

Analysis of the Spatial Sequence in Jinan Traditional Streets

Ma Mingchun^{1,a}, Yuan Yun^{2,b}

1 School of Civil Engineering and Architecture, University of Jinan, China

2 School of Civil Engineering and Architecture, University of Jinan, China

^amamingchun@163.com

^bcea_yuany@ujn.edu.cn

Keywords: Spatial sequence, Street space, Traditional streets, Node of space

Abstract: This paper mainly focuses on discussing the spatial sequence in the renewal of traditional street and lane space through the analysis of space distribution, street alongside interface and street node space of traditional street in Jinan old city. Furthermore, the characteristics of traditional commercial streets and traditional living streets will be summarized and discussed, even the open waters which is one of the typical characteristics of jinan special space nodes.

Introduction

Old city has the whole memory of the city, and like the rings of the city, the traditional old streets witness the rise ,fall and honor of the city, and also record the development of the city, are the business cards of the city.Kevin lynch said in the city image, streets are the primary intention to understand a city; And Mr. Jacobs said: "when we think of the city, the streets and squares first appeared in mind.Streets are angry, cities also have angry, street depressing, cities are also boring. "Thus, perception experience of the street space has the most direct and most profound impact .Jinan , a famous historical and cultural city, has more unique flavor for its winding advancing traditional street space -- "faint ancient alley around the ancient city, everywhere spring with somebody else's".

Distribution characteristics of traditional streets of Jinan traditional region

The layout of the traditional residential courtyard of Northern is generally composed of a north-south road, some of the east-west alley, every lane arrangement sitting in turn courtyard. This road is called centipede alley which runs through the distribution of the compound, same like the conditions of Beijing, Shanxi, Henan and other places of the old city layout.However, the layout of the streets are different from general in the northern city of jinan.In jinan city, the water is rich and full of numerous spring, because of the low relief meteorological north, so water flow is from south to north.Affected by the distribution of the water system, the old city from Quan Cheng Road to Da Ming lake road block in several north-south street, but the direction of the road is mostly short and impassable. The direction of the construction yard is not like most of the northern yard by sits layout which is more flexible. Such as lotus pool street and north and south to Wang Fu street on both sides of the buildings along the street and so on, are directly open door in a north-south street, courtyard towards something.

Because the road is affected by the river system, the road distribution of Jinan city is irregular. Conform to the direction of river system in the old town north-south road, the length is longer, can connect the two main road which are Quan Cheng Road and Ming Hu road, but the road is not straight, is following the water potential wound.In the old city of east-west road, short and that block between every two north-south road is continuous.(Fig.1)



Fig.1 Distribution texture of Jinan old urban streets



Fig.2 Organization analysis chart of street space
Furong street north section

Thinking of the spatial sequence in the renewal design of traditional streets

The leader of the British urban design theory Gordon says Cullen street landscape is not a static scene (stable tableaux) but a spatial awareness of continuous system. Contemporary American master of landscape architecture, John.O.Simonds also made a similar point of view, people can gain from the movement of a series of continuity of perception formed the so-called sequences, the sequence of significance lies in the people's perception and experience. People tend to feel a kind of power driven, because sequence will produce the movement and trend, make this the beginning of a sequence towards the end of the exercise.

Although sequences play an important role in the perception of space, but In this road will affect a person walking speed, direction and the process of perception sequence. To convey the effect of the spatial form and perceptual ratio is to cater to each other mutual echo. To achieve abundant experience of landscape, it suggests the plot must be reasonable. General narrative plot are tips at the same time, but it always lead a direction. In this process, the narrative way is varied, or a strict and orderly, or loose improvisation, different ways will bring different results. A control bit by bit to see, even if people have all sorts of look forward to, and can take control of the space layout and create rich space change.

Although sequences play an important role in the perception of space, but In this road will affect a person walking speed, direction and the process of perception sequence. To convey the effect of the spatial form and perceptual ratio is to cater to each other mutual echo. To achieve abundant experience of landscape, it suggests the plot must be reasonable. General narrative plot are tips at the same time, but it always lead a direction. In this process, the narrative way is varied, or a strict and orderly, or loose improvisation, different ways will bring different results. A control bit by bit to see, even if people have all sorts of look forward to, and can take control of the space layout and create rich space change. (Fig.2)

Interface of the street space-building elevation along both sides

The side interface of the street space, which is composed of buildings along the street vertical interface. On one hand, it is crucial for the appearance of the city streets, on the other hand it is the boundary of the relationship between the bottom of the center city texture, and together with its

surface structure to reflect the historical context of the street, becoming the carrier of urban culture, determining the characteristics of the street.

