

Research on the Management of Commercial Street Congestion in Cultural Tourism: A Case Study of Nanluogu Lane in Beijing City

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Abstract

During national short holidays and weekends, there will be congestion to vary degrees in tourist attractions, which exist as a tough situation and challenge the development of scenic spots and the improvement of tourists' visiting quality. Under this circumstance, we are supposed to timely respond to the congestion in the scenic spot and find out proper solutions. Through the investigation and analysis of Nanluogu Lane in Beijing city, the author explores specific management countermeasures and methods to solve the problem of congestion and provides corresponding case analysis to solve the problem of congestion, which provides a reference to some extent for other scenic spots.

Key words: Congestion in scenic spots; Service quality; Nanluogu Lane

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INTRODUCTION

With the vigorous development of tourism industry in China, commercial streets, culture streets and tourism are combined, thus commercial streets in the category of cultural tourism are taking shape. A large number of scholars have conducted preliminary studies in its related areas, for example: Hu (2013) identified various concepts of commercial streets in the category of cultural

tourism, Niu (2012) proposed the research ideas on the development of commercial streets; Song (2002) analyzed the interaction between pedestrians' behavior model and pedestrian space and put forward the feasible ways for creating high quality commercial pedestrian streets environment, concluding the relation between movement space and staying space; Zeng (2013) put forward the six common factors affecting consumers in their purchasing behaviors in the comprehensive commercial streets; Zhang (2006) had a research on commercial street pedestrian traffic. Researches on Nanluogu Lane are as follows: Tian (2011) proposed the overall protection and organic renewal path of historical and cultural blocks in Nanluogu Lane; Lü (2013) studied the space layout of Nanluogu Lane; Lu and Cui (2010) put forward the optimal choice of traffic in Nanluogu Lane.

In the definition of congestion, from the perspective of perception study, Zhang (2012) defined "perception of congestion" as: The flow of people in scenic spots exceeded the range visitors can bear; the adverse effects among tourists; and the subjective and negative feelings that the environment in scenic spots, facilities and services exert on tourists. At the same time, Meng (2013) held the view that congestion is not the objective manifestation of density, but the social, psychological, and subjective evaluation of density, which is a kind of perception. As for studies on the countermeasures and methods for congestion, Wu, Chen and Zheng (2014) put forward that to effectively realize of space-time distribution in scenic spots, two flow control methods can be adopted, i.e. tourists self-occupation and tourist guidance. Li, Wu and Li (2010) pointed out that tourists' dynamic coordination method can meet real-time response requirements, effectively improve the flow distribution and reduce the congestion degree at the same time; they also pointed out that this method has a good application prospect to the coordination of visitors in theme parks, museums and large-scale activities. In this century, the

relation between congestion perception and satisfaction has become the focus of studies (Eroglu, Machlei, & Barr, 2005). Therefore, in the context of tourism congestion, we can also create opportunities to transfer the attention of tourists, help them pass through congestion and get good feelings of travel experience again.

As an ancient Beijing style street, Nanluogu Lane has a history of 800 years; it is also the main street and center in the past dynasties. With rich historical and cultural resources, Nanluogu Lane also enjoys modern commercial atmosphere; integrating modern elements into Beijing Hutong Culture, it introduces a number of distinctive bars, restaurants, art shops, etc.. With all the elements, it has not only become the focus of attention for people of all walks of life, but also a sought-after scenic spot among domestic and foreign tourists. With the continuous development of the tourism industry, commercial streets in the category of cultural tourism gradually become the hot spot of development. Nanluogu Lane, as a typical representative of the commercial street in the category of cultural tourism, with a length of 787 meters and a width of 8 meters, will embrace congestion in varying degrees with a strong flow of tourists in all kinds of holidays and golden weeks, which leads to various negative effects.

