platform but also having the ability to shape the consumption space of cities. In our research, the theory of boundary perception refers more to an intangible boundary that people perceive from

their psychological perspective [13]. It affects their behavior [14]and is a spatial differentiation boundary formed by the behavior of different groups in the environment [15]. The arrival of the digital age has significantly impacted how people socialize, and this change has further caused changes in public spaces, leading to increasingly fragmented and blurred urban areas [16]. People's perception of boundaries in public spaces gradually becomes blurred and reconstructed.

3.3. Data Sources

From April 2023 to June 2023, I conducted over ten field visits and collected the following data: (1) Random questionnaires and in-depth interviews were conducted with residents and tourists separately. Among them, 83 questionnaires were collected from residents and students, and 56 questionnaires were collected from tourists. I specifically investigated residents' consumption behavior and concepts and whether they were influenced by tourist consumption. I also examined how consumption symbols and social media influenced tourists. (2) I conducted semi-structured interviews with some behavioral subjects, totaling 12 interviews, representing tourists (2 people), university students (4 people), nearby residents (1 person), and shop owners (5 people). The interview time exceeded 5 hours.

4. Characteristics of Space and Mechanisms of Evolution

4.1. Characteristics of Current Space Status

In studying the northern section of the space, there is a clear phenomenon of the aggregation and differentiation of the consumption behaviors of the two main subjects. After communicating with the majority of shop owners on this road, it was found that nearly 80% of them said, "We mainly serve tourists/students." It can be seen that most shops have already considered their product positioning and set corresponding scenes to attract crowds when they are in business. In the middle section of the research space, the passenger flow increases, and tourists and students gather in a shop. It can be found that tourists usually consume in several shops, staying for a short time at each shop. In contrast, students usually only choose one shop to finish and last for a long or short time. Therefore, the dine-in area inside the shop is generally occupied by students, while tourists gather on the roadside to wait for their food and take it away. The different consumer groups of the shops naturally form boundaries between them. At the same time, the other consumption behaviors of the two main subjects also lead to the formation of boundaries between the roadside waiting area and the dine-in area inside the shop.

After students occupy the space, nearly 50% of tourists are willing to approach the space boundary to interact with students (such as asking for food recommendations) and consume. However, when tourists occupy the space, less than 30% of students are willing to approach, and the others will consume in other shops where they don't need to queue.

Compared with the clearly defined physical boundary inside the campus, the virtual border refers to the fact that the research space is promoted as a food street in the university town on social media, with an unclear boundary and several popular shops as the main nodes. However, this space is also an important commuting route for students, and unclear promotion on social media can easily cause tourists to get lost. The boundary conflicts between students and tourists can be divided into two types. The first type is lateral blockage. Shops that mainly offer takeaway food, due to their small storefronts, are prone to long queues when there are many tourists, which can block traffic, as shown in Figure 2.

Figure 2: Diagram of Horizontal Blockage

The second type is vertical blockage. When crowds gather at the entrance of a shop to wait for their turn, it can affect the flow of people entering and exiting the shop, reducing the consumer experience, as shown in Figure 3.

Figure 3: Diagram of Vertical Blockage.

4.2. Mechanisms of Space Evolution

Based on the survey and interviews, the factors that led to the evolution of the space can be divided into direct and indirect elements. Natural factors directly affect consumer behavior, while indirect factors have a smaller impact on consumer behavior but play a greater role in the psychological aspect of consumers.

The direct factors include user-generated content (UGC) on social media. Specifically, nearly 90% of tourists came to Changsha University City because of the influence of social media, and more than 60% of them queued up because of social media. More than 70% of university students consume in certain stores because of social media promotion. This shows that both tourists and university students rely on social media to make choices for their consumption behavior. Both groups pursue experiential consumption based on daily consumption. Still, the word cloud data of the stores where they gather can show that their experiential consumption space is different.

The reason is that tourists are more easily attracted to explicit consumption symbols with local cultural significance due to their psychological needs for travel memories. At the same time, university students pursue novelty in their experiential consumption needs above their daily belongings. Moreover, taste is often the priority for them. Therefore, stores with unique values and niche markets are likelier to be chosen by students for experiential consumption. Therefore, the difference in demand for experiential consumption between mass and niche markets is behind the consumption scenario. Indirect factors include the actual situation of the space. From the survey data, queuing itself has become a consumption symbol with cultural significance. At the same time, nearly half of the tourists will actively go to places with more tourists to experience consumption. Therefore, the spatial boundary perception of tourists will have strong commonality and group guidance. More than 80% of people will explore.

5. Conclusion and Countermeasures

This article analyzes the background and overview of the Lu Shan South Road section. Using spatial entity conflict as the core logic, it describes the impact of dominant factors on its development. It summarizes the scope and power of different elements in the spatial consumption process and introduces the concept of "boundary." It is found that various influencing factors, such as social media, tourist experience-oriented consumption psychology, and the perception of space boundaries by tourists and students, as well as the diverse promotional methods used by shops, have led to the evolution of the consumption space of Lu Shan South Road. Based on the above results and findings, I have further proposed some improvement strategies for the Lu Shan South Road section:

1. Utilize the corner space as a rest area: Many gray spaces on Lu Shan South Road have not been utilized, and there is no rest space for tourists or students during consumption.

