

ORIGINAL ARTICLE

To Predict the Tendency of the Development of Urban Comprehensive Park through the Social Reform of China - The Example of Changes of Comprehensive Park in Wuhan City -

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Abstract

This paper is to study the tendency of the development of the urban comprehensive park in the modern history of China, and take the urban comprehensive park of Wuhan as an example to study the local research through the literature.. In 1928, Wuhan Urban Comprehensive Park starting stage characteristics to the ideological education of the government as the center, in 1977 the policy of reform and opening to the outside world to entertainment center, ecology design point of view, the introduction of open space and urban plaza, to human centered design, application of science and technology. 2015 in Wuhan Urban Garden Expo theme can be seen in green life as the goal, through the design of urban comprehensive park ecology and human centered design, the application of science and technology development.

Key words : Urban Comprehensive Park, Wuhan , Landscape Architecture

1. Introduction

There are two parks in Wuhan. The first general park is Shouyi Park, which is designed by Xia Dao Nan, who led the Xinhai Revolution in 1923. Zhongshan Park, founded in 1928, is the first comprehensive park in this city. There are a series of events that affect the formation of urban comprehensive parks: the Great Leap Forward movement (1958-1960); Great Proletarian Cultural Revolution (1966-1976); Reform and Opening-up (1978); and natural disasters (1959 to 1961). Changes and reforms had been made to parks since 1980. Looking at characteristics of urban compre

-hensive parks at an early stage, ideological education was everything at that time, and therefore it affected parks, tourist sites, and architecture. In other words, development of urban comprehensive parks was about urban development. (Luan Chun-feng, 2004.5, Study on changes in functions of urban comprehensive parks of China, Limei Hui, 2010.5 Study on changes in functions of urban comprehensive parks of Beijing, periodical

publications: Yang Yuanyuan, 2010.4, Study on trends of development of urban parks - Case study of the Olympic park in Beijing). Prior studies, however, stated only simple changes of different periods and

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follow-up research was not conducted. Therefore, there are few results on problems caused by park design for each period.

This study sees each stage of China's urbanization and its characteristics and analyzes functions of urban parks to identify developments in urban comprehensive parks in China.

2. Scope and Method of study

2.1. Study Scope

Field surveys were done from the first urban comprehensive park founded in 1928 to ones in exist. Moreover, contemporary urban parks were analyzed from multiple perspectives, using relevant materials.

2.2. Study Method

- 1) With data stored in Wuhan Archives, various information through year books, official documents, and reports which fall into the period of this study, were analyzed.
- 2) Materials in internal archives of each park in Wuhan, design of related materials, diagrams, pictures and photos of urban parks were also analyzed.
- 3) Aside from basic information gained from literature research, materials are collected by field survey of parks in Wuhan to compare the current status with historical documents.



Fig. 1. China Map.

3. Results and Considerations

3.1. Emergence of Comprehensive Parks:

1927– 1949

Shouyi Park (166,000m²), designed by Xia Dao Nan of Wuchang, who led the Xinhai Revolution in 1923, became the first urban park created by people in Wuhan. As described in Table 1, the government of Republic of China integrated Sanzhen (Hanyang, Hankou, and Wuchang) into Wuhan, making it the capital of the country at that time. As requested by the government, roads, bridges and parks were established and Zhongshan Park became an urban comprehensive park in 1928.

3.2. Economic Recovery Period: 1949–1957

After the foundation of Republic of China, the country entered a new phase of development. For several years after 1950, the country have developed nurseries in Hankou, Seosang, and Wuchang and planted Cedrus dedodara, Pivrasma quassioides, Robinia pseudoacacia, Ligustrum lueidum, etc.

Starting 1953, the country was in the process of transition to socialism. During that time, a public ownership was established, which was mainly based on two forms - the first is state owned system and the second is quasi state-ownership system like collective ownership system, sparking off an historical transfor



Fig. 2. Distribution chart of parks in Wuhan.

