



**Politecnico
di Torino**

**Research and Analysis on the Protection and Renewal of
the Historical Buildings in Hankou, Wuhan**

Beini Guo

CORSO DI LAUREA MAGISTRALE IN
ARCHITETTURA PER IL PROGETTO SOSTENIBILE

Tesi di Laurea Magistrale

Sessione di laurea 14 / 2022

A.A. 2021/22

“Although the Concession has left us with much, it is ultimately a flower that grew out of the mud, and it is ultimately a wound in the fabric of China that once ached physically and emotionally”.

- Fangfang, Hankou Concession



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HISTORY TIME-LINE

1856 YR

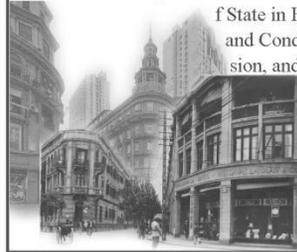
The British and French launched the Second Opium War against China, forcing the Qing court to sign the Treaty of Tianjin in 1858, which opened ten additional ports of commerce, including



Hankou. At the end of that year, British imperialist warships entered Wuhan, and in 1861 they sent someone to Han to make a treaty with the Qing Governor of Huguang, Guanwen, to delineate the boundaries of the concession.

1861 YR

On 21 March 1861, the British Embassy in China and the Minister of State in Hubei entered into the Terms and Conditions of the Hankou Concession, and the first foreign concession in



Hankou was established. 31 August 1898, the British and the Qing Government formally entered into the Terms and Conditions of the Additional British Concession in Hankou.

1895 YR

On October 3, 1895, the Hankou Leasehold Treaty was concluded between the Han-Huangde Road and the Supervisor of Jiangnan Pass in Hubei Province and the German Consul in Shanghai, and on



August 27, 1898, the Qing Government and the German Government revised the Hankou Leasehold Treaty, stipulating that "the German Leasehold is permitted to reach the root of the city outside the Tongji Gate, and all the remaining land in the front and the back part of the city are added to the leasehold."

1896 YR

The Russian concession in Hankou was the first Russian concession in China, and in April 1895, Russia and France requested the establishment of a concession in Hankou on the grounds that they were



credited with interfering with Japan's return of the Liaodong Peninsula, and on 2 June, the Russian Consul in Han and the supervisor of Jiangnan Pass, Qu Tingshao, signed the Russian Concession in an area of 414.65 acres.

1896 YR

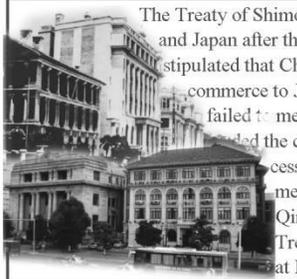
After the Second Opium War, France, the second most powerful country in the world, sought privileges in China equal to those of the British Empire. After the First Sino-Japanese War, France demanded that the Qing government grant it the same privileges as the Russians and Germans in terms of land leases,



on the pretext that it had been instrumental in returning Liao. On 2 June 1896, the French Consul in Han and the Superintendent of Jiangnan Pass signed the Articles of Association of the French Leasehold in Hankou.

1897 YR

The Treaty of Shimonoseki, signed between China and Japan after the First Sino-Japanese War, stipulated that China would open four ports of commerce to Japan, but Japan subsequently failed to meet these conditions and demanded the creation of four additional concessions in Tianjin, Shanghai, Xiamen and Hankou, and coerced the Qing government into signing the Treaty on Japanese Concessions at Ports of Commerce.



1902 YR

On 17 March 1897, the Belgian Consul in Hankou met with Zhang Zhidong to discuss the construction of the Luhan Railway. In June



1898, the detailed contract for the renewal of the Belgian loan for the Luhan Railway and the contract for the operation of the Luhan Railway were signed.

•••••

ABSTRACT

The former Hankou concession area was an important area for the economic, social and cultural development of Wuhan, Hubei Province. At the same time, it is also the area with the most complete historical features of the city. It brings together the architectural sites of the five countries' concessions from Britain, Russia, France, Germany and Japan, and concentrates the main historical and cultural blocks in the Hankou area.

The essay takes the former Hankou concession Area as the main research object, and analyzes and studies from the two perspectives of the renewal of the historical space of the entire area and the evolution of the representative buildings in it. Through field research, literature research and comparative analysis methods, the current situation and problems of the overall internal space of the region as well as the representative buildings are sorted out.

From the perspective of the entire regional historical space, the former Hankou concession took the lead in forming the most complete modern urban mechanism. However, with the renewal and development of cities and people's lifestyles, many problems have also been exposed. The area has a high population density and a complex structure. Each building has a single function and poor connectivity, making it difficult to form a comprehensive area. Traditional texture and modern style need to be coordinated, and environmental quality needs to be improved. Public facilities and municipal infrastructure are overloaded. The conservation planning of each block is relatively independent, lacks coordination in the direction of historical development and cultural continuation, and has not yet found a suitable mode of historical and cultural protection and renewal. Therefore, in the context of a new round of comprehensive construction in Wuhan, a series of sustainable protection and renewal proposals were put forward, and a clearer functional layout and space planning were carried out. Under the protection of traditional way of life, improve the living conditions of residents. At the same time, strengthen the cross-shaped landscape axis of Wuhan, so that Hankou and the two ancient districts of Wuchang and Hanyang are combined and echoed.

From the perspective of representative buildings, four representative buildings are selected through analysis: Baogong House, Jincheng Bank, Jianghanguan Building, Pinghe Packing Factory. To study the changes in the spatial form of these public buildings and private

residences under the influence of specific periods and historical events, to analyze the key factors affecting the changes of these buildings, the possible development trend of the buildings in the future and to propose effective methods for the protection and development of these buildings.

By combining relevant domestic and foreign practice cases, in the context of urban renewal development, based on the current stage of the Hankou concession, a series of reasonable reuse strategies such as the combination of environmental characteristics and architectural remains, and the combination of internal space and external characteristics are further considered. The synchronic and historical relationship enables the Hankou concession Area to enhance the overall cultural charm, highlight its characteristics, enrich the cultural life of citizens, promote the development of Wuhan's cultural tourism industry, and realize the overall protection of the Hankou area while inheriting the history and culture. Bringing inspiration and thinking from more perspectives.

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Thank you to my good friend Wangze Song, When I was unable to go to Wuhan for field research, he ignored the hot weather in Wuhan and helped me to collect first-hand detailed pictures of the concession.

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INTRODUCTION

In China's modern history, colonialists once controlled the vast rural areas and cities along the southeastern coast of China, along the Yangtze River (the middle and lower reaches of the Yangtze River) and along the railway lines in the northeast region. These cities took the lead in becoming the dumping market and distribution and transshipment center of the Western capitalist commodity economy. As a result, the modern southeastern coastal urban agglomeration, the urban agglomeration in the middle and lower reaches of the Yangtze River, and the northeast urban agglomeration have been created, which are "prosperous because of business, prosperous because of mining, and new because of roads"¹. In addition, the Qing government opened 35 cities by itself as "Ports opened voluntarily by China" for foreigners to live in and conduct trade activities. All these commercial ports have become open markets in modern China, deepening the extensive connection with the culture and economy of Western countries, thus bringing urban construction to the forefront and accelerating the modernization and transformation process of traditional Chinese cities.

Wuhan was one of the earliest areas to open a port in modern times, and the emergence of the concession led to a large number of buildings, both public and residential, appearing within a short period of time, making it one of the earliest buildings in Wuhan to embody modern architectural functions and one of the first material entities to reflect the blending of Chinese and Western cultures.

At first, the construction of the Hankou Concession Area was mainly concentrated on the first line of Yanjiang Avenue, forming a waterfront building complex. Later, with the continuous expansion of the concession area, urban construction began to develop in depth to form block blocks. The characteristics of the Hankou Concession are that it is set along the river, and the location is concentrated. Although the internal construction of the concessions of various countries is mostly independent, but because the concessions are adjacent to each other, they have to consider the internal and external traffic connections. Especially because the British Concession opened earlier, the basic pattern of urban areas has been formed, which led to the

¹ Chen Youxiang. *Chronicles of Hanzheng Street* [M]. Wuhan: Hubei People's Publishing House, 2009: 23.

overall unified layout of the Concession Area. Wharfs will be opened along the river, and warehouses and freight yards will be set up to facilitate water transportation and distribution. The main roads along the river and large-scale public buildings will be arranged to improve the landscape of the river. The western periphery of the concession area (now Zhongshan Avenue) has been turned into a commercial street, with embassies, banks, foreign firms, churches, hospitals, schools, restaurants and other public buildings as well as mansions, villas, apartment houses and other public buildings in the interior and office areas.² This layout avoids the bustling commercial streets and the distribution of people and goods by the river, ensures the quietness of the interior of the concession area, and reflects the characteristics of modern urban functional divisions. After the establishment of the five-country concession, seven other countries successively established consulates in Han (the United States, Italy, Belgium, Denmark, the Netherlands, Mexico, and Switzerland). Since then, a large number of western buildings have been introduced into Wuhan, and an unprecedented peak of construction has appeared in the history of modern urban construction in Wuhan, thus basically forming the overall urban pattern of the current Hankou modern concession.

Hankou Modern Concession has always been the core area of Wuhan City, and it is the traditional living, working and entertainment area of Wuhan citizens. The Hankou Concession is adjacent to Jiangnan Road Pedestrian Street in the south and runs through Zhongshan Avenue in the northwest. Along Jiangnan Road and Zhongshan Avenue is the traditional business district of Hankou, which brings together a large number of commercial retail, catering and other contents. The Yiyuan piece area is adjacent to the Yanjiang Avenue in the east, and some commercial, banking and other facilities are gathered along the Yanjiang Avenue. In the modern settlement of Hankou, there are a number of cultural and leisure facilities such as cinemas, cultural centers, coffee shops and bars. The renovation of Yanjiang Avenue, the construction of performance venues and other facilities on the Yanjiang Avenue, the completion and opening of the Hankou River Beach, further improved the urban landscape of Hankou along the river, and provided citizens with a beautiful and pleasant place for leisure and activities. The modern concession of Hankou is also a traditional residential area. During the concession period, a large number of lifang, collective residences and some villas have been built to provide living places

² Dong Jianhong. History of Urban Construction in China (Third Edition) [M]. Beijing: China Construction Industry Press, 2004.

for the upper and middle classes of the city at that time, including the former residence of Soong Ching Ling and the former residence of Zhan Tianyou and other famous people. Since the reform and opening up, some multi-storey and high-rise residential buildings have been built in the modern concession of Hankou. The modern concession of Hankou concentrated a large number of administrative agencies in our city, including the municipal government, the municipal council and a number of commissions and offices.

In the old concession period, it used to be a place where commerce and trade were active, merchants and celebrities gathered, and a large number of middle- and upper-class people lived, leisure and residence. However, with the passage of time and the development of society, its buildings have gradually fallen into disrepair, and supporting facilities such as parking, municipal administration, and living have gradually fallen behind. Especially in recent years, with the development of urban construction in Wuhan, many new residential areas with complete supporting facilities and good environment have been built in the new urban area, and a large number of high-income classes in the modern concession of Hankou have moved out of the area. Most of the people who continued to stay in the concession area were older people or people with lower incomes, and some migrant workers moved into the modern concession area of Hankou. As a result, the overall class of people living in the area has declined, and the quality of the occupants has declined, further deteriorating the urban environment in the area. How to improve the supporting facilities in the modern concession of Hankou, optimize the regional environment, improve the urban functions, attract tourists to come and play, and at the same time maintain the high-income class to live and work, has become a top priority for the development of this area.

The old concession of Hankou is a symbol of a period of history and culture in this area. It has obvious historical traces and regional cultural characteristics. It is the best witness of regional civilization and the carrier of the collective memory of urban residents. With the development of the new city and the renewal of the old city, the old city was quickly "reborn" and gradually became "a thousand cities alike", and the characteristics of the city gradually disappeared.

Therefore, to maintain the characteristics of the city and protect its memory of the city, we need to re-understand the concession area and the public and residential buildings in it, and give them enough respect.

CHAPTER ONE: THEORY AND METHODS

Research Background

In the course of its development history over the past century, modern Chinese cities and architecture have undergone a tortuous process of development, with the East and the West intertwined and the old and the new co-existing. It includes both the introduction and development of modern Western urban planning and architecture, and the continuation and change of traditional Chinese cities and architecture.

As one of the earliest areas to open a port in modern times, the successive emergence of the concession was one of the first physical entities to embody the intermingling of Chinese and Western cultures. From the perspective of regional history, due to the specificity of the context and period of its formation, it represents the regional development of modern Wuhan, accompanied by extensive cultural and economic ties with Western countries, which led to the pioneering development of Wuhan's urban construction and accelerated the process of modernisation of traditional Chinese cities. In terms of architectural history, the concession buildings were the earliest buildings in Wuhan to embody modern architectural functions.

With the continuous development of the former Hankou concession, the Hankou concession is now a national key cultural relics protection unit, with a wealth of outstanding modern buildings remaining in the area. In 2003, the Wuhan Institute of Excellent Historical Buildings was established, and 88 excellent modern buildings have been registered and listed, but in recent years, the government has tended to focus on the physical environment at the "display level" of the listed buildings, but little consideration has been given to the balance of the various environments at the "living level" of the buildings. There are still a large number of unlisted outstanding modern buildings in the Hankou concession area that are in a precarious state. Existing research and conservation work on the buildings in the Hankou concession area has focused mainly on the study of residential and public buildings. The government's top-down conservation and reuse practices have been concentrated on Zhongshan Avenue, Jiangnan Road and along the riverside avenues, where important buildings such as financial and public buildings have been relatively well protected. The city government's Community 883 programme has improved the infrastructure and alleyway space of the Li-Fen Housing, which

has to some extent enhanced the working, living and recreational environment in the Hankou concession. However, the heritage of modern historical buildings in the Hankou concession area has not been systematically reviewed, and due to a lack of understanding and recognition of the architectural culture that remains in this area, the existing buildings are in a state of inefficient use or facing demolition. The existing renovation and reuse of modern industrial heritage in the former concession area of Hankou is also mostly bottom-up and spontaneous, often based on the commercial value of the site, and often more destructive to Wuhan's modern historical architectural culture than reuse.

At the end of 2017, the State Council officially approved "supporting Wuhan to build a national central city", and Jiangan District followed the trend and proposed the development plan of "two districts and one city" to build Hankou Riverside International Business District, Hankou New City of Science and Technology and Hankou Historical and Cultural Style District.³ This is an attempt to find a new focus and trigger point for economic and social development. Based on national policies and the constant renewal and development of the city as a whole, the demolition and construction of the Hankou concession area is no longer compatible with the needs of society. The whole area as an organic living organism needs to break down the 'old' and create the 'new' in the process, in order to find a way to survive. The conservation of historic architectural heritage is not only based on the premise of preserving its authenticity, history and culture, but also has more established conditions and constraints. In the process of conservation, it is important to consider how to comprehensively protect the buildings while preserving the cultural value of the historic district.

Purpose and Significance of the Study

Purpose of the Study

The development process of a city is in essence a process of constant renewal and alternation of old and new buildings. In the process of urban regeneration, new buildings are constantly emerging to drive the development of the city, while historical buildings, as historical relics, also exist in metabolism, and are also developing and changing. Along with the accelerated pace of urban regeneration in modern China, the potential value and ecological significance of the

³ Wuhan Urban Planning Administration. Wuhan Urban Planning Chronicle [M]. Wuhan: Wuhan Press, 1999.

renovation and reuse of historic building areas is gradually being appreciated.

This thesis examines the overall development history of the former Hankou concession area and the reuse of the existing modern architectural heritage. Based on a comprehensive analysis, generalisation and research of the first-hand information obtained from the research and a large number of historical documents consulted, and with reference to relevant cases at home and abroad, the thesis explores the more effective conservation and use of the Hankou concession area, which still has value and potential for use today.

Significance of the Study

Deepening Research in the Architectural Discipline

The period of the emergence of the concession coincided with the period of the emergence and development of modern architecture, which allowed for an additional transitional period in the development of Chinese architecture from traditional to modern architecture. The architecture of the Concessions reflects a combination of the local architectural styles of the colonial countries and the architectural features of the Wuhan region, including a degree of integration of construction techniques. It is clear that the introduction of foreign architecture in modern times has contributed to the development of Chinese architecture.⁴ The study and analysis of concession architecture has now become one of the most important research topics in the Chinese architectural discipline, and is of great significance to the development of architectural education.

Effective Ways of Using Resources

The conservation and regeneration of the concession area has two resource advantages, it is a re-integration of the physical and social cultural heritage resources: firstly, the renovation costs of the old area are on average lower than the new design costs of the vacant land, which shortens the construction period; secondly, the concession area has great historical and cultural value of intangible assets, and this intangible "cultural asset" cannot be obtained directly with money.

Since the early 1990s, most large and medium-sized cities in China have been revising their urban master plans, and some areas along the Yangtze and Hanwaters in Hankou and Hanyang

⁴ Lai Delin. Research on the History of Modern Chinese Architecture [M]. Beijing: Tsinghua University Press, 2007.

are facing comprehensive regeneration, with some of the remaining buildings still having value for use. The conservation and reuse of the former tenement areas of Hankou is therefore of practical importance and a topic that needs to be explored in depth at this stage.

the Requirements of the Times for Sustainable Development

In recent years, the state has advocated the path of saving society and sustainable development. The changes in cultural, economic, ecological and other values brought about by sustainable development make us look at the surrounding old sites with a new attitude. One is to change from only focusing on high-value historic areas to focusing on wider old sites, and to give the region wider adaptability with a more creative vision; the other is to change from only focusing on the historical and artistic value of old sites to focusing on their economic , social and ecological potential value as part of the overall socio-economic system. The reuse of modern concession areas can become an opportunity for urban development, providing us with sustainable development ideas with more cultural, economic and ecological values.

the Material Carrier of History and Culture

The very existence of the Concession represents a pivotal period in the development of Wuhan, and the historical buildings of the Concession are the crystallisation of the material and spiritual civilisation of human society, as well as being witnesses to this important period of history. They reflect the evolution of Wuhan during a particular historical period, and represent the most colourful aspect of the city's modern history, a condensed history book and an indispensable part of the historical memory of its inhabitants. Therefore, the preservation of the Hankow tenement area in reuse means that the relevant history, culture, background events and cultural spirit are carried in the form of a material carrier.

Research Methodology

literature Research

It mainly collects relevant materials on the protection and reuse of the Hankou concession, and understands its era, cultural background, and related research and practical results, so as to give a clear orientation to the research of this paper on the protection and reuse of the Hankou concession. At the same time, with the help of relevant theoretical achievements, statistical data and scientific research methods, it lays a foundation for the in-depth research of the subject.

Field Research

On-the-spot observation, surveying and mapping, interviews with relevant personnel, etc. were conducted on the original concession of Hankou. For data collection, we mainly follow the 6W principle to study this topic, namely (What, Why, When, Where, How, Who). That is, the past and present situation of the Hankou concession that may be involved, the background, opportunities and reasons for the protection and reuse of the Hankou concession, the time of the previous reconstruction and expansion of the Hankou concession, the changed functional use, the regional environmental design method, the engineering elements and the specific design. The program and the investors, designers, and participants of previous projects are analyzed and researched.

Interdisciplinary Reference

By drawing on research methods from other relevant disciplines, such as sociology and statistics. Use these methods to further analyze the research to make the conclusions more scientific and objective. Drawing on the vision of "Architectural Anthropology", it records and analyzes the events that have occurred in the construction and continuous use of buildings, customs and the imprints left in the process of interaction with buildings.

Review of Relevant Literature

The conservation of historic districts and buildings first originated in Europe. From the beginning of considerations of human ecology and the recognition of the non-renewable nature of resources, it developed into the beginning of the protection of the ecological environment, then into a further concern for the inhabitants of urban life and the various man-made, natural and human environments of cities, and finally, in the middle of the last century, into the conservation and reuse of the historical monuments of cities, especially concerning the historical heritage buildings. The conservation of historic districts in Europe has undergone an intense development, from the stylistic restoration represented by Viollet le Duc, to the anti-restoration movement of William Morris, to the documentary and scientific restoration based on the idea of conservation in Italy. Such discussions and the upward spiral of development have contributed to the pace of conservation of historic districts. Throughout the world, a unified understanding of the conservation of historical and cultural heritage is gradually emerging, and protective

measures for the conservation of heritage, including old urban areas, historic districts and historic buildings, are gradually being established and put into effect. In this context, various studies on urban conservation, the regeneration of old cities and the preservation of historic districts have been carried out, and considerable results have been achieved. In 1933, the International Council of Modern Architecture issued the Athens Charter, and in 1964 the Venice Charter stated that the repair of missing parts of historic buildings must be in harmony with the whole, while at the same time being distinct from the original and ensuring that the restoration does not distort history. This was followed by a series of laws and regulations that have led to the maturation and improvement of the conservation of historical and cultural heritage.

There are also many studies from China as references that are of great relevance to this thesis. There is the collection of essays on the study and conservation of modern Chinese architecture edited by Zhang Fuhe, which includes Li Jiang's 'The Hankou concession at the Early Stage of the Opening of the Port' by the University of Tokyo, and 'A Study of the Market Space in the Hankou concession Area' by Chen Shiping and Duan Yu of the Wuhan Urban Planning and Design Institute. These studies provide accounts of the Hankou concession from different perspectives. The Hankou concession in the Early Years of the Opening of the Port investigates the initial period of the establishment of the concession, describing the characteristics of the initial period of the concession in terms of the formation of the concession, the life of the people in the concession, and the urban structure and architecture of the concession. Through a study of the history and current situation of the market space in the former concession area of Hankou, the article attempts to reveal the evolution of the external space of the city under the clash of East and West. The article analyses the urban layout of Hankou before and after the opening of the port, comparing the liberalised spatial layout of the traditional handicraft town before with the colonised city afterwards, as well as analysing the traffic, commercial and trade patterns, the composition of the inhabitants and the effects of the border area, to reveal the evolution of the market space and its characteristics in the concession area. The book, edited by Professor Wang Tan of Tsinghua University, is a comprehensive overview of modern Chinese architecture in Wuhan, edited by Li Chuangyi, Zhang Fuhe, Muramatsu Shin, and Terahara Kuniji. The book contains a census of the existing buildings in the Hankou concession, a survey of some of the basic conditions, and a very detailed overview of the majority of the existing buildings in the concession.

Key Concept Definition and Analysis

Hankou Concession

"In modern Wuhan, since the Treaty of Tianjin in 1858, Hankou was established as a port of commerce: The area below Jiangnan Road to Mayang Street and within the river to Zhongshan Avenue was successively designated as a concession for imperialist countries such as Britain, Russia, France, Germany and Japan, becoming a 'city within a city'⁵, but the concession, since the day they were established The original concept of land boundaries did not really describe the exact scope of the leased area. The successive expansions since the establishment of the concessions were equivalent to the total area of the boundaries delineated, meaning that the boundaries of the concessions doubled in size from the original ones.

Name of the Concession	Date of Establishment, Area	Date of Extension, Area	Total Area	Date of Repossession
British	British Treaty of Hankou Lease of 21 March 1861 458.3 acres	British Hankou Additional Leasehold Clause of 31 August 1898 337 acres	795.3 acres	15 March 1927 Establishment of Third Special District
Russia	Russian Lease of Hankou, 21 May 1896 414 acres		414 acres	1 March 1925, establishment of the Second Special District
France	Lease of 187 acres in the French Quarter of Hankou, 2 June 1896	The French Lease of Hankou for the Expansion of the New Territories, 12 November 1902, 305 acres	492 acres	February 14 August 1945 (1943) On 23 February, the Vichy regime in France had surrendered the leasehold to the Japanese)
Germany	Sino-German Treaty of Hankou Concession of 3 October 1895 600 acres		600 acres	14 March 1917, Establishment of First Special District
Japan	Treaty of 16 July 1898 on the Japanese Exclusive Leasehold of Hankou 247.5 acres	7 February 1907 Treaty of Hankou Leasehold for the Japanese in the Territory of Hankou 375.25 acres	622.75 acres	August 14, 1945

Fig.1: Summary Table of When Each Concession Was Established, Its Area, and When It Was Recovered

⁵ Wuhan City Urban Planning Administration, edited by Wuhan City Urban Planning Journal. Wuhan:Wuhan Publishing House, 1999. p2

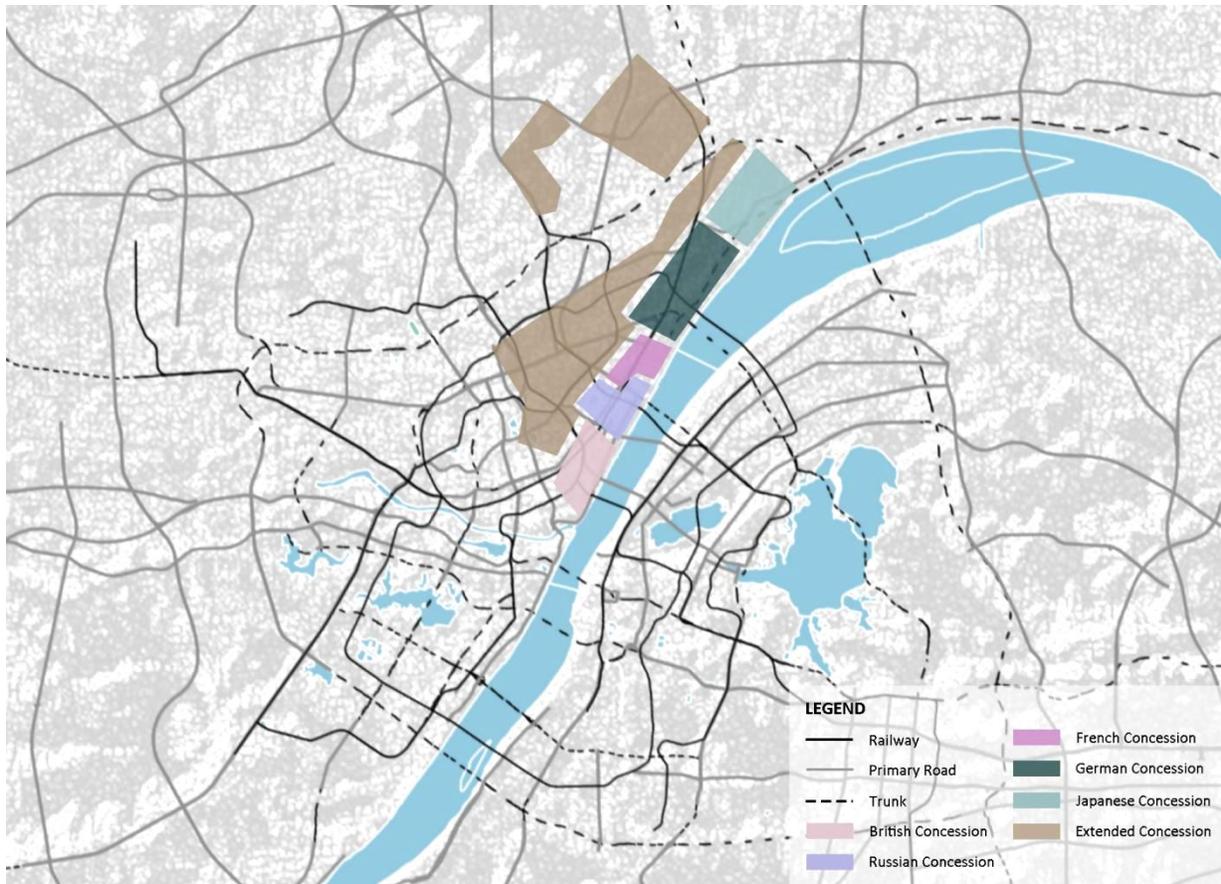


Fig.2: Map of the Boundaries of the Hankou Concession

Conservation and Reuse

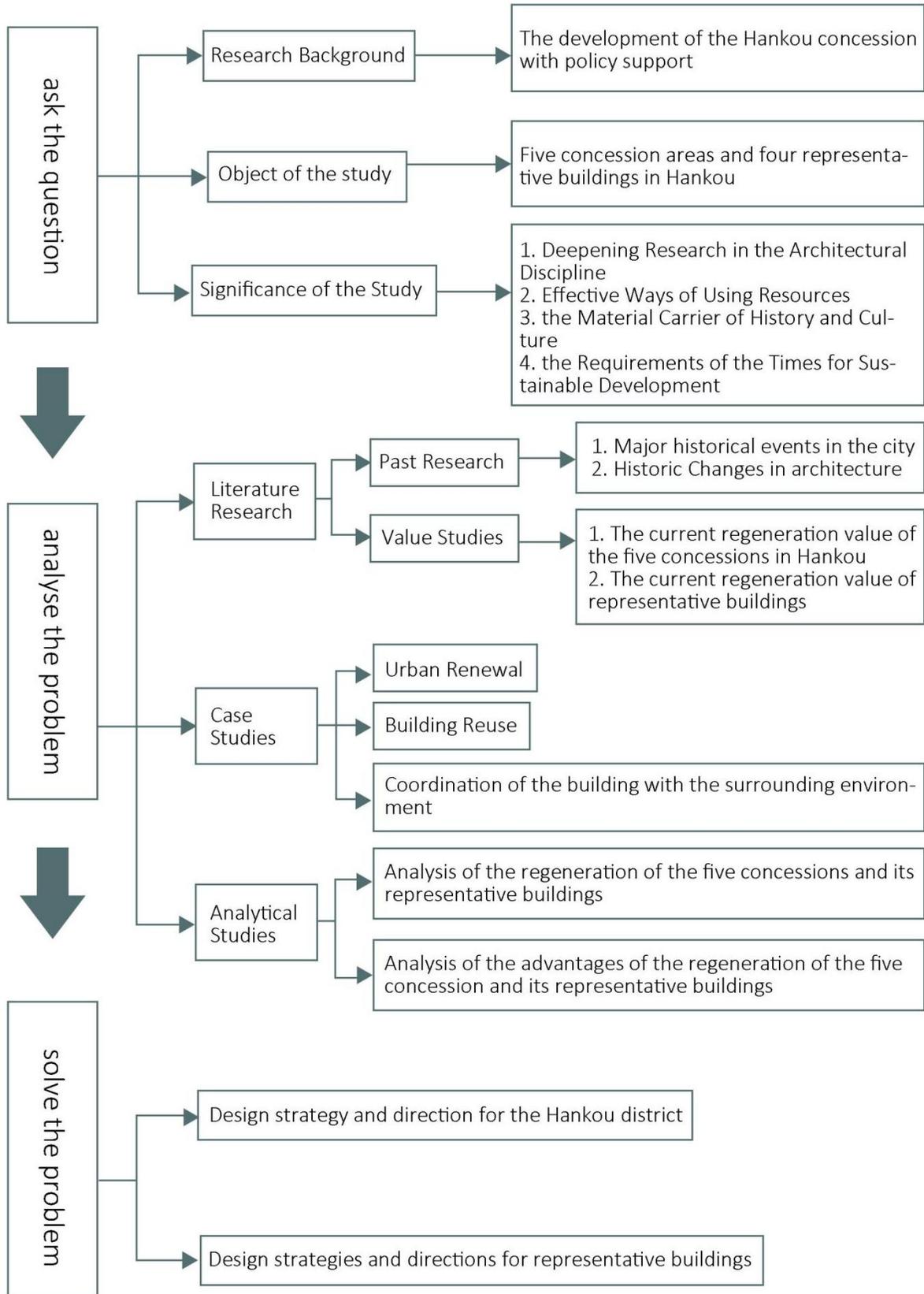
Conservation is the repair and improvement of historic buildings to make them meet the functional requirements of modernity, while maintaining the general character of the building. Conservation is different from the previous frozen preservation of historic buildings, but includes the rational use of resources, and its basic problem is how to integrate the environment reflecting the stages of historical evolution into the contemporary living environment.