2. Adjust the location of shops to create different themes for tourists to play in various Lu Shan South Road sections. Currently, the site of shops is randomly assigned, and the order of street shops is chaotic.

3. Optimize the sign design: Add some characteristic shop signs on both sides of Lu Shan South Road to give tourists and students a more intuitive cognitive map.

By implementing the above improvement strategies, Lu Shan South Road can enhance its consumption appeal and service quality, attract more tourists and students to consume, play, and rest, and create a more prosperous business environment for shops. Due to the limited number of questionnaires obtained in this study, there are still certain limitations regarding research bias and the need for consideration for the quantitative level. At the same time, because this study only focuses on one case, the conclusions lack a certain degree of universality. This study can provide useful references and insights for developing the tourism industry in Changsha and other cities.

References

[1] Zhou, Kai & Zhang, Haitao & Xia, Yining & Liu, Chong. (2021). New Urban Consumption Space Shaped by Social Media: A Case Study of the Geo-Tagging Places of Changsha on Xiaohongshu. 20-27. 10.3969/j.issn.1009-6000.2021.09.003.[J] Modern Urban Research,2021,(09):20-27.

[2] Qiuju Luo, Dixi Zhong,Using social network analysis to explain communication characteristics of travel-related electronic word-of-mouth on social networking sites,TourismManagement,Volume46,2015,Pages274-282,ISSN0261-5177,https://doi.org/10.1016/j.tourman.2014.07.007.

[3] Liu Xue Zhen Feng Zhang Min Xi Guangliang Research review of online shopping impact on personal travel and urban retail space and implications.,2015,34(01):48-54.

[4] Cynthia Cabañas, Atsushi Senju, Tim J. Smith, The audience who knew too much: investigating the role of spontaneous theory of mind on the processing of dramatic irony scenes in film, Frontiers in Psychology, 10.3389/fpsyg.2023.1183660, 14, (2023).

[5] Zhang Min, Zhang Xiang, Shen Jun-xia. Cases of Designer Women Costumes Stores on"Taobao"[J]. Scientia Geographica Sinica,2015,35(08):960-968.DOI:10.13249/j.cnki.sgs.2015.08.004.

[6] Estela Marine-Roig, Salvador Anton Clavé,Tourism analytics with massive user-generated content: A case study of Barcelona,Journal of Destination Marketing & Management,Volume4,Issue3,2015,Pages162-172,ISSN2212-571X,https://doi.org/10.1016/j.jdmm.2015.06.004.

[7] Yuxin Zhu Yongquan Hu. From the perspective of college students' consumption behavior, we can observe the current development status of Xiaohongshu. [J] . Modern Business,2022,No.649(24):9-11. 7

[8] Seong Ok Lyu,Travel selfies on social media as objectified self-presentation,Tourism Management,Volume54,2016,Pages185-195,ISSN0261-5177,https://doi.org/10.1016/j.tourman.2015.11.001.

[9] Dobrica Zivadin Jovicic (2016) Key issues in the conceptualization of tourism destinations, Tourism Geographies, 18:4, 445-457, DOI: 10.1080/14616688.2016.1183144

[10] Naixia Mou, Yunhao Zheng, Teemu Makkonen, Tengfei Yang, Jinwen(Jimmy) Tang, YanSong,Tourists' digital footprint:ThespatialpatternsoftouristflowsinQingdao,China,TourismManagement,Volume81,2020,104151,ISSN0261-5177,https://doi.org/10.1016/j.tourman.2020.104151.

[11] Koens, K.; Postma, A.; Papp, B. Is Overtourism Overused? Understanding the Impact of Tourism in a City Context. Sustainability 2018, 10, 4384.

[12] Sung-Eun Kim, Kyung Young Lee, Soo Il Shin, Sung-Byung Yang,Effects of tourism information quality in social media on destination image formation: The case of Sina Weibo,Information & Management,Volume 54, Issue 6,2017,Pages 687-702,ISSN 0378-7206,https://doi.org/10.1016/j.im.2017.02.009.

[13] Dimitrios Stylidis, Amir Shani, Yaniv Belhassen,Testing an integrated destination image model across residents and tourists,TourismManagement,Volume58,2017,Pages184-195,ISSN0261-5177,https://doi.org/10.1016/j.tourman.2016.10.014.

[14] Pandža Bajs, I. (2015). Tourist Perceived Value, Relationship to Satisfaction, and Behavioral Intentions: The Example of the Croatian Tourist Destination Dubrovnik. Journal of Travel Research, 54(1), 122–134.

[15] Xue Chenlu Jin Cheng. A study on the consumerization process and mechanism of rural space: A case of Huangpu Village in Guangzhou [J]. Journal of Chinese Ecotourism,2021,11(03):413-426.

[16] Jiaqi Zhang. Research on spatial characteristics and localattachment of Internet celebrity places in Guangzhou [D] Guangdong University of Technology,2023.DOI:10.27029/d.cnki.ggdgu.2022.002410.