For the study of congestion management in commercial streets, this research observes Nanluogu Lane in Beijing city for ten days from January 1, 2016 to January 10, 2016. The period is divided into three main stages: the first stage is the New Year holiday which ranges from January 1st to January 3rd; the second is from Monday to Friday, which ranges from January 4 to January 8; the third stage is the weekend, which ranges from January 9 to January 10. Through on-the-spot investigation from every morning to evening, this research observes the congestion in Nanluogu Lane, including the record of congestion in different periods and areas, the main composition of tourists and whether related facilities and equipment meet demand of the tourism under the circumstance of congestion, thus analyzing the characteristics of congestion and putting forward solutions of congestion management. Meanwhile, the author interviewed tourists, shopkeepers, street management staffs, cleaning staffs and volunteers from different perspective of the different roles, so as to understand the congestion of the Nanluogu Lane. Questions mainly involved in the interview are: daily amount and capacity of a store for visitors, the causes of congestion, problems caused by congestion and the effects of congestion.

1. SURVEY ON CHARACTERISTICS OF CONGESTION IN NANLUOGU LANE

1.1 Relatively Concentrated Congestion Periods

All through the year, tourists in summer are generally more than that in winter, and the congestion is particularly serious during the golden week. Congestion on Saturday

and Sunday is severer than that from Monday to Friday. During the day, congestion is obvious from two to six p.m.; the number of visitors in other times is moderate and less congestion occurs.

1.2 Concentration of Each Part of Congested Space Is Obviously Different

1.2.1 Main Street and Alleys

Tourists are concentrated in the main street of Nanluogu Lane, which means the main street accommodates most of the tourists; some cultural relics and alleys that have famous tourist attractions also attract some tourists; there are fewer visitors in other alleys. Since most shops are concentrated on both sides of the main street, most tourists are gathered on the main street of Nanluogu Lane; while there are fewer tourists in the eighteen alleys on both sides of the main street. In several alleys, there are a small number of well-known tourist attractions attracting some visitors, but less congestion occurs. For example, Central Academy of Drama is located in Dongmianhua alley; many tourists visit the quadrangle courtyard in Qianensi and Houensi alley; Qi Baishi's former residence, located in the Yuer Hutong also attracts tourists.

1.2.2 Visitors' Distribution in Different Parts of the Main Street

Different parts of Nanluogu Lane are not evenly distributed, but the congestion parts are relatively concentrated. Due to the fact that there are many shops in Nanluogu Lane with rich commercial functions and different marketing strategies, the number of consumers and visitors is also different; besides, tourists' staying time is divergent with several shops often being queued up while some shops store having fewer tourists. Certainly, in some specific period of time, when visitor flow reaches the peak, the whole street will be congested, so the customer flow volume in different shops is no longer as clear as it was. Generally speaking, the congestion is in accordance with the uneven distribution of visitors flow in different shops, for example: Wenyu cheese shop, CHURROS, there is no corn juice, etc..

1.2.3 Abruptness of Congestion

At rush hours when visitor flow reaches the peak in Nanluogu Lane, the whole street will be congested due to overcapacity. However, once an unexpected factor appears, it will cause serious congestion in a specific place. For example, during the investigation, at four o'clock p.m. when the flow reaches its peak, a garbage truck moves into the street and occupies a part of space, tourists in that area will push and crowd with each other. On the basis of the original congestion, the incidence rates of trampling accident increases.

1.2.4 Huge Differences in Terms of Customers' Staying Time in Different Types of Shops

Nanluogu Lane covers an area of about 84 hectares, of which residential land area accounts for up to 73%,

which is the largest part; followed by commercial land, accounting for 6.7%, administrative office 3.2%, historical and cultural protection units 1.8%, special land 6.1%, and other types of land 9%. The number of commercial tenants reaches a total of 153 in Nanluogu Lane with obvious classifications: creative products and commodities (28%), cafe and bar (24%), special

clothing (20%), specialty catering services (13%), as well as the clubhouse and inn (3%) and other industries which are not easy to be classified. Through the on-the-spot observation, there are huge differences in terms of customers' staying time in different types of shops; the degrees of congestion caused by the customers are not consistent (see Table 1).