According to the Encyclopedia of Architecture Design Engineering&Construction, reuse means: "the creation of a new function in the field of architecture, or the reconfiguration of a building so that it can be adapted to a new spatial form and thus continue the life of the building. Reconfiguration of a building so that it can be adapted to a new spatial form and thus continue the life of the building. The reuse of architecture allows us to capture the value of the building's past, to make full use of it and to transform it into a new vitality for the future."⁶

⁶ By Fu Zhaoqing. The Second Spring of Old Buildings. The Architect, 1993/11, P15

Reuse is a holistic strategy that includes, to some extent, appropriate conservation, restoration, renovation and renovation, the core idea of which is to bring old buildings back to life on the basis of the overall socio-economic and cultural development objectives. "Reuse" is a dynamic process of conservation and an effective way to rejuvenate buildings. In Australia, the Charter for the Conservation of Culturally Significant Places, published in 1979, explicitly introduced the concept of "adaptive re-use" of historic buildings, the key to which is to find appropriate uses for historic heritage, to make it compatible with the overall socio-economic and cultural development goals, and to achieve the maximum preservation and reproduction of valuable heritage resources. The key to this is to find appropriate uses for historic buildings, to make them compatible with the overall socio-economic and cultural development objectives, to achieve the maximum preservation and reproduction of valuable heritage resources, and to minimise changes to the function and structure of heritage buildings, and to make such changes possible.

Research Framework Diagram



CHAPTER TWO: HISTORICAL DEVELOPMENT OF HANKOU CONCESSION

Historical factors have played a leading and driving role in the evolution and transformation of urban space, and the context of the development of the Hankou concession and the main historical factors at each stage are the basis for the study of the morphological and cultural dimensions of Hankou's urban space. This chapter analyses the main background factors in the formation of the Hankou district and the three important stages of historical development in the formation of the concession area within it as well as describes the changes in policy guidelines in the development of the concession area.

Background to the Historical Development of Hankou

Hankou was founded during the Chenghua period of the Ming Dynasty, and it was only after the diversion of the Han River between about 1465 and 1470 that Hanyang was divided in two to form the city limits of today's Hankou. Hankou is the latest of the three towns in Wuhan today, lying quietly at the confluence of the Han River and the Yangtze River, across the river from the ancient cities of Wuchang and Hanyang, which were built in ancient times. The formation of Hankou created the present-day cheng'shi pattern of one city, two rivers and three towns in Wuhan.⁷

Geographical Background

Hankou is located on the banks of the Yangtze River and is part of a plain area with low terrain, historically a low-lying mudflat area with a network of lakes within its city limits, and much of the city's construction consisted of filling lakes to expand the city's land and building flood control dykes. While the rivers and lakes hindered the development of the city, on the one hand the numerous ports and the stopovers of merchant ships provided excellent conditions for cultural exchange between Hankou and the outside world.⁸

In ancient times, Hankou's regional and unique geographical advantage in the middle and lower reaches of the Yangtze River has been known for its prosperity in trade and commerce, and it

⁷ Pi Mingma. *Nearly 100 Years History of Wuhan* [M]. Wuhan: Huazhong University of Science and Technology Press, 1985.

⁸ Wuhan Local Chronicle Compilation Committee. *Wuhan City Chronicle (City Construction Chronicle)* [M]. Wuhan: Wuhan University Press, 1996.

only took a few hundred years for Hankou to overshadow the centuries-old ancient cities of Wuchang and Hanyang in terms of fame and prosperity, along with Jiangxi Jingdezhen Hankou is known as one of the four most famous towns, along with Jingde Town in Jiangxi, Zhu Xian Town in Henan and Foshan Town in Guangdong.

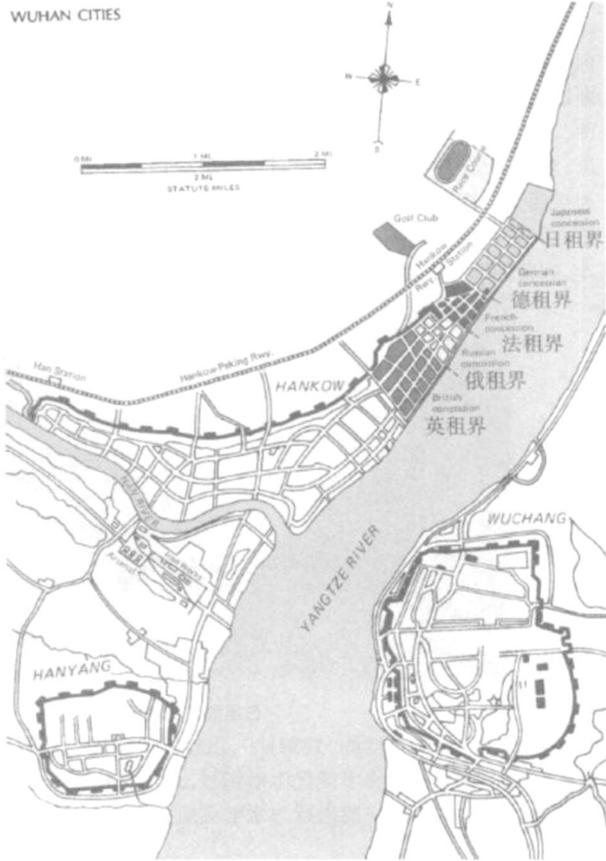


Fig.3: Hankou District Map

Political Background

After the Opium War in 1840, the Qing dynasty was forced to open five coastal ports, Guangzhou, Xiamen, Fuzhou, Ningbo and Shanghai, and to allow foreigners to live in the ports of commerce. 1856-1860 saw the Second Opium War, which gave the Western powers the privilege of sailing on the Yangtze River and forced the opening of more ports along the coast. In March 1861, the Treaty of Tianjin opened Hankou to the outside world and established a British Concession, and after the Sino-Japanese War in 1895, four other countries - Germany, Russia, France and Japan - established concessions in Hankou. The opening of Hankou was the first stage of Wuhan's modernisation, and after the opening of the port, merchants from home and abroad "immediately flocked to the city", setting up concessions, raw material processing

factories and foreign companies, which gradually led Hankou to move from a traditional closed city inland to an open international city⁹.

Cultural Background

Hankou is a rare example of a city in modern China that has directly developed from an ancient trading town to a modern international metropolis. This is due to special historical reasons. Therefore, Hankou's urban cultural background is also unique, integrating a variety of cultures. Hankou's urban culture integrates business culture, wharf culture and open culture. It shows that the secular culture of citizens occupies the dominant position of urban culture, the whole city is open and dynamic, and open culture is expressed as active learning and acceptance of foreign culture.

To this day, Hankou is still the commercial center of central China. As an inland city in the middle reaches of the Yangtze River, Hankou originated in ancient times, formed in modern times, and continued to modern times. Its urban form and style are mixed with cultural collisions and exchanges from different historical periods and different sources to form today's urban space. Implanted and actively absorbed the construction ideas from China and the West, and finally formed today's city appearance.

Development of the Concession Area

Hankou has a history of over 500 years and its urban development has spanned three stages: ancient, modern and contemporary. Hankou lived because of the Han River and was formed because of shipping. A spontaneously formed traditional Chinese city pattern was formed in the area of Hanzheng Street and Huangpi Street by the Han River. The city of Hankou expanded rapidly along the direction parallel and perpendicular to the Yangtze River, and the urban layout also underwent a qualitative change. In different historical stages and under the guidance of different urban properties, the urban construction of Hankou also presents different themes, contents and characteristics. In the urban space of each stage, there are both local and foreign, and the process of "generation, development, collision and mixing" occurs, and finally the status quo of Hankou's urban layout is formed. ¹⁰Among the modern cities, Hankou has both a certain

⁹ Hubei Provincial Local Chronicle Compilation Committee. Hubei Provincial Chronicle (Memorabilia) [M]. Wuhan: Hubei People's Publishing House, 1990.

¹⁰ Wuhan Urban Planning Administration. Wuhan Urban Planning Chronicle [M]. Wuhan: Wuhan Press, 1999.

representativeness and the particularity of its development. The urban development of Hankou is characterized by a short period of time, rapid transformation, clear stages, and obvious characteristics of each stage. It should be classified according to the type of urban space. Western collage-style cities, so the study of its urban space also has certain significance.

As an important part of the urban spatial pattern, the urban layout is closely linked to the history of the city, and in what way does this linkage reflect the dynamic development of history in the dynamic changes of urban space, and how do the various stages of historical urban development and layout relate to the current urban layout and how does it change? These should be analysed in depth in order to gain a comprehensive understanding of the history of the city and its impact on spatial change.

Ancient Period (before 1861)

The formation of the traditional city of Hankou was a spontaneous and dynamic process, facilitated by the convenient land and water crossings at the Hanshui inlet wharf and the dense flow of people, which led to a flourishing of trade and commerce. Relying on this 'growing point', the city of Hankou began to sprout. A large number of shops and residential buildings quickly flourished along the Han River, forming the beginnings of the traditional urban commercial centre of Hankou in the area of today's Huangpi Street and Hanzheng Street, where a large number of dense and intricate street traffic systems were gathered¹¹.

As can be seen from Fig.4, the construction of Hankou along the Han River in the late Qing Dynasty had already reached a certain scale, and its early development was not strictly planned, but was in a disordered state of natural flow. The flexible development of the natural type is far inferior to that of Wuchang and Hanyang as provincial, prefectural, and county records. They are arranged according to the taste of cities and towns in the feudal era, and city walls, government offices, and markets are built.¹² Driven by the economy, combined with the actual ability of waterproof filling, the market is gradually extended. Wherever commerce and trade develop, the city will develop. Since there is no limitation of city walls, the urban development of ancient Hankou was only limited by the Yangtze River and Han River, showing a semi-closed state, showing the typical spontaneous formation of traditional Chinese urban layout

¹¹ Pi Mingma, Tu Wenxue. General History of Wuhan (Volume of the Republic of China) [M]. Wuhan: Wuhan Press, 2005.

¹² Like Wuchang and Hanyang, Hankou had its walls built in 1864, but they were dismantled in 1907 due to the rapid expansion of the city, which limited its development.

characteristics - unplanned and irregular road network system and flexible urban space.

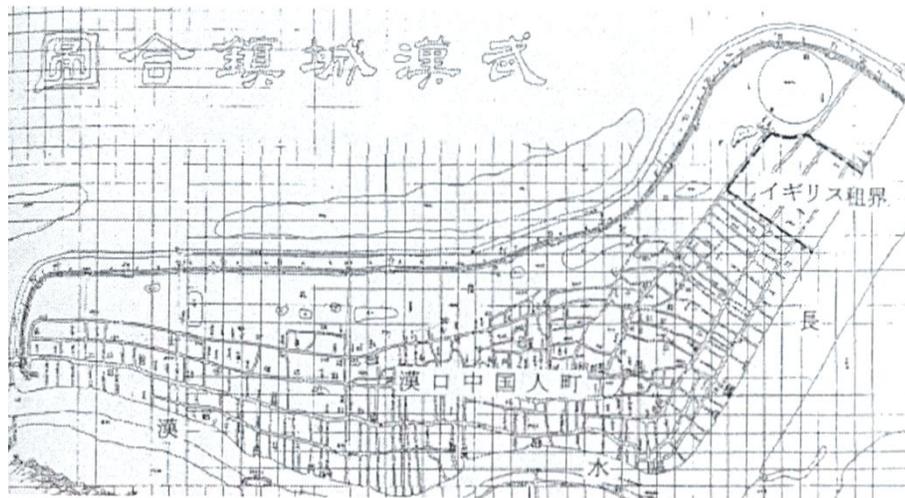


Fig.4: The Urban Form of Hankou in the Late Qing Dynasty

Modern period (1861-1949)

The modern period from 1861 to 1949 was one of the most active periods in the history of Hankou's urban development, during which the city's population increased dramatically as a result of increasing trade and commerce, which created a need for living, living, activity and working space, manifesting itself in a rapid expansion of urban space.

In October 1864, in order to strengthen the defence of Hankou against the influence of the Nian army, a castle was built at Hankou Hou Lake. 11 miles of castle were built from Qiaokou to Shabao (today's Yiyuan Road) to ward off flooding from the East and West Lake and Hou Lake, and the former low-lying land was gradually filled in to become a residential area, allowing the urban area of Hankou to expand and being the basis for the construction of the concession area.

The expansion of the concessions was faster at the end of the 19th century and foreigners carried out a lot of construction in the concessions, laying roads and building docks. The five countries' concessions were rapidly lined up along the Yangtze River for construction and had broken through the limits of the city walls, with the southeast corner of the city walls disappearing first.

In 1906 the Luhan Railway was completed and opened, and the mode of transport in Hankou shifted from Yangtze water transport to rail transport, and the direction of urban development shifted from along the Yangtze to inland.

In 1907, Hankou Castle was demolished and the foundations of the city were transformed into a

road, starting from Qiaokou and ending at Jiangnan Road, called Houcheng Road, which is the section from Liudou Bridge to Jiangnan Road today. This was the first modern road in Hankou, the beginning of the modernisation of the city and a sign that Hankou was moving from being along the lake to being along the river.

Between 1912 and 1920, after the Xinhai Revolution, there was a building boom in Hankou, and the vacant lots and ruins in the bordering tenements became sought-after sites.¹³ These were mostly commercial comprador by purchasing land for the development of urban residential areas and businesses; in addition to the official development of land around the railway for railway land. Both private and official developments of the city were planned to produce an orderly urban space.

In 1918, the Hankou municipal government began to improve the old city of Hankou, showing the widening and improvement of streets and alleys.

Between 1929 and 1935, the former Ximan Road was widened into Zhongzheng Road (today's Jiefang Avenue), showing the city's development across the railway, reflecting the openness of urban development and the orientation of transport to urban development.¹⁴

From then to 1949, due to the impact of the war, a large number of people fled, factories were relocated, and the development of Han and Japanese cities stagnated.

In modern times, the construction of Hankou's city was mainly based on the construction of infrastructure (roads, railways, etc.)

The main feature of its construction is urban expansion. It can be seen from Fig.5 that in the process of urban construction of Hankou in the modern period, the city gradually formed an east-west frame of "Yanjiang Avenue-Zhongshan Avenue-Jingnan Railway-Jiefang Avenue", and the north-south Jiangnan Road was connected in series, Hankou The process of urban expansion follows the transformation of the nature of the city and the transfer of the urban development center, from the Hanzheng Street and Huangpi Street in the traditional urban area to the Liudu Bridge and Jiangnan Road.

¹³ Pi Mingma. *Urban History of Modern Wuhan*, Beijing [M]. China Social Science Press, 1993, p. 300.

¹⁴ Pi Mingma, Wu Yong. *Five Hundred Years of Hankou* [M]. Wuhan: Hubei Education Press, 2005.

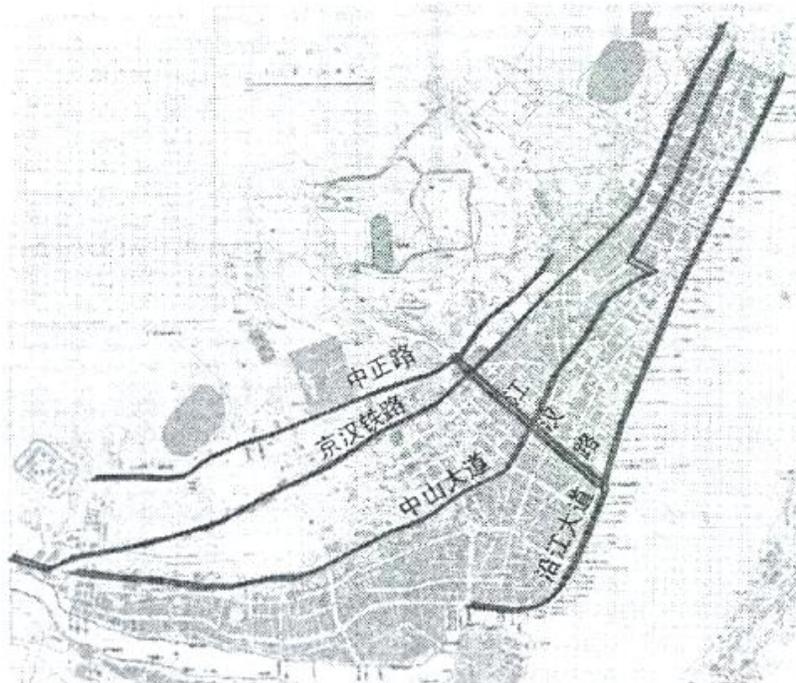


Fig.5: Urban Space in Hankou in 1949 (The Lines Are the Main Roads of Hankou City)

Contemporary period (1949 to the present)

In contemporary, Hankou's urban development was slow. Today, Hankou is only the northern bank of the Han River on the west bank of the Yangtze, a collective name for the three districts of Qiaokou, Jiangnan and Jiangnan, and has no practical administrative significance. In the modern era, Hankou retains the influence of the modern era, being the commercial centre, financial centre and transport centre of Wuhan and the central region. During the modern period, Wuhan began to industrialise, and Hankou's urban development was based on that of an industrial city, beginning the process of urban modernisation and showing an unprecedented rate of urban development, with a fundamental change in the nature of the city and the driving force of its development.¹⁵ The modern era saw the integrated development of Hankou in conjunction with Wuchang and Hanyang, and the opening of the Yangtze River Bridge in 1954 laid the foundation for the three towns of Wuhan today.

Today, Hankou has formed a city map of 'Yanjiang Avenue - Zhongshan Avenue - Jiangnan Avenue - Jiefang Avenue - Development Avenue'. The general layout of the city continues the spatial characteristics of the city from the ancient and modern periods, showing respect for the

¹⁵ Wu Zhiling, Hu Yidong, Wang Xie, etc. Centennial Plan of Wuhan [M]. Beijing: China Construction Industry Press, 2009.

natural environment and topography.

As one of the second batch of national historical and cultural cities announced in 1986, Hankou, as the place where Wuhan's modern history began, has gathered a large number of modern historical architectural relics, and the Hankou Concession continues its modern historical appearance; however, the Hankou Concession has been subject to large-scale renovation activities, which have had a certain positive and negative impact on the historical appearance.

With the rapid economic development and soaring land prices in recent years, the Hankou concession, as the current urban core of Hankou, is the commercial, residential, transportation and financial centre of the city. Driven by the economy, the urban space of the Hankou concession has been experiencing 'organic growth' - an increasing density and height of buildings.¹⁶ The economic drive has also put historic buildings in danger of being demolished, the overall historic landscape has been increasingly destroyed, and the historic spatial layout has been increasingly eroded and replaced by modern urban spatial design, and the entire concession has changed dramatically.

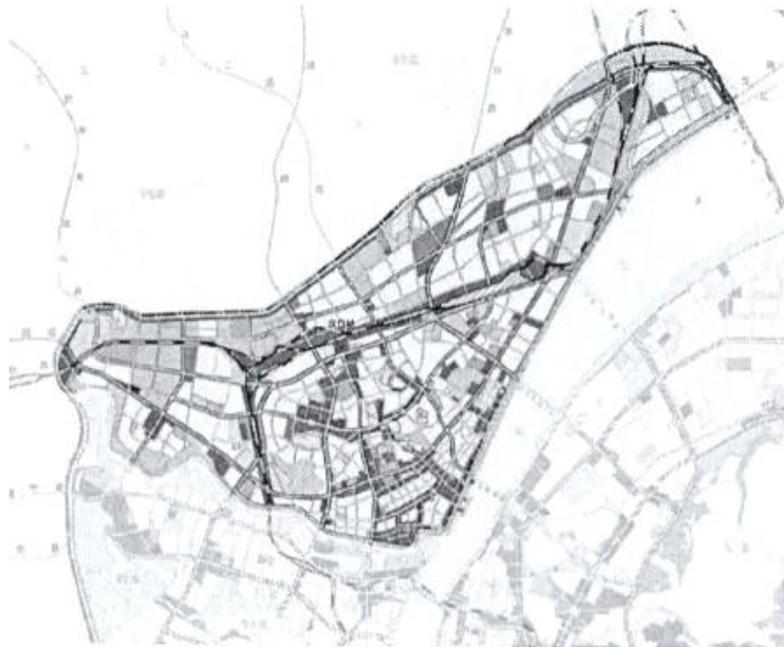


Fig.6: Contemporary urban space in Hankou Concession

Overall Policy Orientation

1966—1980

¹⁶ "Wuhan City Historical Atlas" editorial committee. Wuhan City Historical Atlas [M]. Beijing: China Map Publishing Press, 1998.

During this period, the Hankou concession, because of its colonial experience, became a projection of anti-imperialist sentiment in society at the time. After the founding of the People's Republic of China, the activities of foreigners in the concession area largely ceased, and in addition to the Western countries' blockade resistance to the new China, the Chinese side took over the assets of foreigners in China.

The assets in the concession area are disposed of in two ways after they are received: one is to directly use some abandoned and unowned buildings expropriated, and the utilization method is generally a continuation of the original function of the building, such as the deployment of residential buildings in the concession area to the local people. The second is to transform and use some buildings with strong colonial brand, and the way of use will generally change the initial function of such buildings. Today, the Xishang Jockey Club, which is located in the east of Jiefang Park, has been divided into several parts and assigned by the government to different social entities: the green space has been changed to Jiefang Park, the runway stand has been merged into the nearby military academy, and the houses and gardens have been classified into municipal literary and art groups. During this period, the Wuhan Municipal Government started to solve the living problem of people, made full use of the space in the concession area, filled in a large number of low-quality residential buildings and converted some buildings in the concession area into residences. Although the overall spatial form and architectural style of the block did not change much, it aggravated the deterioration of the ecology, humanities and architectural environment of the Hankou concession to a certain extent, leaving many hidden dangers for the subsequent protection and renewal work.

The idea of opposing the Hankou concession Area as a revolutionary object reached its peak during the "Cultural Revolution" period of "destroying the four olds". Churches are both capitalist and Imperialism has become a category of buildings that are "focused on" in the "Four Olds". They suffered material losses, but they have also been stripped of their religious functions and used disorderly. For example, the display of icons in the Catholic Church on Shanghai Road in the British concession of Hankou was destroyed, the collection of books was confiscated and lost, and the lobby and the bishop's palace were requisitioned by the cultural department. In addition, the important parts of the concession buildings, especially the Western-style decorations, were not spared, such as the neoclassical-style exterior decoration of Huiluo foreign firm on Lihuangpi Road, which was demolished during this period. In addition, the

policy of enriching the population in the concession area has continued. To make a large number of people relocate, a garden next to the Divanovan Mansion in the former Russian concession in Hankou was demolished and built into the current Dongtingli No. 1-12.



Fig.7: Hankou Huiluo Company Site

1981—1999

After the end of the "Cultural Revolution", the protection of cultural relics was on the right track, such as the selection of historical cities and the promulgation of the Cultural Relics Law¹⁷. The development of cultural relics protection work not only creates the atmosphere of the protection system of the building people in the settlement, but also directly promotes it to become a protected object¹⁸. The site of the "87 Conference" is a western-style apartment built by the British in 1920. It was admitted to the second batch of national key cultural relics protection units in 1982. A single building on the "National Security" list. However, due to the failure to properly handle the relationship between protection and development during this period, the local government focused on improving the living conditions of urban residents, and lacked the concept and consciousness of cultural heritage protection, resulting in difficulties and twists in the protection of the Hankou concession.

In the mid-1980s, the nationwide "old city renovation" campaign was launched. Many cities quickly demolished or renovated landmark historical buildings and cultural relics in local historical and cultural blocks, and built modern high-rise buildings on their original sites. In

¹⁷ The Law of the People's Republic of China on the Protection of Cultural Relics, Adopted on 19 November 1982.

¹⁸ Ji Guoliang: A Study on the Heritage of Modern Foreigners' Architectural Remains in China, Shandong University, PhD thesis, 2015.

1985, Jiang'an District took the lead in demolishing 4 pieces of Baocheng Road, and built a modern high-rise building with both commercial and residential functions on the original site. However, due to the large scope and the involvement of too many residents, the building density and volume of the area were increased. The rate both exceeded the standard, not only did not achieve the expected effect, but also gave birth to the lower limit of the old city renovation standard. In general, local governments were constrained by economic factors in the early stage of reform and opening up, and were unable to carry out large-scale "transformation" of the traditional pattern of historical and cultural blocks. Therefore, by the end of the 1980s, the traditional pattern of the original Hankou concession area was basically well preserved.

In November 1988, the Ministry of Construction and the Ministry of Culture jointly issued Document¹⁹, clarifying the chronological division of modern buildings and the time period for which key protection is required, and at the same time requiring local governments to declare and announce cultural relics protection units at all levels. From this, the comprehensive investigation and protection of modern buildings in Wuhan really began. In 1993, Wuhan City announced the first batch of 102 outstanding historical buildings, of which 8 were buildings in the original concession area, and related protection work in the Hankou concession area followed. However, due to the lack of corresponding laws and regulations at that time, these buildings were only listed as cultural relics protection units in Wuhan, and were protected and managed by referring to the relevant regulations of cultural relics protection. Since then, the concept of unified planning and protection of historical buildings has emerged, and local governments have begun to put the protection of historical and cultural blocks on the agenda. In 1996, Wuhan compiled the "Plan for the Protection of Famous Historical and Cultural Cities", demarcating the Hankou concession area as an old city style area, and the name use and delimitation of Wuhan's old city style area began. At the beginning of the 21st century, on the basis of the master plan for the protection of the historic city, Wuhan started a block protection plan at the meso-level.

However, Wuhan entered a period of rapid economic growth after the 1990s, and the cultural benefits of the Hankou concession inevitably gave way to land economic benefits. The "old city renovation" for economic purposes is accompanied by "constructive damage", which has led to the demolition, reconstruction or illegal construction of a large number of historical buildings in

¹⁹ "Notice on Key Investigation and Protection of Outstanding Modern Buildings".

the area. The original "Jinyuan Building" was not in line with urban planning at the expense of the demolition of the original French patrol house.²⁰ Compared with the original buildings in the concession, such high-rise buildings are cramped, oppressive and lack aesthetic experience, which seriously affects the overall charm of the Hankou concession. The regret caused by the "old city renovation" of large-scale demolition and large-scale construction on the historical and cultural blocks has led to strong criticism from all walks of life, and the calls for stopping the large-scale demolition and large-scale construction in the historical city are also increasing. It is a pity that the awareness of cultural heritage protection failed to keep up with the pace of economic development at that time, and the rapid development of the city also brought many regrets.

2000—2022

Entering the new century, Wuhan's cultural heritage protection work has been vigorously promoted to enhance the city's core cultural competitiveness. In February 2003, the second executive meeting of the Wuhan Municipal Government passed the Measures for the Protection and Management of Wuhan's Old City Scenic Areas and Excellent Historic Buildings has made clear regulations on the protection and management of historical and cultural blocks and excellent historical buildings in Wuhan, thus formally establishing a multi-level cultural heritage protection system in Wuhan.

At this stage, the Wuhan Municipal Government began to protect the internal street fabric in pieces, blocks and sections, based on the concept of holistic conservation of the Hankou concession. In 2002, the city prepared a conservation plan for the Yiyuan Road area, which was considered in conjunction with the original Hankou concession area. The most important feature of this plan is that it adopts a graded conservation model, dividing each area into three categories: control areas, coordination areas and renewal areas, according to the integrity and value of each area, and formulating different conservation guidelines according to the conditions of each area. This plan has protected more than 100 single historical buildings in the concession area, as well as four core areas including Qingdao Road, "August Seventh " meeting site, Jiangnan Road, Zhongshan Avenue and Yiyuan Road. It has been instrumental in the

²⁰ Zhou Dejun. *The Concession of Hankou—An Investigation of History and Sociology* [M]. Tianjin: Tianjin Education Press, 2009.

preservation of the key core area of the concession.²¹ In 2008, Wuhan City compiled a protection plan in the name of the concession area. The focus of this round of planning is two: first, to coordinate the relationship between the overall protection of the region and the key protection of the four core areas; second, to plan the comprehensive functional planting of the city. Enter to update the promotion protection. For the purpose of urban construction, the implementation plan of the Qingdao road piece was first launched in 2008, and the Yiyuan road piece and the "August Seventh" meeting site piece were launched in 2012.

On September 25, 2012, the Wuhan Municipal People's Congress passed the "Wuhan City's Regulations on the Protection of Historic and Cultural Streets and Excellent Historic Buildings", which was implemented on February 1, 2013, marking a new phase in the protection of architectural heritage in Wuhan. stage. In 2015, Jiangnan Road and Zhongshan Avenue historical and cultural blocks became the first batch of Chinese historical and cultural blocks, and the "Qingdao Road", "August Seventh " meeting site and Yiyuan Road located in the Hankou concession area are the core protection areas. In December 2016, the two-year comprehensive renovation of Jiangnan Road and Zhongshan Avenue historical and cultural blocks was completed, and the facade near the main street of Zhongshan Avenue in the concession area was restored and restored to its original appearance as much as possible. So far, the protection and renewal of the four key planned blocks in the original Hankou concession area has been completed. Today's Hankou original concession style area has become a symbol of Wuhan's urban history and culture in the new era, and has gradually reached a co-ecological trend with Wuhan's urban cultural construction.