- Example-
1. Zhongshan Park
 2. Liberty Park
 3. Hanyang Park
 4. Ganghan Park
 5. Gyogu Park
 6. Lotus Lake Park
 7. Chungsan Park
 8. Jayang Park
 9. Baekun Park
 10. Mt. Maan Forest Park

Table 1. Characteristics of urban comprehensive parks: 1927-1949

Name	Opening year	area/m ²	Style	Characteristics
Zhongshan Park	1928	125,000	Combination of China and the West Design	Entertainment for people, ideology education by the government

-mation in the economy and society.

First-Five year plan for the development of the national economy from 1953 to 1957 established a basic principle that landscaping is a priority and the construction of parks should be based on the power of the people. Accordingly, gradual progress was made to greening works and landscape architectures. During that period, their effort was quite successful. Green coverage per person increased from 0.45m² at around Liberation to 1.6m² in 1955. Public green area in Wuhan also increased to 4,160,000m². A series of comprehensive parks including Liberation Park were constructed. As shown in Table 2, another four including Hanyang Park and Ganghan Park were built. This can be called a golden age in terms of construction in Wuhan since the foundation.

3.3. Partial progress and overall deterioration:
 1958–1976

Together with the Great Leap Forward in 1958, the people's commune movement helped the First-Five year plan and socialism successful. Investment in infrastructure increased from CNY 13.8 billion in 1957 to CNY 26.7 billion in 1958. It is 81% more than total CNY 99.6 billion (CNY 34.5 in 1959, CNY 38.4 billion in 1960) under the First Five year plan. National income skyrocketed from 24.9% to 33.9% to 43.8% and 39.6%. That was the biggest since the foundation of the country. In the meantime, as indicated in Table 3, from 1958 to 1960, parks and squares construction showed consistent development while design was still affected by the Soviet Union. However, there was an effort to apply China's traditional style in landscape planting to building new

parks.

For three consecutive years between 1959 and 1961, natural disasters brought an unprecedented crisis to the country, decreasing investment in infrastructure due to shortages, which led to suspension of construction. With significant decreases in investment in forest, park construction declined while agricultural production increased.

From 1961 to 1964, the pace of park construction in Wuhan was slowing down. Only one park was newly constructed during that period. Parks turned into farms and the quality of landscape art decreased.

In the late 1965, when production level in agriculture and industry restored to the one of 1957, finance restored and the inflation stabilized, improving the quality of life. However, as the Great Proletarian Cultural Revolution began in 1966, it hindered normal development of the economy and devastated national product. For 10 years after that, expenditures exceeded revenues.

Between 1965 and 1976, statues of historical figures or relics were considered superstition of feudalism so they were destroyed. People lost green land and statues of the Buddha, stone works, and ancient monuments were also destroyed. There were less people who manage parks and a lot of green areas in parks were occupied illegally. Amenities like playground were closed. Forest work in Wuhan also went through destruction and people were damaged emotionally and physically.

3.4. Post Reform: 1977–1996

3.4.1. 1977–1985

Since 1977, Reform and Opening-up policies brought

Table 2. Characteristics of urban comprehensive parks: 1949-1957

Name	Opening year	area/m ²	Style	Characteristics
Liberty Park	1953	382,000	Danish garden	1. Putting importance on united activities 2. Putting importance on ideology education
Hanyang Park	1956	28,000	Suzhou Garden	
Ganghan Park	1956	18,000	Design natural structure	
Gyogu Park	1956	42,000	West garden	

about increases in investment in the landscape development under the leadership of Deng Xiaoping. For example, the amount was CNY 1,390,350,000 in 1978 and a year later, it decreased by 16.06% due to 'adjustment' and 'declines in infrastructures'. Park constructions were halted. In the late 1980, the space of 10 parks including Zhongshan Park, Liberation Park, and Ganghan Park was 1,510,100 m².