The north and south street shall be taken as the main trunk road in Jinan old city, therefore, this article analysis is given priority to with north and south street, street and such streets including two kinds that are life street and commercial street. The two types of street interface have their own different characteristics.

Commercial streets, shops open directly to the street, and street interface is rich.

Furong Street is now the only preserved Ming Qing Era Commercial Street and the street is located in the city of Jinan center, south of Quan Cheng Road, north to West Street on the south wall flowers, because the Middle West Street has the lotus spring name. If the "Lotus surrounded on three sides Liu, a city with hills and lakes is the excellent portrayal of Jinan springs, so every spring, the true description of huhuchuiyang" is the hibiscus street and the surrounding area. The width of the street is 4-7 meters, on both sides of the buildings on both sides of the Ming and Qing Dynasties, architectural style, rich in business format, commercial atmosphere. From south to north along the street layout: TuDiMiao, Guan Yu Temple, around the temple Confucius 'temple, the temple of the dragon. The function of the basic layout of buildings along the street before the shop is as the basic pattern, the building along the street on the lower bunk. Therefore live commodity circulation in the Street Center, on both sides of the courtyard buildings along the street, the formation of things towards Courtyard shape. This is the effect of water flow on street alignment, and further influences the orientation of the courtyard space.

As a result, this street interface is rich and vibrant, but due to the nature of the commercial buildings, the openness of the facade is strong, but the second contour surface along the street chaos, advertising signs, too much commercial decoration, even destroy the building form itself.



Fig.3 The street space of Wang Fu pond

Residential streets, formed by the building circled walls

Wang Fu pond street, is located in the historical and cultural blocks area within the scope of protection in Jinan and the springs culture experience to be as the main characteristics of street life. South the wangfu pond street, north to the phoenix bridge street, total length of 100 meters, 2.5-4.5 m wide winding. It Is simply a traditional settlements in ordinary traffic space and the buildings on either side of the yard has no commercial use and mostly of them sits between the compound on the streets, but with no east-west alley and so the compound gateway is located in the north-south lane. This courtyard, although the local-style dwelling houses of gate towards the north is not in conformity with the general practice, but the structure of the courtyard space does not change, the central room, wing-room, reverse sit will be the location of the gate between the wing and facing the wall. The gate toward the east or the west, people enter the door to the north after turning to the middle of the courtyard. (Fig.3, Fig.4)

Therefore, this street facade is endless gable, courtyard wall and courtyard door, street width and building height ratio is around 0.5-1. The sealing ability is strong but lack sense of rhythm, and still not to be rich enough.



Fig. 4 The schematic diagram of street building elevation renewal

Street node space

Open water has the meaning of landscape nodes, and runs through the narrow streets, turned on the corner of narrow and water resources can be found - vibrant spring. This is the unique surprise of old town of Jinan. The water is hidden in a place between closely connect with the compound, between private residence in the formation of a unique public space. People here can get water, chatting and even swimming .It now becomes people's favorite place to go.

Wangfu Pond, also known as ZhuoYing Spring, belongs to the pearl spring Quan Qun, about 30 meters long and 20 meters wide. there is a small open square at the south side and about 5 meters deep, what side next to the building, north building is 3 meters backward distance.Spring water flows from northwest, basically in the family home, to the water station street, and then into the jinan day the first spring scenic daming lake.And the most traditional and unique folk activities of Wang Fu pond is swimming here all the year round, especially the diving. The winter swimming almost becomes one scene.In addition, sitting in the water, drinking a bowl of herbal tea; talking together; are the old street life of Jinan people.

Acknowledgements

This work was financially supported by the Project of Humanities and Social Science in Universities in Shandong (SQ16021) ,the Natural Science Foundation of University of Jinan(xky1617), the Key Subject of Art and Science in Shandong Province 1607247。

References

- [1] Joseph, Pine & James, Gilmore. (2002) *The Experience Economy* [M]. China Machine Press.
- [2] G.Gullen,Townscape.New York:Reinhold Publishing Corporation,1961.
- [3] Jane.Jacobs,*The Death and Life of Great American Cities*,Nanjing,2007
- [4] Zhang Jianhua,Mamingchun, Thoughts About Experience Tourism and Jinan's Urban Landscape Shaping as A historical and Cultural City,*Urban Studies*,2008(3)
- [5] Wei Xiangdong &Song Yanqi.(2005) *Urban Landscape*. Beijing: China Forestry Press.
- [6] Wang Jianguo.(2005) *Urban Design*. Nanjing: Southeast University Press.