

The Urban Trail Landscape Design with Regional Culture

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Abstract. The urban trail landscape, the provision of tour and traffic functions for visitors, also undertakes the important task of promoting the regional culture and the continuing of the urban context. At the same time, through the analysis of the regional culture elements and the trail landscape functions in Ji'nan Huancheng Park, we summed out urban trail landscape design enlightenments and reference with regional culture heritage for today .

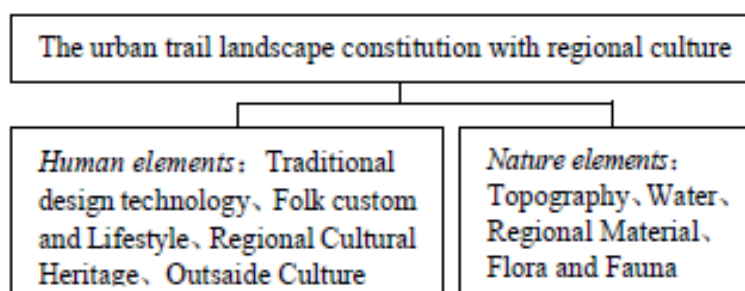
Introduction

In 1960s, the US shifted its freight focus from railroads to trucks, and many railroads were abandoned. Then, the US rose up to the movement “abandoned railway to trails”. This trail from the path, is not just urban transport channel, but also a special, non-motor vehicle interference complex concept[1]. Therefore, the trail is different from park road or greenway concept, which means its scale and space should be more accessible and more adapted for walking or biking. This kind of trail landscape together with elements on both sides serves not only the linear portion to connect each separated urban parts, but the carrier to spread and innovate the regional culture, and also an important component of the urban context continuation.

The Urban Trail Landscape Elements with the Regional Culture

Homogenization exposed in recent Chinese urbanization movement tells us that it is vital to promote regional culture in the urban construction, for the reason that the residents need such a landscape design combined with local culture to meet the development requirements of today. The urban trail landscape can play a very important role in the development of regional culture and regional ecological environment protection. As shown in Table 1. Here, an example, the trail landscape in Jinan Huancheng Park, shows us its specific human and nature elements.

Table 1 Trail Landscape constitution



The Regional Human Elements

1. *Traditional Design Technology*: With distinct regional characteristics, the urban trial landscape, being as the traditional technique, can be used directly in the landscape design, so that visitors in the landscape during the trail travel can be easily feel the sense of regional identity.

2. *Folk custom and Lifestyle*: By showing a variety of local folk activities and unique way of life, the urban trail landscape forms unique regional features for visitors.

3. *Regional culture heritage*: Culture heritage is an important part of the urban trail landscape, which is more easier to form the attractive view point and to attract more visitors to enter inside.

4. *Assimilate the foreign culture*: The urban trail landscape carrying the regional culture is bound to absorb foreign culture in the course of development so that visitors there can be easily feel the city's openness and inclusiveness.

The Jinan moat is a veritable "culture river" for the reason that it links the major springheads and monuments in Jinan City. So the trial in Huancheng Park is a "culture trial". For example, the Liberation Tower, constructed in the original city wall ruins, is the commanding heights of the landscape space in the south moat landscape, on which visitors can see the layout of the entire trail space ; Fujian and Zhejiang Hall on the west side of the Liberation Tower, is the first batch of cultural relics protection units of Jinan City in 1979, where Jinan architectural history, construction techniques, sculpture paintings with exploring trails process are shown here.

Jinan formed a special civil culture because of the relations between the residents and the water, like fetching water in the river, swimming, enjoying the cool air, chatting, shopping and so on. These activities also form a dynamic trail landscape. "Waterfront neighbors" is the wisdom choice by Jinan ancestors under the guidance of the ideological unity between man and nature. Special natural and geographical environment has led to this particular spring settlement pattern: human choose to adapt with nature. This is a real spring residents living conditions under natural ecological concepts [2].