As production increased after 1980, investment went up accordingly. Starting 1981, the country launched the Sixth-five year plan and things improved. Gross Domestic Product reached CNY 21.255 billion until 1985, 6.8% up from 5 years earlier. The increase rate was 10.4% on average. Gross output of agriculture and industry was CNY 17.542 billion, an increase by 60% from 1980, whose average increase was 10.0% a year. Thanks to this, the pace of park construction was rising and the quality and quantity of water improved dramatically.

3.4.2. 1986–1989

The national urban park association proposed in 1986 that the landscape focus should be on plants rather than constructions. As a result, Wuhan's green space increased to 29.28% in 1990, and its per capita public green area is 2.36m² and per capita green space is 143m². Moreover, 9 additional parks were constructed, raising total area of parks combined at 15,427,300m².

3.4.3. 1990–1996

Early 1990, Qian Xuesen mentioned 'landscaped cities' in his remark of 'China should build landscaped

cities' in response to a situation where urbanization was focused on short term profit and lacked in green, hindering the environment. He also said that a socialist China should express Chinese traditional culture and help its people enjoy beauty of nature, work, learning, and entertainment.

In July of 1990, the Wuhan Municipal Committee decided to push forward works on greening for 5 years in Wuhan so as to improve the quality of city and enjoy various styles of greenery and arts. To achieve that goal, Wuhan city's finance on greening project increased CNY 51,527,200 in 1996 from CNY 3,076,240 in 1994. By the end of 1995, the ratio of greenery area over all lands was 30.9%, green area ratio was 25.8%, and public green area per person was 6.6m². A goal of removing bare mountains using Productive green area (2396,000 m²), shelter belt forest (5740,000 m²), and park area (5360,000 m²) was achieved, and at the same time, it gave rise to the basics of city for landscaped China. Moreover, the income of an agency for such projects increased from CNY 61,511,900 in 1994 to CNY 86,650,700 in 1996. Such increased incomes funded for forestry projects.

Since 1970, protecting green areas of parks has been valued as environmental pollution becomes serious. The government raised funds from the public to construct parks and created them with labor force mandated. In the meantime, with the transition of society, there became new tendencies of materialization among the public as people had access to the

Table 3. Characteristics of urban comprehensive parks: 1958-1976

Name	Opening year	area/m ²	Style	Characteristics
Lian Hua Hu Park	1958	169,000	Chinese traditional garden	Putting importance on agricultural production after natural disasters
Chungsan Park	1959	380,000	Chinese traditional garden	
Jayang Park	1959	330,000	Chinese traditional garden	

market economy. In the long term, changes in consumption on planting were shown as income increased and ideology was affected by such tendencies. Table 4 shows comprehensive parks built during this period.

3.5. Constructing a Landscaped China: 1997-2015

Wuhan city council was reported from a greening bureau of the city in 1997 and proposed for the first time to make Wuhan a landscaped city within 5 years so as to get a title of a landscaped city, as well as to improve the environment and achieve a goal of sustainable development.

In the Urban Green Planning (2003-2020), Europe's greening system where city is in forest and forest is in city is introduced. In the planning, areas like vegetable patches, fields, orchards and water are included in the system 4). Its focus is put on building large green areas like Wetlands, agricultural and ecological areas, forest parks, and tourist areas by linking with projects where based on Wuhan's cultural and natural resources, forest and fields are to be constructed. Cities are to be constructed with reasonable structures, large green areas, various plants, beautiful sceneries 5). The structure of parks is based on the system of large and small systems. Large cities are required to have one or two central parks with a space of over

100,000m² while small cities are required to have one central park with a space of over 50,000m².

Affected by the market economy, central parks were to be constructed with land for special use and land for urban was set separately for urbanization in 1977.

While income and the quality of life improved, the environment degraded. Therefore, people increasingly demanded more parks. In response, a Wuhan forest division referenced urban park styles of advanced countries and opened parks to the public for free in 1996 in order to attract tourists and investors, boost its image and listen to its people.

To serve comprehensive parks as an open city park, a project called "Remove barriers" began. At the same time, authorities opened parks for free. The project included streamlining walkways surrounding gardens, creating green housing district, and linking officetel district with industrial complexes. Table 5 shows comprehensive parks built in this period.

