

Construction of Urban Space in Shengming Kangyuan Area of Liyang Based on Fengshui Theory

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Abstract Under the background of stereotyped urban planning and construction and the pursuit of high land value, it is particularly important to explore the application of urban environmental characteristics in urban design and highlight the integration of local characteristics and people's life. In this paper, based on the origin of Fengshui theory and the planning points of an ideal Fengshui pattern, the planning and design of Shengming Kangyuan Area in Liyang were studied to explore the positive influence of Fengshui theory in the construction of urban space, and some planning suggestions were put forward to improve the urban environment and achieve harmony and unity between man and the natural environment.

Keywords Fengshui theory, Urban construction, Planning and layout

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With the continuous development of China's economy and society, the space of old urban areas has been gradually filled, and new urban areas are springing up like bamboo shoots after rain. For the planning and design of new urban areas, the core idea of "putting people first and taking green as the base" is often mentioned. However, after the planning and construction of new urban areas, they often pay more attention to the high-value utilization of land, and obtain higher benefits through land capital operation. The value mapping between people and the environment ends up with nothing definite. Since ancient times, Fengshui theory has been the theoretical basis for the construction, planning and layout of cities, advocating the mutual feeling between people and the earth, and harmony and unity between people and nature rather than confrontation. The harmonious and ecological development concept can provide a theoretical basis for the urban design of the new district with high quality and rich heritage by using limited land resources.

As the last pure land of urban development, Shengming Kangyuan Area of Liyang shoulders the responsibility of driving the city to take off. At present, the living space of the old urban area has been saturated. Zhongguancun in the north is the industrial highland of the city, and Tianmu Lake in the south is the tourist space of the city. Therefore, it is urgent to take the central Shengming Kangyuan Area as the urban connector and booster to create a diversified new district integrating business, commerce, education and residence, so as to improve the city's energy level and stimulate its innovation

vitality.

1 Fengshui theory

1.1 Interpretation of Fengshui theory

Fengshui is the traditional culture spread from ancient times to the present. It is not only the divination of seeking advantages and avoiding disadvantages, but also a kind of folk culture spread. Historically, Guo Pu of the Jin Dynasty was the first to define Fengshui in the Book of Burial, and put forward some suggestions on the location selection, orientation layout and heavenly way layout of buildings after considering topography, environment, climate, landscape, ecology and other aspects. Fengshui theory deals with the relationship between man and the environment based on the principle of entirety, and adopts a life style suitable for nature according to local conditions and the objectivity of the environment. The core idea is to create a better living space for people and then achieve the realm of harmony between nature and man through careful and detailed investigation of the natural environment, and adapting to the laws of nature, using and transforming the environment according to local conditions^[1].

1.2 Influence of Fengshui theory on ancient urban planning

The palace of the Shang Dynasty was once located in Xiaotun Village which is 2 km away from Anyang City, Henan province. The Huan River near the village flows from the northwest to the southwest and then turns east. In the Yin ruins, it is found that all the important areas are surrounded by the bent Huan River, which fully proves that the concept of Quzeguiji pursued in Fengshui theory has a long history. In Fengshui

theory, it is required that rivers should be bent because dragon spirit gathers along the bent rivers, and the area surrounded by bent rivers is the best land.

In ancient cities, most houses faced south. In Fengshui theory, directions are often represented by Qinglong, Baihu, Zhuque and Xuanwu. The necessary conditions for the formation of a place with good Fengshui are as follows: there are rolling mountains in the north, low hills in the south, mountains on both sides, a clear pattern in the middle, and winding water around, and it has open terrain.

1.3 Ideal Fengshui pattern and planning points

1.3.1 Ideal Fengshui pattern. From the perspective of contemporary urban construction, it is necessary to consider the natural geographical conditions and ecosystem of the whole region. Each region has its own specific climate, vegetation and hydrological conditions. Ideal Fengshui pattern means forming an urban environment fronting water and with hills on the back, thus creating a city with mountains and rivers.

