

Selection, Integration and Adaptation: Legacy of Traditional Regional Design in the Capital Region, China

1 Definition of Regional Design

Fast urbanization and urban sprawl in China is transforming the metropolitan landscape across the country. As city regions (i.e., urban agglomeration) are being shaped, to create livable human settlements according to natural environment as well as to fulfill political, economic, social and cultural requirement becomes a significant challenge. While the western world provides helpful precedents (e.g., the Greater London), China has her own long-time tradition in regional design^[1], leaving human beings of this generation a great treasure. Chinese antecedents designed not only the city itself, but also the region focusing on how to locate and build the human settlements based on large-scale natural environment. In this way, regional design distinguishes itself from other conventional terms such as regional planning in the sense that the focus extends from the function and economy to the cultural, aesthetic perspectives and especially the creation of regional characteristics.

Design of capital regions in ancient China is a classic case of regional design. In the long history of China, many capital regions kept growing throughout dynasties with prosperous economy, rich culture and spectacular human settlements. Examples include the Guanzhong region (centered by Xi'an today) in Qin, Han and Tang Dynasties, Jiangnan region (centered by Nanjing today) in the Six Dynasties, Beijing-Tianjin-Hebei Region (centered by Beijing today) from Liao to Qing Dynasties, etc.. All of them leave us plentiful regional design experiences.

The development of the capital regions is a continuing effort of taking both “the favorable situation” (*Shi Bian*) and “the advantageous environment” (*Xing Li*) from time to time. The regional design is simply the method of combining those two factors. Ancient Chinese people pay much attention to observe and take advantage of the natural environment. In old Chinese literatures, lots of descriptions of mountains, rivers, geography, and wonderful terrains can be found, along with their values of defense, transportation, landscape and resources. The growth of a region is the process to arrange cities and areas according to the advantageous geographical environment so as to fulfill changing functions (e.g., water transport, irrigation, etc.), and at the same time to create a “shan-shui-city”^[2] (mountain–river-city) integrated human settlements according to an aesthetic notion. The regional design is important practice reflecting the Chinese traditional naturalism as well as nature-inclusive spatial consciousness.

This paper will study the Beijing Capital Region (the Beijing-Tianjin-Hebei region today). The region played an important role in ancient China and favored by generations of ancient leaders. This paper will use mainly the literatures in Qing Dynasties^[3] and others to explore the regional design method in this capital region, as well as to propose recommendations for regional development in this area today and in future.

2 Analysis of Regional Design in Ancient Beijing-Tianjin-Hebei Region

According to the status of Beijing-Tianjin-Hebei Region in the nation and the geography transformation of Haihe river basin, the author will analyze regional design traditions in the Capital Region in three phases: (1) Pre-Qin Period as scattered cities confronting each other in the northern China; (2) from Qin to Song Dynasty as an integrated strategic military region confronting nomads from the north; (3) from Yuan to Qing Dynasty as a capital region governing the whole country.

2.1 First Phase: states in the north

Before the middle Warring States period, while the North China Plain was often flooded by the Yellow River and the mountain area was too challenging for construction activities, the mountain edge with slopes for drainage and springs coming out for water supply, became the

best place for ancient people to settle down. The regional routes along the mountain edge were thus gradually formed. The most frequently used one started at the port of the Yellow River in the south, ran along Taihang mountains to the north, went across the Yongdinghe River and then forked into three branches: one went to the Inner Mongolia plain via Juyongguan Pass, a second went to Songliao Plain via Gubeikou Pass and the third went to Liaoxi Plain via Shanhaiguan Pass. Beijing city was just located near the ferry of Yongdinghe River where four routes met. Some other towns were also developed near the passes.

In the Chunqiu and Warring States period, there were several small states in Beijing-Tianjin-Hebei region. Yan State, one of the north states, made use of the natural environment to built military defenses. To the south, there was a down-city built at the north bank of Yishui River and a segment of great wall constructed at the edge of the river; in the north, there were a series of great wall built along the mountain ridge and five counties were created in and out the passes of the great wall^[4]. The regional design in this period mainly focused on the military defense. Yishui River, Hutuo River and the old Yellow River that functioned as regional barrier were the most famous natural elements recorded in the old literatures^[5,6]. Yan State was called “a land of abundance”^[5], not only because the land was fertile but also because the people learnt the skills of farming and irrigation. One of the most famous farming lands is Dukang area, which was originally a swamp, but turned to be a fertile land after the excavation of the Dukang trench.