Wuhan city landscape bureau will take the 2015 expo as an opportunity to build or renovate 38 parks and plant 36,600 trees. Most of them will be *Cinnamomum camphora* SIEB, *Metasequoia glyptostroboides*, and *Koelreuteria paniculata* Laxm.

Table 4. Characteristics of urban comprehensive parks: 1977-1996

Name	Opening year	area/m ²	Style	Characteristics
Baekum Park	1978	150,000	Chinese traditional garden	Developing commercial entertaining functions through reintegration and readjustment
Mt. Maan Forest Park	1993	7130,000	Combination of China and the West	

Table 5. Characteristics of urban comprehensive parks: 1997-2015

Name	Opening year	area/m ²	Style	Characteristics	Analysis
Sangchung Park	1997	254,600	Europe	1. Design focusing on ecology rather than garden 2. Putting importance of a space for relaxation and play 3. Putting importance of transmission of tradition 4. Installing natural disaster prevention facilities	1. Intention and theme of the designer were considered as important for embodiment. 2. Openness of space and introduction of urban squares 3. Human focused design 4. Application of technologies
Hwapyoung Park	1997	495,400	Combination of China and the West design		
Tangho Park	2004	370,000	Chinese traditional garden		
Gwansan Park	2004	79,400	Netherland		
Saho Park	2010	3770,000	Chinese traditional garden		
Wenbowen Park	2012	2000,000	Under construction		

Status of construction of comprehensive parks in Wuhan

China's international garden exposition, a biennial expo, is state level museum focusing on garden arts in China. Wuhan won to host the 10th expo in May 2012 and it is expected to hold from September 2015 to April 2016. The venue is located in Wuahn with a space of 2,000,000m². It includes three districts of Ganghan, Gyogu, and Dong-Seoho, and landfills.

The expo has 104 exhibition rooms. In the park, there are 96 exhibition districts and 8 parks around the expo. The structure of the park is about Chu state, expressing cultures of Wuhan as an axis of cross of landscaped China. Northern district of the expo shows global culture by converging local, ethnical characteristics with structures. Also, world renowned experts on garden is invited to display an exhibition of art works in a modern park.

4. Conclusion

In 1928, parks were designed as a role of entertainment for the public and a means of ideology education of the government, based on the government's view.

From 1949 to 1957, their functions were about

exposure to culture and relaxation with a style of the Soviet Union.

From 1958 to 1976, they served as something that reunites, adjusts and also develops a role of commercial entertainment, seeking a way of combining nationalism with modernism, affected by 85 Art New Wave Movement.

From 1997 to 2015, their functions were simplified, focusing on relaxation in nature and seeking their own ways corresponding to globalization.

As progress is made, planning and development of urban comprehensive parks will evolve to satisfy needs for the survival of humans.

As for the characteristics of each stage of Wuhan comprehensive park, the focus was put on ideological education by the government in 1928 at an early stage. In 1977 when Reform and Opening Up policies were effective, it was on commercial entertainment. More emphasis was also put on design considering ecological aspects and humans, adoption of urban squares, application of technologies and free access to parks.

From 1997, their characteristics were more about ecological design rather than landscape one. A space for relaxation and entertainment was considered more

important than before. History and tradition were valued and disaster prevention facility was installed. Others include openness and embodiment of space, the introduction of urban squares, human focused design and application of technologies.

China's international garden exposition, which is to be held in 2015, aims at green life with ecology. It means that urban comprehensive parks consider ecological elements, and human-centered design. The application of technologies is also one of the key elements. The development of urban comprehensive parks started in big cities like Wuhan, Beijing, Shanghai and Guangzhou and after then, it led to small and medium sized cities across the nation.

People's cultural awareness is expected to be mature in line with the development of the country's economy. Accordingly, the system of comprehensive urban parks in Wuhan and the whole country is anticipated to be developed focusing ecology, human, and technology.

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