1.3.2 Planning points of ideal Fengshui pattern.

(1) Attaching importance to mountains and topography, and investigating a small environment in a big environment. There are not many new districts that fully conform to the ideal Fengshui pattern, so the new districts will be investigated in a larger environment, and the geographical deficiency can be remedied by artificial transformation. This is called "supplementing Fengshui" and "cultivating Fengmai" in Fengshui theory. For example, the layout of mountains and water system in the Old

Summer Palace adapts to the terrain of the site foundation, but it also supplements the Fengshui of the Old Summer Palace on a larger scale. It is “the most winner of the situation”, because the Old Summer Palace is high in the northwest and low in the southeast, and the trend of the water system is consistent with the “general trend of the world”. Dragon vein originated in the Kunlun Mountains, starting from the northwest and ending in the southeast, and all the rivers flow into the sea from the northwest to the southeast. The Zibi mountain house in the northwest corner of the Old Summer Palace has the highest rockery in the park, which is a symbol of the Kunlun Mountains. The water system in the park echoes the mountains, flowing from the northwest to the southeast. It is in line with the trend of mountains and rivers in the world confirmed by Fengshui experts^[2].

(2) Mountains and rivers are interdependent and integrate local characteristics. Mr. Wu Liangyong once said, “Chinese cities take mountains and rivers as the elements of urban composition, and mountains and rivers are integrated with cities, and the background of forming these characteristics is the traditional Chinese philosophy of “harmony between nature and man”. Seen from the overall big environment, cities should be built in an ideal place near a mountain and by a river. Seen from a small environment, a comfortable living environment should be created. The proposal of “landscape cities” breaks through the urban concept based on functional zoning and road structure, forms an organic system combining nature and artificial environment, eliminates the gap between artificial environment and nature, and achieves the urban development mode of ecological and environmental balance^[3].

(3) Balance between yin and yang and abundant space. The theory of a balance between yin and yang guides the specific application of urban orientation, ventilation corridor and skyline planning, building volume and form control, texture and color unification, etc. Through the reasonable allocation of blue and green space and the mutual infiltration of virtual and real space, the dense, coordinated and orderly dynamic changes are generated to make the overall urban environment present a rich sense of rhythm and achieve the interpromoting relation between yin and yang in the concept of five elements and the combination of virtuality and reality, so as to promote mutual benefit and symbiosis between people and the environment, and harmonious development between people and society^[4].

2 Application of Fengshui theory in the construction of urban space: A case study of Shengming Kangyuan Area in Liyang City

2.1 Urban characteristics of Liyang

Liyang City, a county-level city under the jurisdiction of Changzhou City, is located in the south of Jiangsu Province and at the junction of Jiangsu, Zhejiang and Anhui provinces. The city is rich in products, and it is the famous “hometown of fish and rice”, “hometown of silk”, and “hometown of tea”. Its economy has been ranked among the top 100 counties (cities) in the country for many years. It is said that “there is Paradise above and Suzhou and Hangzhou below; out of Suzhou and Hangzhou, the beauty is in Liyang”. There are many folk legends in Liyang, and it has been an auspicious and prosperous place since ancient times.

2.2 Interpreting the future of Liyang from the change of urban pattern

2.2.1 Urban pattern in the ancient city period. Since the Song Dynasty, Liyang is a thousand-year-old county town which is situated at the foot of the Tianmu Mountains in the south and near Lishui in the north. In the Emperor Hongwu Zhu Yuanzhang period, the four gates of the city were renamed Dongping Gate, Nan’an Gate, Xicheng Gate, and Beigu Gate, and a small town was built outside the four gates. At present, the outline of the city and the road network are basically preserved. The overall orientation of the ancient county is in a structural relationship with the location space. The upper water pass leads to Jinling (Nanjing), and the lower water pass looks at Shaoxing and Hangzhou. The important waterways of the city become the channel of Wuyue culture. The ancient county integrated the important landscape elements of Jinling and Taihu Lake within 100 km through the landscape design of surrounding roads, four city gates and upper and lower water passes.

