

Research on the Public Transportation Space Reconstruction of Open Community from the Perspective of Collaborative Governance

Taking Chenjiahu Community as an Example

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Abstract—The change of unit system community to commercial housing community has gradually formed the residential land pattern of access control community in China, but in recent years the access control community has been criticized much. Closed communities have brought about a series of external negative effects, such as waste of land and lack of urban transportation function. Therefore, it is urgent to explore whether the public policy of urban block system can effectively overcome these disadvantages. Taking Chenjiahu Community as an example, this paper uses the case study method to explore whether the urban block system can increase the volume of public transportation space. The following conclusions are drawn: first, the openness of the community helps to alleviate the problem of transportation space volume; second, the implementation of urban block system needs sufficient institutional guarantee; third, the location factors of open region needs to be fully considered in the implementation of urban block system; fourth, the implementation of the urban block system requires public participation; and fifth, the implementation of the urban block system requires supporting measures to ensure the substantive justice of the policy.

Keywords: *open community, public transportation space, urban block system, space reconstruction, collaborative governance*

I. INTRODUCTION

With the rapid development of cities and the increase of population density, the number and area of housing are constantly increasing. The high density of urban housing squeezes the space of vehicular roads, and traffic accidents are frequent. In 2016, the central government issued the "Opinions on Further Strengthening Urban Planning and Construction Management" (hereinafter referred to as the "Opinions"), proposing that "the block system should be promoted for new residential buildings, and closed residential areas should not be built any more in principle. The completed residential areas and courtyards should be gradually opened, and the internal roads should be made public, so as to solve the problem of transportation network and use the land economically. After the introduction of the

policy, wide discussion has been aroused in the whole society. The implementation has encountered great difficulties, but there are still some successful cases. In accordance with the urban development concept proposed by the central government and the "Three-year Action Plan for Comprehensive Improvement of Quality and Level of Communities in Changsha", Chenjiahu Community in Kaifu District of Changsha took the lead in dismantling the fence and implementing the urban block system. Can the implementation of the block system in the community achieve the result of public transport space reconstruction? What is the utilization of the regenerated space? How does the government and society manage the problems arising from the allocation of public space? Does the implementation of urban block system need other supporting measures? Three years after the opening of Chenjiahu Community, this paper carried out field research, and adopted the case study method to explore the status quo of public transportation space reconstruction of open community, as well as the measures of government and social security authorities in public transportation space volume management.

II. "OPEN COMMUNITY" AND "PUBLIC TRANSPORT SPACE RECONSTRUCTION"

The concept of "open community" stems from the "urban block system" in the West. It refers to a settlement without walls located within a built-up area, especially in or near the city center, in which various infrastructures (such as roads, water, electricity and communications) are relatively complete, and public space and public life such as culture, science, education and transportation take shape. "Public space" and "block system" are both high frequency interdisciplinary words, with different connotations in urban planning, political science, sociology, design and other fields. However, no matter in which discipline, the meaning of public space is urban space for public use. The space reconstruction in this paper is not space transformation in the sense of functional replacement, such as house renovation, but the exploration on whether there is any innovative spatial

functionality of public transportation space in the community after opening the fence from the perspective of public planning [1].

The opening of the community will inevitably lead to the increase of public space, and the urban public space is also inseparable from the traffic problem. Burke believed that the reconstruction of the space by the gated community changed the traffic habits and traffic spatial pattern of the city [2]. While access control communities occupy a large area of land, squeeze public transportation space, and block the coupling between internal roads and public roads, open communities can solve this problem to some extent. By constructing an evaluation index system to evaluate the impact of community opening on surrounding roads, Qiu Tianci drew the conclusion that community opening does more good than harm on surrounding roads [3]. At present, the academic research on block system and public space mainly focuses on the field of urban planning, and few studies have looked at open residential traffic from the perspective of public management. Therefore, from the perspective of community governance, this research studies whether the trial of urban block system in China has achieved the result of public transportation space increment.

III. PUBLIC TRANSPORTATION SPACE RECONSTRUCTION UNDER COLLABORATIVE GOVERNANCE

Collaborative governance mechanism refers to that the government plays a leading role to build an institutionalized communication channel and participation platform for governance, to strengthen support and cultivation for society, and give play to the role of society in independent governance, participation in services, and collaborative management [1]. The problem of public space caused by public roads in communities is ultimately the problem of governance structure. Public space is also a public product to a certain extent, and its publicity is defined as the division of labor, collaboration, sharing of responsibilities and co-governance between the government and society. Therefore, "co-management and co-governance management" of all stakeholders is the best management [4]. As social subjects are at the grassroots level, they can more intuitively find and solve problems. Although collaborative governance is government-led, the needs of social subjects are an important basis for government decision-making. On the basis of soliciting the opinions of residents, the government provides services for the community through resource integration and protects the rights and interests of community residents. Collaborative governance can make up for the shortage of government in the supply of small-scale and differentiated public services and improve the efficiency of public services. Since the issue of public roads in the community involves not only the interests of people and traffic flow outside the community, but also the vital interests of the residents in the community, the government cannot make decision on its own wits; yet most residents have a misunderstanding of "open community" and cannot solve the traffic space problem in the form of autonomy, so they need government guidance. Under the principle of government guidance,

participation of social forces and legal guarantee, the focus should be establishing and improving various interest coordination mechanisms, appeal expression mechanisms and rights protection mechanisms in the field of social management, so as to promote the smooth completion of public space reconstruction.