²¹ Yuan Jicheng. Chronicle of Hankou Concession [M]. Wuhan: Wuhan Press, 2003.

N.	name	location	categories			protection level
			cultural relics protection unit	excellent building	li fen	
1	87 meeting site	Poyang Street 139	√			national
2	The former site of the All-China Federation of Trade Unions and Hubei Provincial Federation of Trade Unions	You Yi Street 16	√			provincial
3	Hubei Gongjinhui site	Chushanli 28				provincial
4	Ruzi House	Poyang Street	√			provincial
5	Liu Shaoqi's former House in Wuhan	Shangdeli 4	√			municipal
6	Delin Apartment	Tianjin Road 2	√			municipal
7	The former site of the Yangtze River Bureau of the CPC Central Committee	Luojiashan Street 12	√			municipal
8	Flood Control Monument	Inside Riverside Park	√			municipal
9	The former site of the Central Committee of the Communist Party of China	Shengli Street 185、187	√			municipal
10	Xiang Jingyu House	Sandeli 27	√			municipal
11	"1·3" massacre site	Wuhan Guanqian Square	√			municipal
12	Hankou HSBC Bank Building	Yanjiang Avenue 99	√			provincial
13	Dazhimen Railway Station Waiting Hall	Jinghan Street	√			national
14	Zhan Tianyou's former house	Dongting Street 51	√			national
15	Citibank Building in Hankou	Yanjiang Avenue 97	√			provincial
16	Jianghuan Building	Jiangnan Road	√			national
17	Hankou Orthodox Church	Poyang Street 38	√			municipal
18	Hankou Shanghai Road Catholic Church	Shanghai Road 16	√			municipal
19	Hankou U.S. Navy YMCA Site	Lihuangpi Road 10	√			municipal
20	Hankou Macquarie Bank Building	Dongting Street 33	√			municipal
21	Hankou Commercial Bank Building	Nanjing Road 86	√			municipal
22	Yanye Bank Building	Zhongshan Avenue 998	√			municipal

23	Hankou Melchers & Co. Building	Yiyuan Road 2	√			municipal
24	Hankou Yokohama Zhengjin Bank Building		√			municipal
25	Hankou Nissin Foreign Trade Building		√			municipal
26	King Ming Building		√			municipal
27	Former site of the German Consulate in Hankou		√			municipal
28	China Industrial Bank Building		√			municipal
29	Former U.S. Consulate in Hankou		√			municipal
30	Former site of Hankou Telephone Bureau		√			municipal
31	The former site of Hankou Siemens		√			municipal
32	Deming Restaurant		√			municipal
33	Hankou China (Qing) Bank Former Site		√			municipal
34	Hankou Bank of Communications Former Site		√			municipal
35	Soong Ching Ling's former residence in Hankou in 1927			√		municipal
36	Jincheng Bank			√		grade 1
37	asia kerosene co., ltd.			√		grade 1
38	Lixing & Co.			√		grade 1
39	Russian Consulate			√		grade 1
40	Jiangnan Customs Supervision Office			√		grade 1
41	Bagong house			√		grade 1
42	Xian'an Fang				√	grade 1
43	Divanov Mansion			√		grade 1
44	Shou Shan Tang			√		grade 2
45	Shanghai Bank			√		grade 2
46	Zhejiang Industrial Bank			√		grade 2
47	Dafu Bank			√		grade 2
48	Juxingcheng Bank			√		grade 2
49	Wo Lee Bank			√		grade 2
50	Nissin & Co.			√		grade 2
51	French consulate			√		grade 2

52	German Ministry of Industry patrol room		√		grade 2
53	Russian consulate residence		√		grade 2
54	russian patrol house		√		grade 2
55	Xinyi Office		√		grade 2
56	English Chu Post Office		√		grade 2
57	Chinese Merchants Jockey Association		√		grade 2
58	Xintai Building		√		grade 2
59	Pinghan Railway South Bureau		√		grade 2
60	Wuhan Guard Command		√		grade 2
61	Chinese Communist Party Trust Bureau Hankou Branch		√		grade 2
62	Luojia Mountain Residential Area			√	grade 2
63	Tu Kunshan Mansion		√		grade 2
64	Zhou Xiangbai Mansion		√		grade 2
65	Shanghai Village			√	grade 2
66	Continental Fang			√	grade 2
67	tongxingli			√	grade 2
68	Liuye Village, Jiangnan Village			√	grade 2
69	Dongting Village			√	grade 2
70	Jinchengli			√	grade 2
71	hankou electric light co.		√		grade 2
72	Pinghe Packaging Factory		√		grade 2
73	Xiao Yaonan Mansion		√		grade 2
74	Gefeitang		√		grade 2
75	Oriental Bank		√		grade 2
76	security firm		√		grade 2
77	Tang Shengzhi Mansion		√		grade 2
78	Guangdong Bank		√		grade 2

Fig.8: Summary Table of Cultural Relics Protection Units, Excellent Buildings and Mileage in the Concession Area

Conclusion

The urban development of Hankou has its own different characteristics in each historical period. The characteristics of urban construction and urban space in the historical concession area of Hankou in the three historical periods are analyzed, and the urban characteristics of Hankou are summarized. The transformation of “ancient industrial and commercial town—modern semi-

colonial city—modern city” occurred. Different social backgrounds, different historical periods, and different social natures led to changes in the policies and guidelines of the government as a whole. With the continuous update and development of policies, it can be seen that people's perception of historical concession areas is changing, and the urban form that promotes Hankou has also changed. Semi-closed city-open city-modern multi-center combined city" This series of changes in urban space has had a huge impact on Hankou.

CHAPTER THREE: URBAN SPATIAL DEVELOPMENT OF HANKOU CONCESSION

Spatial Patterns

Displacement of the city center: Before the opening of the port, Hankou was a gathering place for business in Central China, and the business radiation was diversified. The city center was located on Hanzheng Street and Huangpi Street and adapted to this cohesive business pattern. After the opening of the port, along with the establishment of the concession area, the diversified business structure of Hankou gradually transformed into a unit radiation mainly oriented to Shanghai, thus prompting the displacement of the commercial center of Hankou. Liudu Bridge and Jiangnan Road along the river gradually replaced Hanzheng Street and Huangpi Street and became the center of Hankou City.

Before the opening of the port, Hankou was a market town formed gradually by the Han River, and was not planned. The spatial form of the city was unstructured and the roads and streets were random, reflecting its organic and gradual growth. With the opening of the port of Hankou, the street pattern changed dramatically.²² There was a gradual transition from the traditional Chinese spatial pattern of 'streets dividing buildings' to the Western spatial pattern of 'streets dividing buildings'.

For example, before the opening of the port, the main streets of Hankou, Hanzheng Street and Huangpi Street, consisted of a single street with interspersed lanes on both sides, which was the spatial pattern of 'streets dividing buildings'. The traditional Western street space is open, with buildings on each plot occupying as much of the street frontage as possible and forming appropriate courtyards within to meet the needs of various functions, thus creating a street space pattern of 'buildings dividing streets'. Streets divide Western cities into squares of varying sizes, known as blocks, which are the basic elements of urban space.²³ The spatial structure of the city, divided by the concessions after they were granted the right to lease land forever, reflects the spatial concept of the 'block', which is typical of the western 'block' spatial pattern. This spatial character was also adopted by the Chinese neighbourhoods adjacent to the concession areas in

²² Deng Zutao. *Urban Spatial Evolution and Mechanism Research in the Yangtze River Basin* [M]. Wuhan: Hubei People's Publishing Press, 2007.

²³ Yu Zhiguang. *Wuhan Urban Space Construction Research* [M]. Beijing: China Construction Industry Press, 2011.

later urban developments, such as the Bagong House in the Russian Concession. In some parts of the city, the diverging roads also create a spatial landscape that enriches the overall spatial form of the city.

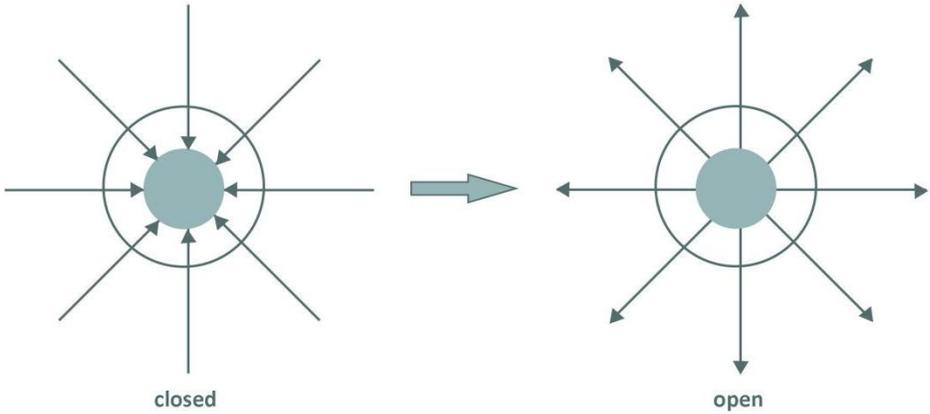


Fig.9: Diagram of Hankou's Transition from Closed to Open

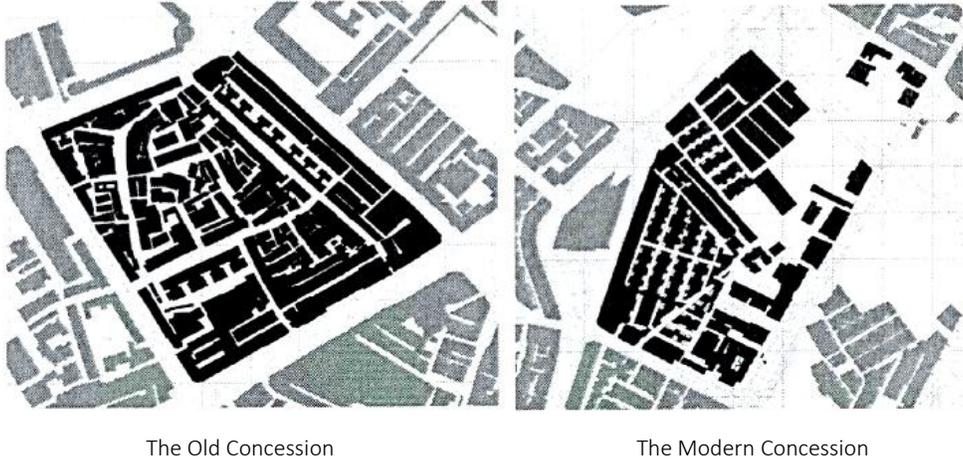


Fig.10: Spatial Pattern of Streets and Alleys in the Hankou Concession

Functional Spaces

Before the opening of the port, the city of Hankou was centred on Hanzheng Street and Huangpi Street and radiated in all directions, with mixed functions of urban land and no clear functional zoning.

After the opening of the port, the concessions developed independently and in different styles, but their roads and land use divisions still reflected a certain harmony and eventually formed a whole. After 100 years of evolution and development after the opening of the port, the urban land tends to be structured with the continuous integration of urban functions, and several

typical urban functional spaces have been formed in the concession area: from Jiangnan Pass to the present day Poyang Road, along the river avenue, including most of the central business space of the former British Concession; from the river avenue to Huangpu Road, together with the river bank and the wharf, the industrial storage and transportation space is formed (in recent years, commercial and office are gradually The former Yuehan Wharf and several neighbourhoods adjacent to it form leisure and entertainment spaces; and several neighbourhoods adjacent to Zhongshan Avenue are mainly residential and living spaces²⁴.

Therefore, the functional layout of urban land in the Hankou concession in recent years is still scientific and reasonable compared to that of the old city of Hankou. On the basis of giving priority to trade, finance, and industrial storage and transportation functions, the layout of the land in the concession area has been integrated and coordinated with administrative, living, cultural, public, and municipal facilities to ensure the normal operation of all urban activities such as work, residence, rest and transportation for the residents of the concession.

Road System

In addition to the architecture of the city, it is the organisation of the city's streets that makes the impression. Jane Jacobs once described: "When we think of a city, the first thing that comes to mind is the street. When the streets are alive the city is alive, and when the streets are dull the city is dull."²⁵

Roads are the hallmark of the evaluation of a city, the most important element that constitutes materiality, forming the main skeleton of the city, which is then populated by buildings and open spaces, ultimately shaping a rich city. The urban road system has changed throughout history and has directly altered the structure of the city, causing a huge impact on the final form of urban space.

Road Evolution

In China's modern history, colonialists once controlled the vast rural areas and cities along the southeastern coast of China, along the Yangtze River (the middle and lower reaches of the Yangtze River) and along the railway lines in the northeast region. These cities took the lead in

²⁴ Su Jilang. *The Dynamic Development of Chinese Modern Urban Culture: A New Vision of Humanistic Space* [M]. Hangzhou: Zhejiang University Press, 2007.

²⁵ Ashihara Yoshinobu, Yin Peitong. *The aesthetics of the street* [M]. Shanghai: Baihua Wenyi Publishing House, 2006.

becoming the dumping market and distribution and transshipment center of the Western capitalist commodity economy. As a result, the modern southeastern coastal urban agglomeration, the urban agglomeration in the middle and lower reaches of the Yangtze River, and the northeast urban agglomeration have been created, which are "prosperous because of business, prosperous because of mining, and new because of roads". In addition, the Qing government opened 35 cities by itself as "Ports opened voluntarily by China" for foreigners to live in and conduct trade activities.²⁶ All these commercial ports have become open markets in modern China, deepening the extensive connection with the culture and economy of Western countries, thus bringing urban construction to the forefront and accelerating the modernization and transformation process of traditional Chinese cities.

The road system in the Hankou concession was largely established in the modern period, but the change in traffic patterns and the explosion in the number of motor vehicles have placed new demands on the transport system in the Hankou concession. As shown in Figure 11, the evolution of roads in the historical urban area of Hankou shows the following characteristics:

- (1) In the ancient period the roads consisted mainly of low-grade narrow lanes, and in the ancient period there were only four main roads running parallel to the Han River in the entire town of Hankou.
- (2) In the modern period, the built-up area of Hankou doubled in extent compared to the ancient period, and Hankou's urban roads were in a period of rapid construction.
- (3) The contemporary period of roads in Hankou in the modern period basically overlaps with the road system in the modern period and is based on the continuation of the modern road system, with the streets in areas with high traffic volumes being renovated by widening and straightening the original roads accordingly, or increasing the density of roads on top of the original road network, in order to solve the problem of traffic congestion in the concession, thus allowing the concession to still maintain the modern urban structure.

It can be seen from Fig.11 that in the Hankou concession, the streets in the ancient urban area and the modern urban area show completely different structural states. However, each area follows its own road system and is laid out according to its own rules, but they are connected with each other to form a complete road system.

²⁶Xiong Guoping. The evolution of contemporary Chinese urban form [M]. Beijing: China Architecture Industry Press, 2006.

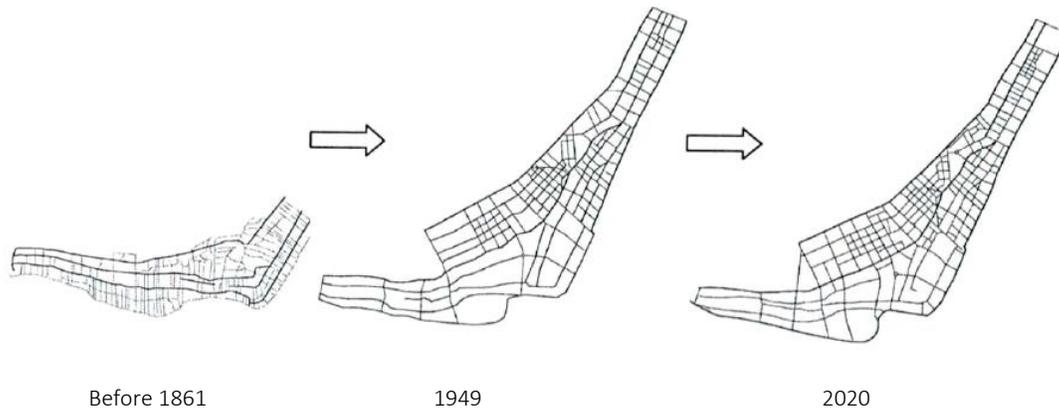


Fig.11: Evolution of the Main Roads in the Hankou Concession

Road Grade

Avenues: In ancient Chinese cities, the term 'avenue' referred mainly to the post roads used for external traffic in the city, while 'avenue' is basically a modern name for urban roads. The concept of an "avenue" is equivalent to the modern "avenue", and generally refers to a road of a higher grade, which is planned for motor vehicles. The three 'thoroughfares' in the Hankou concession area all run parallel to the Yangtze River, the Han River, and the river bank, and the closer they are to each other the more obvious the parallelism becomes²⁷.

Roads: In terms of the development of Chinese cities, the concept of 'roads' did not exist in the earliest Chinese cities, but originated from the experience of the construction of the modern concessions. Jiangnan Road was the first 'road' in Hankou, and most of the 'roads' were perpendicular to the Yangtze River and the Han River. According to statistics, the number of 'roads' in Hankou is the highest among the total number of roads, with more than 70 in total, while most of the 'roads' are located in the modern urban area.

Streets: The 'streets' are those perpendicular to the Yangtze River and the Han River, and according to statistics, there are 24 'streets' in the Hankou concession, most of which were also built in the modern period.

Lanes: Because the ancient urban area of Hankou is a street formed spontaneously, the internal lanes are intricate, the number of "lanes" is large, and the texture is generally irregular. There are many lanes perpendicular to the direction of the Yangtze River. Pull knots to form a network.

Li: Lifen is a unique combination of Chinese and Western residential buildings in and around

²⁷ Zhou Niu, Zhao Jianbo, Zhang Yukun. The density of street interface and the planning control of urban form [J]. Urban Planning, 2012 (6).

the Hankou concession. The roads inside the Lifan are similar to traditional lanes, but are generally called "li".

In the road system of the historical city of Hankou, "streets" and "lanes" are the original road systems in Hankou, while "avenue", "road" and "li" are urban construction practices influenced by Western roadism. The combination of the two forms Hankou's unique urban road system. According to the relationship between roads and the Yangtze River and Han River, this phenomenon in Chinese cities shows the respect and dependence of urban roads on the natural environment, and the development of ancient and modern cities in Hankou is a kind of adaptation to local conditions.

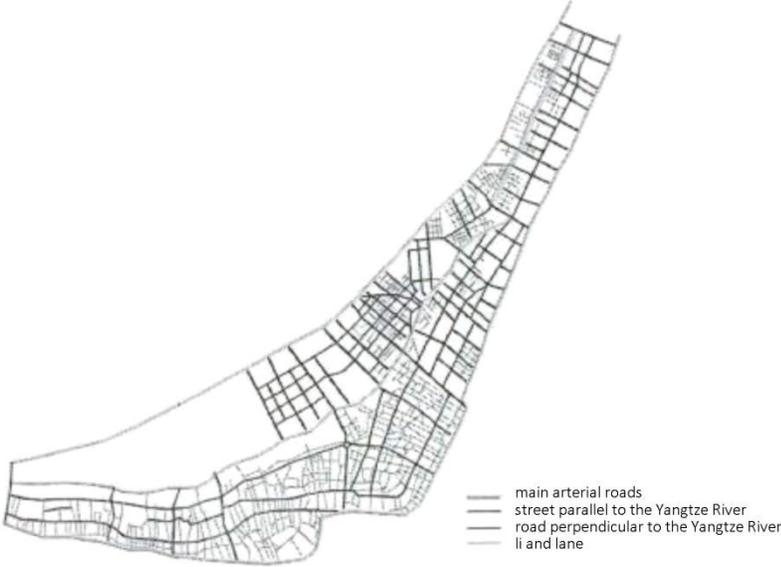


Fig.12: Hankou Concession Road Grade Map

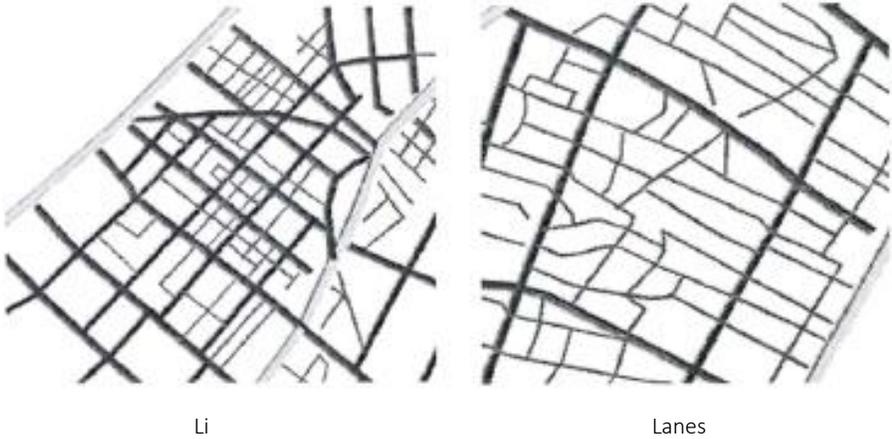


Fig.13: Comparison of the Layout of the 'Lane' and the 'Li'

Road Form

Street form and its layout affect the final form of the city. Bending or neatness affects the overall outline of the city, and the direction and angle of city streets also have a huge impact on the city structure. The formation of urban road forms is based on different natural topography and political factors. By analyzing the form of urban roads and their causes, the process of forming the main skeleton of the spatial structure of the Hankou Concession is three-dimensionally analyzed.

Fig.12 shows that in the Hankou concession, the 'streets' running parallel to the Han River extend in line with the curvature of the river bank, and the parallel roads in the modern Concession are more regular than those in the ancient urban areas. The 'roads' are relatively regular in form, especially in the modern concessions, and the distances between them are more evenly maintained.

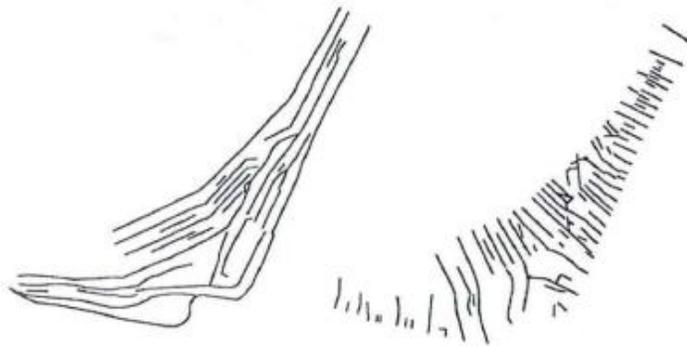


Fig.14: Layout of Horizontal and Vertical Roads in the Historic District of Hankou

Although the modern urban area of Hankou was planned, the construction of roads did not follow the rule of 'streets parallel to the Yangtze River and roads perpendicular to the Yangtze River'. In contrast to the functionalist-oriented western urban fabric, the urban fabric of the modern Hankou district is less regular and is partially characterised by the following:

Discontinuities: The length of the streets in Hankou concession areas is generally shorter than in the ancient city, and the longer streets in the concession areas are generally disconnected in the middle, for example, Zhongshan Avenue breaks off at Huangxing Road and rejoins Shengli Street, and Dongting Street breaks off at Tianjin Road²⁸.

In both the ancient and modern urban areas, the 'streets' in Hankou were long and generally ran

²⁸Zhou Niu. Discussion on the "line sticking rate" in the planning control of street interface form [J]. Urban Planning, 2016(8).

through several concessions, and as the roads in each concession were built independently, the roads were partially curved and changed direction in order to link the coherence of the roads in the concession.

Curved roads: In the modern urban area of Hankou there are several abruptly curved roads, such as Chongshan Road and Baohua Road (Fig. 15), which have created many 'interesting' spaces for the urban fabric of Hankou and have broken the dull pattern of Hankou's urban space.

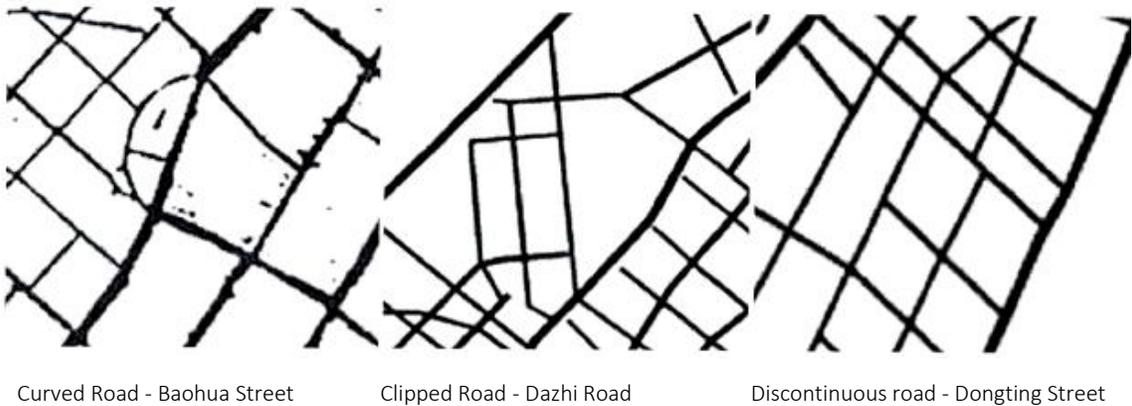


Fig.15: Road Node Pattern in the Hankou Concession

Clipped roads: In addition to their parallel and perpendicular relationship to the water, there are clipped roads in the historic district of Hankou.

The overall form of the roads in Hankou is parallel and perpendicular to the water, and the particular road form that emerges is very much related to historical events and the layout of the Beijing-Hankou railway at the time.

Comparing the road forms in the historic city of Shanghai in Fig.16, the roads are regular and also in parallel and perpendicular relationships with the water bodies, thus showing that the development of modern Chinese cities was site-specific and had a greater connection with the natural environment. Similar to Hankou, Shanghai's roads also show partial discontinuities and pinched roads, which are also associated with the independent construction of the concession area.²⁹ In general comparison, the road form in the historic district of Hankou is freer and the roads are more obviously dependent on the natural environment, with the curved roads of its ancient district and the regular roads of its modern district, showing The curved roads of the ancient city and the regular roads of the modern city show different forms, but with certain

²⁹Wei Shu. The Apocalypse of "Greater Shanghai Plan", Planning Changes and Spatial Evolution of the Downtown Area of Shanghai in Modern Times [M]. Nanjing: Southeast University Press, 2011.

connections and harmonious combinations.

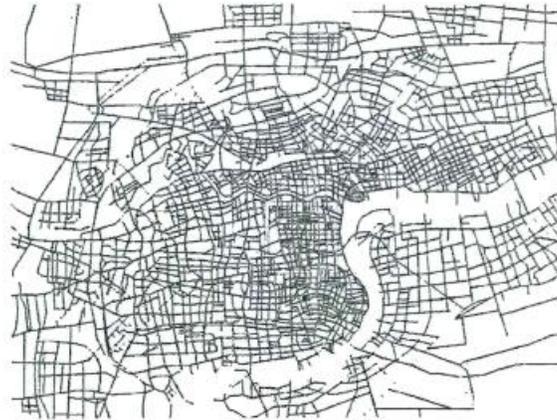


Fig.16: Road Patterns in the Historic City of Shanghai

Road Structure

In the Hankou concession, roads of different shapes and scales are combined to form a collage of independent and interconnected road structures in the ancient and modern urban areas of Hankou, which are then combined to form a collage of road structures in the Hankou concession. The road structure in the ancient urban area of Hankou was organic and irregular, with the main street running parallel to the Han River as the skeleton and other roads and lanes serving as links³⁰.

The modern urban area of Hankou is characterised by a typical European and American urban space, with a regular spatial layout and no obvious urban centre. Within the modern urban area of Hankou, the former British, German and Japanese Concessions all partially adopt a grid-like layout.

In addition, within the modern urban area of Hankou, there are a large number of irregular roads, attached to a regular grid of squares to form a combined layout, which is related to the urban nature of Hankou, as each country within the concession area carried out independent planning and construction, and the lack of connection between the plots of land in the concession area formed a combined road structure.

The structure of the roads in the historic district of Hankou is somewhat distinctive, as modern cities developed from ancient political cities, whereas Hankou jumped directly from the development of a spontaneous commercial town to become a modern city. In Fig.14, there is no

³⁰ Liu Yan. Research on the Urban Development and Spatial Form of Hankou in the Late Qing Dynasty [M]. Beijing: China Construction Industry Press, 2006.

clear distinction between the ancient and modern urban areas of the historic city of Shanghai, as the ancient political cities of China were square and regular in form, and the roads were regular and rigid.

In contrast, the roads in the ancient city of Hankou were a spontaneous organic road structure, which was combined with the rigorous square grid road structure of the modern era, so that the combination of the two different road structures is more evident in the urban structure of the historic city of Hankou (Fig.17).

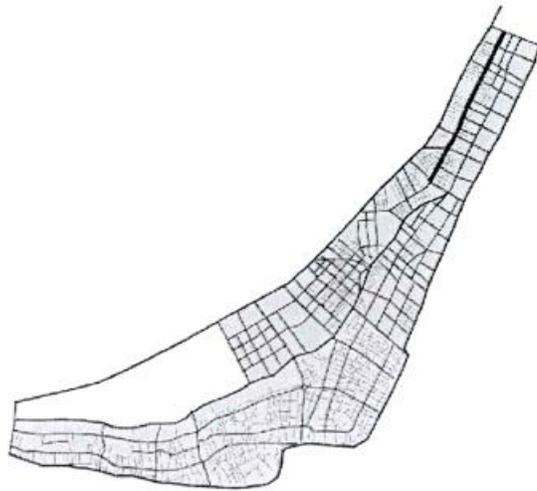


Fig.17: Composition map of road structure in Hankou Concession

Building Layout

Architecture is the basic unit of urban spatial layout research, and the change in the arrangement of buildings is a relatively slow process of change from quantitative to qualitative. From the traditional buildings on Hanzheng Street to the large number of high-rise buildings in the historic district of Hankou, the arrangement and distribution of buildings ultimately affects the final form of the spatial layout of the city through its own changes. The study and analysis of architectural layout is carried out through the composition of the buildings themselves, including architectural forms and building assemblages.