2.2.2 Modern urban pattern. The main axis with the municipal government as the center is in line with the Danjin Licao River and Changdang Lake, relying on the Changjiang Bay, and becoming the gathering place of dragon spirit. Liyang City faces the Tianmu Mountains in the south, and is mainly oriented towards the Tianmu Lake scenic spot. It is surrounded by lakes and mountains, green tea and bamboo, having beautiful scenery (Fig.1). The tourism industry is booming. The Yangtze River moves gradually from Wuhu into the Yangtze River Delta region, and surrounds around Liyang with a radius of 100 km. In the past, the

plan of Songtuancheng did not directly face Taihu Lake and its surrounding area. Since the establishment of New China, the development relationship of Liyang City with Suzhou City, Wuxi City, Changzhou City, and Zhenjiang City is closer, and it further reflects the general trend of developing towards Shanghai and the international direction.

2.2.3 Future urban pattern. The future development of the city is studied from the macro landscape pattern. Bordering the Dabie Mountains in the west and the East China Sea in the east, Liyang is the center of the confluence of south dragon and the Yangtze River in China, becoming a picture scroll stretching from the west to the east. The whole Yangtze River Delta region is surrounded by the Yangtze River and the Qiantang River, and Liyang, in the middle, is surrounded by the two rivers. The two rivers eventually converge in Shanghai and face the sea together (Fig.2). The future city axis faces the main vein of the Tianmu Mountains in the south and Zhenjiang, Yangzhou and the Beijing-Hangzhou Grand Canal in the north, making the rear of the city more powerful. The west side of the city is close to the Shilichang Mountains, reflecting the ecological beauty; the east side of the city is surrounded by the mountains and lake, showing mighty momentum.

2.3 Fengshui analysis and spatial construction of Shengming Kangyuan Urban Area

2.3.1 Fengshui analysis. From the pattern of landscape cities, the north-south axis represents the development of time from the past to the future; the east-west axis is the spatial development axis, symbolizing the expansion and integration of space. Liyang is situated on the north side of the Lishui River, just reflecting the progressive relationship of metal generating water and water generating wood. In the past, the story of Shi Zhennv helping Wu Zixu and the tours of Li Bai and Meng Jiao indicate that through Liyang everything will be full of vitality, which is also the meaning of Shengming Kangyuan.

The building pattern of Shengming Kangyuan is consistent with the large landscape of Liyang City. Landscape pattern reflects the spatial order of urban landscape elements, carrying the natural background and source of cultural context under historical accumulation. From the overall perspective, the echo relationship of “mountain-water-city” should be strengthened. In addition, according to the traditional Chinese concept of building cities and landscape culture, the divinatory symbols of Shengming Kangyuan

from south to north and from west to east are three divinatory symbols of Fu, Lin and Tai. Fu divinatory symbol represents the germination of vitality and success in sight. Lin divinatory symbol stands for urban harmony. Tai divinatory symbol means an auspicious and smooth omen.

2.3.2 Space construction of Shengming Kangyuan Urban Area.

(1) Integrating the status quo to supplement the Fengshui of the area. The Fengshui pattern of Shengming Kangyuan Area is incorporated

into the big landscape pattern of Liyang City. Shengming Kangyuan Area is backed by the Shilichang Mountains, just as Liyang is backed by the Dabie Mountains. The Chating River passes through the area, just as Qiantang River enters the area. The confluence of the Qianli Lake is like the entrance of two rivers to the sea. The whole area lacks lakes like Taihu Lake to enhance the momentum of the area.

Therefore, the western part of the site takes the shape of Taihu Lake to supplement

the missing part of the macro landscape pattern. The soft river relationship of the Chating River is re-constructed, and the landscape pattern image of “the entrance to the sea” is completed. The regional water network is organized to construct the urban river system and form a wishful space form. The lake like Taihu Lake is named Yuan Lake, which means the beginning of another year. The lake intended to enter the sea is named Yang Lake, which means auspicious beginning of a new year.

(2) Leading mountains into the city to create a landscape ecology of the area. Based on the concept of building a park city, park form and urban space are organically integrated to establish a composite system with suitable production, life and ecological space and integrated nature, economy, society and humanity, so as to achieve a high degree of harmony and unity among people, city, environment and industry.

