Analysis on the Street Landscape in *Riverside Scene at Qingming Festival* and Its Enlightenment

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Abstract—The *Riverside Scene at Qingming Festival* created by Zhang Zeduan, a renowned painter of the Northern Song Dynasty, is one of the ten famous paintings of China handed down from ancient times. It depicts the landscapes on both sides of Bianhe River in Kaifeng and suburbs, showing the bustling commercial streets of Kaifeng and the prosperous life of people in Northern Song Dynasty. Undoubtedly, Kaifeng City in Northern Song Dynasty is one of the most attractive cities in ancient China. The implementation of street market system in Northern Song Dynasty promotes the development of commodity economy, making Kaifeng City at that time acquire a completely new outlook. It may be called the rudiment of the modern commercial street. Therefore, the analysis on landscape characteristics of commercial streets in the Northern Song Dynasty through the street landscape inside and outside Kaifeng City at that time depicted on the *Riverside Scene at Qingming Festival* can provide useful reference and enlightenment for the present commercial streets that all follow the same pattern.

Keywords—the *Riverside Scene at Qingming Festival*; street; commercial; landscape

I. INTRODUCTION

As a famous painting created by a renowned painter Zhang Zeduan and handed down from the Northern Song Dynasty, the *Riverside Scene at Qingming Festival* vividly depicts the landscapes on both sides of Bianhe River and suburbs of Kaifeng City in Northern Song Dynasty at the beginning of the twelfth century. It embraces social phenomena at that time, depicting vast and numerous as well as grand spectacle. Meanwhile, it depicts architectures and streets in Kaifeng City and rural landscapes, unique style and features, prosperous streets and well-developed business of Kaifeng City at that time. The depiction of “the noisy carriages and horses on streets accessible from all directions are heard” makes people feel the prosperity of Kaifeng City in Northern Song Dynasty as if being personally on the scene, especially the numerous shops and bustling citizens on both sides of Bianhe River at that time.

People use paintings first to record information. It can present figurative and visualized information, having important values for people to research style and features, architectures, citizens and urban economy of ancient cities. Although the street landscape of Kaifeng City in Northern Song Dynasty doesn’t first appear in the history, the well-developed commerce in Northern Song Dynasty contributes to colorful and unique street landscape at that time. Showing the street space of Kaifeng City at that time, the *Riverside Scene at Qingming Festival* is important for us to research the street forms of Kaifeng City in Northern Song Dynasty. According to the *Riverside Scene at Qingming Festival* included in the three assemblies of the Precious Collection of the Stone Moat, this paper bases on the city background and the scenes on it.

1 Zhang Gongyao: postscript of *Riverside Scene at Qingming Festival*  
2 According to the statistics, there are tens of scroll paintings named *Riverside Scene at Qingming Festival*, including the *Riverside Scene at Qingming Festival* included in the three assemblies of the Precious Collection of the Stone Moat and collected in the Palace Museum in Beijing, the *Riverside Scene at Qingming Festival* painted by Qiu Ying and collected in Liaoning Provincial Museum, the *Riverside Scene at Qingming Festival* collected in the Metropolitan Museum of Art and the *Riverside Scene at Qingming Festival* painted in Qing Dynasty and collected in the National Palace Museum in Taipei. It is generally accepted that the *Riverside Scene at Qingming Festival* collected in the Palace Museum in Beijing is painted by Zhang Zeduan. The rest are copies.
and analyzes the street landscape and the visual facts, explores the characteristics of commercial streets in Kaifeng City of Northern Song Dynasty, in order to provide reference and enlightenment for the machine-made urban commercial streets at present.