IV. RECONSTRUCTION AND ANALYSIS OF PUBLIC TRANSPORTATION SPACE IN CHENJIAHU COMMUNITY

A. *General situation of the Chenjiahu Community transformation*

Chenjiahu Community is located in Kaifu District, Changsha city, Hunan Province. Chenjiahu is an old community, in which many houses were built in the 1970s or 1980s, covering an area of 0.49 square kilometers. There are total of 35 houses, including 11 units, 20 unit buildings, 3 buildings of commercial housing and 4 settlement buildings. Inside the 1,607-meter fence there were 7 yards, each with only one gate. Any routes in the community are not straight, and one needs to detour. There were only three passageways in the whole Chenjiahu Community, which utterly told the how blocked the transportation was¹. The comprehensive renovation involves 35 old residential buildings, 1,454 households of more than 3,200 people, with a total investment of about 60 million yuan. After the renovation, 4 new road passageways, 5 non-motor vehicle parking sheds, more than 200 parking spaces and more than 2,800 square meters of green space are added. About 630 square meters of new community office space was built and 35 floors were facade renovated². After the completion of the project, Chenjiahu Community has become a model for the transformation of old communities in Changsha

B. *Paths for space reconstruction*

1) *Institutional guarantee*: In February 2016, the "Opinions" pointed out the deficiencies in urban construction: in the process of large-scale new town expansion and old city renewal, due to the influence of public policy, property right, development mode and other factors, the super block and access control block present an extremely diverse composition; since these large courtyards have the space characteristics of large scale and introversion, they are "rounded by fast motorway, forming islands that are difficult to reach and cross on foot "[5]. Some scholars believe that the problem of insufficient traffic space in urban construction can be improved through a series of measures such as urban planning and regulatory restrictions, the basis of which is the urban block system. Opening up the roads inside closed communities is the most direct way to increase public transport space. As a kind of public policy, the urban block system has become the basic institutional guarantee for the possibility of space reconstruction, and it is also the

¹ http://www.kaifu.gov.cn/kfyw/zhxx/201704/t20170410_183151.html

² http://www.le.com/ptv/vplay/25852511.html?ch=360_kandsp

legal basis for dismantling the fence in Chenjiahu Community.

2) *Supporting measures:* The demolition of the wall of Chenjiahu Community was carried out simultaneously with the "Three-year Action Plan for Comprehensive Improvement of Quality and Level of Communities in Changsha". The rectification work made Chenjiahu Community take on a new look, with spacious roads, orderly vehicles and unobstructed space. In the increase of public transportation space, the demolition of the fence is the main project, and the supporting measures are auxiliary projects. Without the implementation of supporting measures, the effective and reasonable use of public space cannot be realized. Before the reconstruction, roads in Chenjiahu Community were not smooth and illegal constructions were everywhere. In the process of opening the community, conditions such as lack of parking spaces and sidewalks are all improved to ensure the smooth reconstruction of the space.

3) *Collaboration between the government and society:* The implementation of urban block system involves many issues such as public space justice and public product distribution, but its basic nature is "publicness". Open community concerns people's livelihood and requires joint management and governance by the government and society. It was found in the field investigation that before the implementation of the project of "improving quality and level", the government would collect residents' opinions, form a specific transformation plan, hold residents' meetings and sign relevant documents, and form a multi-party collaborative governance pattern. The reform of the block system involves the supply of a variety of public goods. In order to improve the supply efficiency, the government "outsources" some public goods. Services such as road repair and parking management are open to tender through the government portal website. By integrating government requirements and residents' needs, community neighborhood committees guide residents' representatives and party members' representatives to participate in community governance through publicizing. Through open discussion and democratic consultation, opinions on community governance were conveyed and residents widely participated in public space reconstruction. Collaborative governance enables better resolution of community public affairs related to people's livelihood and optimal allocation of resources, which is an important promotion mechanism for space reconstruction.

C. Results of space reconstruction

1) *Increased sensory vitality:* People will first make a judgment on the senses whether the road is spacious and feasible or not. Sensory vitality is the most intuitive property of public transportation space. After the fence was removed, 60% of the respondents hold the noise pollution in

the community has decreased a lot. After the removal of the fence, the community introduced a parking management system. In the past, external vehicles were not charged for parking, but now the charging system limits the entry of foreign vehicles, so most noise pollution is effectively shielded. In addition, without the fence most residents agree that the accessibility of the improved pedestrian and vehicle-free is higher. Compared with the situation where the illegal construction obstructed the traffic, the traffic lanes and sidewalks were not divided, the livability of the community environment has been improved a lot. 92% of respondents said the community as a whole was better off than before. The project of "improving quality and level" has been supported by residents and managed to meet their needs of living in beautiful places. When it comes to whether the number of public spaces increases directly after the opening of the community, 96% of the respondents think that visually, the number of public spaces increases as a whole, but 4% of the residents feel that the traffic space decreases after the opening. The reason is that after the opening of the community, in order to couple the internal transportation with the external public transportation space of the community, corresponding demolition and construction adjustments have been made on the facilities in the courtyards of some units, which involves the problem of spatial justice and uneven distribution of public goods. Therefore, some residents feel that their activity space and traffic space are reduced.