Architectural Form

The architecture of Hankou in the ancient period is traditional Chinese architecture, and although no traces of it can be found in the historical city after a century of history, ancient architectural forms can still be found in ancient texts. The merchant houses in Hanzheng Street

during the Daoguang period of the Qing Dynasty are depicted in detail: "Huaju is as dense as a forest, an inch of land is worth an inch today, the hall is high and the patio is small, nine of the ten houses in Yang are in Yin". The houses of the time were generally small courtyard buildings with small patios, and were arranged in a regular, dense pattern along the lanes³¹.

After the opening of the port, advanced Western architectural techniques and design concepts were introduced to China, and Chinese and Western architectural cultures collided and merged, causing a huge impact on the local architectural form. A large number of Western-style buildings were formed in cities such as Hankou, Tianjin, Shanghai and Qingdao, which were known as 'museums of foreign architecture'. A large number of buildings combining Chinese and Western styles exist in the Hankou concession. These buildings are mostly colonial buildings of the outer corridor style, which show typical Western architectural features while adapting to the local hot and humid climate of Hankou³². The architectural styles are mixed, with Renaissance, neo-classical, baroque and eclectic styles of architecture being found everywhere. Western-style architecture opened up the horizons of the Chinese with its majesty, and under the general trend of learning about Western culture, Western-style architecture rapidly began to spread in Hankou.

At the same time, the interpenetration of Chinese and Western societies and lifestyles gradually evolved into a mixture of Chinese and Western architectural types. Western and East-meets-West architecture was widely used as public buildings in the city, such as financial, office and entertainment buildings, changing the traditional look of the city of Hankou (Fig.18).



Fig.18: the Varied Architectural Forms in the Hankou Concession

³¹ Deng Xiaoming. Study on the interstitial environmental behavior of Hanzheng Street neighborhood [D]. Wuhan:Huazhong University of Science and Technology, 2006.

³² The outer corridor style did not come from Western architectural features, but from the colonial countries of India and Southeast Asia, and was widely spread because it was adapted to the hot and humid climate of Hankou, Shanghai, Guangzhou and other southern Chinese cities.

In addition, Western architectural concepts were introduced into China and rapidly combined with traditional Chinese architectural forms, resulting in a series of buildings with distinctive features. The exterior of the building generally adopts western elements and decorations in pursuit of a rigorous style, while the plan layout of the building is more regular and is an extension of the traditional Chinese architectural space in terms of functional layout. At the same time, as the functions of the buildings gradually diversified, the layout of the buildings also showed diversified characteristics, which had a certain impact on the urban space of Hankou.

Residential buildings are the type of buildings that are closest to the urban culture. Taking modern residential buildings in Hankou as an example, the residential buildings in Hankou are modern unit dwellings based on the traditional Chinese courtyard space and combined with Western architectural concepts. They are mainly distributed in modern Hankou. In the urban settlements and modern new districts, their architectural forms have had a huge impact on the spatial layout of historical urban areas. Hankou Lifen was created on the basis of modern Shanghai Lane Residences. It adopts the form of Western-style or eclectic houses in terms of architectural form, and generally adopts row-row Chinese-style patio-style houses in plane layout, which is a simplification of traditional Chinese courtyard buildings. In the later period, functional spaces such as toilets and kitchens were added, which are characterized by traditional spaces such as inner courtyards and patios, which not only satisfy the residents' needs for the closeness of the residence.³³ To meet the needs of modernization, it also continues the sense of hierarchy in the traditional Chinese courtyard space. This architectural form adds a spatial layer to the historic city - grey space.

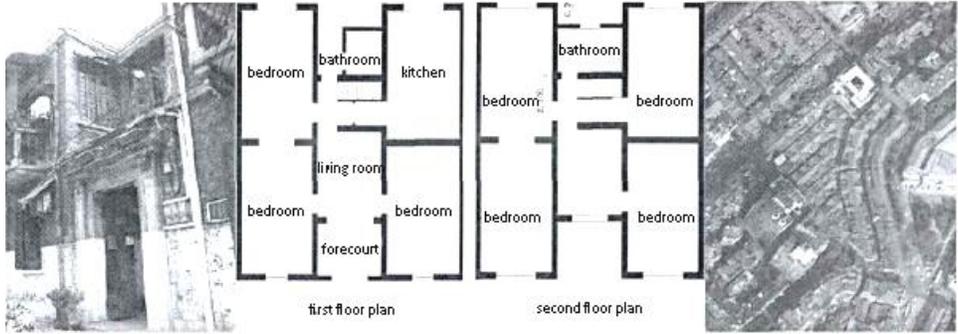


Fig.19: the Architectural Form and Spatial Layout of Lifen in Hankou Concession

³³ Li Chuanyi. Overview of Modern Architecture in China • Wuhan [M]. Beijing: China Construction Industry Press, 1992.

Building Mix

Architecture is the smallest unit that constitutes the layout of the city, and the combined space constituted by groups of buildings has a great influence on the spatial layout of the city, and is the fundamental element that constitutes the emblematic layout of the city. The spatial layout of the city is either rough or delicate, homogeneous or inhomogeneous, loose or compact, and these variations are often closely related to the form of the building combinations as well as to the orientation of the buildings and their arrangement³⁴.

Organic layout: The urban structure layout of the ancient urban area of Hankou is a free organic structure. The buildings and secondary alleys are arranged on both sides of the main street in a fishbone shape, and the building combination presents an irregular organic layout. As shown in Fig.20, the plot is in the street enclosed by Minsheng Road, Tongyi Street, and Hualou Street in the Hankou concession. The layout of the buildings has not been planned in the early stage, but is spontaneously arranged adjacent to the street. However, the overall orientation is parallel or perpendicular to the Han River. This form of building combination space forms a large number of interstitial spaces in the urban spatial layout of Hankou, which makes the ancient urban area of Hankou form an organic, dense and delicate urban spatial distribution.

Geometric layout: The buildings in the Hankou concession were planned in part, and the buildings were arranged in an orderly manner according to a certain pattern in the street outline, forming an even and regular layout of urban space. Fig.21 shows a plot of land enclosed by Zhongshan Avenue, Nanjing Road and Shengli Road, with a large area of internal buildings in combination, and a relatively regular form of building combination, which makes the main part of the spatial layout of the Hankou concession, giving a strong sense of spatial order in the modern city of Hankou.³⁵ The principle of architectural layout is mainly parallel or perpendicular to the city roads, and because of the richness of the structural form of the roads in Hankou, the layout of the buildings in the modern urban area of Hankou is also relatively diverse.

³⁴ Ding Yuan, Li Jie, Wu Shabing. *Map of Wuhan Historic Architecture* [M]. Wuhan: Wuhan Press, 2017.

³⁵ Li Baihao. *Hubei Modern Architecture* [M]. Beijing: China Construction Industry Press, 2005.

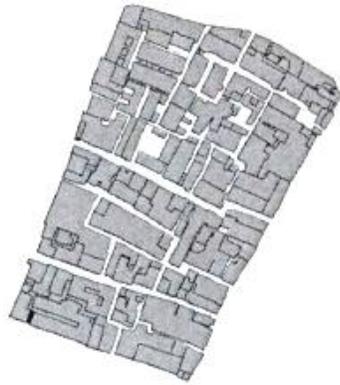


Fig.20: Organic Building Layout

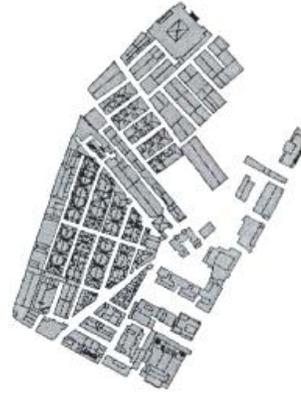
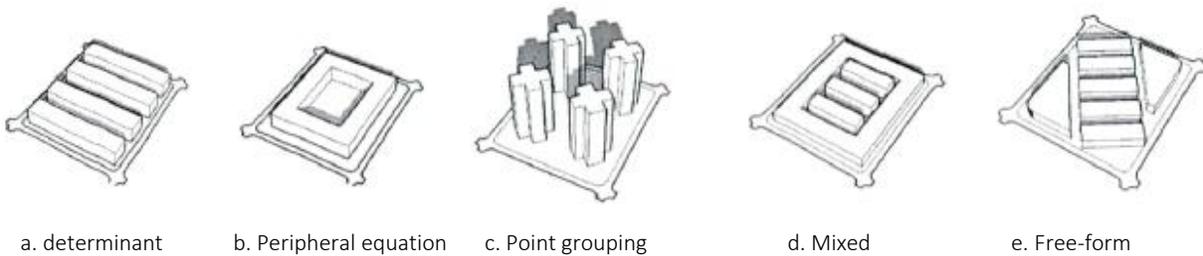


Fig.21: Geometric Layout

As shown in Fig.22, the basic forms of building group plan combinations are: ranks, perimeter, point group, mixed and free³⁶. The layout of the buildings in the Hankou concession is more flexible, with a combination of building layouts being the most common, and this diversity of building grouping forms is indicative of the local and regional nature of the city of Hankou.



a. determinant b. Peripheral equation c. Point grouping d. Mixed e. Free-form

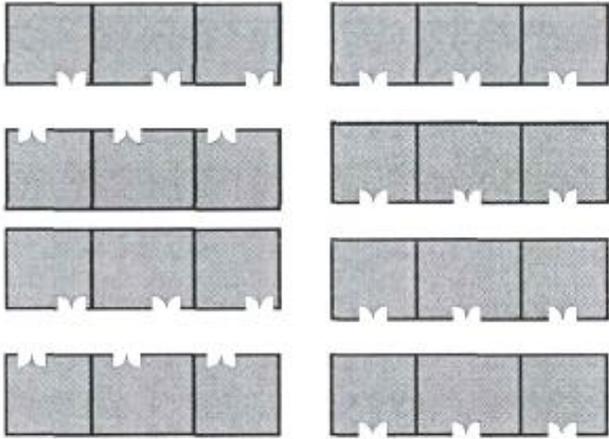
Fig.22: Building plan combination form

In Fig.22, the building layout is mixed, a combination of row and perimeter layout, with a perimeter layout around the perimeter, generally for commercial use, and a row layout inside for residential use. This is related to the nature of Hankou as a modern small industrial and commercial city, where the commercial value along the streets was emphasized and the arrangement of the buildings within the plots changed according to the orientation of the buildings along the streets, resulting in more combined spatial forms. There are also a certain number of free-form groups of buildings in the modern urban area of Hankou, which is related to the unique street scale and form of Hankou, and this free-form spatial mix of buildings has had an impact on the distribution of urban space in Hankou.

As can be seen from Fig.23, most modern cities are composed of a large number of buildings

³⁶ Zhou Jian, Principles of urban residential planning [M]. Shanghai: Tongji University Press, 2005, p. 89

arranged in an orderly manner according to certain rules to form a new urban distribution. Order is a major feature that distinguishes the distribution pattern of modern buildings from the distribution pattern of ancient buildings. The architectural texture in the city is similar with minor differences. The architectural features of the Lifan in Hankou are most similar to those in Shanghai, but the features are different from those in Shanghai in terms of architectural layout.



"The door is opposite to the door" in Hankou "Front door to back door" in Shanghai Lane

Fig.23: Comparison of Architectural Layout between Hankou and Shanghai

The buildings in Hankou's modern historic district are generally grouped in a parallel relationship perpendicular or parallel to the Yangtze River, and are neatly arranged. However, unlike the arrangement of buildings in other concession cities, the alleyway space is characterised by 'gates to gates, dwelling doors to dwelling doors, narrow and wide', in contrast to the 'gates to back doors, back doors to gates, alleyways of uniform width' of Shanghai's lanes. "This is in stark contrast to the homogeneous alleyway space of Shanghai lanes, where the gates are opposite to the back gates and the back gates are opposite to the gates³⁷.

Hankou Lifan focuses on creating communication between neighbors, distinguishing main traffic lanes and auxiliary lanes, increasing the frequency of people in the communication space, creating a convenient communication space, and more concentrated communication. At the same time, the layout of three-room and two-room units is adopted in the way of collage, forming a dislocation relationship between the opposite entrance doors, increasing the actual lighting spacing of the wing rooms, and protecting the privacy of the occupants.

³⁷ Li Baihao, Sun Zhen. One of the studies on Hankou Lifan: Han Runli [J]. Central China Architecture, 2008 (1): 161-163.

Conclusion

The urban spatial layout of Hankou presents a hybrid feature. No matter in terms of structure or space, its city shows a mixture of traditional Chinese urban layout and western urban layout.

In terms of spatial pattern, the pattern of streets and alleys in the historical city of Hankou is dominated by blocks and bifurcated roads, which reflect the integration of Chinese and Western urban spaces and enrich the overall spatial form.

In terms of functional space, from the confusion of urban functions and the independent development of each concession area to the continuous integration of land structure, the functional layout began to be planned and operated based on the normal life of residents, which became more scientific and rational.

In terms of the road system, the road form in the historic city combines a spontaneous organic road structure with a rigorous grid structure and presents a multi-level spatial relationship.

In terms of the architectural layout, organic and regular architectural combinations are shown to adapt to different street shapes. At the same time, in order to well coordinate urban pedestrian and motor vehicle traffic, Hankou has also developed a variety of building space combinations.

Through the analysis of the urban space layout of the Hankou concession area, it is concluded that Hankou experienced a transition period in the modern period, experienced a rapid transformation from an organic urban structure represented by roads to a geometric urban structure, and at the same time With the slow transformation of urban space, it is manifested in the micro-levels of cities, buildings, roads, etc., making today's urban space layout in the historical city of Hankou present a diversified feature.

CHAPTER FOUR: EVOLUTION OF THE FIVE NATIONS CONCESSIONS

There are a total of 78 cultural relics protection units, excellent buildings and lifen in the Hankou Concession. The style and features of the modern concession of Hankou are mainly the five major architectural styles of Britain, France, Russia, Germany and Japan. At the same time, classical buildings are mixed with modern buildings, and high-rise buildings are mixed with low-rise and multi-storey buildings.³⁸

British Concession

The British concession covers an area of 61.6 hectares. It is characterized by the budding land of Wuhan's modern metropolis system. Large-scale public buildings such as grid-grid streets, banks, and commercial inns are relatively concentrated. The column is rigorous, luxurious and elegant.

Regional Spatial Analysis

Due to the special historical environment, the macro-urban layout of the British Concession is caused by the interaction of Chinese and Western cultures. It is different from the urban layout before Hankou was opened as a port. By comparing the urban layout of Hankou British Concession with other cities at home and abroad, we can obtain different urban layouts formed under different urban macro-environments (including nature, society, culture, politics, etc.). The British Concession Area of Hankou was formed under the joint action of two control mechanisms: "bottom-up" and "top-down". Its complex layout reflects the superposition and changes of different urban development dynamics in different periods.



Fig.24: Spatial Changes of the British Concession Area in Different Periods

³⁸ Wang Hanwu. Wu Mingtang. The Five Kingdoms Concession in Hankou [M]. Wuhan: Wuhan Press, 2017.

The urban space in the old city of Shanghai fully reflects the traditional street and lane space pattern of ancient Chinese commercial towns, while the urban space in Qingdao and Harbin is influenced by Western urban planning, showing a street-style space pattern similar to that of Berlin. The urban space texture of the British Concession in Hankou combines Chinese and Western spatial patterns. Specifically, the outer space (street space) is the western street profile space, while the inner space continues the traditional Chinese street and lane space, and the interior of the street profile is still the same³⁹. There is a large amount of roadway space as a supplement to the external traffic space, so such a street profile interface is still not completely continuous.

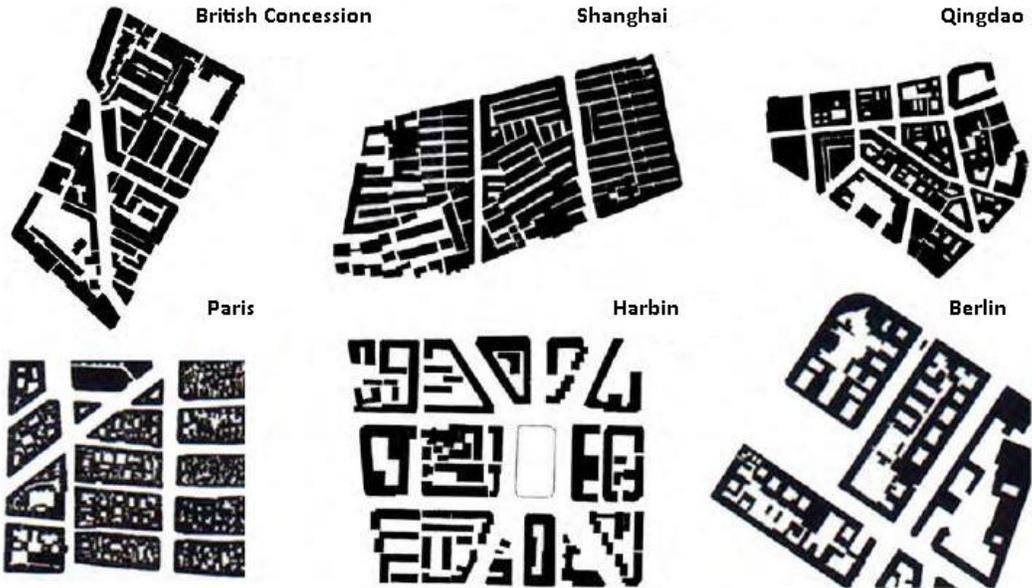


Fig.25: Comparison of the Spatial Layout of Different Cities

Building Type Analysis

There are many types of building spaces in the area, mostly 2-5 floors. Overall, the three outstanding historical buildings that are well preserved are the former Central Trust Bureau Hankou Branch, Zhejiang Industrial Bank Hankou Branch and Guangdong Bank Hankou Branch⁴⁰. The historical buildings are divided into the modern Hankou Lifan residential

³⁹ Jiang Difei. Double-scale urban construction—Thinking about modern urban space form [J]. Urban Planning, 2005(01):90-95.
⁴⁰ Fang Yangang, Liu Jisheng. Exploration of urban texture organization based on complex system theory [J]. Urban Planning, 2008(10):32-37.

buildings represented by the Continental Fang and the antique buildings that replicate the Western style.

The excellent historical buildings are well preserved, but the protection of the texture and style of the old buildings is neglected, such as closing the colonnade of the historical buildings and using them as billboards, or hanging the air conditioners on the exquisite carved doors and windows at will. In addition to excellent historical buildings and buildings with historical features, there are also a large number of general buildings of poor quality or even dilapidated in the area. Many of these buildings occupy the original streets and alleys for illegal self-construction. Although their street fronts are slightly decorated, the interior space of the buildings is small, with insufficient lighting and poor ventilation.

Street and Alley Space Analysis

There are various types of streets and alleys in the British Concession, reflecting the unique street and alley space pattern of Old Hankou. According to the characteristics of all kinds of streets, they are divided into four types: main alley type, main and secondary alley type, ring type and comprehensive type.

Type of Space	Street Name	Location	Street Space	Building Layout	Description
Main Lane	Continental Fang				The widest is 7.6m and the narrowest is 2m. The space layout is peripheral. The stairwell of the original Continental Bank was designed inward and processed into a curved surface to coordinate with the western-style octagonal bay window, which enhanced its sense of spatial sequence.
	Yong Songli				The widest is 7m and the narrowest is 4m. The north is connected to the southern end of Nanjing Road. The building layout is built along the street along one side of the main lane, and the other side is limited by the wall to define the space boundary.
Primary and Secondary Lane	Xin Deli				The interface is 1.7 m wide, and the width increases inward, with a strong sense of violation. The spatial layout type is determinant, and the self-built interface at the interface destroys the original sense of space.
	Ding Yuli				The main lane is a T building with a width of about 4.2m, and the secondary lane is 1.8m wide, connecting the entrance and exit of the building. The sense of enclosure is very strong. It is also a determinant layout.
Ring	Qin Yili				The roadway is 5m wide, the ring roadway, and the building space layout is determinant combined with the surrounding type, which can not only meet the uniformity of the building, but also meet the needs of the surrounding business.
Comprehensive	Zhong Fuli				The width of the roadway is about 6m. The space layout type is free style.
	Yan Changli				The roadway is 5m wide and 2m narrowest. There is open space inside the space for public activities, which is a free-style layout. Because it belongs to the accumulation of construction in different periods, it has the characteristics of growth.

Fig.26: Analysis on the Spatial Characteristics of Streets in the British Concession

Spatial Functional Analysis

The nature of land use in the British Concession District of Hankou is divided into six categories: administrative office land (including administrative offices and business offices), such as the Yangtze River Navigation Administration, banks, postal services, etc.; commercial facilities, such as hotels, shopping malls, vegetable markets, etc. ;Cultural, educational and medical land (including land for cultural facilities, educational and scientific research, medical and health care), such as Wuhan Library, Wuhan Central Hospital, City 21 Middle School, etc.; Residential land such as Chengchangli, Changjiang Daily dormitory, etc.; religious Lands such as Orthodox churches, etc.; vacant land.

Most of the administrative office land in the British Concession of Hankou adopts closed management, and sometimes has an independent inner courtyard. There is a lot of static traffic in commercial facilities, and parking problems will occur. At this stage, normal social activities cannot be carried. The land for culture, education and medical care is relatively public. There is a distribution space in front of the door, and certain rest facilities are set up, which also attracts small vendors and surrounding residents to come here for activities.

The residential land in the British Concession of Hankou is mainly divided into traditional areas, with a small amount of modern commercial residences. Traditionally divided into Dingyuli, Xingguoli, Chengchangli, etc., residential buildings are mostly two or three stories, low density, internal determinant layout, and form a balanced layout, so that the interior can pass through network-like lanes. Each building is organized and connected with urban roads through multiple alleys to form a spatial sequence of “urban roads—one alley—one main alley—one lane—one single household.” The alley is a sign of the boundary of the entire interior, and the transition between the inner and outer activity spaces stimulates people's communication activities. Modern commercial housing, such as Tianjin Courtyard Community, Changjiang Daily Dormitory, etc. They are generally renovated and demolished on the basis of the original sub-districts, adding six or seven-story residential buildings, emphasizing private areas, and generally using walls to isolate or according to their economic Value Place commerce along the street with clear boundaries.⁴¹

⁴¹ Chen Xuan, Wei Xiaochun. The informal evolution of urban street space—a case study of Hanzheng Street in Wuhan City (1988-2013) [J].Urban Planning, 2013(4).

Russian Concession

The Russian Concession covers an area of 23.2 hectares. It is characterized by relatively free street layout. The building type is influenced by Byzantine style.

Regional Spatial Analysis

The Russian Concession was influenced by the Russian planning ideas of the same period. The greening and water surface were integrated with the city center. The entire spatial layout used the urban axis planning method. The space was open, and the buildings were distributed in groups. Among them, social activities and high-end residential areas were concentrated and the types were diversified. The overall road network is square grid and radioactive, with unique greening and courtyard space, featuring Western-style architectural style.



Fig.27: Spatial Changes of the Russian Concession Area in Different Periods

Building Type Analysis

There are 39 existing historical buildings in the former Russian Concession of Hankou, which can be classified according to investment background, use function and structure type. In terms of investment background, there are 10 Russian-funded buildings, mainly office buildings and residential buildings, and 1 industrial building; 8 Chinese-funded buildings are mainly residential and commercial buildings; 5 British-owned buildings are mainly commercial buildings; There are 2 foreign-funded buildings, 1 Japanese-funded building, 3 church buildings, and the remaining 10 buildings have no investment background information⁴².

According to building functions, there are 22 public buildings in the Russian Concession, including 13 office buildings, 3 entertainment buildings, 3 religious buildings, 1 financial

⁴² Chen Youxiang. *Chronicles of Hanzheng Street* [M]. Wuhan: Hubei People's Publishing House, 2009.

building, and 1 medical building. The 16 residential buildings include 7 apartment buildings and 9 garden houses. There is only one industrial building, which is the industrial water tank building of a brick tea factory. According to the type of building structure, there are 13 brick-wood structure buildings, including 9 residential buildings, 3 public buildings and one industrial building. There are 10 brick-concrete structures, 5 residential buildings and 5 public buildings. There are 5 reinforced concrete structure buildings, 4 public buildings and 1 residential building. There are 6 mixed-structure buildings, 5 public buildings, and 1 residential building. The structural information of the remaining 5 buildings is unknown, and they are all public buildings. The general layout of the Russian Concession Area is that the exterior is commercial and the interior is residential. Along the Yangtze River are mainly factories, warehouses, freight yards and banks, which are convenient for water freight and commodity distribution. There are many foreign shops on the side of Linying Concession and Wuzu Street, and a large number of public buildings such as office, religion and health are concentrated on Lihuangpo Road, which is adjacent to French Concession. There are embassies, churches, schools, restaurants, apartments and other buildings in the Russian Concession.⁴³ This type of layout effectively separates the noisy commercial trade and logistics areas, ensures the internal living and office environment, and reflects the characteristics of modern urban functional zoning.

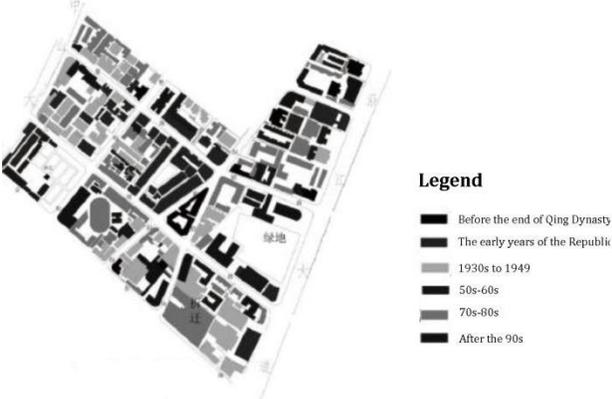


Fig.28: Building Quality Analysis

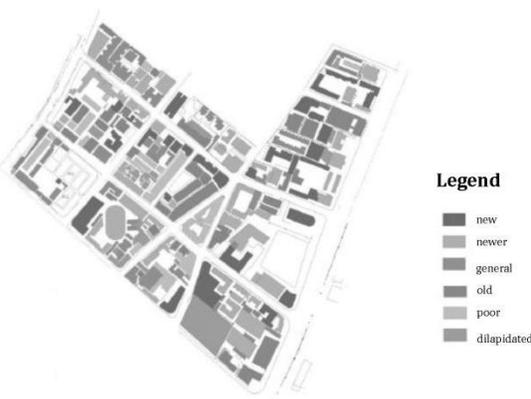


Fig.29: Building Age Analysis

Street and Alley Space Analysis

There is a lack of traffic flow at this stage. The base starts from Hehe Road in the south, Lihuangpo Road in the north, Dongting Street in the east, and Shengli Street in the west. The

⁴³ Shen Kening. Architectural typology and urban morphology [M]. Shanghai: Baihua Literature and Art Publishing Press, 2006.

width of the streets is relatively balanced, mostly 12-15 meters. Among them, Luojiashan Street and Poyang Street have good facades along the street, and Lihuangpo Road and Lanling Street have rich historical value.

Before the concession was opened, a "Y"-shaped road was formed across the Russian and French concessions. Compared with the later newly opened concessions and expanded concessions, it is not like the original British concession, which is divided into a checkerboard road network and has a regular road network structure.

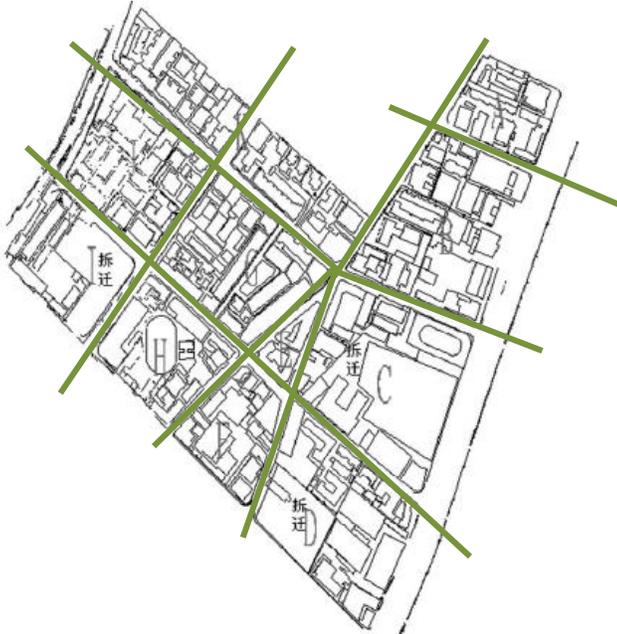


Fig.30: The Main Road inside the Russian Concession

Spatial Functional Analysis

The Russian Concession has obvious functional divisions in urban construction land: the area along the river has the advantage of river and sea transportation. Except for a small amount of consulate land, it is mostly used for commercial banks, production, processing, storage and transportation. Schools, teaching, cultural and other public facilities and residential land are mostly located between Poyang Street, Shengli Street and Zhongshan Avenue.⁴⁴ This is consistent with the historical situation at the time.

⁴⁴ Li Jun. Evolution of Modern Wuhan Urban Spatial Form (1861-1949) [M]. Wuhan: Changjiang Publishing Press, 2005.

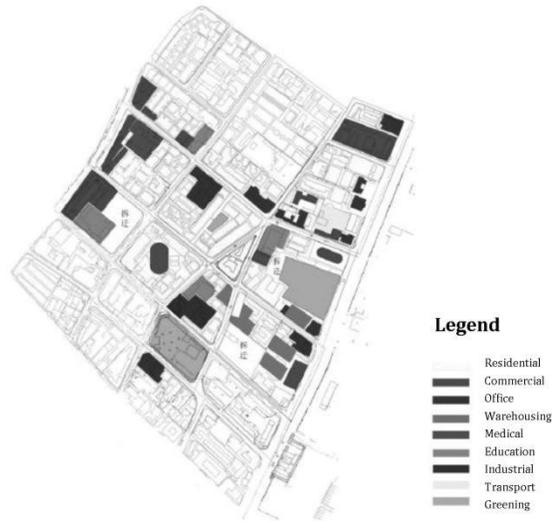


Fig.31: Functional Type Analysis

Residential Function

The Lifan residence pattern in the Russian Concession adopts the combination of Chinese and Western. It has created three spatial levels, which fully meet the different degrees of privacy needs of residents.⁴⁵ Through the public space of "lane", residents' activities are moved to the outdoors, which strengthens the communication between residents. Appropriate scale, pleasant scale and strong territoriality, safe semi-public spaces create a vibrant community atmosphere and harmonious and interactive neighborhood relationships⁴⁶.