Regional Nature Elements of the Urban Trail Landscape

From "Design with Nature" presented by I • L • McHarg to the "Sponge Urban Theory" presented by Kongjian-Yu, both theories illustrate that it is important to respect nature in today's landscape design .So the urban trail landscape design also have to take into account the influence of regional nature elements, including topography, water, animal and plant, material and geography.

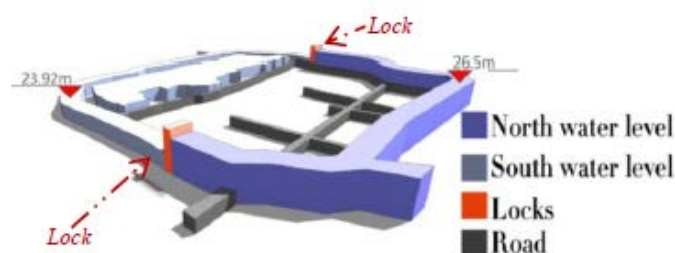
1. *Topography element*: Topography elevation benefits to rich landscape level while geomorphological features contribute to form special geographical landscape.

2. *Water element*: Trail was placed above the water or arranged on the shore to form a different view experience. Water can also have an orientation on the trail direction.

3. *Material element*: Regional material used in urban trial landscape is a double performance for the regional history and natural culture.

4. *Flora and fauna elements*: In the trail landscape, the application of local flora and fauna elements is not only to beautify the environment, but also to function the science education.

Figure 1 Locks adjust the water level



The topography of Jinan is high in the south and low in the north, which decides the main springheads located in the south of the city. Thus the spring flows to the Daming Lake which in the

northern city of Jinan. In order to adjust the water level elevation from the north and south to realize the moat navigation, designers built two locks in the East and the West of the river. The maintenance of natural ecology in landscape along the east moat is better than the other three sections. And it maintains to the previous natural ecology environment in three ways.

First, it's not like any other part of the riverbank as hardening and perpendicular to the surface of water but to use local stone slope protection and greening, so it is easier for visitors to get close to the water. For example, the distance between the Waterwheel Mill floor height and the water surface is the same level, but the water rises over and the plant on the shore is immersed under the water season. Thus, all visitors have chance to experience this dynamic landscape. Secondly, the park has many paths paved with local stones, enrich the landscape level on the narrow shore. Designers plant flowers in the interval between two slates, which will not only increase the enjoyment of the park but also improve conducive to conservation of water and biodiversity. Thirdly, attract more animal. Many birds still play and foraging in here in the process of observation, although limited by the moat width and the area of the vegetation of both sides. This proves that the natural ecology conditions of the moat basin can meet the requirements for survival and reproduction of these local birds. This is very important to protect the natural ecology environment in the urban environment lack of the biological diversity.

Table 2 Trails composition example in the East moat

<i>Type</i>	<i>Position</i>	<i>Scale</i>	<i>Proportion</i>
Wooden walkway	Above the water	2.5×290m East Bank	40%
		2.5×80m West Bank	
Stone road	In the shallows	0.6~1.2m×120m East Bank	12%
Flat trail	On the shore, the park	1.5×150m East Bank	27%
		1.5×120m West Bank	
Corridor	On the shore,	2×50m East Bank	5%

Figure 2 Wooden walkway



Table 3 Analysis of the constituent elements of the trail landscape

<i>Types</i>	<i>Elements of composition</i>	<i>Embodied</i>
<i>Human Elements</i>	Traditional technology elements	Regeneration scene: Waterwheel power mill in the eastern section of the moat
	Folk and Local Lifestyle	Dynamic landscape: The crowd to play with water at the edge of spring , open-air barber shop, exercise groups, etc.
	Regional culture heritage	Commemorative significance: Inheritance of regional characteristics.,the Liberation Tower; bridges on the moat, couplets, etc.
	Foreign cultural elements	Open and inclusive: Hydroelectric mill established in Jinan、 dancing crowd on the shore, etc.
<i>Nature Elements</i>	Terrain elements	Enrich the landscape level: Sluice water balance, make quieter landscape space in downtown
	Water elements	Waterfront trail increased landscape experience; Trail on the water have oriented
	Material elements	Enhance regional identity: by paving stone from the ancient city wall material
	Flora and fauna elements	Perfect the regional ecosystem, and form regional cultural features