The plan takes Yuan Lake and Yang Lake as the core nodes, and establishes a visual corridor with the mountains in the area to form a green skeleton. On the basis of the skeleton, the current river system is connected to form a six-level park alliance system consisting of forest parks, country parks, urban integrated parks, greenways parks, community parks and recreational parks. Layers of green space blood vessels are formed by interconnecting urban parks, greenways and water networks, and ecological greenways are arranged along the major roads of the city to build a regional integrated greenway space network through interconnection with regional blue and green networks.

Buildings face the Shilichang Mountains across the lake to create a natural and artificial perfect fit around the lake. In the landscape avenue of the area, patchwork skyline changes can be seen. That is, through the row upon row of buildings, the intersection of the city and the surrounding mountains can be felt. It is needed to build a greenway connecting the whole green space, advocate walking and bicycle travel, create a slow greenway of “convenient access to water + gazing mountains + enjoying the scenery of the city”, and create an immersive ecological experience of “being in nature”. In the water-front space, the integrated control of blue and green is implemented to create a safe and pleasant waterfront space with varied landscape. The integrated landscape design of the urban street space is carried out to form the vitality area of streets and create differentiated characteristic urban image avenues, traffic roads

(To be continued in P47)

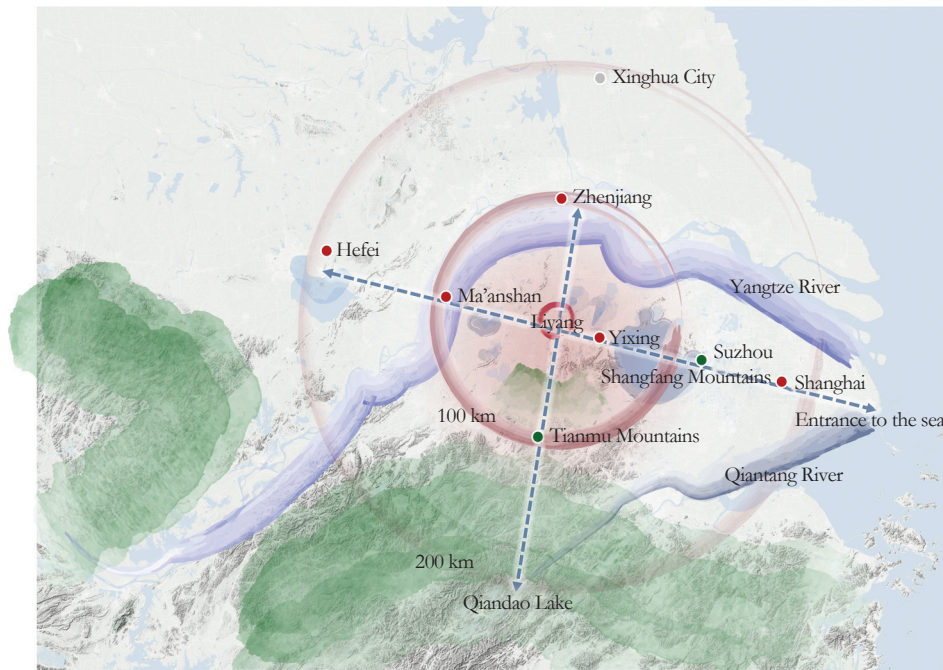


Fig.1 Macro urban spatial pattern of Liyang City

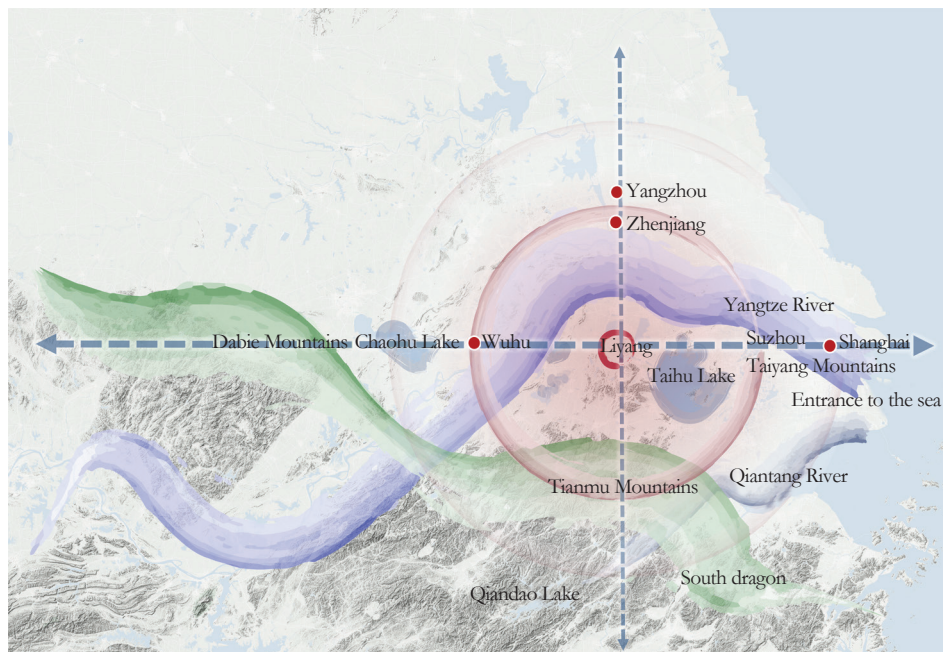


Fig.2 Macro urban spatial pattern of Liyang City

pilation. Meanwhile, it is necessary to strengthen the training and quality improvement of planning personnel to improve their theoretical and practical level of plan compilation, cultivate planning professionals with systematic thinking and comprehensive analysis ability, and enhance the planning ability and level of plan compilation units. At the same time, it is needed to introduce new technical means to support the plan compilation work, use information technology and data management tools to establish the digital platform and database of the plan compilation work to facilitate the information sharing and data exchange of plan compilation units. Remote sensing, geographic information systems and other technical means should be used to obtain geospatial data and resource information to realize scientific and refined planning. Besides, it is needed to strengthen planning supervision and risk management, establish a sound planning supervision mechanism, carry out regular supervision and evaluation of plan compilation work, and timely find and solve problems in plan compilation work.