Commercial Function

Today, Li Huangpi Road is a famous café street, reflecting the cultural and commercial model. Small shops with strong literary and artistic flavors, such as cafes with different characteristics transformed from historical buildings, form a strange fusion with the surrounding streets full of market atmosphere. From the perspective of the historical function of the block, its function is positioned as a café and other cultural and recreational places in line with the atmosphere of its concession.

The store door faces the street, all the facades are removable, and there are also semi-open facades. Generally speaking, this kind of building is one or two floors, the building structure is brick and wood structure, and there is a mixed commercial and residential building type

⁴⁵ Kevin Lynch. Urban Form [M]. Beijing: Huaxia Publishing Press, 2001.

⁴⁶ Kevin Lynch. City Image [M]. Beijing: Huaxia Publishing Press, 2001.

developed in modern times. Its formal characteristics are that the ground floor is used as a storefront, and the upper floor is a residence. This type of architectural form originated in Europe.

French Concession

The French Concession covers an area of 29.4 hectares and is characterised by a grid of squares with radial streets, a flexible spatial layout and an architectural form that is mostly Romanesque Revival classical, with round coupons and pointed arches as the main stylistic elements.

Regional Spatial Analysis

The overall spatial layout of the French Concession presents a square-shaped street layout. The overall road planning is obviously refined, and the division of hierarchical roads begins, and the spatial changes of the expansion area are continuously adjusted to adapt to the original division of the French Concession, so that the new and old spaces are coordinated. .

The German Concession starts from Yiyuan Road in the south, Liuhe Road in the north, Yangtze River in the east and Zhongshan Avenue in the west. Three main roads are arranged vertically and six secondary roads are arranged horizontally. With the clear division of roads, the layout of building types is also relatively concentrated.



Fig.32: Spatial Changes of the French Concession Area in Different Periods

Building Type Analysis

The French Concession is a high-end residential area in the Hankou Concession. At the same time, because of its back to the railway station, the concession trade is prosperous. Therefore, according to the classification of building types, the historic buildings in the French Concession mainly include two categories: residential buildings and public buildings. Among them, public

buildings are mainly distributed in the boundary of the first demarcation of the French Concession, while most of the residential buildings are distributed in the extension of the French Concession in the form of lilong residences.

Due to the developed business and trade in the French Concession, entertainment prevailed. Therefore, in the French Concession, there are many types of public buildings. Most of the office buildings are financial, trade and administrative office buildings, such as the two office buildings of Lixing Yangxing, the office building of Crédit Agricole, the office building of the Pinghan Railway Bureau, and the consulates of various countries. As for transportation buildings, because of the special geographical location of the French Concession, it has become a transit station for north-south traffic. Therefore, Dazhimen Railway Station was established in the French Concession. It is the first large-scale station for long-distance standard-gauge railways in China. Its main building is the waiting hall. It dates from an early age and is an important historical witness to the construction of modern Chinese railways.⁴⁷ Some factories and warehouses have also been opened as industrial storage and transportation buildings. The factories are mainly engaged in the production and sale of soft drinks and ice making, such as British Merchant Heli Soda Factory, British Merchant Zanyu Soda Factory and Peilin Refrigeration Factory.

And because there are many types of residence in the French Concession, there are buildings where foreigners, senior Chinese and ordinary people live. Among the residential buildings, the most are the lilong buildings that are rented out to ordinary people, and they still exist and are used today. Most of them are located in the extension of the French Concession. For example, Changqingli, Qingpingli, Hongweili, Gongduli, Sandrili, Haishouli, Changnianli, Rushouli, Changanli, auxiliary hall, and Xinchengli. There are also high-end lanes in the French Concession, such as Tongxing Lane and Shoushan Lane.

⁴⁷Tan Gangyi. "River" in Jiangcheng—a clue to the evolution of modern Wuhan's urban form [J]. *Urban Planning Journal*, 2009(4).



Fig.33: Building Distribution Map

Street and Alley Space Analysis

Before 1890, the British Concession built a racecourse within the city wall of Hankou Fort. Therefore, the formation of the "Y"-shaped cross road was related to the road to avoid the racecourse, and the road network structure was still retained during the construction of the French Concession. The connection between the inner and outer concessions has resulted in the extension of the river streets along the banks. Under the influence of the city wall, the road also forms a "Y"-shaped road in the French Concession.

In the process of its expansion, the French Concession advocates avoiding large-scale demolition and construction, avoiding existing buildings, and using the original old roads or open spaces as much as possible for new road construction. The two ends of the French Concession have obvious historical imprints at the junction of the Russian and German concessions, indicating that the expansion of the French Concession is not only in the direction of Dazhimen Railway Station, but also in the direction of the Russian-German Concession.

Spatial Functional Analysis

The overall functional distribution is divided by the "Y" shape. The surrounding Zhongshan Avenue is concentrated as an administrative area, which is the consulate of various countries. However, with the change of time, the administrative area and financial area are concentrated on

Nanjing Road, which is located on the border of the Russian Concession and the French Concession. The area between Jiefang Avenue and Jinghan Avenue is concentrated for transportation infrastructure, but now it mainly undertakes transportation and commercial functions, and the area tends to be diversified. basic living needs, and drive the influence of radiating Jiefang Avenue as the main line of the road⁴⁸.

German Concession

The traditional German architectural style section covers an area of 21.1 hectares, and is characterized by delicate and elegant architectural shapes, large roof slopes, bright colors, organized street layouts, and complete spatial forms.

Regional Spatial Analysis

The German Concession starts from Yiyuan Road in the south, Liuhe Road in the north, Yangtze River in the east and Zhongshan Avenue in the west. Three main roads are arranged vertically and six secondary roads are arranged horizontally. With the clear division of roads, the layout of building types is also relatively concentrated.

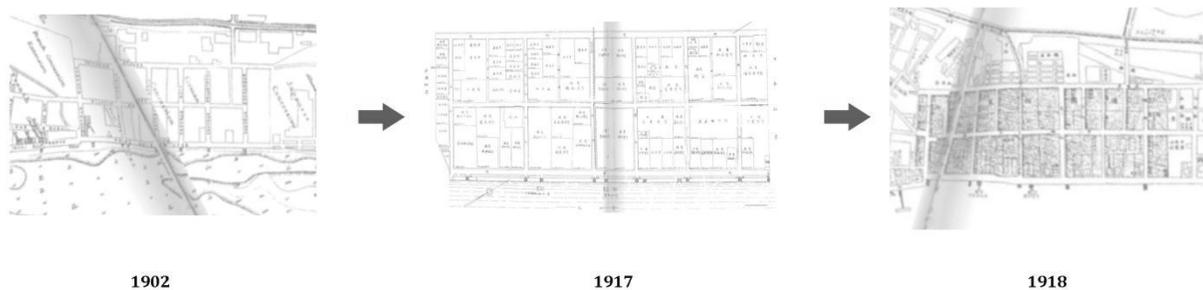


Fig.34: Spatial Changes of the German Concession Area in Different Periods

⁴⁸ William Luo, translated by Jiang Rong and Lu Xiqi. Hankou: Commerce and Society in a Chinese City [M]. Beijing: People's Publishing House, 2016



Fig.35: Primary and Secondary Roads

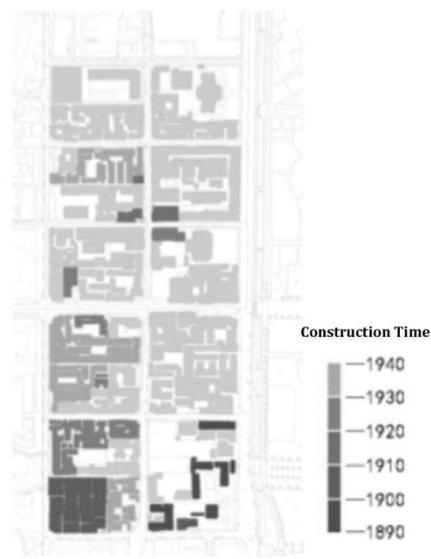


Fig.36: the Construction Time of the Buildings

Building Type Analysis

The Hankou German Concession still retains some historical buildings left at that time, including the German Consulate (a national key cultural relics protection unit), the German Ministry of Industry's patrol house (protected buildings), Hankou Meishe Shi Yangxing Building (Wuhan City Cultural Relics Protection Unit), Jiangnan Customs Supervision Office (protected buildings), Amway Yingyang (protected buildings), etc.

The site includes five parts: administration, finance and trade, industrial transportation, living, and public buildings. The area is dominated by residential and commercial land. In addition to urban roads, square land and public green space, there are also some cultural and educational land, medical and health land. and other properties. Among them, residential land accounts for the largest proportion, which can be divided into two types: low-rise high-density old dwellings (in the form of mileage) and modern high-rise residential areas.

The main building is mainly made of brick and wood, and the form is a simplified imitation of Western medieval buildings and eclectic buildings. It is generally 2.3 floors, with spires and domes, and then mainly reinforced concrete.⁴⁹ The architectural forms are classical colonnade style and modern modern style.

⁴⁹ Li Baihao, Xue Chunying, Wang Xibo, et al. Graphical Analysis of Modern Urban Planning in Wuhan (1861-1949) [J]. Urban Planning Transactions, 2002(b):23-29.

Street and Alley Space Analysis

The east-west roads in the area can be divided into two grades: secondary roads and branch roads. Through comparison, it can be seen that there are significant differences in the types, functions and floor heights of the two street buildings. Most of the two sides of the secondary roads are public buildings and commercial buildings, and the storey height is mostly 6-7 floors. The two sides of the branch road are mostly residential buildings, usually in the form of one-story commercial buildings and second-floor residents. The secondary road is slightly wider than the branch road, and the branch road is more lifelike.

Spatial Functional Analysis

The buildings on the street corners in the area can be roughly divided into four types: residences, shops, hotels, and administrative offices, among which the commercial buildings belonging to shops and hotels account for a large proportion. Most of the shops along the street in the east-west direction are restaurants, serving the needs of nearby residents and students, maintaining a relatively strong popularity. Most of the hotels on the side of Yanjiang Avenue have formed certain commercial features.

Japanese Concession

The Hankou Japanese Concession is the most remote among the five Hankou concessions, with an area of 17 hectares. The Hankou Japanese Concession was demarcated in July 1898 and was recovered in 1945. During the 47 years of occupation, the Japanese Concession gradually developed from an uninhabited area in the beginning to the area with the largest number of foreigners in Hankou. When the Sino-Japanese War broke out, the Japanese Concession was bombed into ruins by the US military, and most of the original Japanese Concession quickly turned into a slum. Most of the buildings in the concession were destroyed by the war, and the only two dozen outstanding historical buildings with value were destroyed and demolished one after another due to the lack of protection.⁵⁰ Today, there are less than 10 historical buildings with their original appearance.

Due to the limited financial resources of Japanese merchants, business was not prosperous. However, it is still second only to the Tianjin Japanese Concession among all Japanese

⁵⁰ Mizuno Kokichi, translated by Wu Deqing. Central China: Hankou [M]. Wuhan: Wuhan Press, 2014.

concessions in China. Slightly powerful Japanese companies, such as Yokohama Shokin Bank, Bank of Taiwan and Nissin Steamship Co., Ltd., were all set up in the British Concession of Hankou. The Hankou Japanese Concession is also recognized as a stronghold for smuggling and drug trafficking.

Regional Spatial Analysis

The Japanese Concession continues the main roads of the German Concession, but shows a change from chaotic bypasses to bypasses planned according to function on the secondary roads, with medium and large factories mainly on one side of the Yangtze River in the area to facilitate the flow of shipping, while residential and commercial properties are mainly on the other side. The area as a whole is still a regular and neat rectangular block.



Fig.37: Spatial Changes of the Japanese Concession Area in Different Periods

Building Type Analysis

Now the type of buildings in the Japanese concession has changed from industrial and commercial mainly to residential and commercial in the Republic of China, and the number of historical buildings accounts for a small proportion. The existing historical buildings are mainly distributed near Shengli Street and Yanjiang Avenue. Among them, there are 2 national key cultural relics protection units, 5 first-class excellent historical buildings in Wuhan, and 1 second-class excellent historical building in Wuhan. The historical buildings in the Hankou Japanese Concession are built with brick-concrete structures except the Huishen Hotel, which was built on the original site.

Street and Alley Space Analysis

The Hankou Japanese Concession is located in the northernmost part of the concession area, adjacent to the German Concession. However, at present, both sides of the inner streets in the

area are full of vehicles. The road conditions of Changchun Street, Shenyang Road and Hao Mengling Road are poor. Parking is random on both sides. The low-rise houses on both sides are dilapidated and need to be renovated.

Spatial Functional Analysis

Functionally, it can be divided into three areas. One is the area close to the German Concession and facing the Yangtze River, namely He Street (now Yanjiang Avenue), Zhongjie (now Shengli Street) and the southern section of Yamazaki Street (now Shanhaiguan Road). The facilities of the government, local organizations and large corporations such as the Consulate, the Japanese Marine Corps Command in Hankou, the Taisho Hall (the headquarters of the Resident Militia), the Japanese Club, the Japan Post and Telecommunications Office, the Japanese elementary school, the office building of the Mitsubishi Corporation, and the staff residence, that is, the administration , office area. On the downstream coast of this area is the industrial area of the concession, including the Belgian-invested Ruixing Egg Factory, the Sino-British Joint Venture Sample Tai Furniture Factory, the Chinese-funded Mengchang Match Factory, as well as Japanese and American oil refineries. Factories, etc.⁵¹ In the area west of Zhongjie (now Shengli Street) and Dahe Street (now Shengli Street), there are Japanese-funded small and medium-sized enterprises such as Hankou Daily Office and Miyoshikan, as well as Motsuji Temple of the Japanese Jodo Sect. Mainly residential, there are small single-family houses, modern apartments, and most are Lilong residences.⁵²

Although the Japanese consulate has achieved certain results through various efforts to develop the concession, from the perspective of the overall spatial structure of the Hankou concession, the Japanese concession has never been able to get rid of its remote and subsidiary status. The Bund and Middle Street in the British Concession are the financial and trade areas of Hankou, with many high-rise buildings and large banks and companies from all over the world. The French Concession is close to Dazhimen Station, the terminus of the Beijing-Hanzhou Railway. There are a large number of lilong residences built nearby, and many hotels, restaurants, smokehouses, brothels, casinos, etc. are mixed among them. It is the most lively low-level

⁵¹ Tang Jing. Analysis on the development of urban spatial structure and form in Wuhan [D]. Instructor: Hong Liangping. Wuhan: Huazhong University of Science and Technology, 2003.

⁵² Sun Zhen. A Comparative Study of Li-style Housing in Modern China—Centering on Shanghai, Tianjin, and Hankou [D]. Instructor: Li Baihao. Wuhan: Wuhan University of Technology, 2007.

entertainment place in the Hankou Concession. The Russian Concession and the German Concession are high-end residential areas in the Concession, with high-end department stores and clubs from various countries. The Japanese concession is far away from the commercial center, and many large Japanese banks and large enterprises are also located in the concessions of other countries. The most concentrated residential areas and factories in the Japanese concessions have become the middle and low-level residential areas and industrial areas on the outskirts of the concessions.

Conclusion

The Hankou District Concession is located in Jiang'an District, Wuhan City, north to Sanyang Road, adjacent to Hankou Yongqing Film; south to Jiangnan Road, close to Hanzheng Street, a traditional business district; west to Jiefang Avenue; east to Yanjiang Avenue, close to Hankou River Beach; The total area is 2.82 square kilometers (including the river beach area of 3.11 square kilometers). The Hankou Concession Area was once the second largest "concession" area in my country in modern history. It is an area representing the modern culture and history of Wuhan. The cultural relics, historic sites and excellent buildings in this area are densely distributed, high-grade, relatively well-preserved and distinctive areas, including Jiangnan Road, Qingdao Road, and "August 7th" meeting site. There are a total of 78 cultural relics protection units, excellent buildings and lifen within the scope of the modern concession of Hankou. The features of the Hankou Concession Area are mainly the five architectural styles of Britain, France, Russia, Germany and Japan.

Therefore, how to preserve the architectural style of the concessions in various countries, improve the urban functions, optimize the community environment, improve the related supporting facilities in the Hankou concession area, further explore the unique historical and humanistic value of the Hankou concession in modern times, and highlight the geographical and environmental advantages of the area, so as to integrate the modern Hankou concession area. The construction of the concession into a vibrant urban core area that not only has a unique modern historical and cultural style, but also adapts to modern life has become the core content of the overall protection plan.

CHAPTER FIVE: REGIONAL CONSERVATION UPDATE STRATEGY

Causal Analysis

Socio-economic Promotion

As a two-dimensional representation of urban space, urban layout planning is a product of the materialisation of complex human socio-economic activities in the process of historical development, and is a representation of the material space of the organisation of urban functions. The transformation of urban functions, the gradual abandonment of the original developmental dynamics that were incompatible with the functions of the city, and the promotion of the breeding, emergence and development of new urban spaces.⁵³ The opening of ports in the modern period, as the main material influencing factor in the development of the modern city, brought about a sudden change in the nature of the city in the modern period, and the new nature of the city inevitably brought about new urban functions and a shift in the focus of urban development. The old urban space could no longer meet the new needs of urban development, which led to the transformation of the urban layout plan.⁵⁴

In the modern period, the main function of the city was transformed from the domination of the inhabitants in the ancient period to the economic plundering by foreign capitalist states and the revival of national capitalism in the late modern period, so that in the modern period the socio-economy played a huge role in promoting the development of the city. The socio-economic influence concentrated on the promotion of urban spatial layout in terms of land values and forms of transport.

In the Hankou concession, during the construction period, the pursuit of land value is reflected. In terms of urban structure, the fine grid road layout is used to extend the density of the road network, reduce the size of the plot, and increase the length of the street. Maximize land-use efficiency. Gradually, this land development model has been recognized by Chinese urban planners. In the construction of the modern new district of Hankou, this fine grid has also been gradually promoted, laying the foundation for the general grid small street profile in modern

⁵³ Colin Luo, Fred Cotter, translated by Tong Ming. *Collage City* [M]. Beijing: China Construction Industry Press, 2006.

⁵⁴ James E. Vance, Ling Ni, Pan Rong translated. *The Extended City—Urban Morphology in Western Civilization* [M]. Beijing: China Construction Industry Press, 2006.

cities. form of urban structure.⁵⁵ Due to the improvement of land utilization rate, various kinds of spaces have appeared, the building density has increased sharply, and the combination of building space and traffic space has prompted the emergence of various characteristic spaces such as street buildings and arcades in modern urban space.

The transformation of transport modes also contributed to the transformation of the spatial layout of the city. Transport, as the skeletal system of the city, was the guide for the development of the city, directing the direction of urban space and the form of the composition of the urban structure. The emergence of motor vehicles prompted the modernisation of the road in extensive construction, and the construction of the city under the guidance of roadism promoted the modernisation of urban construction and municipal construction and built the basic structure of the modern city. In Hankou, for example, the urban road system in the Hankou concession area and the new district is by far more stable and, after a century, still meets the needs of today's urban traffic; in contrast, the ancient urban system in Hankou faced paralysis in the face of huge motorised traffic flows.

Constraints of Natural Conditions

The natural geographical environment is the basis of human social dependence and is the most basic material condition for the formation and development of cities. The influence of natural factors on urban development is the most significant and has been accompanying the whole process of urban formation and development.⁵⁶ The differences in natural factors have given rise to different cities with local characteristics in terms of urban layout. Differences in natural conditions are important factors contributing to the regional nature of urban layout. The influence of natural conditions on urban layout mainly includes the influence of both natural topography and climatic conditions.

In the Hankou concession, the urban road system forms an organic relationship with the natural environment, with both the ancient and modern urban areas showing a more developed road system parallel to the Yangtze River than perpendicular to it. This is a manifestation of the full use of Hankou's natural water bodies, allowing the urban space as a whole to expand along the river. The alignment of the Yangtze and Han rivers directly influenced the direction of urban

⁵⁵ Ye Yu, Zhuang Yu. The Emergence of Quantitative Analysis Methods in Urban Morphology [J]. Urban Design 2016(4).

⁵⁶ Oke .T. R. Street design and urban canopy layer climate[J].Energy&Buildings, 1988,11(1).

development in Hankou, as the low topography of the city as a whole severely hindered the development of the city inland, and the natural constraints of the Hankou concession took on a fan-shaped form to maximise the use of the area along the river. At the same time the roads in Hankou were named according to their relationship to the river bank, which also reinforces the relationship between the urban layout and the natural environment.⁵⁷

Apart from Hankou, the road systems of other modern cities such as Shanghai and Tianjin show a perpendicular and parallel relationship to the water bodies. On the one hand showing respect for natural conditions and on the other hand making full use of the natural topography, the arrangement of urban functions along water bodies facilitates the organisation of urban traffic and port transport.

As the basic unit of the urban layout, the architectural arrangement and combination essentially affects the spatial sense of the city, following the climatic characteristics and the law of change in the process of urban formation, taking advantage of the situation and avoiding harm. Hankou, for example, is located in the middle reaches of the Yangtze River and has a humid north subtropical monsoon climate, characterised by abundant rainfall, abundant sunshine, hot summers and cold winters. Its climate is characterised by cold winters and hot summers, high humidity and high heat. Although there are four distinct seasons, spring and autumn are short, summer and winter are long and summer lasts up to 135 days, and because it is inland and far from the sea, the terrain is like a basin, so it is easy to accumulate heat and difficult to dissipate it. Based on the existing environmental characteristics, ventilation and thermal insulation are the main considerations in the urban planning and architectural design of Hankou.

The main orientation of buildings in Hankou is generally north-south, and in the ancient city the orientation of buildings was generally north-south parallel to the Han River; there was no positive north-south orientation in the concession area, and buildings were arranged along the street roads, and in order to make better use of the land value along the river direction, buildings were generally oriented perpendicular to the Yangtze River; in the modern period, after the construction of the new district, the main orientation of buildings was adjusted out parallel to the Yangtze River, which was conducive to receiving airflow from the The building is oriented parallel to the Yangtze River, which is conducive to receiving the airflow from the river and

⁵⁷ Tang Li. Population, Space and Urban Development of Hankou [M]. China Social Sciences Press, 2010.

creates good ventilation.⁵⁸

Hankou's modern architecture is based on traditional dwellings. It inherits the patios of traditional Chinese architecture, or the regional elements such as Tiandou. It draws on the architectural measures such as sunshade, corridors and arcades widely used in Western architecture. The ventilation and heat insulation are organized to adapt to the sultry climate of Hankou.

According to the interaction theory, the environment and people will lead to a certain result in the process of mutual independence. People can not only passively adapt to the environment and use the elements provided by the environment, but also actively change the environment around them to achieve the satisfaction of life. The buildings in Hankou are in the process of constantly adapting and transforming the environment. By constantly adjusting the building orientation, a good ventilation effect is achieved. At the same time, through the means of construction technology, it constantly transforms its own architectural environment, and finally creates the most adaptable urban environment that coexists harmoniously with the natural environment, forming a regional urban space layout based on climate characteristics.

Influence of Cultural Perceptions

The city is a material expression of the accumulated cultural activity of people over a long period of time, whether spontaneously formed or planned, relying on the will of groups or individuals to shape the urban form.⁵⁹

In the modern urban period, with the introduction of western urban planning ideas, various modern cities began to produce planning drawings and planning texts, which played an increasingly important role in the development of modern cities as a direct means of predictive control of urban development. The main influence on modern urban development was European and American planning thinking, which emphasised urban function and efficiency through a grid-like road system and the division of regular street contours to lay out the general layout of the city.

Despite the influence of Western culture, modern cities have maintained traditional Chinese cultural concepts, and although the urban fabric of modern Chinese cities has changed

⁵⁸ Sheng Qiang. City Labyrinth—Space, Process and Urban Complex System [J]. World Architecture, 2005(11): 92-95.

⁵⁹ David Ludlin, Nicholas Fokker, Wang Jian, Shan Yanhua Trans. Building a Home in the 21st Century—Sustainable Urban Neighborhood Community [M]. Beijing: China Construction Industry Press, 2005.

dramatically under the influence of Western culture, urban space has maintained the inwardness and unity of indigenous culture.

In the modern spatial layout of the city, attention is paid to the organisation of the layers of urban space, in the creation of a grey spatial hierarchy in the city and in the buildings. This is expressed in the creation of spaces for interaction within the urban street profile, where buildings are not directly connected to the urban road system, but rather to urban traffic through alleyway traffic.⁶⁰ As seen in Fig.38, Chinese urban spatial culture does not exist in isolation as in the West, but forms a network of relationships centred on the individual and radiating outwards, while emphasising the overall unified order of the group. Local and Western cities show two different patterns in the relationship between built entity and space. The Chinese culture of cohesion, where urban space is cut out of the built entity, and the Western culture of openness, which results in a 'void in the middle of the entity'. The former is a positive, enclosed urban space, while the latter is a negative, unenclosed boundary, open to all sides.

It is the influence of this traditional cohesive culture that essentially led to the combination of the Western street pattern with the traditional Chinese street pattern, giving rise to the particular urban spatial layout form of the modernised city. The modern urban layout is an outward expression of the extension and development of indigenous cultural concepts of the modern Chinese city under the influence of Western culture.

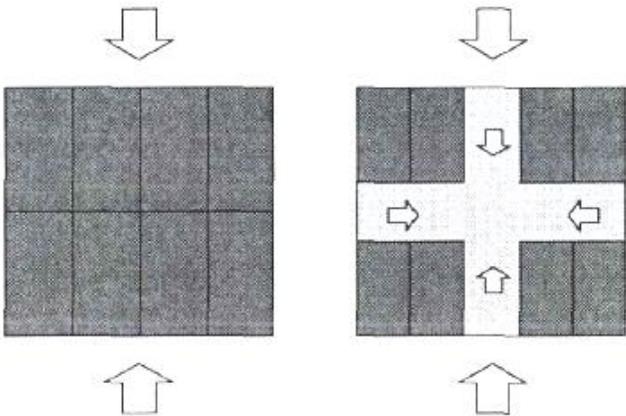


Fig.38: Comparison of Chinese and Western Spatial Cultures

Current Status of Conservation Renewal

With the changing times and changing lifestyles, the former Hankou concession area is facing

⁶⁰ Yoshinori Awara, translated by Yin Peitong. Street Aesthetics [M]. Shanghai: Baihua Literature and Art Publishing Press, 2006.

many new problems, and it is becoming increasingly difficult to preserve the old city's landscape and improve people's livelihood. The main manifestations are: high population density and complex structure, difficult to evacuate outward; aging historical buildings, the current use of a single function, functional business mode sub need to be innovative; traditional texture and modern appearance need to be organically coordinated, landscape features and environmental quality to be improved; pedestrian system broken, parking facilities are insufficient, public support, municipal infrastructure load The large size of the pedestrian system and parking facilities, as well as the load on public facilities and municipal infrastructure, have restricted the development of renewal.

First, the planning coverage rate is high, but the preparation standards, approval progress is not - the implementation effectiveness needs to be further strengthened. Up to now, the Hankou concession has successively completed the protection planning of six neighborhoods, namely Zhongshan Avenue, Qingdao Road, the "August Seventh" meeting site, Yiyuan Road, Dazhi Road and Liuhe Road, basically achieving full coverage of the detailed planning of key historical neighborhoods, laying a solid foundation for the protection and renewal of Wuhan's historical neighborhoods. However, the current conservation plans for each neighbourhood are relatively independent, lacking coordination and integration at the level of regional, historical development and historical and cultural continuity. From the perspective of the special planning system, Wuhan has established a framework for conservation planning at three levels: protection of the general pattern, protection of historic and cultural style neighbourhoods and protection of cultural relics and monuments, but there is a lack of planning effectiveness at the mesoscopic level of the Hankou concession.

Secondly, the introduction of relevant local regulations and statutory plans has played a certain control role, but activities affecting the historic environment and appearance still exist. The Wuhan Regulations on the Protection of Historic Areas and Outstanding Historic Buildings were promulgated and implemented on 1 February 2013, providing a legal basis and institutional guarantee for the protection of historic and cultural spaces. Through the implementation of statutory conservation plans such as the Yiyuan Road Area (2003) and the Qingdao Road Area, the old city transformation mode of large-scale demolition and construction has been avoided, and urban construction activities affecting the historic environment and appearance in the area south of Yiyuan Road within the former Hankou

concession Area have been curbed to a certain extent, but the historic environment and appearance in the area north of Yiyuan Road tends to fade away.⁶¹

Thirdly, the implementation of many projects has been completed, but the appropriate historical and cultural protection and renewal models and implementation paths are still being explored. In the Hankou concession, a large number of historical relics represented by the August Seventh meeting site and the Wuhan Art Museum have been repaired, and some of them are open to the audience; the rapid transit and public transportation systems have been continuously improved, and the rail lines 1 and 2, the river crossing tunnel Completed and opened to traffic, the construction of linear spaces such as Yanjiang Avenue, Jiangnan Road, and Jiangtan Park has been effective; Renovation and implementation of planar historical and cultural spaces such as Wuhan Tiandi and Jiqing Street. The implementation subjects, operation modes and operation effects of the above protection implementation projects are different, and many experiences and lessons have been accumulated for the protection and renewal of historical and cultural areas.

Implementation Strategies and Measures

Site-specific Conservation Objectives

Under the strategic guidance of building a national central city and rejuvenating Wuhan, the former Hankou concession Area is positioned as a "national historical and cultural district". At the end of the "Thirteenth Five-Year Plan" period, it will be built into an international cultural exchange and exhibition center, a national patriotism education base and a demonstration area for the strategy of reviving the Greater Wuhan. Drawing on the successful experience of the reconstruction of typical urban historical districts in China, it proposes the protection principles and implementation paths of "government-led, division of labor and cooperation; residents' participation, pilot projects first; expert guidance, repairing the old as old; culture first, market operation".

