Waterway Scaling Regional Development
— A Cultural Landscape Perspective in China Grand Canal
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Inspiration: Be like a water---- Bruce Lee

“Empty your mind! Be formless, shapeless, like water. If you put water into a cup, it becomes the cup. Put it into a bottle, it becomes the bottle, you put into a teapot, it becomes the teapot. Now water can flow, or it can crash: Be water, my friend!”

Bruce Lee

quote taken from the short lived 1971 TV Series Long Street.
## Summary

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Summary

China Grand Canal has been a national identity and also a scalability system be constituted by waterways, villages, cities, metropolis.

The inland waterways are a unique asset. They form part of our environmental and cultural inheritance and contribute to the local distinctiveness of the areas through which they pass. They act as a testimony of the cultural landscape for human living on the territory, promote urban and rural regeneration, stimulate leisure, recreation and tourism, and can contribute to an integrated transport system.

This thesis "Waterway scaling in regional development -- a cultural landscape perspective in China Grand Canal" has study objects to explore the planning strategies issues generated by the multifunctional nature, use and management of waterways. I expect it to influence the local metropolitan plans encouraging local authorities to take a holistic and sustainable approach to the protection of waterways from inappropriate development, as well as unlocking the economic, environmental and social benefits offered by waterways.

This thesis mainly specifies interpretation of waterways from its earliest time to great imperial Grand Canal, and its regeneration from a sharp decline when modern railway replaced water transport. Urban planning, such as how to develop an identity of cultural landscape by its spatial and temporal narrative, how could policy makers measure and revalue this large-scale waterway? I would propose a framework in my study, to resolve problems from the complex large-scale waterways system. The large-scale waterways are based on a geographical spatial analysis, draw most images of cultural landscape. The interpretation of spatial elements requires an abstract and objective frame of thought, quantifiable data (Yi-Fu Tuan, 1979).

This thesis uses a methodology to analyze why and how the waterways scaling in the regions of Grand Canal, big cross-regional scale and local regional scale? The waterways and its 18 cities are major study cases, because the China Grand Canal could be considered as a physical structure which is a crucial hypothesis for linking series of cities with the capital of a country. Territorial rules summarize the conditions of life and the activities of the inhabitants, the urban historian Fu Chong Lan has early concluded some cities of Grand Canal in five macro subjects, the relationship between cities' locations and waterway, the natural environment of cities and waterway, demographic changes, urban economies and cultures, he thought that the cities of
canal have their own characters in urban economic and create unique urban culture (FU Chong Lan, 1984). The modern metropolitan plans of 18 cities which imply the waterways keep dynamic scaling in regional development.

This thesis has research content be divided into 8 chapters in two parts:

The first part of the thesis, gives an explanation of why I need to use the concept of cultural landscape to study the great waterway, Grand Canal. This part has four chapters.

In Chapter 1 introduces ancient ideas in territorial governance that has begin to use the waterways as a tribute route for supplying goods to the national capital. In addition it was an idea about how to develop an regional agricultural economy to suit governmental conditions. Many documents have recorded the classical rules for agricultural product and transport so that the governors could have benefit from a local agricultural production. Then the waterway was expanded fast for exchanging foods, handicrafts, textile and also the migrants. The territorial governance gave administrative conditions to the renaissance of Grand Canal.

In chapter 2 Grand Canal has defined a study area that is a changeable water route born in Yangzhou city and then gradually grew from a small water channel to be a regional water network. Finally, it grew to a national main waterway administered by the central government. This chapter also describes the historical and geographical background of Grand Canal. Yangzhou is one of historic cities of canal, from its urban transforming under the life journey of Grand Canal, it has shown many times significant processes of urban form in its history.

In chapter 3, I develop the study methodology that attempts to give cultural landscape perspective for understanding the scaling of waterway, and evaluating its values in the regions of Grand Canal.

In Chapter 4, I put forward the hypotheses, one is to establish a recognizable scope, the cultural landscape could be an instrument to interpret a complex system combined by human and nature, like the Grand Canal works as water transportation on the land but also generated various waterscapes, built different riverside urban forms. For China Grand Canal, a large-scale waterway could be read closely from all of the scaling intervention, such as river basin plan, metropolitan plan, waterway landscape plan of historical waterway and urban design. The hypotheses would support to strengthen a national identity of China Grand Canal.

The second part of the thesis has three chapters are reviewing different scales interventions in a
large-scale cultural landscape of Grand Canal.

Chapter 5 firstly focused on the motivations why people needed to construct and maintain the waterway in the eastern plain of China. The great waterway is not a result of chance but is a big land work and engineering created by a nation, which aims to defend from flood and support central politics.

Chapter 6 has analysed a cross-regional scale reading linear elements of cultural landscape, contain the natural and cultural contexts.

Chapter 7 has analysed the local scale models based on the metropolitan plan, the water and land regions in the cultural landscape. Generally, they are many cooperative patterns interwoven by water network of Grand Canal.

Chapter 8 is the conclusion, it concludes that the on-size-fits-all urban plans do not work because they ignore contextual factors that determine an intervention's efficacy in a particular local situation. This paper presents a framework on how to design urban plan innovations for scalability through enhancing their adaptability for effective usage in a wide variety of settings. The cultural landscape perspective enhances the identity of China Grand Canal, is presented as a case study.

To date over seven ancient capitals and 18 cities of canal throughout the regions of Grand Canal have participated in a heritage network. Urban planners and policy makers would creating and evolving interventions from a scaling framework to help the waterways increase effectiveness, sustainability, and spread.

This thesis discusses a typical large-scale cultural landscape and heritage in China, meanwhile, it is a special study area needed to be considered in our modern life, because the object of study, Grand Canal, is continuously used as a busy waterway in its southern regions, but the northern historical part of waterways apply for new strategies to use it even though they have lost its navigational function. Cultural landscape records the processes of transforming landscapes, a land work from small scale to large scale, individual to collective efforts, regional planning, and territorial administration. The cultural landscape is an expression of man-land relationship. People change nature, nature Conversely impacts on people, the ideal and hopeful result is like the sentence by Wang Bo, Propitious Place with Greatness Men.

1 The idiom originally was written by Wang Bo, who was a young literator, it was used to show their respect to the nature, as well as emphasize the ability which human could change the landscape by their works in nature. Wang Bo gave this idiom by his poetic inspiration when he was participating in a meeting in prince of Teng's pavilion (Teng Wang Ge) standing by the Gan river in Jiangxi province, he felt the splendid natural scene when he enjoy the beauty of the river and mountain there. I think that Chinese people could learn from nature to know how to transform land and even their territory to a suitable living place, for their social and economic functions, or even a aesthetical site to relax there.