4 Conclusions

China's social and economic development has entered a new stage. In order to meet the needs of China's high-quality development,

the level of territorial spatial planning and spatial governance needs to be continuously improved. To achieve this goal, it is needed to give full play to the leading role of the national territorial spatial plans as the "general outline" of the whole territorial spatial plan system, and decompose the strategic deployment of the space blueprint step by step. The top priority is to speed up the compilation, approval, implementation and supervision of various types of local territorial spatial plans, so as to ensure that the various arrangements of the national territorial spatial plans can be detailed and implemented. However, there are many problems in the territorial spatial planning work. All parties in society should pay attention to them, jointly find solutions based on the specific conditions and characteristics, strengthen the top-level design of territorial space, promote the construction and improvement of territorial spatial system, and improve the governance capacity of China's territorial space.

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(Continued from P43)
and life roads.

(3) Realizing the efficient layout of the area by multiple compound. On the west side of the Shengming Kang-yuan Area, the CAZ core area, which integrates functions of government affairs, business, art, leisure, health care, sports, education and tourism, is built around Yuanhu Park, and radiates outward to form a group. The buildings in the CAZ core and the Shilichang Mountains surround Yuan Lake. The height of the buildings changes with the height of the Shilichang Mountains, rises slowly from west to east, and creates a tendency of surrounding lake that perfectly matches nature and artificial energy, meaning that the purple air comes from the east. On the east side, based on Nanhang University, it is needed to strengthen the service functions

of science and education and double innovation, and build a highland of urban innovation vitality.

3 Conclusions

Fengshui has long been regarded as feudal superstition and cultural dross, but it is not true. Fengshui theory is a life philosophy that the ancients have worked out after a long time of life. It has a certain scientific basis, and can guide the living, life and urban planning of modern people. The essence of Fengshui theory can be extracted and applied in the space construction of new urban areas, so as to provide people with a good living, leisure and work environment, and realize the harmonious unity of "man-land relationship".

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