In response to the different realities of the northern and southern parts of the former Hankou concession area, the boundary of Yiyuan Road is used as the boundary to adopt two modes of renovation and renewal, namely "material space" and "characteristic connotation", respectively, to enhance the implementability of the plan. The southern part of the former Hankou concession area is densely populated with historical buildings, the spatial form of the neighbourhood is

⁶¹ Liu Kai. Research on the evolution of urban morphology in the three towns of Wuhan [M]. Wuhan: Huazhong University of Science and Technology Press, 2017.

intact, and the material space carrier of historical culture is preserved intact, so the "material space" mode of conservation is adopted, focusing on protecting the characteristic material space, strictly controlling the construction activities in the area, relocating the population as a whole and retaining a small number of original residents, while the government is the main body. The northern part of the area has a relatively scattered distribution of historical buildings, with only traces of historical streets and alleys remaining in the current situation and a relative lack of historical and cultural material space carriers, so it adopts a "connotation of characteristics" type of conservation model, focusing on the shaping of historical and cultural atmosphere, with new construction activities not destroying the original street and alley texture, and allowing the market to participate in the renewal of some of the plots.

Clearly Layered Spatial Planning

At the macro level, the former Hankou concession Area is integrated into the urban pattern, strengthens the "cross-shaped" landscape axis of Wuhan, integrates into the two rivers and four banks, and echoes the two ancient cities of Wuchang and Hanyang.

At the mesoscopic level, with the former Hankou concession Area as the middle area, the regional system is integrated through the skeleton function of "two axes and six streets". "Two axes" means relying on the current distribution pattern of historical relics to create two main axes of cultural experience along the river along the Yangtze River Avenue and Zhongshan Avenue, connecting the five countries concession area and the surrounding functional areas such as Hanzheng Street and Erqi Business Park in the north-south direction; "Six Streets" It refers to the six historical streets and lanes along the river, namely Jiangnan Road, Qingdao Road, Lihuangpi Road, Caie Road, Sanyang Road, and Lugouqiao Road, connecting key development projects from east to west, as well as important functional nodes in the Binjiang area and around Jingnan Avenue.

At the micro level, plan thematic and functional projects, identify specific starting points for implementation, and propose implementation guidelines for leading functions, cultural themes, spatial images, architectural features, and core sectors. Create distinctive functional areas, clarify the development orientation and core sectors of each area, and radiate and drive surrounding blocks. Promote key theme projects, implement and refine functional formats through projects, carry out detailed design, and use this as a starting point to promote the implementation of transformation.

Supporting Projects with an Eye on People's Livelihood

The two major system projects of traffic accessibility and residential upgrading are important safeguards for the conservation and regeneration of the Hankou concession, and for the enhancement of the quality of public life and residential life in the area.

The skeleton road network in the Hankou concession has undertaken a large amount of transit traffic. The internal historical road network has no room for expansion and expansion. The limited road resources can no longer support the development of high mobility. Only by optimizing the traffic structure and developing efficient and sustainable transportation methods can it be better To achieve regional protection and renewal. In terms of green transportation strategy, Hankou concession has achieved full coverage of regional rail transit through the construction of Zhongshan Avenue bus passenger corridor, three rail lines, and riverside tram tour lines. , relying on the six characteristic streets and lanes along the river and the river beach greenway in the concession to form a pedestrian system, connecting key projects to experience the style of the concession; in terms of motor traffic guidance strategy, through the regional "three horizontal and three vertical" skeleton diversion system, new diversion channels, retention One-way traffic is organized to optimize the circulation system, and a zoned parking strategy is adopted according to the different characteristics of the north and south sections. The north section is mainly equipped with parking and supplemented by public parking. The southern section is mainly controlled, moderately taps potential, and guides demand. Specific management measures such as parking lots in public buildings that are open at night, and using mini-shuttles to realize "outside the parking area and inside the tourist area" should be tried to be implemented in the Hankou concession.

In order to effectively organize population relocation, a population relocation model of overall relocation in the southern part and partial relocation in the northern part can be adopted, and the residents resettlement plan can be implemented in combination with the district-level three old reconstruction implementation plan. At the same time, public service facilities such as education, medical care, and parks and green spaces should be improved, and the construction methods of municipal infrastructure such as electricity and sanitation should be improved to eliminate potential safety hazards and inconveniences caused by the aging of existing facilities. In terms of the characteristics and atmosphere of the living space, with the style intention of “Southern Tradition, North Modern”, we will create different forms of living space in the North and South.

Combined with the protection and renewal of traditional Lifen housing, we will create a pilot tourism and leisure project operated by residents.

Coordinated Action Plan

The overall implementation of the protection and renewal of the Hankou concession is a systematic project completed by multi-department and multi-subject division of labor. According to the situation of Wuhan and relevant urban experience, the implementation of the project is generally coordinated and controlled by the municipal government platform, and the municipal state-owned company is responsible for the preliminary financing, land acquisition and storage, house eviction, and public infrastructure construction. Under the guidance and supervision of the government, the development enterprises should be appropriately introduced for unified investment promotion for business planning and operation. At the same time, well-known design institutions at home and abroad should be invited to refine the design plans of key projects and implementation projects, establish a professional cultural media company to promote the history and culture of the concession, and establish a professional historical project. Construction agencies and special building materials production agencies are directed to carry out the restoration of historical buildings. The implementation sequence should also reflect the concept of short-term and long-term integration and sustainable development. In the near future, based on the protection and renewal plan, the overall renovation of road municipalities, green landscapes, and the relocation and reconstruction of historical blocks should be completed. Maintain, repair and operate, and track and control the construction of surrounding control and coordination areas.

Conclusion

The Hankou Concession Area is an important area for economic, social and cultural development in Wuhan City, Hubei Province, and it is also the area with the most complete historical features of the city. The main historical and cultural blocks reflect the historical development process of Hankou since its opening as a port. The overall protection and renewal of the original Hankou Concession Area is of great significance to the prosperity of cultural undertakings, the enhancement of urban taste, and the improvement of people's livelihood.

Under the influence of the ever-expanding urban renewal trend, the task of protecting historical blocks has become more and more arduous, and the traditional historical and cultural protection

methods oriented by static protection can no longer meet the needs. The comprehensive planning of features, restoration of major architectural sites and improvement of regional environment has certain practical significance. Carry out certain exploration and research in combination with specific implementation projects, in order to better realize the inheritance and development of urban history and culture through the innovation of planning and technical means.

CHAPTER SIX: DEVELOPMENT OF REPRESENTATIVE BUILDINGS

Overview of Representative Buildings

With the emergence and development of human society, cities are gradually formed and expanded, and tracing the development of cities is a process of dynamic renewal. In the modern social environment, the protection and disposal of old buildings has become an unavoidable difficulty and pain point in every urban renewal, because old buildings themselves have certain historical, cultural and social service function values. However, the pace of urban development and construction is unstoppable. In order to further improve urban service functions and meet the development needs of urban society in different eras, old buildings have to be demolished or rectified. It not only promotes urban renewal, but also gives full play to the value of old buildings and realizes the harmony between old and new buildings.

In the past urban renewal, many places adopted the "rough" method of tearing down and rebuilding. It was necessary to completely demolish the old buildings in the planned area on a large scale and in a large scale before new construction. The site is treated for many times, and a series of problems such as urban environmental pollution, reasonable disposal of waste, and resettlement of residents must be taken into account, which affects the sensitive nerves of the government, construction units and urban residents. Improper handling of any link may lead to a variety of problems. loss and conflict. And purposeful protection, renovation and utilization of some representative old buildings in the concession area, retaining the main structure of the original buildings, using the original infrastructure, such as power and telecommunications facilities, water supply and drainage facilities, roads and greening, etc. Appropriate renovation and upgrading can not only reduce the number of construction and demolition in the concession area during the renewal process, save the cost of civil engineering and the investment in new facilities, but also effectively improve the renewal efficiency and quality of Hankou.

The old buildings in the concession area are not useless. They were also the symbols and glorious representatives of Hankou in that era. They have distinctive architectural art characteristics and profound historical and humanistic connotations. They are witnesses to the development of Hankou and are also many residents. , especially some ancient buildings, which have high traditional culture and historical research value. In the protection and renewal of the

concession area, construction planners should pay attention to these precious resources, make rational use to give them new life, and let them present their special charm with a new look in the new era and the new concession environment. With the help of these restored and renovated old buildings, it can not only show the historical and cultural heritage of the entire city, but also bring a new artistic effect, and become the characteristic image representative of a city, which can improve the city's influence and popularity.

Therefore, in the entire Hankou Concession area, the British, Russian and French Concessions carried the main commercial and administrative activities and reflected the overall trend of development of the Concession. Four representative buildings with complete and obvious architectural styles were selected in this area. Bagong Houses represent residential buildings, Jincheng Bank represents commercial buildings, Pinghe Packaging Factory represents industrial buildings, and Jianghuan Building represents administrative buildings. Through the analysis of the four representative buildings, and a reasonable planning and updating strategy for the future development of these buildings, avoid maintenance and rectification in the wrong direction, and give the overall planning of the entire concession area to guide and demonstrate the role, so that the entire city can harmoniously Mix classical buildings with modern buildings, and mix high-rise buildings with low-rise and multi-storey buildings to fully demonstrate the urban style of the entire concession area.

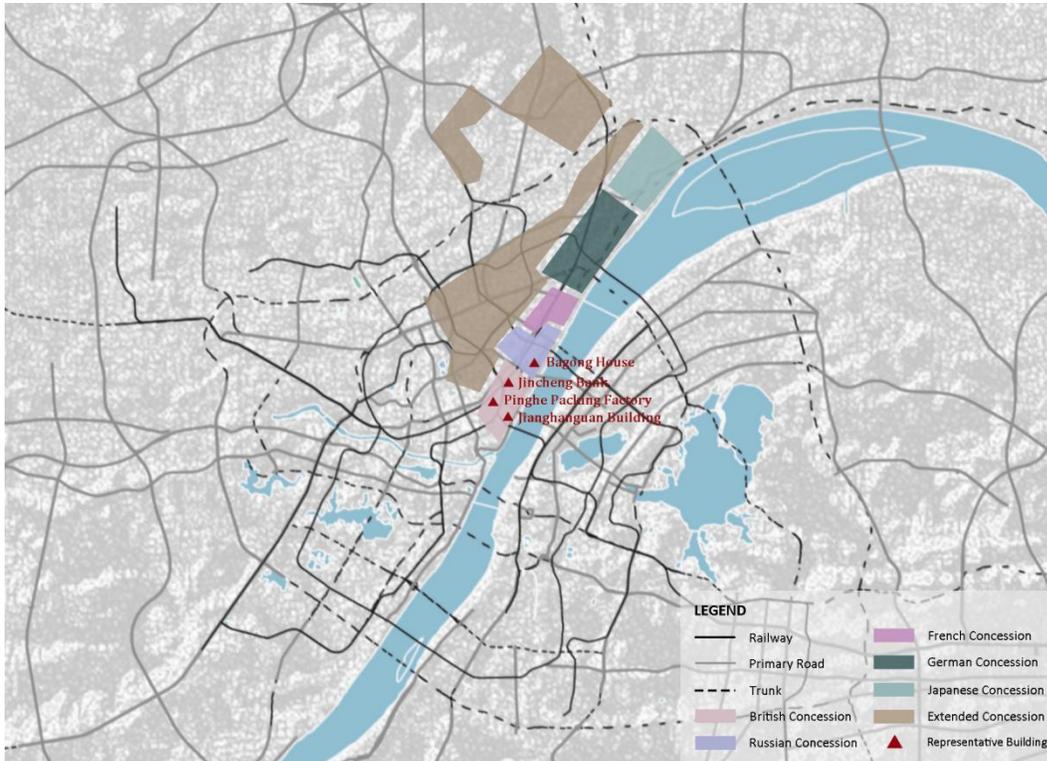


Fig.39: Distribution Map of Representative Buildings

Bagong House

Architectural Overview of the Bagong House and Its History

The Bagong house is located at No. 46-56, Poyang Street, Hankou District, Wuhan City, Hubei Province, between the intersection of Poyang Street, Dongting Street and Lanling Road. It was built in 1901 and completed in 1910. In modern times, it belongs to Russia Concession (Fig.40). The Bagong house has a construction area of nearly 5,000 square meters, is 5 stories high, and has 220 rooms. It was the largest high-end apartment in Hankou in the early days. The overall building is a brick and wood structure (colonial style). At the same time, it is also a Renaissance-style building with Russian style. It is now an excellent historical building under the first-class protection in Wuhan.⁶²

⁶² Xu Huandou, Wang Kuiqing. Hankou Xiaozhi [M]. Four years of the Republic of China lead print.



Fig.40: Location Map of Bagong House

The architecture of the Bagong house is influenced by the Byzantine architectural style, and the outer contour is full of changes. On the satellite map, the Bagong house seen by the naked eye is an enclosed triangular building. In fact, the construction of the Bagong house is carried out in two phases, called "Big Bagong" and "Little Bagong". The side near Lanling Road was built first and has a larger building area, so it is called "Big Bagong". On the other side of Li Huangpi Road, the construction was continued later, and it was called "Little Bagong" because of its small building area. Later, the large and small "Bagong houses" were combined into one, which solved the lighting and ventilation of the residents in a unified way, and opened a triangular inner patio on the inside of the building. (Fig.41, Fig.42).



Fig.41: Big Baogong



Fig.42: Small Baogong

Because the Bagong house is near the middle of the intersection of the three roads, the building plane is an acute triangle, and the middle is a triangular patio, which is the inner courtyard. The

plane adopts a unit layout, each unit is equipped with entrances and exits, and the units are clearly divided into households. There are bedrooms, living rooms, balconies, bathrooms, and kitchens indoors. The layout is very compact (Fig.43, Fig.44).

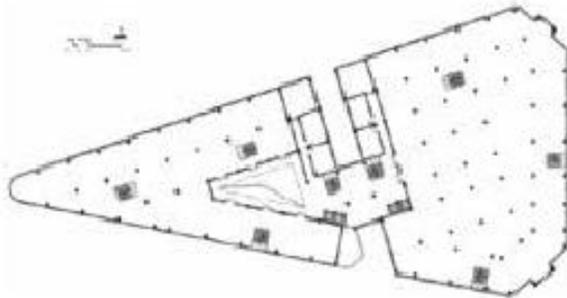


Fig.43: Ground Floor Plan

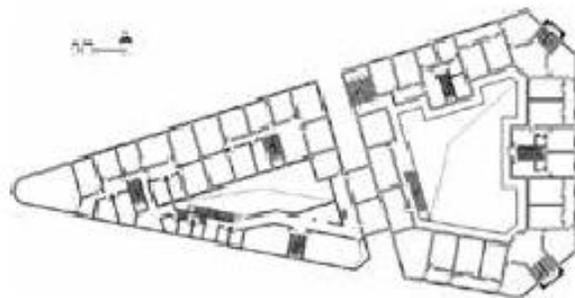


Fig.44: First Floor Plan

The name of the Bagong house comes from the original owner, Banov, a Russian nobleman who came to Hankou in 1869 to become the person in charge of Xintaiyang, and served as the executive director of the Russian Concession Municipal Council in 1896. During his stay in Hankou, he Invested to build a "Bagong" house as his private residence. Until 1917, with the outbreak of the October Revolution, the tsarist rule of Wuhan ended. After the original owner left, the Bagong house became the office building of the bank, and the multi-storey space upstairs was used as the dormitory for bank staff until now. It has completely evolved into a residential building with more than 220 households.⁶³ The main uses of the first floor are today's grocery stores and traditional Chinese medicine beauty salons.

Features of Facade of Bagong House

Bagong house is a brick-concrete structure with 4 floors above ground and 1 floor underground, with a floor height of about 15.8m. The building is enclosed on three sides, with building entrances and exits on three sides. The exterior wall material is made of clay bricks, which are in the form of clear water joints, and some wall structures such as window covers use the primary color of masonry. The bottom leg is made of blue-striped stone masonry, and the whole body is red. The ground floor of the building is distributed with underground ventilation openings inlaid with black iron railings, the ground is a horizontal row of long windows at different intervals, the top window row is a circle of slightly protruding eaves, the short column

⁶³ Qiaokou District Local Chronicle Office. Hanzheng Street and Hankou City [M]. Wuhan: Wuhan Press, 2017.

platform fence The embedded pilasters under the eaves make the entire building facade appear neat and clear, with clear layers, without losing the changes of lines and rich patterns.

Investigation and Analysis on the Decorative Art of Bagong House Architecture

The outer wall of the facade facing Dongting Street is built with robed earth bricks, which are in the form of clear water joints, and some wall structures such as window covers use the primary color of masonry. The bottom floor is made of blue-striped stone masonry, and the whole body is red (Fig.45, Fig.46). The ground floor of the building is separated by underground vents inlaid with black wrought iron railings (Fig.47).



Fig.45: Partial Elevation of Dongting Street Fig.46: Partial Window Structure and Decoration of Dongting Street



Fig.47: Dongting Street Underground Vent

Bagong house The space at the intersection of Dongting Street and Poyang Street is now a traditional Chinese medicine beauty salon. Since the 1920s, various artificial stone crafts have been mastered and widely used by Chinese craftsmen. Stone approach (Fig.48-50).



Fig.48: Exterior of the Bagong House (Chinese Medicine and Beauty Salon) Fig.49: Exterior Decoration of the Bagong House
Fig.50: Detail of the Exterior of the Bagong House

The wall decoration materials of Poyang Street and Dongting Street are similar. The whole body is made of flat clay red bricks. The bottom material is the common water brush stone technology after the 20th century, and the horizontal surface is also spliced with decorative bricks (Fig.51 ,Fig.52).



Fig.51: Poyang Street Facade Decoration Fig.52: Combination of Decorative Brick and Painted Stone Work

Lanling Road is basically a residential area, and the facade is more lifelike. The overall facade decoration is relatively simple, the overall wall facade is based on red, and is built with clay bricks in the form of clear water joints. The bottom steps are mostly used for natural stone (Figure 53-56).



Fig.53: Lanling Road Facade



Fig.54: Lanling Road Facade Material



Fig.55: Natural Stone Steps



Fig.56: Clear Water Jointed Red Brick

The Bagong house is an early multi-storey apartment building in Hankou with the characteristics of "Art Deco". The elements of Art Deco in terms of style are eclectic, it shows a certain freedom of expression and the pursuit of individuality. It is characterized by the use of straight lines, strong edges or corners to combine the composition, with a specific decorative style, and the decorative details are often made of the same materials as the main building. The Bagong House has the style of European classicism and romanticism at the same time. There are basically two types of railings on the balcony in the whole building, one is an aquarium-style decorative railing made of natural stone, and the other is a railing with black iron carvings. The

overall style is classical and romantic.⁶⁴

(1) Balcony structure and its decorative arts: Bagong's house faces three streets, and the facades corresponding to each street have different characteristics. On Dongting Street, it is characterized by the combination of the balcony and the entrance of the gate. The main structure of the balcony is made of natural stone, and the balcony railings are mainly composed of black iron hollow swirl patterns and stone-carved aquariums (Fig.57-59). The residential balcony railings are thick and graceful and the shutters are red and exquisitely crafted. The balcony railings on the second and third floors are connected by different materials and shapes, which are simple and elegant, showing the noble temperament.



Fig.57: Dongting Street Entrance and Balcony Integrated Modeling

Fig.58: Dongting Street Black Iron Railing Decoration

Fig.59: Dongting Street Aquarius Decorative Railing

(2) The structure of the window and its decorative arts: Bagong's house faces three streets, and the shape and decoration of the windows are different. It is embodied in the facade of Poyang Street. In the facade of Poyang Street, it can be found that the shapes and decorations of the windows are very rich, which shows a certain freedom of expression and the pursuit of individuality. It is characterized by the combination of straight lines, strong edges or corners, and has a specific decorative style, but the decorative details are often made of the same materials as the main building (Fig.60).

⁶⁴ Fan Kai. Hankou Congtan Proofreading Translation [M]. Wuhan: Hubei People's Publishing House, 1999.



Fig.60: Modeling and Decoration of Windows in Bagong's House

There are a total of 8 entrances to the Bagong house (Fig.61). The entrance gate on the side of Poyang Street is high and mostly made of stone, with complex and elegant decorative patterns. There are two similar wooden doors on one side of Lanling Road, the special feature is the ventilation window at the bottom of the second floor above the eaves. The door on one side of Dongting Street is wider and echoes the style of the balcony above to form a complete facade.

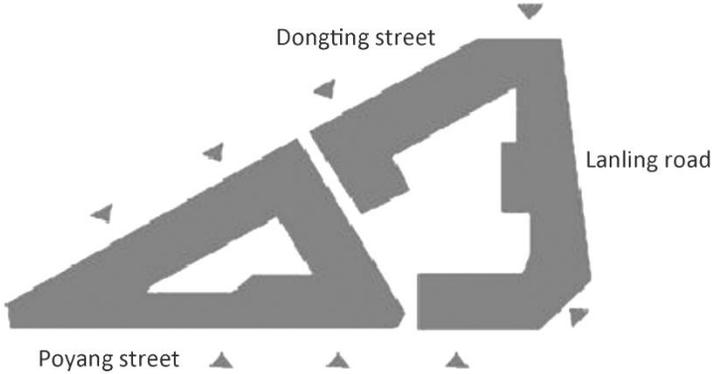


Fig.61: There are a total of 8 entrances to the Bagong House

(1) The structure of the entrance of Dongting Street and its decorative features: the entrance of No. 75 Dongting Street and the balcony on the second floor are an integral shape, and the shape of the Roman column capital has been extended to the balcony to form a whole. The romantic entrance of No. 75 is now Dongting. Main entrance of a commercial bar on the street. The pilaster capital of the entrance is a scroll pattern, and the 4m-high pilasters and decorative details appear elegant and atmospheric at the entrance (Fig.62-Fig.65).



Fig.62: Roman Column Shape



Fig.63: Pilaster Stigma

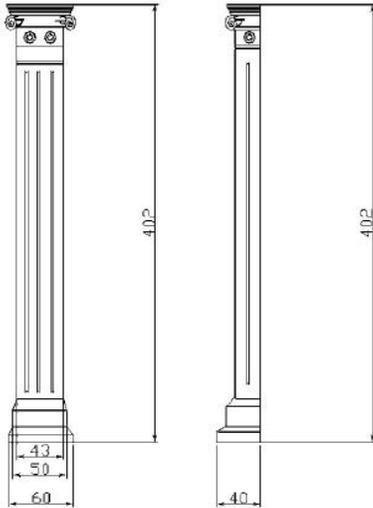


Fig.64: Scroll Decorative Pilasters (unit: cm)



Fig.65: Rendering of the Entrance of No. 75 Dongting Street

(2) Entrance structure of Poyang Street and its decorative features: Bagong House has three main entrances on Duyang Street, namely No. 80, No. 84 and No. 86 of Poyang Street. The entrances are all designed in the form of arches (Fig.66).



Fig.66: Three Entrances of Poyang Street

The architecture of the Poyang Street block as a whole pays more attention to the use of artistic techniques in decoration. The emergence period of the concession area basically coincides with the period of the germination and development of modern architecture. Hankou architecture, where retroism and eclecticism prevail, undoubtedly brings people a strong visual experience. , composition, or architectural decoration details have been greatly simplified, giving people a simple and straight modern sense. The No. 80 entrance gate of Poyang Street is of the same material as the red brick wall of the building facade, and the entrance is mainly based on the simplified shape of arch coupons. The joints of the brick walls are made of finer thread incense seams, and the overall red brick collage is patchy and rigorous. The length of each group of red bricks is divided into two groups, one group is 490mm, the other group is 280mm, the width is 240mm, the distance of the joint is 100mm, and the overall arrangement is orderly (Fig.67- Fig.70).



Fig.67: Entrance of No. 80, Poyang Street



Fig.68: Entrance Rendering of No. 80 Poyang Street

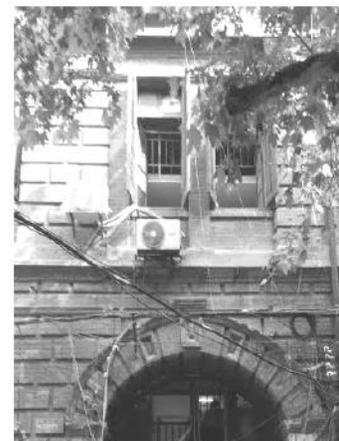


Fig.69: Decoration Details of the Entrance of No. 80 Poyang Street

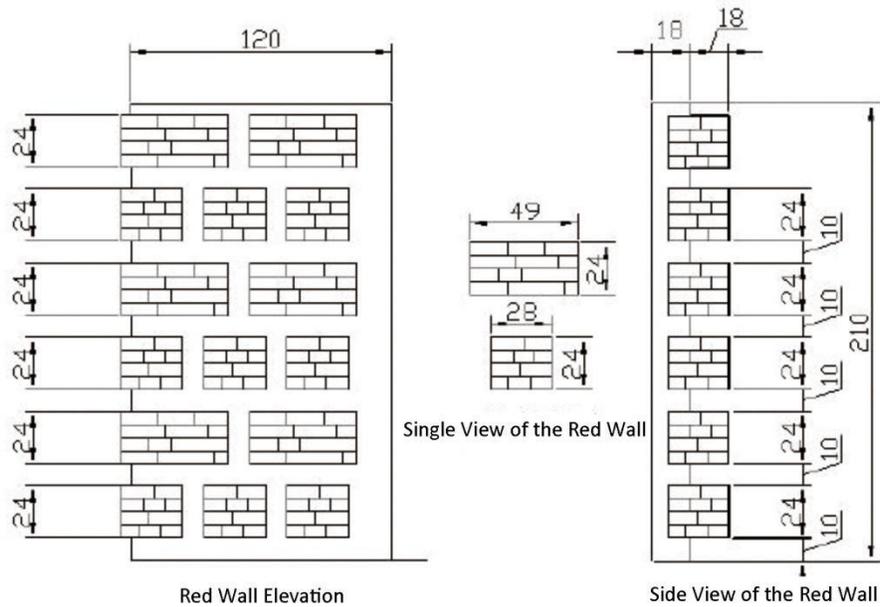


Fig.70: Red Brick Detail Decoration at the Entrance of No. 80 Poyang Street (unit: cm)

The entrance of No. 84 Poyang Street is a mixture of masonry and stone. The entire entrance is designed with an arched coupon. The symmetrical ends of the entrance are veneered with Roman column patterns. The decorative details are simple but elegant. The bottom floor is made of blue-striped stone masonry, and there are ventilation openings. Quartz stone is the main material at the connection with the second floor (Fig.71-Fig.73).



Fig.71: Entrance of No. 84, Poyang Street

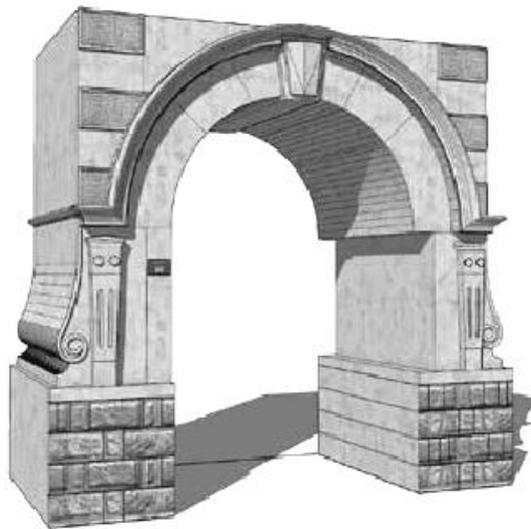


Fig.72: Entrance Rendering of No. 84 Poyang Street

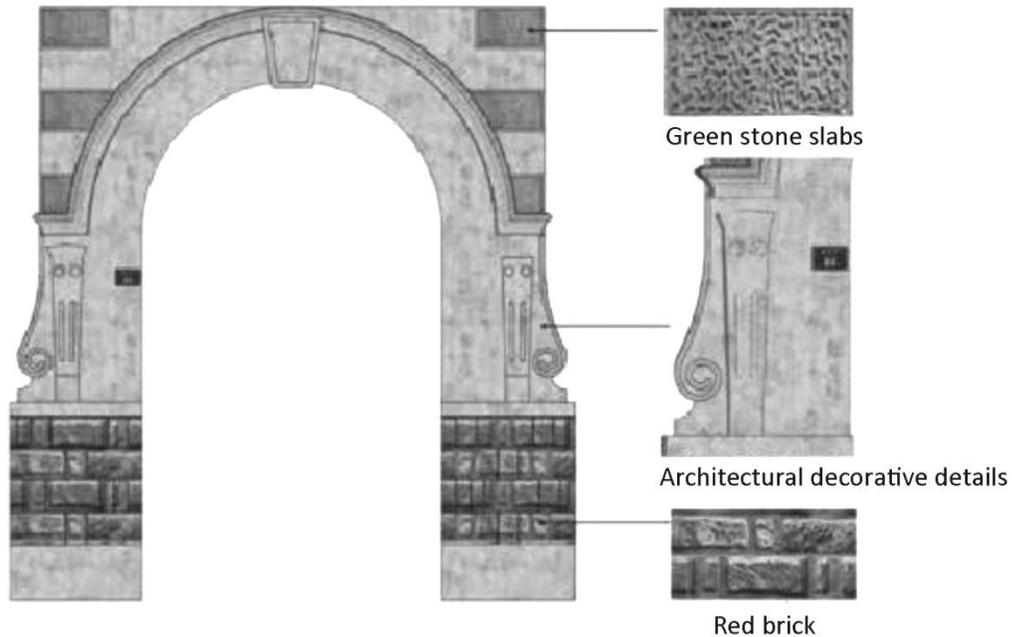


Fig.73: Front Elevation of the Entrance of No. 84 Poyang Street

(3) Lanling Road entrance structure and its decorative features: The Lanling Road façade is relatively simple in its decoration, with an overall red brick collage. As can be seen from the current state of the site, Lanling Road is the most damaged part of the overall architectural façade of the Bagong House by artificial influences. On the ground floor of Lanling Road, which is now a commercial shop, the residential accommodation on the second to fourth floors is severely lacking in kitchen and bathroom facilities, resulting in the extension of the building façade in such a way that not only destroys the original decorative façade of the building, but also has a serious impact on the building structure and accelerates the ageing of the building. There are two similar wooden doors on one side of Lanling Road. The overall shape is simple and the decoration is mainly based on the ventilation openings with the character "Well". The special feature is the ventilation window located at the bottom of the second floor above the eaves (Fig.74-Fig.76).