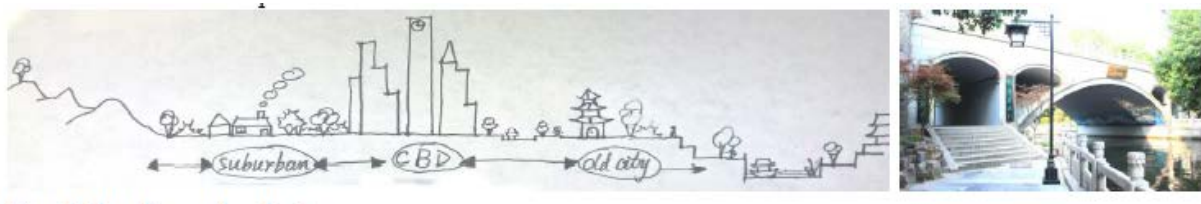
Function Analysis of the Urban Trail Landscape with Regional Cultural

Continuation of the City's Local Culture

Regional Culture Exhibition:

The trail traffic attribution determines that it has good linear link function. So it has good effect to show the city regional culture. The cultural significance of linear characteristic in urban trail landscape is integrate the different cultural resources in the city, display to the visitors and affect them in the tour process. The trail in the Jinan Huancheng Park rely on the moat that connected the three major groups of spring, like Daming Lake and other similar attractions along the trail to forming a "Cultural Trail". There are many relief murals, myths and legends, poetry famous phrase and Jinan famous literati on both sides of the trail to display the regional culture. Landscape bridges, crossing over the trials, such as the Pipa Bridge, Qinglong Bridge, also carry on the history stories and Jinan couplets.

Figure 3 The trail connections functions



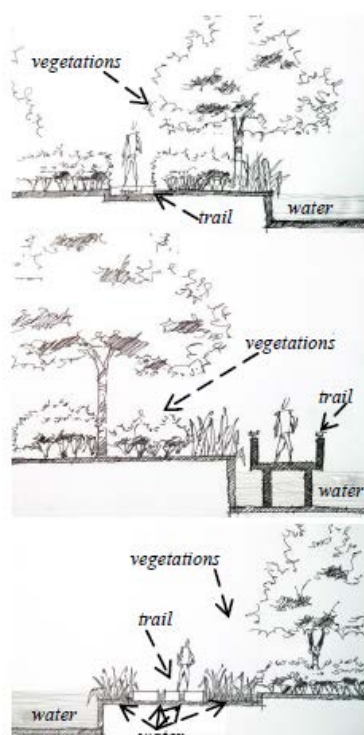
Education Function:

The trail is a road of education because it contains many types of information. For example, basic knowledge of flora and fauna, a history of the trail, the nature geography information, human heritage and so on [3]. So, visitors can learn information for the tour process. In the East moat, children can learn more plants and animals information from the boardwalk above the water surface and the shore stone road shuttle between the lush aquatic plants and animals. It's a good way for children to close nature. There are various spring water introduction, geological features genesis, history information in the Huancheng Park. Thus, the visitors can understand the splendid culture about Jinan's spring history and special geography during the trails tour.

Table 4 Markers and cultural shows on both sides of the trail

Types	Quantity			Content
	East moat(660m)	South Moat(1400 m)	West moat(1000 m)	
Frescoes and reliefs	—	2	3	Jinan legend about the spring
Inscription	5	23	—	Historical figures, famous poetry and couplets of Jinan
Indicating Brand	3	8	5	Traffic management guide, park rules and profiles on springs

Figure 4 Relations between the trails, water and vegetation



Compensation of Urban Ecological Environment

Urban Trail Landscape can compensate the city's ecological environment by connecting and integrating the natural resources in the city. Based on "Jinan City Green System Planning program (2010-2020)," the moat basin are "together with the moat structure chosen to be the core parts of the city green system as the first link [4]. The trail, connects the Heihu Spring, the Baotu Spring, the Wulongtan Park and the Daming Lake to form a nearly 14km green shaped corridor in the city. Lower river forms a quiet landscape space for the urban trail landscape, which realize the beautiful nature environment and perfect the human ecology system. Spring can increase the humidity of the surrounding air by the water, and can effectively alleviate the strong urban heat island effect through the transpiration of green plant community on both sides of the moat. Therefore, it produces great ecological benefits for the local dry climate in the winter.