Table 1
Tourists' Staying Time in Shops With Different Business Functions in Nanluogu Lane and the Names of Shops

Business functions	Category	Characteristics	Tourists' staying time	Names of shops in Nanluogu Lane
Catering	Dinner	Importing local culture; thematic; refinement development	★★★	Yinxiang restaurant JingXiu restaurant
	Casual meal	Light meals; Western-style food, tea and noodles	★★★★	Cherry vintage café, Sandglass café
	Local flavors	Taking fast and convenient snacks, local delicacies as its characteristics	★	Wenyu cheese shop, Cheese baked sweet potatoes
Shopping	C u s t o m i z e d shopping	Artworks made by artists, successors of intangible cultural heritage	★★	Paper-cutting art by king of scissors
	Handbag shopping	Tourist souvenirs, special crafts	★	JMAX
Entertainment	Lounge bar	Slow clubs	★★	IN Bar
	Special club	Retro movies	★★	No.20 business club in the ancient lane

Note. The figure ★ indicates the length of time spent by tourists; the more the number of ★, the longer tourists stay, and vice versa.

2. SOURCE ANALYSIS OF THE CAUSE OF CONGESTION IN NANLUOGU LANE

2.1 Street

Nanluogu Lane is a narrow street. With a length of only 786 meters and a width of 8 meters, its tourist's capacity reaches one hundred thousand people at most. The street is not flat: It is high in the middle and low in the north and the south like a hunchback, which has also been nicknamed as hunchback lane. The terrain hinders the pace of walking and increases the difficulty for vehicle to go through the lane. The buildings are not evenly distributed on both sides of the main street but bulge in some place, which makes the lane here narrower and the flow of people more intensive.

Nanluogu Lane is a single line from the south to the north. The renovation of pedestrian street is not complete, so vehicles can still pass through the lane. Due to the demands of residents and businesses nearby and the fact that there are no other paths in Nanluogu Lane, vehicles often travel in the alleys of Nanluogu Lane, which makes the narrow streets have greater traffic pressure.

As a world cultural heritage, Nanluogu Lane enjoys Hutong culture and quadrangle courtyard culture at the same time, which is different from other ordinary commercial streets. Therefore, Nanluogu Lane should take

protection as the main method; besides, the extension of buildings is also difficult, so there are serious restrictions in terms of the expansion of alleys.

Nanluogu Lane is a completely open scenic spot without tickets. It has double functions of residence and tourism, but its nature belongs to the category of commercial street. Therefore, Nanluogu Lane, unlike other closed scenic spots that can limit the number of visitors through tickets, is encountered with the situation of heavy traffic, and it is also difficult to control the number of visitors.

2.2 Residents

Owing to Hutong culture and quadrangle courtyards in Nanluogu Lane, at present it still takes residence as its main function and the development of tourism as its secondary function, resulting in difficulties in management. As a commercial street of cultural tourism, Nanluogu Lane integrates culture, business, residents, tourists and other elements; with all kinds of contradictions, conflicts often exist between visitors management and residents management in the process of reconstruction. Great as the conflicts are, we cannot unilaterally urge everyone walk through the lane; instead, we must give full consideration and resort to comprehensive treatment of all kinds of relations. With residents' bicycles on the street and their facilities on both sides of the street, traffic burden here also increases.

2.3 Shops

Shops in the Nanluogu Lane are mainly ancient buildings, so shop areas are narrow and small in the process of renovation; with limited capacity of visitors, there is even no place to accommodate visitors, so they have to stay on the street.

Tourists in different shops are unevenly distributed. Due to different marketing strategies, shops with better reputation are often crowded with a long queue in front of the shop, but there are also fewer tourists in some shops. Secondly, shops are unevenly distributed. If the two shops on both sides of the street are popular, congestion here will be more serious.

The business type in Nanluogu Lane is scene experience consumption and entertainment, accompanied by street performance art, Art Festival activities, stalls set on both side of the main street and selling activities in the middle of the street, so it is easy for visitors to stay at these places, giving rise to congestion.