Fig.74: Entrance of No. 10 Lanling Road



Fig.75: Rendering of the entrance of No. 10 Lanling Road

Fig.76: Elevation of the entrance of No. 10 Lanling Road

Comparison of Bagong House with Similar Building of the Same Period

Name	Wuhan Bagong House	Harbin Modern Hotel
Build Time	1901	1906
Building Exterior		
Geographical location	No. 86, Poyang Street, Jiang'an District, Wuhan	No. 89, Central Street, Daoli District, Harbin (Intersection of Central Street and Xiqidao Street)
Architectural Style	Modern Classical Revival Architecture	Art Nouveau Architecture
Architectural Features	The two buildings of Bagong House are close to each other. The plane is an acute triangle with a triangular patio in the middle. The layout is unitized. Each unit has its own entrance and exit. The facade of the building is rigorous and symmetrical, the scale is magnificent, the inner corridor is marble, the outer corridor is flowered, and the mosaic floor.	The building's façade design and detailing are highly complex, mainly manifested by the rich variations in the design and decoration of doors and windows, balconies, domes and parapets. The parapet is mainly made of bricks, and adopts various soft and flexible "Art Nouveau" curve shapes, or a steep falling water curve, or a rounded elliptical scroll curve.
Door and Window Features		
Wall Features		
Interior Detail Features		
Common Features	The decorative motifs are all rather elaborate, the pilasters are mainly scrollwork, the whole is a mixture of masonry or brick and timber, all in a 'well' layout, the other sides are courtyard gates, a mixture of basic Russian, Art Nouveau, Eclectic and Baroque styles.	

Fig.77: Architectural Comparison

Jincheng Bank

Architectural Overview of the Jincheng Bank and Its History

The Jincheng Bank in Hankou, located on a traffic island at the intersection of Huangshi Road, Zhongshan Avenue, Baohua Street and Nanjing Road, began construction in 1930 and was completed the following year. After liberation, the building served as the Wuhan Children's Library for a long time. (Fig.78)



Fig.78: Jincheng Bank before Renovation

The Jincheng Bank is a building group with a polygonal site. The main building is located on the perpendicular side of Zhongshan Avenue, covering an area of 670 square metres, while the dormitory for the bank's staff is located in Jinchengli, a folded building along the street from east to west. The Jincheng Bank has the typical characteristics of Han Dynasty architecture: the buildings are arranged along the street and enclosed into a courtyard in the middle. The main building consists of four and a half storeys, with a terrace at the fourth floor. The main building is in the Western Classical style, with some traditional Chinese decoration; the secondary building is in the Wuhan Lifan architectural style. (Fig.79, Fig.80)



Fig.79: The Facade of Jinchengli Courtyard before Renovation



Fig.80: The Facade Along the Street in Jinchengli before the Renovation

The ground floor of the main building is 2.5 meters high, which is the auxiliary room; the second floor is the main entrance and business hall, with a floor height of 5 meters; the 3-5 floors are 3 meters high. The Jinchengli building complex in the annex building consists of three 3-storey buildings: the ground floor is 4.5 meters high for shops; the 2-3 floors are dormitories, with a floor height of 3-3.5 meters, two households with one ladder, two rooms and one living room per household. This group of buildings has high artistic value: the seven rooms and eight columns on the front of the main building, Jincheng Bank, adopt the Western classical style of colonnades; while the colonnade is three stories high, and there are circular arch windows on the second floor, so that it can be seen from the gallery. From the outside, it is both majestic and varied. Another feature of it is that the pedestal is very high, and it takes 21 steps to get to the first floor. The ground floor of the building in Jinchengli is in the form of arcades, and the second and third floors are corridors, which are integrated with Jincheng Bank.

Jincheng Bank is eclectic in the use of Western classical colonnades. Western classical roofed corridors are called column porches, usually four-column, six-column, eight-column, ten-column and twelve-column. The column type is a collection of various parts including the column base, column body, column head, lintel ditch (cornice) on the column, etc. The general column spacing is 2.25-4 times the column diameter, and the narrow column type is 1.5-2 times. The distance between the columns of Hankou Jincheng Bank is 4 meters, the column height is about 10 meters with 3 floors, and the ratio of diameter to height is 1:10. The column foundation does not have the usual positive and negative curve angles, but uses cabochon corners and straps. The lower part is retracted and stands on a square column base with a height of 1.8 meters. The stigma is a composite type superimposed between the ancient Greek Ioni and Corinth in the ancient Roman period, but the delicate scroll of the Ioni stigma was changed to Chinese-style decoration, and the image of honeysuckle that was rolled up at the lower part of the Corinthian stigma was changed to four lion-face reliefs and petals.⁶⁵ In our country, the "lion" is often used as the "gatekeeper lion" at the entrance of the sacred place. It is said to be a symbol of bringing wealth and good luck to people. (Fig.81)

⁶⁵ Wang Baoxin. Continuation of Hankou Talks [M]. Wuhan: Hubei Education Press, 2002.



Fig.81: Jincheng Bank Pillar Head

The gable of the colonnade is a functional floor. The frieze of the gable is raised to form one storey, and seven windows are cut into the seven bays of columns. The eaves project outwards and the lower lintel is finely worked and extends to the sides, joining the horizontal gables on either side. The roof has mountain flowers of different sizes but with uniform symbols in the middle and at both ends, enhancing the sense of unity in the horizontal direction of the building. The top mountain flower is the most ingenious. Jincheng Bank made a mountain flower above the eaves of the three bays in the middle. The two sides of the mountain flower were large baroque curved scrolls, but the vortex eyes of the scrolls were made of Chinese decorative patterns. The rectangular "plaque" in the middle is engraved with the four characters "Jincheng Bank". The arched doors, windows and glass partitions at the entrance have traditional Chinese characteristics. The lines and corners of the doors, windows and pilasters are very simple. Various decorations of Western classicism are simplified here, handled properly, and tasteful. The colonnade and the exterior wall of the building have a strong contrast between the virtual and the real. Under the sun, the shadows in the corridor change and subtly change, which contains the harmony and quietness of classical architecture, and the charm of lofty and holy beauty.

Renovation of Jincheng Bank

After historical changes, Jincheng Bank has lost its original style: because the Children's Library has moved out of Jincheng Bank, the building has been idle and its internal functions have declined. Jinchengli, which mainly focuses on residential functions, cannot meet the requirements of modern living environment, and the residents' spontaneous building renovation

will cause great damage to historical buildings. In order to reproduce the historical features of the historical buildings, in 2005, the Wuhan Municipal Government decided to fully exploit the historical value of the historical buildings and invested 220 million yuan to renovate and expand them. It took three years to complete the Wuhan Art Museum.⁶⁶ While retaining the original architectural style, the new museum meets the requirements of the museum's functions and facilities.

The general layout of the museum is divided into two parts: the reserved part and the new part. The reserved part is in the south - a building complex enclosed by Jincheng Bank and Jinchengli. The new part, on the north side, is a reconstruction after demolition of a five-story office building that was out of step with the historic building. The trapezoidal courtyard enclosed by the old and new buildings is the core part of the museum, the atrium. The new building takes the utilization and visual perception of the triangular space on the north side as the entry point. The two right-angled triangular building blocks and the north plaza of the diamond-shaped space allow the museum to integrate with the environment in geometric order. The green plaza to the south of Jincheng Bank is preserved. (Fig.82)



Fig.82: General Plan of Jincheng Bank

⁶⁶ Li Baihao, Wang Xibo, Xue Chunying. A Brief History of Modern Urban Planning in Wuhan [J]. Planners, 2002(5):20-25.

First of all, different structural forms are adopted for different grades of protected buildings: the original Jincheng Bank is a municipal first-class protected building, and its use is a public building, so only this part is structurally reinforced; the original Jinchengli is a municipal second-class protected building, and its original use nature For a residence, the small-scale and low-rise space division cannot meet the functional requirements of the museum. Therefore, on the premise of retaining the outer wall and the main structural system, the original structure is reinforced and added to a new structure, so that the new and old building structures can be jointly affected. force; the new part of the structure is completely separated from the force of the old building. Three kinds of structural treatment methods combine new and old buildings into an organic whole that meets modern bearing requirements.

Then, the old drawings designed by Zhuang Jun were retrieved from the archives (Fig.83), and the materials, colors and details of the original building's inner and outer facades were studied and verified. Carry out sampling analysis and research on the layering of the building at each development stage, and finally determine the plan for the protection and repair of the facade:

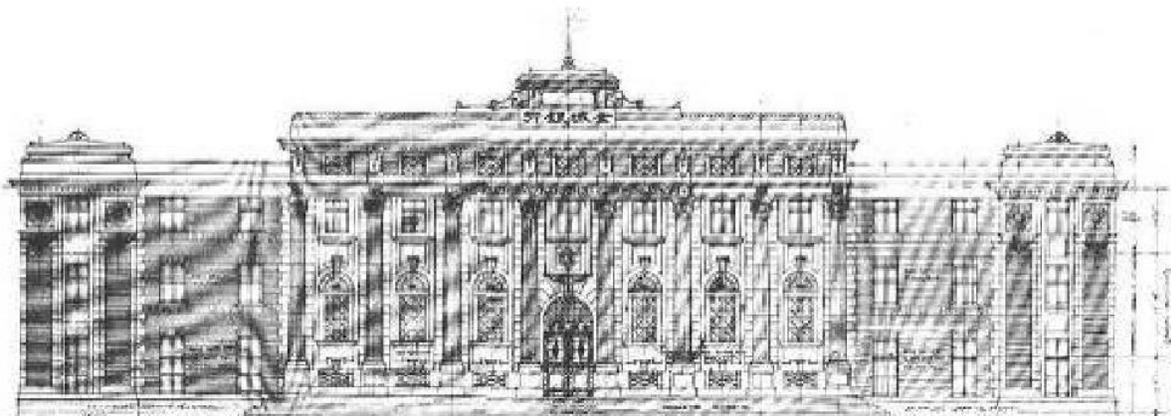


Fig.83: Elevation of the Former Jincheng Bank

The first is to clean and repair the main part of the walls and decorations that remain intact. . In order to minimize the damage to the wall, Jincheng Bank adopts the cleaning method mainly by sandblasting and supplemented by other cleaning technologies. After cleaning the partially weathered and flaky walls and decorations, repair them with materials of the same composition and proportion as the exterior wall materials of the old building.

The second is to repair the severely damaged walls by means of duplication. For the clear water wall in Jincheng, we specially customize the surface brick veneer that is similar to the masonry

brick of the clear water wall. The surface of the surface layer is rolled with silicone protective agent to ensure anti-leakage and protection of the opposite brick surface.

The third is to replace the missing or damaged metal components such as door and window frames or railings with new imitation components. The window frame is made of thermal insulation profiles to imitate the original material, and the glass is made of hollow low-e glass to achieve energy-saving effect. Most of the staircases and balcony railings of the building are cast iron floral railings and wooden handrails. The restoration of such structures is the main focus, and the original materials and construction techniques are fully utilized.

The fourth is to repair or copy the repair of wall moldings, roofing and external wall decorations. The original moldings have been severely weathered and damaged due to wind and rain erosion and reconstruction. We repair the damaged parts as they are, and the repaired moldings are in harmony with the original color samples.

The fifth is to repair the roof and maintain the original style. The form of the building roof is an important aspect that reflects the characteristics and artistic style of the building. For Jincheng Bank, the roof style was determined by researching historical data, the illegal construction was demolished, the terrace was restored, the entire roof was renovated and a waterproof layer was added; Lifting up (the ridge does not exceed the height of the parapet, so it does not affect the facade), the new sloped roof adopts imitation red tiles, and the flat roof restores its roof terrace form, thereby restoring its original architectural style.

The total construction area of the new hall is 12,139 square meters, with 7 exhibition halls, the exhibition hall area is about 4,230 square meters, and the total length of the exhibition line is more than 1,000 meters. In addition, the museum also has training classrooms, restoration rooms, art salons, galleries and other functional areas, with functions such as exhibition display, collection protection, academic research, art education, art exchange and social services.(Fig.84)

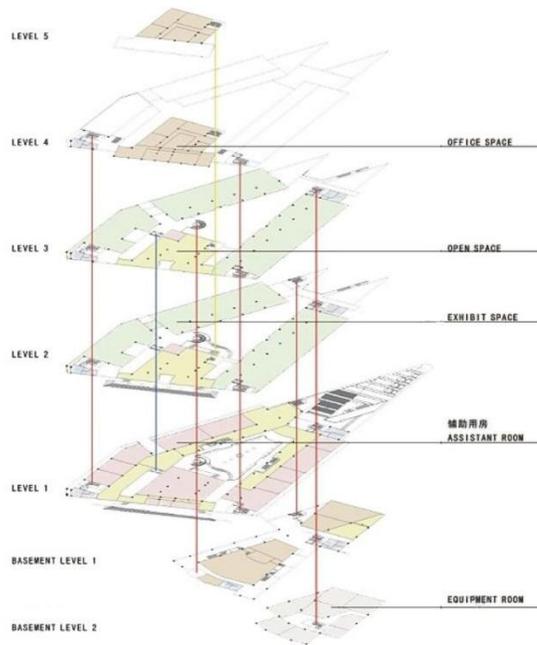


Fig.84: Jincheng Bank Functional Axonometric Drawing

The historical building is the main body of the function of the museum: the original Jincheng Bank has a low floor height and is surrounded by solid walls, so the collection storage area is set up; the first floor of Jinchengli Dormitory is facing the street and the service room for the art museum; Jincheng Bank and Jinchengli 2 The third floor was transformed into an exhibition hall (Fig.85, Fig.86); the fourth and fifth floors of the former Jincheng Bank were equipped with research and office areas. The new building is for traffic and auxiliary functions: the first basement is mainly for equipment rooms; the first to third floors are the entrance hall, passage hall and traffic core (Fig.87). The atrium is transformed into an atrium by retaining the courtyard of the building and adding a roof. The side windows of the atrium can be opened to meet the needs of natural ventilation (Fig.88).



Fig.85: Renovated Showroom 1



Fig.86: Renovated Showroom 2



Fig.87: Renovated Aisle



Fig.88: Renovated Atrium

Reflections on the post-renovation evaluation of Jincheng Bank

The renovation project retains the original facade of the historic building with high artistic and commemorative value, and maintains it as it is. In particular, the original south facade is used as the iconic facade of the new art museum. However, the protection of its authenticity only stays in the protection of part of the original facade, and it has not been refined to the display of the original construction information, nor can we see the maintenance and renewal of traditions and techniques. The facade elements, red brick materials and details elements of the original house were not highlighted, and they were in an embarrassing situation. There were problems in the details of the handover and fit between the old and new buildings, and the construction and

design were not considered in depth. In the actual experience, you can't feel the blunt addition of the historical and cultural atmosphere, and it is impossible to achieve the continuation of the culture.

The biggest feature of the renovation of Jincheng Bank is that the bank building and other historical buildings on the Triangle Traffic Island are included in the renovation object. In the whole renovation design scheme, a spiral staircase was added to the atrium enclosed by Jinchengli to improve vertical traffic. Jincheng Bank and Jinchengli, which were originally not connected, were opened up during the renovation. The exhibition hall of the art gallery was partially transformed from the original Jinchengli. Jinchengli was originally the dormitory area of Jincheng Bank employees. After the ceiling is added, the height of the floors is slightly insufficient. The elevations of the original floors of Jincheng Bank and Jincheng are not the same. In the connecting part of the two buildings, a ramp is used to make up for the height difference, so as to solve the problem of vertical fire protection and barrier-free traffic in public buildings.

From the point of view of materials, in the renovation of Wuhan Art Museum, almost all the brick exterior walls of the original building were preserved, and the moldings and patterns of the original building exterior wall were removed. Drawings and brickwork for authenticity restoration. After the interior renovation of the building, in order to meet the requirements of the internal display function of the museum, the brick surface was not exposed.

The Wuhan Art Museum adopts a "surgical" method for the reconstruction of the structure. The original function of Jinchengli is a residence. If it is directly transformed into an art museum, its technical conditions such as bearing capacity will hardly meet the requirements of the new art museum. Under the premise of the wall, the internal structure of the Jinchengli residence was completely hollowed out, and the original masonry load-bearing structure was replaced with a reinforced concrete frame structure. Although this is a confusion of the original structural information of the original materials, the form of the structure has been preserved. This is a not the best strategy for conservation and reuse. Part of the roof of the pavilion retains the form of the original roof truss in Jincheng, and all the beams of the original building have been replaced.

Comparison of Jincheng Bank with Similar Building

Name	Wuhan Jincheng Bank	Tianjin Yokohama Specie Bank
Build Time	1930	1899
Building Facade		
Geographical location	No. 2, Baohua Street, Jiang'an District, Wuhan	The northern section of Victoria Road (now 80 Jiefang North Road)
Architectural Style	Western Classical Style Architecture	Western Classical Style Architecture
Architectural Features	There are 7 compartments and 8 columns on the front of the building, adopting the European classical column style. The colonnade is as high as three stories, with semi-circular arched windows on the second floor with heavy cornices and mountain flowers. From the outside of the corridor, there is both a sense of majesty, a sense of openness, and a sense of change.	The building is a three-storey mixed structure with four floors in part. Granite walls, golden gates, 8 Corinthian columns standing on the outer eaves of the front form an open colonnade, with glass roofs and cloisters inside.
Door and Window Features		
Wall Features		
Interior Detail Features		
Common Features	Both buildings are Greek classicist buildings with some Chinese elements added. They use two-story Greek columns, and the cornices are designed with fifty lion faces. The overall façade is symmetrical in proportion.	

Fig.89: Architectural Comparison

Jianghanguan Building

Architectural Overview of the Jianghanguan Building and Its History

In 1861, the British government forced the Qing government to turn Zhenjiang, Jiujiang and Hankou into foreign trade ports according to Article 10 of the Sino-British Tianjin Treaty. Before Hankou opened as a port, the Qing government only set up inland checkpoints in Wuhan, such as Chaoguan in Hanyang, Zongguan in Hanxi, Jiangguan in Wuchang, and Hanguan in Hankou. After the opening of Hankou as a port, the Neiguan was abolished and Jianghanguan was established.

In 1861, the British colonists unilaterally published the "Yangtze River Trade Regulations" and the "Twelve Articles of the Yangtze River Trade Regulations" without the consent of the Qing government. It stipulates: "Foreign merchants transporting goods to the middle and upper reaches of the Yangtze River, only need to go through the formalities in Zhenjiang, they can freely load and unload legal commercial goods at all ports above Zhenjiang, and they are not required to go through any customs procedures before returning to Zhenjiang." Guan Wen, Governor of Huguang Expressing dissatisfaction with this, he then filed a petition to the Qing government, requesting the establishment of a customs office in Hankou.

After several setbacks, Jianghanguan was officially opened on January 1, 1863. (Before January 1, 1863, Jianghan Customs only inspected the goods and collected taxes for the whole bank.) Jianghan Customs belonged to the General Taxation Department (Department) of the Customs. On January 15, 1863, the first Jianghan Customs Taxation Department, Di Tuoma, reported to the General Taxation Department. Scheder reports. The main function of Jianghan customs is to supervise the import and export of transport ships, passenger luggage, goods, etc., to collect customs duties and to investigate smuggling. In addition, Jianghan Customs also manages non-customs businesses such as waterways, shipping, postal services, meteorology, port affairs, and quarantine. In 1864, Jianghanguan began to set up water gauges on the riverside to measure the water level. In 1866, the rules of the waterway were formulated. In 1874, Jianghanguan paid Japan 500,000 taels of indemnity. In September 1876, China and Britain signed the Treaty of Yantai, which stipulated that six places on the Yangtze River, including Anqing, Wuxue, and Shashi, would allow ships to berth and load and unload passengers and cargo. The inspection affairs of these six places are also handled by Jianghan Pass. In 1878, Huida, the taxation department of Jianghan customs, established the Hankou Post Office. In 1900, Jianghanguan

apportioned 194 million taels of Gengzi's indemnity. In 1902, Jianghanguan started quarantine and formulated quarantine rules. In 1916, Jianghanguan and Hankou merchants jointly established the Customs Declaration Association. In 1922, the Moji ceremony was held in the Jianghanguan Building. In 1924, the Jianghanguan Building was officially completed. In 1926, the Jianghan Customs Union of Trade Unions was established, and issued the "Declaration to all circles" and "Declaration to the National Customs", demanding the recovery of customs sovereignty. In October 1938, the Japanese army occupied Wuhan, and Jianghanguan stopped working. In May 1943, the Japanese army established the Puppet Hankou Re-export Tax Bureau. In September 1945, Jianghan customs issued an announcement to resume customs work. In October 1948, the Urban Work Department of the Hubei-Henan Prefectural Committee of the Communist Party of China established an underground listening station at Jianghanguan to listen to the Xinhua News Agency broadcast and publish underground publications. In 1949, the Wuhan Military Control Commission took over Jianghanguan. In 1950, with the approval of the General Administration of Customs, it was renamed "Hankou Pass", and in October of the same year, it was renamed "Wuhan Pass". In 1956, the Wuhan customs were sold off, and all were handed over to foreign trade units the following year. In April 1980, Wuhan Customs was re-established and renamed as "Wuhan Customs". Since then, Wuhan Customs has once again assumed the heavy responsibility of the national customs⁶⁷.

After the establishment of Jianghanguan, with the continuous development of business, the original office building has been insufficient. On November 4, 1922, on the 60th anniversary of the founding of Jianghanguan, the Jianghanguan Building held a groundbreaking ceremony and was officially completed on January 21, 1924.

The design and drawing of the Jianghanguan Building were undertaken by the Hankou British businessman Jing Ming Yang, and the British engineer Si Jiusheng of the bank was specifically responsible for it. The building is modeled after the arches and Corinthian colonnades of the Greek classical and European Renaissance, combined with the characteristic style of the bell tower of British architecture. The building covers an area of 1,499 square meters, with a construction area of 4,009 square meters and a total height of 45.3 meters. It was the tallest building in Wuhan at that time, and the top of the bell tower was as high as 83.8 meters above

⁶⁷ Jianghanguan Museum. A Century of Jianghan Pass. Hubei Changjiang Media Digital Publishing Co., Ltd. 2015.

sea level.⁶⁸

The Jianghanguan Building adopts a three-stage composition, with an elegant British-style bell tower at the top of the middle. Granite exterior wall, strong and spectacular east, west and north three facades have granite colonnade, using Corinthian column. The entire building has straight lines and clear angles. The main building on the ground floor is a square four-story structure, and the main entrance is made of eight granite columns. The steps in front of the door are high, and there are as many as 23 steps from bottom to top (Fig.90).

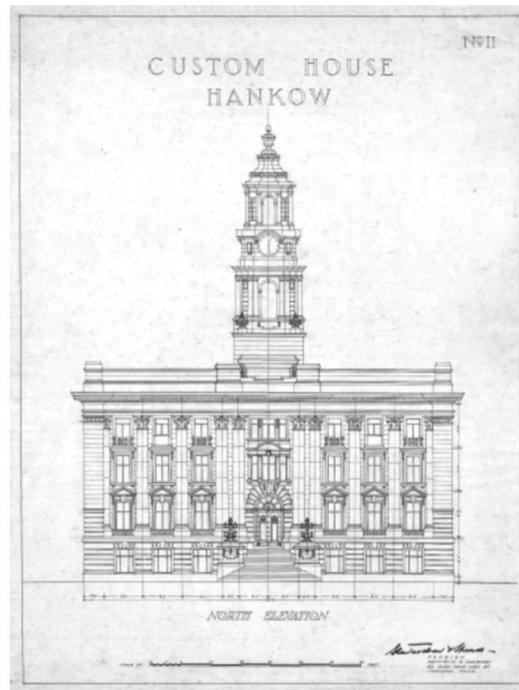


Fig.90: North Elevation of the Jianghanguan Building

The top bell tower of Jianghanguan Building is 20 meters high, and its internal structure runs through the entire building from top to bottom. A wind vane is placed on the top of the building. The instrument is composed of four English letters, which are used to indicate the wind direction. There is also a Ryujin English sailboat on it. The top floor of the building is an audio room composed of seven bronze bells of different scales; the third floor is the clock room of the big clock, the needle is 1.5 meters long; the second floor is the mechanism room of the big clock; the ground floor hall is the big clock pendulum bowl room, the diameter of the clock face is 4 meters, and when the weather is clear, it can be clearly seen from ten miles away. The bell tower was imitated from the bell tower of Westminster Abbey in London, England. The internal parts

⁶⁸ Wang Gang. The Significance and Evolution of Hanzheng Street Street Form [M]. Nanjing: Southeast University Press, 2013.

of the bell were also ordered by the United States. They were shipped to Hankou by the United States, and then Hankou was hired to enjoy the Wang Street of the Hengdali watch shop at that time. The master is responsible for the assembly. The big bell is a recited piece of music, playing "God Bless our King". Every hour is on time, and the sound is extremely loud. In the dead of night, the bell can be heard ten miles away (Fig.91).



Fig.91: the Bronze Bell on the Top Floor of Jianghanguan Building

In 2010, the Jianghanguan Museum began preparations, which took five years to complete and open to the public. After completion, the Jianghanguan Museum has a total construction area of 4,359 square meters and is divided into three floors, with an exhibition hall area of more than 2,300 square meters (Fig.92).

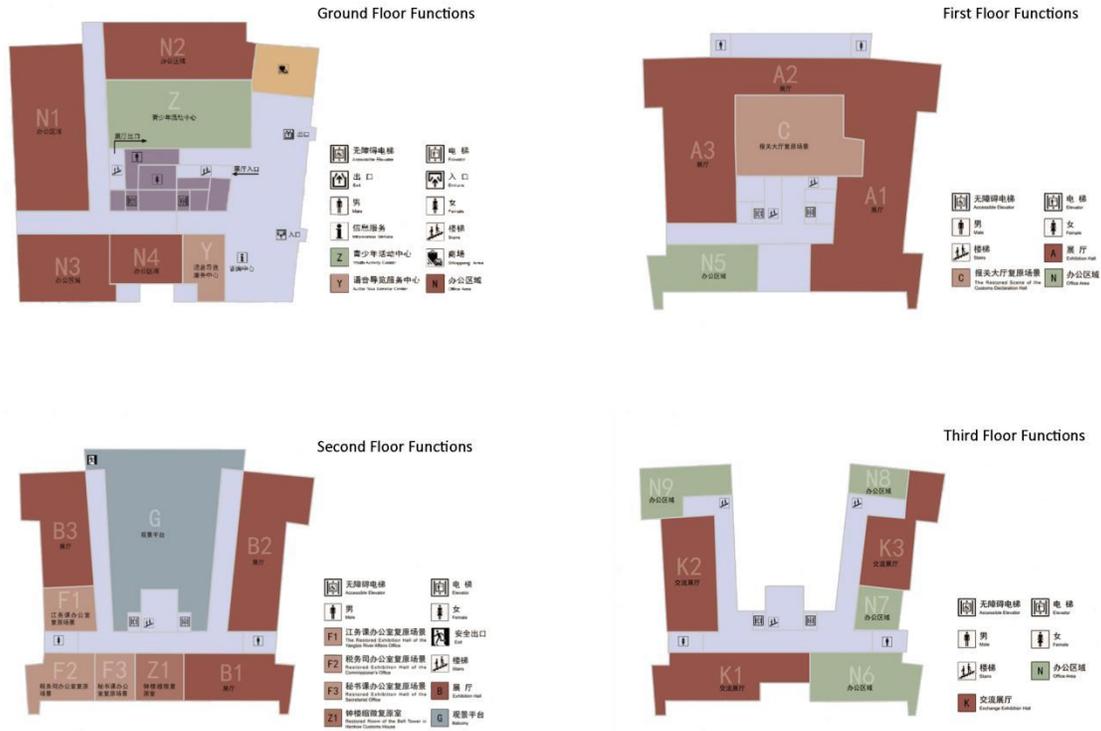


Fig.92: Functional Plan of Jianghanguan Museum

Since its establishment, Jianghanguan Museum has collected more than 3,000 cultural relics at all levels, including metal ware, porcelain, miscellaneous items, paper cultural relics, etc. Currently, there are more than 500 representative cultural relics on display.

The most splendid display of Jianghanguan Museum is to reproduce the Jiangnan customs scene in the late Qing Dynasty and the early Republic of China. The original appearance of the second floor of Jiangnan Pass shows the customs declaration hall of that year. European-style furniture, old-fashioned abacus, table lamps, doors and windows, mechanical computers, bronze-carved customs declarers and customers in the same proportions as real people, reproduce the busy scene of that year.

Analysis of Current Situation of Jianghanguan Building

The construction of architectural space is the soul of architecture, and there is no architecture without space. The unreasonable architectural space will make the artistic value of the building unable to be reflected, or even lose its artistic value. It can be seen that the importance of space to architecture. Similarly, when we display architectural art, we must create a good spatial

feeling for the building so that it complements the surrounding environment.

However, with the development of the commercial economy, many spaces of the Jianghanguan Building have been destroyed, and many new buildings have been built near the Jianghanguan Building. The overall surrounding environment has changed, and many buildings have also damaged the external environment of Jianghanguan.

As for the interior of the Jianghanguan Building, although the Jianghanguan Museum has now been built, some scenes from that year have been restored. At the same time, it also shows some of the history of modern development and changes in Wuhan. Although it enriches the materials and content of the museum, it does not sort out the connection between the development of modern history and the Jianghanguan Building.

In addition, although Jianghanguan has set up a museum, the application of display methods is still very simple. Modern museum display design is the product of the intersection of art design, communication, philosophy, architecture, sociology, psychology, semiotics and new media, and it is a combination of technology and art. The information display displayed by the museum has become more complex, and it has become a comprehensive process of processing, feeling and receiving. In addition, special emphasis is placed on interactive functions. The way of visiting the museum has changed from the previous static-based to dynamic-based; from passive acceptance to active participation; tourists' choice power and active participation have greatly increased. However, at present, the application of new technologies in Jianghanguan is relatively simple. It is still traditional media such as projection and video. Although a mobile APP has been developed, the functions are too simple and the depth of Jianghanguan culture is not enough, especially in terms of interactivity. What has been done is still not enough.