Promote a Healthy Lifestyle

Jinan is a specific city in the northern China because of it is the only city with underground spring water. Local people's life connected with the spring water, they washing clothes and vegetables, swimming, chatting along for the river. Now the urban trail landscape together with spring water attract more residents to go outside the house with exercise, and to be close to nature. Healthy lifestyle, like morning exercise, night running, square dancing, tai chi and other various recreational fitness activities can be easily found easily in the park. It also constitutes a unique and dynamic trail landscape as a specific feature of the regional culture of Jinan.

Table 5 Analysis of the personal ratios on weekends and weekday



Enlightenments and Reference

Walking along the trail is one of the best way to learn about the city. The urban trail landscape is an important recorder of the composition and development of regional culture with rich urban natural and humanistic landscape elements inside. Furthermore, the trail system in Jinan Huancheng Park can showing some enlightenments and reference for the future urban landscape trail landscape design.

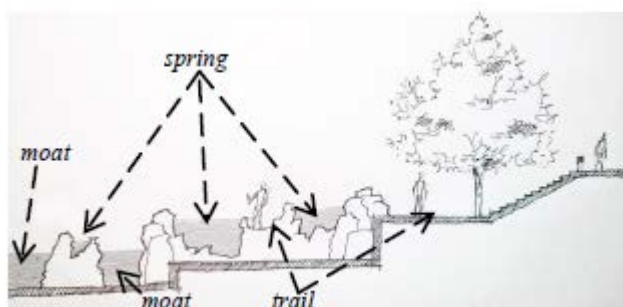
Trail System Construction

The trail net system plays an important role in building the whole regional natural ecology and regional human culture. The integration and optimization with the regional human culture and urban ecology resources should be adapted to satisfy the different levels of different regions. Therefore, the trail's system construction can get attention as the urban planning according to the theoretical system of "Area-City-Community-Architecture"[5].

Trail Accessibility

The trail accessibility poses a significant impact on the landscape spatial organization and culture exhibition continuity. For example, trails in Jinan Huancheng Park have a good accessibility with the local stones and the spring water so they attracted many people to play here. Because of the rich surround spring water, the stone roads, are abundant based on the spring head distribution and up-and-down hierarchy. It should be pointed out that the road has no guardrails at the water's edge in order to attract people to be close spring water.

Figure 5 Relations between the trails local stones and the spring water



The Pursuit of the Trail Landscape Spirit

Kevin Lynch said that "a good environmental image can make the owners have a very important sense of security"[6]. The urban trail landscape under the perspective of regional culture not only trail the reachability but also pay more attention to the construction of landscape space atmosphere, which pursuit the spirit of the place. The spirit of trail landscape contains the landscape space, cultural activities and the corresponding space atmosphere created by them. It is a sense of identity and belonging to a city. When we walk in the different trails around the different landscape space, human element and different leisure activities present us with different psychological feelings. In the East moat, it is easy to feel the beauty of natural ecology, while in the south moat, it is accessible to appreciate the splendid culture of the spring water, and in the West moat, the Chinese classical garden restrained is reflected thoroughly.

The Natural Ecology Integrity

Trails landscape create the regional nature environment as a whole and conducive to the local climate regulation. Also it is easier to get close to nature. In the east and west part, there are many high density residential areas on the shore. The excessive population leads to the loss of the natural ecology environment. The residents are eager to be close to the city nature. So, the trail landscape attract most residents to enter landscape space to enjoy a healthier lifestyle.

From above, a well-designed urban trail landscape can play an important role in the inheritance of regional culture, and also can improve urban ecology and guide public health lifestyle, etc. Designers should fully consider the human and nature factors of the city in the planning process combined with the local human culture and nature ecology so as to promote the city development.

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