II. THE CITY BACKGROUND OF THE RIVERSIDE SCENE AT QINGMING FESTIVAL

Kaifeng City in the Northern Song Dynasty plays an important role in the development history of Chinese ancient city construction, having active business and prosperous streets. According to the Ode to Kaifeng, “It has incomputable treasures and goods” [1] shows Kaifeng City at that time was extremely rich. It relates to the reform of the Chinese system of weights and measures in Northern Song Dynasty as well as extremely rich. It relates to the reform of the Chinese system of weights and measures in Northern Song Dynasty as well as that of the “machine-made urban commercial streets”. In that the shape and structure of the city. Kaifeng City in Northern Song Dynasty was formed through many times of expansion of Kaifeng, a prefecture in Sui and Tang dynasties. It had total population of about 1.3 to 1.7 million, referring to the largest city in the world at that time [2]. In 781 A.D., emperor Dezong of Tang Dynasty expanded Kaifeng City, the city wall of which was an irregular square, forming the foundation of inner city of Kaifeng City in Northern Song Dynasty. In 955 A.D., emperor Shizong of Later Zhou Dynasty built the outer city of Kaifeng City, establishing the basic pattern of Kaifeng City [3] and forming the pattern of three levels, imperial city, inner city and outer city [4]. The emperor and his concubines and major central authorities located in the imperial city. Some central authorities and dwelling district were built in the inner city. Dwelling districts located in the outer city. The river system is developed. Bianhe River is the lifeblood of Kaifeng City. The Riverside Scene at Qingming Festival exactly depicts the bustling scenes from the southeast end of both sides of Bianhe River to the gate of outer city and rainbow-shaped bridge.

III. ANALYSIS OF THE STREET SCENES INSIDE AND OUTSIDE THE CITY GATE

The Riverside Scene at Qingming Festival depicts persons and landscapes and shows detailed business, handicraft, architecture, transportation and social customs of Kaifeng City during the reign of emperor Huizong of Song Dynasty. According to the business landscapes on the painting, it consists of “market on the bridge” with stalls on the rainbow-shaped bridge, “riverside market” formed along the Bianhe River and “street market” in and outside the city gate.

A. Scenes of “Market on the Bridge” and “Riverside Market”

The “market on the bridge” formed on the rainbow-shaped bridge and the “riverside market” along Bianhe River reflect the busy water transport of grain to the capital on Bianhe River, referring to the core of the painting. The formation of them is closely linked to the development of Bianhe River. Bianhe River, called Tongji Canal in Sui Dynasty and Guangji Canal in Tang Dynasty, had become a vital course of water transport of grain and goods in Jianghuai region to the capital in Song Dynasty through excavation and dredging by Sui and Tang dynasties. In Northern Song Dynasty, the Bianhe River was dredged and the river bank was reinforced on the basis of the original river way. Therefore, although the Bianhe River is a canal excavated artificially, it has natural twists and turns and close relationship with the original canal, the natural river and the surrounding terrain. [5]

B. Street Scenes Inside and Outside the City Gate

The prosperous street scenes occupy the largest part of the painting from the far left to the rainbow-shaped bridge. The city gate, restaurants, dwellings and shops are arranged in rows; it also gathers government officials, vendors, tourists, civilians and beggars. It is the most bustling and important part of the painting.

IV. ESSENTIAL DETAILING OF STREET LANDSCAPES

A. Buildings

The buildings in downtown areas are relatively gorgeous and high, going from the gate to the east; the building grades along the street are gradually lowered. Most buildings have one storey; even two-storey buildings can be seen somewhere, such as Sun Yang Monopoly Shop and resident Gentleman Wang’s home. Building types mainly include residence, tea houses, pharmacies and hospitals, different functions form diverse spaces along the streets. According to forms, the buildings can be divided into front shops and rear residence, pure commercial buildings, landmark buildings and residence. Two sides along the streets are front shops and rear residence, front parts of buildings are used for business, and the rear as rest rooms, such as Taicheng Zhao’s home "Fig 1"; along the Bianhe River are mostly street shops, the rear are few residences, besides, many commercial buildings are designed with overhanging corridors so that interior spaces of buildings have access to the outdoor street spaces, showing a high degree of openness. City gate, the highest point in the area, is the most remarkable sign. The residential buildings are quadrangle dwellings such as the house in the left of Taicheng Zhao’s home in the left side of the picture "Fig 2", whose gate is located in the southeast corner, enter the yard and turn west to face the front yard, through the front yard go through the middle gate to enter the main courtyard[6]. The enclosed courtyard walls and open shops are in a clear virtual-real comparison, forming a unique feature of streetscapes in Dongjing of the Northern Song Dynasty [5].

3Monopoly Shop refers to a yeast liquor monopoly shop, which owned wine making workshops and received upper circles in the capital city.
4The home is a combination of business and residence, currently the wine shop and restaurant have different meanings.
B. Subordinate Ornaments and Facilities

In addition to the houses, there are some subordinate ornaments and facilities such as pergola, awning, greenhouses and decorated archway and red-green units and so on. Most of pergola and awning are used as extensions of shops' accessory functions and also a result of illegal street occupation, which though shortens the width of street, yet forms a more popular streetscape, and even some scholars believe that it is the street occupation which ended the original urban pattern of separation between residence and markets, and finally forming a street market situation. In order to prevent from the illegal street occupation, late Zhou Dynasty Shizong Chai Rong issued a decree: "If the street is fifty-step wide, two households are allowed on each sides, within five steps, plant trees and dig wells and build pergolas, if the street is 25-30 steps wide, three steps are allowed."