2.2 Second Phase: centre of the North China

After the Han dynasty, the Haihe river basin was gradually shaped. Five major rivers came out of mountains and went east to Bohai Sea. From Qin to Tang, the old Yan state was no longer a small state in the north, but an important military town of the nation. As the emperor of Qin built the major routes across the country, Ji city (southwest of today's Beijing city), a key node of the transportation network, became “a metropolis of the Bohai Sea area”^[7] on the North China Plain in Han. After the emperor of Sui connected the Grant Canal, Ji City, which was the north end of the canal, grew into a trade centre for goods transported from the central plain, the northeast and the northwest.

After the unification of China by Qin's emperor, to defend the nomad from the north, great walls were built on the trace of the past dynasties and twelve towns were set for defense and cultivation^[8]. The Yanshan Mountain, where the great wall and the military towns were built, was recognized as a strategic element for the nation^[9]. In the Tang dynasty, the Taihangshan Mountain became one important natural element of the region. The edges of the Youzhou (approximately today's Beijing-Tianjin-Hebei region) were defined by Bohai Sea to the east, the Yellow River to the south, Tianghan Mountain and Hengshan Hill to the west, and Shanghaiguan Pass and Ji Gate to the north^[10].

The southern part of Youzhou area was good for farming. During Qin to Tang, the development of irrigation and the agriculture continued, and the region became a main food producing area for the capital city in Sui and early Tang. In Han, 8000 hectares of paddy field was reclaimed along the Baihe River. In the Three States period, a general built a weir at the Shijingshan Hill where the Yongdinghe River came out of the mountains, and introduced the river to Gaolianghe River and then to Baihe River via Chexiangqu trench. All the activities started a large scale faming in a creative way and built a foundation for the future agriculture.

2.3 Third Phase: centre of China

The Song-Liao-Jin period is when the Ji city transitioned itself from a military town into a national political center. In the Yuan dynasty, Ji city became the capital city of the country, and started to be called Beijing in Ming and Qing. During the capital region period, Beijing-Tianjing-Hebei region needed lots of goods to support the region's operation. But the national economic centre had shifted from north to south after Tang, and the local environment kept decaying. The Great Canal, which was the most important transport way, took the key role to sustain the capital region by conveying goods from south to north. The cities and towns near the canal gradually got prosperous, such as Tongzhou Town and Tianjin City. The sea route opened since Yuan also strengthen the capital region's economy.

The great capital also needed a huge amount of water source not only for daily use but also for the canal to operate. Many water sources had been explored, such as the Yongdinghe River and Baifuquan Spring, etc. During the exploration of the region, many beautiful spots and landscapes were discovered. Gardens and even palaces were built in the resorts. After many dynasties accumulation, there formed an abundant garden-city system in and out of the capital region.

After generations' construction, there were 3 levels of the regional design in the Beijing Capital Region:

(1) At the large scale, the region is configured at the centre surrounded by four geographic edges: Bohai Sea, Taihangshan Mountain, Yanshan Mountain and the Yellow River. Before Beijing became the capital city, there was already a military defense system around the city, such as the great wall at the Zhuozhou, Yixian County and Bazhou. During the capital region period, the region was greatly enlarged, with Zhangjiakou city as the west gate, Baoding city as the south gate, Tianjin city as the southeast canal gate, Shanhaiguan pass as the east gate and the Chengde city as the north political centre.

(2) At the middle scale, a functional circle is built around Beijing city depending on the geography, with Tongzhou county on the east, Shijingshan Hill on the west, the Lugouqiao Bridge on the southwest and Juyong pass on the north. They function respectively as the dock of the canal, the water source of irrigation, the bridge to connect roads and the nearest gate for defense.

(3) At the small scale, a garden-city unit is built depending on the natural environment, with the West Hill in the west and four suburban resorts around city. Three mountains and five gardens were built around the West Hill, using springs and mountains to form graceful sceneries. Four suburban resorts were created according to the landform and the relics, forming lakes, forests and hunting ground, etc.

3 Conclusion

The Beijing capital region kept evolving to meet the needs in different situations. The regional design of the region can be summarized as the selection, integration and adaptation of the evolving function and natural environment.

Agriculture: Before Qin Dynasty, the region was self-sufficient with a low population. After the middle Tang with growing population, there was a great need for the development of irrigation and cultivation. And when the region became a capital region in Yuan, "a land of abundance" could not sustain by itself. The government built canals to secure additional supply being transported from the south.