2) *Increased social vitality:*

a) *Management and operation:* After the removal of the fence, the normal use of streets and the maintenance and operation of facilities have been well maintained. 84% of residents thought the streets would last longer. The municipal government, the district government and the street office are all very concerned about community affairs. No matter it is grid members who conduct direct surveys or residents who report relevant matters to the neighborhood committee, many problems in the opening up of the community have been successfully solved, and residents' satisfaction with the living environment and sense of belonging have been improved.

b) *Accessibility:* After the implementation of the urban block system, 92% of residents agreed that the distance between residents and leisure facilities (parks and squares), service facilities (neighborhood committees, hospitals, etc.) and transportation facilities (bus and subway stations, etc.) was closer than before.

c) *Supporting facilities:* In order to meet the diverse needs of residents, improve public services, so that the people can have more sense of gain in the joint construction and sharing. After the opening of the community, not only the green area, the numbers of leisure facilities and directing signs have increased, the environmental health service facilities have also increased.

3) *Increased economic vitality*: Relatively perfect leisure facilities and service facilities attract residents to go out. 96% of the respondents said that after the fence was removed, they were more willing to go out and spent more

time outside (see "Table I"). Residents' activities and vehicle traffic increased the degree of people and traffic concentration in daily activities, and the economic vitality is thus improved.

TABLE I. CHANGES OF RESIDENTS' OUTDOOR ACTIVITY TIME AFTER THE OPENING OF THE COMMUNITY

		Frequency	Percentage	Valid percentage	Cumulative percentage
<i>Valid</i>	shorter	15	12.0	12.0	12.0
	basically unchanged	5	4.0	4.0	16.0
	longer	105	84.0	84.0	100.0
	total	125	100.0	100.0	

V. CONCLUSION

By using the single case study method and taking Chenjiahu Community in Kaifu District of Changsha city as an example, this paper explores the specific changes of public transportation space brought by the implementation of urban block system, and probe the status quo of the public transportation space reconstruction of open community from three aspects: sensory vitality, social vitality and economic vitality. Conclusions are drawn as follows:

First, open community can effectively increase the volume of public transportation space. The formerly crowded streets in Chenjiahu Community can be opened to traffic smoothly. The utilization rate of the roads has been greatly improved in the evening compared with that before the opening, and the external people and traffic flow have a variety of traffic space options. Second, the implementation of urban block system needs sufficient institutional guarantee. Apart from the guarantee of the "Opinions", the government should also comprehensively lay out a multi-layer policy network to ensure the legitimacy and rationality of community opening. Third, the location factors of open region need to be fully considered in the implementation of urban block system. Fourth, the implementation of the urban block system requires public participation. In collaborative governance, diversified subjects can not only provide more effective services, but also make up for the lack of their respective functions and realize the multiplier effect of cooperative governance [6]. But at present, more communication and coordination needed in Chenjiahu Community. Fifth, the implementation of the urban block system requires supporting measures to ensure the substantive justice of the policy. The rights and interests of residents in public security, environment, parking spaces and other aspects should be protected in the demolition of the fence should protect, public space should not be allowed to squeeze the living space of residents. The conclusions of the single case study method adopted in this paper might not be all-sided enough. Future studies can increase the number of cases and draw more comprehensive and universal conclusions.

REFERENCES

- [1] Liang Shengping. Spatial Recreation: Spatial Planning Innovation with Public Planning Viewpoint [J]. *Planners*, 2011(03): 20-25. (in Chinese)
- [2] Burke.M. The pedestrian Behaviour of Residents in Gated Communities [J]. *Walking the 21st Century Perth Australia*, 2001: 139-150.
- [3] Qiu Tianci. Influence of Community's Opening on Road Passage [J]. *Operations Research and Fuzziology*, 2016 (6): 133-151. (in Chinese)
- [4] Chen Weidong, Shu Xiaohu. Community Space Reconstruction: the Three-dimensional Thrust of Government, Market and Society — Taking the Spatial Reconstruction Process of J and D Communities in Wuhan City as the Analysis Object [J]. *Jiangnan Forum*, 2010(10): 130-134. (in Chinese)
- [5] Yu Jianxing, Ren Zetao. Collaborative Governance in Contemporary Chinese Social Development — an Analysis Framework [J]. *Academic Monthly*, 2012 (8): 23-31. (in Chinese)
- [6] Zhu Daixuan. From Neighborhood System to Block System: Legal Analysis of the Intervention of Administrative Public Power [J]. *Journal of Shenzhen University (Humanities & Social Sciences)*, 2016(05): 102-107. (in Chinese)