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5 Red-green units: originally it was set up before official departments to restrict the access of the people. It is said in the Ducheng Jisheng· Liquor that “wine shops have red units, green curtains as well as cape jasmine lights covered with yellow and red gauzes set over gates, it was ever said that Guo Gaozu in five dynasties period traveled Panlou Tower, Bianjing, which has become a custom”. It is said in the Collections of Prosperous Dongjing Vo.16 Wine Shop: set red-green units and cape jasmine lights over the gates, for Guo Gaozu traveled Bianjing in the Five Dynasties Period, all tea towers and wine shops were required to decorate like this, therefore, it has been a custom for restaurants. Seen from this story, the red-green units is a custom which was formed starting from late Zhou Dynasty after the five dynasties period for restaurants in Kaifeng. In addition, according to the records of Southern Song Dynasty, vertical strips of the units should adopt be painted red, and the horizontal strip green, which was called red-green units as a whole.

6 Street occupation: generally illegal structures near streets

limited concession to the street occupation. In addition, Chai Rong executed the control policy: "Within the designated scope, it is used for military camps, streets, storage, temples, official offices and so on and others will be used by the people", and the limited control strategies and the street occupation by the people finally formed diverse streets, which was a unique feature at streets of Bianjing, Northern Song Dynasty.

The decorated arch, also called twisted and bound attic, is a decoration that appeared in the late five dynasties period, which was set up before some shops to attract customers. At least seven decorated arches are found in the Riverside Scenes at the Qingming Festival, big two of which are Sun Yang’s Shop "Fig 3” and Water at Bianhe River "Fig 4", of which, the arches of Sun Yang’s shop had three storeys, grand and extremely decorative "Fig 7". “All gates of restaurant in Bianjing have arches decorated…decorated opposite to each other with embroidery flags seen everywhere” [10]. It was recorded in the Collections of Prosperous Dongjing, the decorated arches were decorations popular in shops like Inn, specifically there were two types of decorated arches at that time, first it was integrated to girders and mortise and tenon joints to form a Paizi; another one is an independent structure, square or polygon [11]. Before the gate of Sun Yang’s shop, there stand a row of wooden red-green units, which may prevent the access of persons or horses, making it convenient for business and keep it clean.

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C. Shop Signs

Shop sign is an industrial sign of traditional Chinese shops, consisting of character-based information signs and industrial symbolic image signs [12]. The so-called signs can be done by hand or speaking. "Thus, waving by hand or speaking is to attract attentions of others, and shop signs in ancient times were used as symbols. The shop signs in the picture are diverse in form, hanging above gates, or standing in front of shops, which has forms such as vertical "Fig 5", horizontal "Fig 6", sitting "Fig 7" and wall-based. In the picture, before an aromatic drugshop, the shop sign “The Liu’s Quality Tambahc and Sandalwood…” was vertical, though its bottom was blocked by a trolley owner, yet its form can be still imagined. Vertical and horizontal signs are found before the Wang’s Silks & Cloth "Fig 6", which turned out that shops at that time might use one or more signs so as to transmit information to guests. Before the Wang’s Paper Horse Shop, a sitting sign is found "Fig 7", whose base is a bent melon pier style, similar to a sitting pier of furniture in Ming and Qing dynasties. In the picture, the sitting signs are widely used, whose bases are changing, such as drum leg, bent melon pier, Ruyi shaped, ladder-shaped, square and so on, no repeats [13]. Shop sign, a wine shop sign, was initially used to attract guests, which afterwards was gradually developed to flags with visual symbols to transmit commodity information and attract guests via figure, color and character. In the picture, the most distinct shop sign is the flag “Sun Yang’s Shop” with five intervals between gray and white strips, which is the widest one in the picture "Fig 8".