Trade: Because of the position at the meeting point of the central plain, the northwest and the northeast region, Beijing-Tianjin-Hebei region became a trade centre in very early times, and was praised as "a metropolis of the Bohai Sea area" in Han. After Yuan, the region's transportation function was strengthened with the excavation of the canal and start of the marine shipping.

Defense: The region was famous of using mountains for military defense in history, which is one of the most important reasons why it became the capital region. With the continuing construction of the great wall, the regional natural environment is greatly exploited and the status of the capital region is enhanced.

Recreation: There were wonderful mountain scenery and lots of springs at the mountain edge. Many of them were discovered as resorts in early times. The garden and palace construction in the area became popular during the capital region period.

Addressing such needs, regional design of Beijing-Tianjing-Hebei region can be concluded at 3 levels: the city system at the large scale to border the region, a functional circle at the middle scale to support the capital, and a garden-city unit at the small scale to create a daily life circle.

4 Recommendations to Sustain the City-region in Future

Recommendations to sustain the Capital Region in future will be concluded as shaping a holistic regional vision, establishing a regional artistic skeleton, and creating a regional coordination mechanism.

4.1 *Shaping a holistic regional vision*

Traditional Chinese regional design illustrates a holistic regional vision. The capital region in the history has a clear structure, with the capital city in the centre, mountains and military towns in the north and west for defense, the endless plain in the south for agriculture, and the canal on the southeast to transport necessary goods. All the function nodes in the region work harmoniously, thus forming an integrated community. In the fast development progress of the city agglomerations nowadays, the regional city and town system should be arranged to fulfill the regional multi-function requirements according to the natural environment, such as to expand the water source, to develop the farming area and to transport goods by making full use of the mountains and the rivers, as well as to build gardens and temples and to create human landscape by taking advantages of graceful natural environment. What's more, new functions are emerging in the modern city-region. For example, with the development of the aviation transport, clustering some cities around the airport becomes desirable. Also, the emphasis on ecology nowadays has called for creating green spaces with regional importance, and for building cultural and ecological cores in a region.

4.2 *Establishing a regional artistic skeleton*

In the ancient capital region, regional function establishment is usually combined with landscape creation, especially with mountains and water. Mountains and water system is treated as regional natural landscape; meanwhile, the city and towns, gardens, summer palaces, passes and ports are treated as regional critical points. Combining these two sets of systems, a number of cultural corridors with local features are shaped, such as Taihang Mountain corridor, Yan Mountain corridor, and the Beijing-Hangzhou Grand canal corridor. When further developing the city clusters, we should carefully examine the Shanshui (mountain-water) system structure so as to establish a regional artistic skeleton^[11].

Particularly, in the mountain area, valleys are convenient routes for transportation and also the converging place for mountain brooks. Therefore, valleys with open views are critical places to create scenic points. The Mountain Resort in Chengde is a good example, which locates on the way to Mulan hunting ground for emperors in Qing dynasty. By development generation after generation, the Mountain Resort becomes a place not only for emperors to relax, but also for them to meet minority people in diplomatic circumstances. At the mountain edge, it is also desirable to create scenic points for its transportation convenience and rich water resources. For this reason, the Jingji reort in Jixian County, was built as one stop along the emperors' way to the East Mausoleum. In the plain area, the significant mountains and water is ideal place to build gardens, also it is important passage for water serving the capital city. For example, the three-mountains and five gardens, the Kunminghu Lake is created not only as a major scenic point for the summer palace, but also as a water reservoir for the whole Beijing city.

4.3 *Creating a regional coordination mechanism*

It is important to treat cities and towns in a region as one spatial unit; and the relationship among cities and towns has to deal with upriver and downriver locations in terms of the whole Shan-shui structure. A regional collaboration mechanism covering economy and society needs to be established for the purpose of pursuing collective development. In the history, many prosperous regions in the old times however suffer from decay because of the degrading function of traditional military defense and water transport. Many mountain areas are less developed because of the transportation inconvenience and limitation of growing space. Similarly, the mountain-edge, although there are many historic sites, becomes less developed because they tend to be water source protected area for the sake of serving downriver towns. To secure a successful regional design, it is necessary to break the

administrative boundaries, and to support regional policy related to regional infrastructure development, environment protection, cultural and landscape development, etc. It is also important to combine the historic cultural landscape development and the mountain-water system preservation. The ultimate goal is to coordinate the creation of regional characteristics with the development of economy and society, and to promote balanced development within the region.

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