2.4 Tourists

According to tourists' group psychology, they are likely to get together. The more crowded in the street, the more tourists like to join in the excitement. Blindly following other tourists, they are prone to cause sudden congestion. Tourists go shopping in the street without an aim and stay at will, resulting in the congestion in the street; tourists often go up and down in the street, resulting in slow traffic and congestion. Tourists will stay in different types of shops for different time. Due to the difference between visitors' staying time and walking speed, they will stay longer in some types of shops. The slower they walk, the more serious congestion is.

3. MANAGEMENT OF THE CONGESTION IN NANLUOGU LANE

3.1 Time Limit for Vehicles' Entrance

We should establish the system of time limit for vehicles' entrance. There are plenty of conflicts in the reconstruction of Nanluogu Lane. With incomplete reconstruction of Pedestrian Street, vehicles can often be seen in the street. Generally, tourists' cars are not allowed to enter the street, which is easy to control; as for vehicles dealing with public problems, they can be driven within stipulated time for work, such as public health vehicles and express delivery vehicles in residential areas. These vehicles are approved to enter within stipulated time when there is less traffic, in order to reduce the pressure of traffic in rush hour and sudden congestion.

3.2 Intelligent and Electronic Transportation System Management

By the use of electronic techniques, through the introduction of intelligent facilities and systems, we can

have an intelligent display of traffic distribution. Through the mapping of the flow of people and the distribution of shops' location, we will introduce intelligent facilities to strengthen tourists guidance, which will enable visitors automatically select spaces with fewer tourists; at the same time, the intelligent facilities will enable visitors directly go to the destination without walking blind on the street, thus reducing their repetition rate, staying time and disordered walking and alleviating the pressure of traffic disorder.

3.3 Rational Distribution and Utilization of Space

Some alleys fall short of space utilization. Therefore, it is necessary to set reasonable public space, such as rest areas, to distribute tourists. In the checkerboard pattern of Nanluogu Lane, there is more linear space but less punctiform space, which results in the shortage of leisure area. According to the uneven distribution of tourists, we can set more leisure chairs, tables, entertainment facilities and dining spaces in the alleys with fewer tourists, so as to disperse visitors flow and guide the tourists to transfer to spaces with fewer people, which will reduce the traffic pressure at rush hour in the main street, thus solving the problem of uneven distribution of visitors.

3.4 Transformation of Business Models

Shop owners are suggested to change the operation models and strengthen their communication with consumers through the Internet. For example, consumers can make an appointment in advance for meal and then go to the shop; in this way, shop owners can control their sales, increase sales volume and improve the efficiency of foods provided, thus improving customers' satisfaction. On the other hand, advance booking will improve service efficiency and reduce visitors' waiting time and ordering time on the second day, which will prevent the occurrence of long queue and alleviate traffic pressure, so as to improve the operation efficiency of street traffic.

3.5 Section Management of Residents and Tourists

Nanluogu Lane enjoys dual functions of both living and tourism, resulting in the fact that residents and tourists are on the same street. According to the checkboard pattern of Nanluogu Lane with four main streets in its neighborhood, we can disperse residents to travel through the streets in its neighborhood and choose the road with less traffic. In this way, the road taken by tourists and residents are separated, reducing the possibilities that residents and tourists have to take the same road, which will reduce the flow of tourists and ease traffic pressure of congestion on the main street.

CONCLUSION

In the process of the research on Nanluogu Lane, the author, through on-the-spot investigation on the tourism

development of Nanluogu Lane and the investigation and analysis of traffic congestion in Nanluogu Lane, comes to the conclusion of the characteristics of traffic and street of Nanluogu Lane, and further concludes the specific causes of congestion, the concentration of time and space and abruptness of congestion. Besides, the author also puts forward solutions for unified congestion management from the perspective of transportation time, travel models, traffic system management and business operation models, which will solve the problem of congestion to the greatest extent.

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