D. Plants

Plants landscapes can be found along streets and riversides in the Riverside Scenes at the Qingming Festival, along the streets and two sides of Bianhe River, willow trees are mainly planted on sidewalks, followed by elm trees and toon trees, dotted by other trees "Figs 9", "Fig 10" [14]. Moat is called Hulong River, about 20-30m wide, and willow trees are planted inside and outside it, white walls and red gates, preventing others from access [10], seen from the picture, the banks of Hulong River is only a litter higher than the river level but are planted with willow trees, which not only form riverside landscapes but also solidify the banks. Except the Hulong River, elm trees and willow trees were also planted on two banks of four river ways in the city according to the governmental orders for greening. Judging from the plants landscapes in Dongjing, Northern Song Dynasty, the urban street greening had reached a certain level, and the Tianjie Street in the downtown area was about 200 steps wide, royal trenches were dug between royal roads and walkways on two sides, lotus were planted in two royal trenches, near the banks, peach trees, plum trees, apricot trees and flowers were planted, which looked like embroidery in late spring and early summer[14]. Native trees such as willow trees, elm trees and toon trees are planted on both sides of other trees, “wide roads, green trees in seasons”, “willow trees are also planted along narrow lanes”[10]. Besides, Huai (pagoda tree) is similar to Kui (chief) in spelling, a symbol of luckiness and applicable for appreciation. In Tang Dynasty, pagoda trees were used for greening in the city[15]. The governmental greening policy not only beautified the environment in Dongjing but also provide shadows for buildings on two sides of streets, besides, the spaces under trees satisfied the people for public activities.
needs of operation at night. They further develop it in light effect to the traditional shop signs in order to meet the only shops in Taiwan use traditional shop signs. People add elements are seldom applied to commercial streets. Nowadays, characteristics.[13] However, the characteristic landscape of wicker strainers on the basis of this custom have cultural connotation. For example, it has symbolic meaning for dumplings after cooking it thoroughly. So the shop signs made dumplings in farewell. People use wicker strainers to fish out shop signs. In the north, people treat friends and relatives with some small hotels to use wicker strainers woven by wicker as cultural connotation. For example, it has symbolic meaning for

V. CONCLUSION

Just as a master of Chinese culture Chen Yinge said, “The Chinese culture has thousand years of history and reaches the peak of perfection in Song Dynasty”. [16] As one of the crucial contents of urban cultural development, urban landscape is not an exception. The implementation of street market system in Northern Song Dynasty promotes the development of commodity economy, making Kaifeng City at that time acquire a completely new outlook. It may be called the rudiment of the modern commercial street. Therefore, the landscape elements in the Riverside Scene at Qingming Festival can provide the following enlightenment for us in building characteristics of commercial streets nowadays.

A. Explore the Traditional Features

The decorations of streets and buildings like decorated archway, red and green branches and shop signs in the Riverside Scene at Qingming Festival have profound decorative and artistic values. Decorated archway and red and green branches are important markers of large-scale hotels in ancient times, which are attractive and reach good publicity effect; shop signs have rich forms, beautiful appearance and cultural connotation. For example, it has symbolic meaning for some small hotels to use wicker strainers woven by wicker as shop signs. In the north, people treat friends and relatives with dumpings in farewell. People use wicker strainers to fish out dumpings after cooking it thoroughly. So the shop signs made of wicker strainers on the basis of this custom have cultural characteristics. [13] However, the characteristic landscape elements are seldom applied to commercial streets. Nowadays, only shops in Taiwan use traditional shop signs. People add light effect to the traditional shop signs in order to meet the needs of operation at night. They further develop it in

B. Use Local Elements

Local elements are the soul of regional landscape as well as people’s emotional sustenance. Native trees like elm and willow were extensively applied to streets of Kaifeng City in Northern Song Dynasty to form plants landscape with regional culture. In the process of modernization, the deficiency of regional elements leads to numerous commercial streets “without recognition”, which fail to let people have a sense of place identification. Landscape environment can let people perceive easiest. Landscapes full of memories enable people to remember nostalgia and keep the memories. The way to create the commercial landscape full of memories is to apply local elements to commercial street landscape.

C. Recover the Natural Ecology

In this painting, border trees are planted in the city to prevent sand and fix soil, improve partial little climate. Willows are planted along the river bank to consolidate the revetment. It shows people at that time also had ecological pursuit in building commercial street landscape. In modern commercial streets, people pursue squares with a large area. Although it contributes to the centralization and decentralization of people, partial little climate often forms in summer and intensifies local thermal environment. At the meantime, the squares with a large area also lead to bigger rainfall runoff and decrease of biological diversity. Under the background that the urban ecological problem is increasingly severe and the ecological civilization construction is proposed on the 18th CPC National Congress, the ecological creation of urban commercial streets is the development trend of street landscape, letting streets stay active.

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