Comparison of Jianghanguan Building with Similar Building

Name	Wuhan Jianghanguan Building	Shanghai Jianghaiguan Building
Build Time	1924	1927
Building Facade		
Geographical location	Intersection of Yanjiang Avenue and Jiangnan Road, Wuhan	No. 13, Zhongshan East Road, Shanghai
Architectural Style	British Classicism Style Architecture	Simplified Neoclassical Style Architecture
Architectural Features	The building sits south to north and has a symmetrical layout with a total height of 41 meters. It adopts a reinforced concrete beam-slab-column structure and a raft-shaped foundation. It consists of the main building and the bell tower on top. The main building has 4 floors and the ground floor is a semi-basement.	The building is divided into two parts, east and west. Facing the Huangpu River in the east, the main building is 8-storey with a 3-storey bell tower above. The west is directly connected to Sichuan Middle Road, and it is a 5-storey auxiliary building. The lintel of the building is supported by 4 Greek Doric columns, with the bell tower as the longitudinal axis. The two sides of the building are symmetrical and balanced. The upper part and the outer wall of the tower are made of granite veneer, and the lower part is made of rough granite.
Door and Window Features		
Wall Features		
Interior Detail Features		
Common Features	Both originally functioned as customs buildings, with a symmetrical design, Doric columns at all four corners and facades constructed in large pieces of granite, absorbing the Italian Renaissance architectural style and the French Classical style of architecture. Both buildings have been updated and designed for their function.	

Fig.93: Architectural Comparison

Pinghe Packing Factory

Architectural Overview of the Pinghe Packing Factory and Its History

At the end of the 19th century, the British businessmen Liddel brothers founded Shanghai British businessmen Pinghe Yanghang. In 1905, they established Pinghe Packing Factory on Qingdao Road, Hankou, which was one of the earliest cotton packing factories opened by British businessmen in Hankou. The 115-year-old Pinghe Packing Factory in front of the mouth is the most complete surviving site of early industrial buildings in Wuhan, and it is also the oldest large-scale steel-concrete building. After the first part of the Pinghe Packaging Factory was completed in 1905, it was expanded in 1918, 1933, 1949 and after the founding of New China. The total construction area is now 32,808 square meters, with 6 single buildings standing outside.⁶⁹ The surface style is different, and it is integrated through the corridor, ceiling and other spatial structures. It was used as a warehouse after being used by Wuhan Commercial Storage and Transportation Company in 1954; It is a "first-class" architectural cultural relic among the first batch of industrial sites in Wuhan.

In February 2017, Wuhan City began to protect and repair this packaging factory, which has witnessed the rise and fall of Hankou's modern industry after a century. This is the largest and most well-preserved industrial building complex restored in Wuhan. Its renovation preserves the original historical appearance to the greatest extent possible. Traditional methods are used in the facade, materials and construction techniques. Shelves, water valves, warehouse location lines, old-fashioned fire windows, slogans on the walls, and iron fire doors are all preserved (Fig.94, Fig.95).



Fig.94: Pinghe Packing Factory before renovation 1



Fig.95: Pinghe Packing Factory before renovation 2

⁶⁹ Wang Jinyan, Liang Jiang. Analysis on the Origin of Ancient Chinese Urban Morphology and Texture [J]. Central China Architecture, 2005(23):154-156.

The renovated Pinghe Packing Factory, as part of Hankou Cultural and Creative Valley, welcomes the entry of cultural and creative industries. There is also a museum inside, which not only preserves the industrial relics completely, but also allows Wuhan people to better feel and appreciate the historical features of the year.

In the renovation and protection project of the Pinghe Packing Factory, first of all, the old telephone poles and unorganized pipelines in the site seriously affected the historical appearance of the Pinghe Packing Factory and reduced the overall environmental value. The added walls and roofs on the original roof broke the proportion and form of the original building facade and destroyed the original historical features (Fig.96-Fig.99). Under these circumstances, through the protection and repair of building facades, the renewal and reconstruction of existing plane functions, the restoration of valuable historical components, and the renovation of green buildings that fit the characteristics of the times, the protection and renewal of cultural relics buildings can be achieved, so that the Prosperity reappears, integrates historic buildings into the revival planning of historic districts, and makes century-old buildings glow with new splendor.



Fig.96: Old Utility Poles and Unorganised Pipelines



Fig.97: Roof Additions 1



Fig.98: Wall Additions



Fig.99: Roof Additions 2

In terms of traffic, the original atrium cross-shaped traffic flow line is continued, and the circular path connecting the buildings is added to form a richer flow of people and a more active public space. In terms of spatial structure, the overall building adopts the layout of "two axes and two belts". The "two axes" refer to the vertical fashion axis and the horizontal historical axis. Fashion and new atmosphere, feel the dual style of history and fashion, and complete the dialogue between the old and the new (Fig.100-Fig.104).

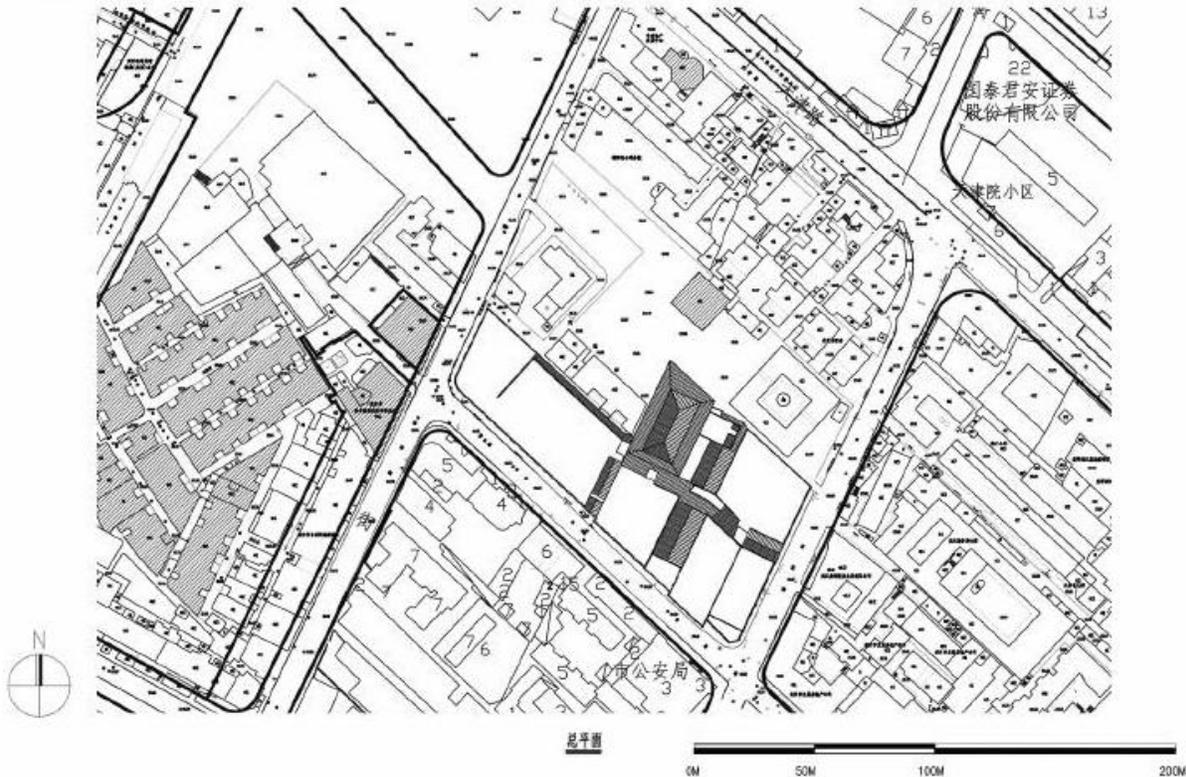


Fig.100: General Plan of the Pinghe Packing Factory

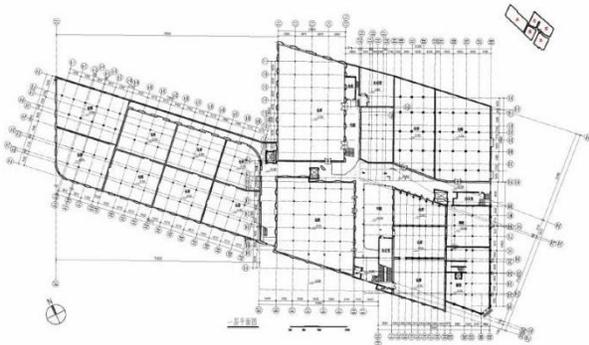


Fig.101: First Floor Plan of the Pinghe Packing Factory

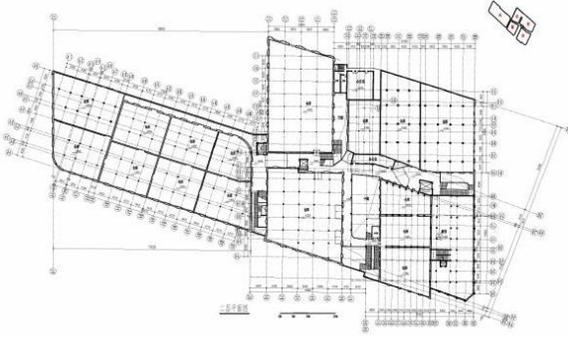


Fig.102: Second Floor Plan of the Pinghe Packing Factory

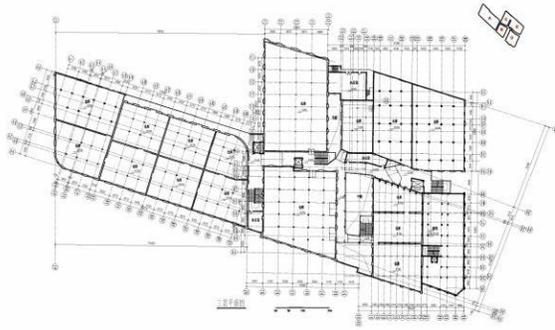


Fig.103: Third Floor Plan of the Pinghe Packing Factory

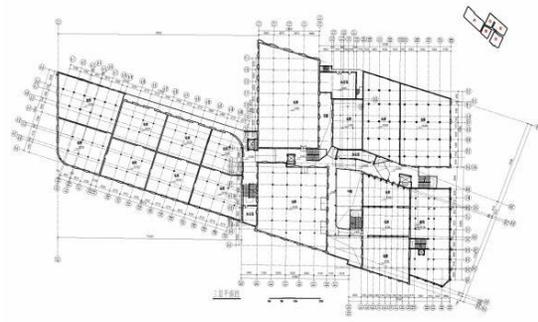


Fig.104: Forth Floor Plan of the Pinghe Packing Factory

The representative features, decorative symbols and components of different periods in the Pinghe Packing Factory shall be preserved, and the added and blocked parts in the later period shall be removed to restore the historical features of the building. The renovation focused on restoring the original exterior wall materials. The exterior walls are mainly red clear water brick walls, the windows are divided by pilasters, and a section of gray cement brushed wall is decorated below the windows. The facade is supported by round coupons, and the treatment method is clean and simple, and the cornice is decorated with more delicate moldings. The building is smooth, flat, simple and durable. It is a typical modern industrial building, and its architectural art value is very prominent.

Analysis of Current Situation of the Pinghe Packing Factory

This four-story brick-concrete building is a typical modern factory building. It has been transformed into a cultural and creative city. Except for the red brick factory building, the entire park has no cultural connection with the "Pinghe Packaging Factory Site". The function of the creative park is too single, and the whole is mainly based on cultural and creative offices, and it is basically operated by new media companies, which further proves that the existing system is insufficient in renovation and functionality. It is not close to the original style and features of the architectural site, nor does it reflect the new functions of the current "creative packaging factory", and it lacks a certain artistic connotation and historical continuation.

As the most famous 100-year-old industrial site in Wuhan, it is a holy place for fans of industrial style. It is the most complete existing early industrial building in Wuhan and a "historical museum" of living industrial buildings. With its gradual evolution into culture The art and creative industry park also undertakes modern large-scale cultural exchange activities such as the "Wuhan Biennale", and needs to consider the actual experience and needs of the

audience. However, in its current state, the park offers only basic visitor functions, and most of the space is the office area of the new media company, to a certain extent, it affects the reasonable and normal operation of the office, and at the same time, it does not allow visitors to visit more industrial and cultural features.⁷⁰ Therefore, it is necessary to consider the behavior habits and needs of the audience, and focus on the actual experience of the audience. Most of the audiences pay most attention to the historical and cultural experience, the convenience of internal activities, new and old functions and cultural activities when visiting or visiting the Pinghe Packaging Factory. The second focus is on other necessary public facilities such as entertainment, catering, leisure and sharing.

The spatial structure of the entire park is relatively complex, and the buildings are gradually completed by different departments over multiple periods of time. The whole is composed of five single buildings with different floor elevations. The corridors are of different widths, with many corners, and many important paths are narrow because of the columns and staircases, and the floors of the various parts are not on the same level, resulting in slopes in the floors and ceilings of the corridors, which leads to poor sight lines, and there are no precise directions at many junctions, which makes it easy for visitors to get lost during the tour. Therefore, the analysis and design of the flow of people in the park need to be further considered.

Comparison of Pinghe Packing Factory with Similar Building

⁷⁰ Huang Ling. Research on the Urban Spatial Cultural Structure—Taking Southwest Regional Cities as an Example [M]. Nanjing: Southeast University Press, 2011.

Name	Wuhan Pinghe Packing Factory	Tianjin Zizhulin Barracks
Build Time	1905	1915
Building Exterior		
Geographical location	No. 10 Qingdao Road, Wuhan	No. 1-5, Chifeng Road, Heping District, Tianjin
Architectural Style	Old Age Industrial Style Architecture	Old Age Industrial Style Architecture
Architectural Features	It is a four-story brick-concrete building. The walls are built with red bricks, the windows are divided by pilasters, and a section of gray cement brushed wall is decorated below the windows. The reinforced concrete frame structure is adopted, the floor slab is cast in place as a whole, the facade is made of round coupons, the treatment is simple, and there are more delicate decorative moldings at the cornice.	The plane layout of the barracks is modeled on the form of a large quadrangle, and there are five other buildings with a mixed brick and wood structure. The top is a red tile sloping roof. A typical combat-ready barracks building. The front facade of the first floor is supported by square brick columns, channel steel and flat iron are used as supports, and a wooden platform is built on it.
Door and Window Features		
Wall Features		
Interior Detail Features		
Common Features	The two buildings are supported by red bricks, and channel steel and flat iron are used as supports. They are both used for industrial purposes and are composed of multiple single buildings. Therefore, the overall architectural style is diverse, and the functions have changed. The packaging factory has become It became a cultural and creative tourist area, and the barracks became a residential area, adapting to the needs of the changing times.	

Fig.105: Architectural Comparison

Conclusion

Through the analysis of the general situation, historical development and current situation of four different types of representative buildings, the existing problems in the current architectural appearance, internal details and functional design are listed, and their potential advantages for development are analyzed. By protecting and renovating these representative buildings, it will play a guiding and exemplary role for the restoration of the building complex in the area, and promote the urban development of the Hankou Concession Area.

CHAPTER SEVEN: BUILDING CONSERVATION UPDATE STRATEGY

Conservation Update of the Bagong House

In-depth Public Participation

The public, as the medium of the historical memory of the building, is an important subject in generating the spirit of place, and plays an important role in the process of conservation and renewal of historic buildings. As the conservation and regeneration of historic buildings is mainly administrative-led, public participation often remains at the stage of questionnaire surveys and presentation of results, and the degree of participation is not high, which directly affects the use of the building after conservation and regeneration, and is an obstacle in the process of rebuilding the spirit of place, so the establishment of a reasonable in-depth public participation programme has become an important part of it.

Public participation should permeate all stages of building conservation and regeneration, including the preliminary survey and planning stage, the mid-term restoration stage and the post-experience use stage. In the preliminary survey and planning stage, it is necessary to fully understand and appreciate The involvement of indigenous people is particularly important. Only by combining the memories and experiences of the indigenous people can we understand the building and update it appropriately. In addition, the public can put forward suggestions based on their own needs, pooling their ideas and providing new ideas for conservation and regeneration, and in this phase the public can participate by means of questionnaires and take ownership of the design, in order to protect and regenerate the building more effectively. In the medium-term restoration phase, in accordance with the principle of "no change to the original state of the cultural relics" for historic buildings, the principle of preserving as much of the existing physical state and historical information as possible, all technical measures should not prevent the conservation of the original object again; the treated part should be compatible with the original object or the previously treated part and be recognisable⁷¹. Public participation is essential in this phase. While restoration and rehabilitation of the building forms, spaces and materials are maximised according to the memory of the indigenous people, certain artisans

⁷¹ Ruan Yisan, Sun Meng. Research on Several Issues in the Protection and Planning of Historic Districts in my country[J]. Shanghai Urban Planning, 2001(04):2-9.

with traditional skills can also be involved. Following the specific approach to "architectural conservation" mentioned by Ruan Yisan in his "Study of some problems of conservation and planning in China's historic districts", the requirements for the façade of a building are that the original features and basic materials must not be altered, but restored in accordance with the original features and using the same materials⁷², the conservation techniques for historic buildings are as far as possible Artisans who have inherited the skills of the older generation, and even those who have participated in the construction of the Bagong house, can offer valuable advice on the restoration of the façade and structure of the house, so that the artistic and scientific value of the building can be maintained.⁷³ At the later stage of experience and use, the public will experience the building mainly from the perspective of the users and make an objective evaluation of the conservation and renewal of the building, while the designers will respond to the evaluation results in a timely manner and make the right adjustments to achieve sustainable development of the building, maximise the re-use of the building and create a place with a sense of belonging.

Respect for the Original Building Form

Respecting the original architectural form is an effective way to generate a sense of identity. When mentioning a building, what people think of is the overall shape of the building, or the most impressive "corner", which is the basic embodiment of the spiritual identity of the place. As the most intuitive memory carrier for people, architectural form is the unique medium of space and the basis of place identity, which should be preserved. However, in the process of continuous development of history, the shape of the building will also change accordingly, so how to distinguish the part that should be demolished and the part that should be preserved has become the primary problem to be solved.

In the process of using the Bagong house, according to the change of architectural form, it can be roughly divided into 4 stages, namely the initial construction stage of the Big Bagong, the initial construction stage of the Small Bagong, the basic forming stage of the Big Bagong, and the restoration and addition stage of the Big Bagong (Fig.106). In this process, the shape of the building has been basically formed. Although there are cases where four floors are partially

⁷² Wang Yongwei, Luo Linglong, Wu Ti, et al. Basic principles for the protection of outstanding historical buildings [J]. Sichuan Building Research, 2010, 36 (03): 1-4.

⁷³ Huang Yaping. Shanghai Modern Urban Planning Development and Its Paradigm Research [D]. Instructor: Li Baihao. Wuhan: Wuhan University of Technology, 2003.

added, the building materials and style are as consistent as possible with the original building, which reflects the originality of the building during the addition process at that time. Respect also reflects the prosperity and decline of architecture in the historical process, and has become an important medium for people to have a sense of identity and belonging. However, in modern times, due to the lack of awareness of building protection among users, in order to meet their own needs, the interior space structure of the building has been remodeled or even destroyed privately. damaged to some extent. In particular, the wooden corridor in the inner courtyard of the Big bagong was demolished because it could not meet the safety requirements, forming a cement corridor with a disordered structure and only meeting basic needs, which was seriously inconsistent with the original architectural style (Fig.107). Therefore, the part that seriously damaged the original architectural form should be properly selected for demolition and repair, and the original architectural form should be respected as much as possible.

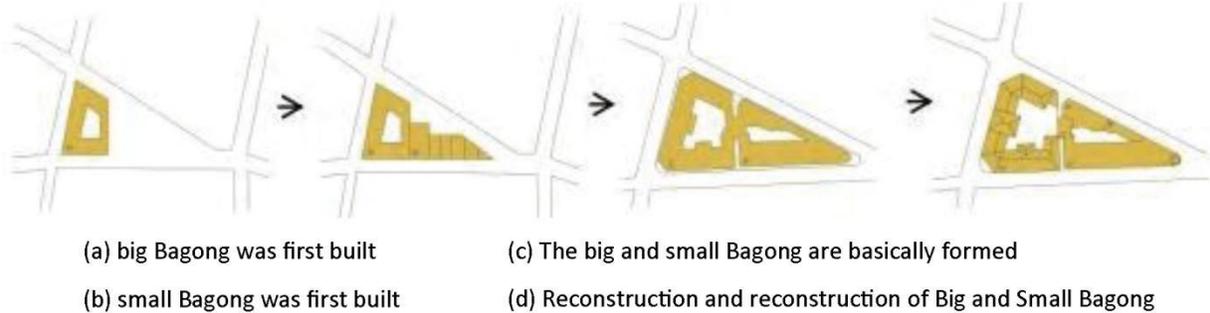


Fig.106: Changes in Architectural Form

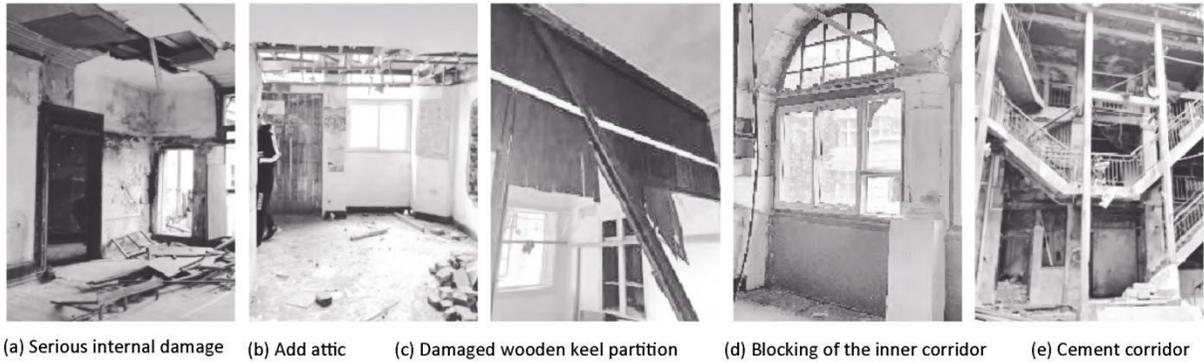


Fig.107: Destruction of Buildings in Big and Small Bagong

According to the principles of historical authenticity and architectural integrity for the protection of historical buildings, while respecting the original architectural form and preserving

the historical structure of the building, reasonable demolition and repair should be carried out on the parts that are recklessly added and destroyed. , In particular, the parts with artistic and scientific value should be properly repaired, try to restore the old as before, so as to preserve the truth, and respect the spatial structure, material technology and decorative elements of the original building to the greatest extent, so that people can feel A sense of identity, thereby creating a place with a sense of belonging.⁷⁴

Sensible and Reasonable Implantation Format

The diversity of architectural functions is an important means to improve the vitality of the building, and it is also one of the effective paths to attract the main body. In the protection and renewal of a building, reasonable consideration should be given to whether to continue the original building function, and whether to plant more business formats that meet the needs of modernization. Only in this way can a building that was eliminated in the historical trend be re-accepted for use. At the same time, the implantation of diverse functions can more effectively evoke the long-storage memory of the building, resonate with people, and rebuild the spirit of the place.

From high-class flats to low-cost rental housing, the Bagong house carries many marks, and choosing a reasonable function according to these marks can perpetuate the historical and cultural value of the building. Firstly, the Bagong house was mainly a residential building, but it also had functions such as a restaurant, a studio, a hairdressing salon and a shop. On the basis of the continuation of the original functions, it is indisputable that new functions should be added to meet the needs of society. It is necessary to put people at the heart of the building and to restore the historical scene while considering the addition of new modern elements in order to comply with the trend of the times and bring out the greatest social value of the historical building. Secondly, it is also necessary to consider the implantation of businesses according to the spatial form of the building. For example, the staircase-based rooms of the Big Bagong are of a larger scale and can be used for commercial, creative and office functions, while the staircase-based rooms of the Small Bagong are of a smaller scale and are more suitable for the continuation of residential functions and can be used as a hotel, etc. In addition, depending on the actual situation of the space, the immersive experience pavilion is considered to be

⁷⁴Transic, translated by Zhu Ziyu. Looking for Lost Space [M]. Beijing: China Construction Industry Press, 2006.

implanted in order to arouse the resonance of the aboriginal people, to show more impressions of the Bagong house and to continue its historical value.

Firstly, it is important to consider the existing functions of the building, taking into account the surrounding environment and the actual needs of the residents to analyse whether the original functions should be continued and whether new functions should be reasonably chosen. Secondly, the spatial form of the building should be considered, and the functions should be chosen reasonably according to the different spatial forms, for example, large spaces can be implanted with a greater variety of functions, while small spaces should be chosen carefully due to their scale, in order to make more reasonable use of space and provide people with a suitable atmosphere. The space can be used in a more rational way, providing people with a suitable atmosphere and creating a place with a sense of identity and belonging.

Conservation Update of the Jincheng Bank

The particularity of the renovation case of Jincheng Bank-Wuhan Art Museum is that it is integrated from a building complex into a single building, and this building complex has historical buildings of different protection levels. For the first-class historically protected building of Jincheng Bank, the designer is modest and cautious, and just simply replaced the function, while for the general historical building such as Jinchengli Residence, a drastic transformation has been carried out, which is based on the residential Space transformation is to make up for the inherent deficiencies of exhibition space. This approach may be too drastic for a single building, but from the perspective of urban decision makers, for the reuse of historical buildings, what kind of function is replaced is more important than how to replace the function. The activation of a single building by appropriate functions may eventually drive the entire urban area.

The site's infrastructure is interconnected with the city's overall municipal system, with relatively easy access routes to the base triangle, with municipal roads and roads within the base differentiated from each other to enhance accessibility, interaction and participation of people with the site. The use of the street rides also enhances the vitality of the area.

The triangular base of the museum is currently surrounded by a typical Wuhan residential conservation area, with many large shopping malls and commercial areas, and a variety of small shops and freelancers flourishing along the streets, allowing for adequate planning and

management of the surrounding area, echoing the overall cultural atmosphere.

The main building space in the art museum is a magnificent atrium space with a height of four floors, which is the place where people can gather and generate sparks of ideas. Therefore, appropriate cultural and participatory facilities should be set up to enhance the flow of people and the impact of activities.

Conservation Update of the Jianghanguan Building

Interaction between Time and Space

For historical buildings, time is contained in space, and at the same time, the space of the building is infinitely expanded and broadened because of time. The construction of the historical building space should fully consider the time factor.

It can be carried out on the humanistic time axis to create several spatial feelings of different eras, and these feelings of different eras can be integrated to form a new overall feeling. Jianghanguan Building can choose several key time points, the start-up period of the business, the peak period of the 1930s, the period of Japanese puppets, the end of the dark period, etc., around these time points to create the image of Jianghanguan in different periods, and finally these The synthesis of images in different periods will bring us a feeling of the vast space of Jianghanguan.

Interaction between Architecture and People

Without people, everything is meaningless. People can affect the cultural value of architecture, and architecture can also affect people's psychology and even their thoughts. For example, in religious places, most people will naturally have a certain kind of sacred awe.

People are the main users of architectural space, and they are already communicating with the building when they are in the building.⁷⁵ For Jianghanguan Building, the interaction between people and buildings should become richer, more elegant and more frequent. Jianghanguan Building has rich inner spirits, including rationality, transcendence, tolerance, art and other spirits. We should use various means to help them describe, for example, we can use text, video materials, etc. to explain their ideological connotations more clearly, and use multimedia and other technological means to promote the interaction between people and buildings.

⁷⁵ Xu Dan. On Urban Texture—An Important Issue of Urban Humanistic Spirit Revival [J]. Urban Planning, 2007(2):3 0-32.

Interaction between People

In the architectural space, people influence each other due to mutual contact, and the mutual influence between people will also affect the formation of the place spirit of the architectural space. Elegant and harmonious human interaction will add elegance and nobility to the building, and vice versa.

Jianghanguan Building has now created a more harmonious environment for people to interact with each other. In the next step, it can beautify the environment and create a better environment for staff and tourists or tourists to communicate with each other.

Interaction between the External Space of the Building

Jianghanguan Building is located in the most prosperous commercial street in Hankou, surrounded by buildings, some of which have destroyed the original spirit of Jianghanguan Building. We should pay attention to the governance of its surrounding environment and strengthen the approval to preserve its original spiritual essence and aura. Build and integrate buildings that promote the spiritual manifestation and growth of Jianghanguan Building, promote the silent communication between them, and create a more harmonious and more conducive overall environment for the extension of Jianghanguan Building.

In addition, when the actual conditions do not allow it, we must use the power of technology and modern 3D virtual technology to restore the original external space environment of Jianghan Pass and restore its own place spirit.

Conservation Update of the Pinghe Packing Factory

The entire spatial structure of the Pinghe Packaging Factory is complex, so it is particularly important to provide the audience with a concise, accurate and rhythmic orientation. In order to provide more complete and clear guidance information, a comprehensive understanding and analysis of the entire path is required, and the characteristics of the path are: "All paths have an initial point, from which we pass through the spatial sequence to our own. The shape of the path depends on how we move. As pedestrians, we can turn, stop, stay or rest at will."⁷⁶

Determine the possible start and end points of the audience, focus on important turning points, optimize the connection, and play a continuous connection role in the path. Therefore, a

⁷⁶ (US) Cheng Dajin. *Architecture: Form, Space and Order*. Translated by Liu Conghong. Tianjin University Press, 2008: 252.

complete guidance system is required to form a continuous and interlocking path, so as to avoid the lack of guidance information in space and bring helplessness and confusion to the audience. The first two buildings of the Pinghe Packing Factory were completed in 1905, another building was added in 1918, and the two buildings at the northern end were completed in 1949, which together with the previous buildings constitute the current Pinghe Packing Factory. The gaps between the five buildings form the main path today and become the core moving line connecting the whole, so in this irregular and scattered path, the direction should be accurate and orderly. It is necessary to have a comprehensive understanding of the project, analyze the entire route structure, determine the starting point and punctuation point, pay attention to important traffic nodes, and optimize the setting of continuous but not complicated intermediate points.

The design should be planned from the perspective of overall development, and the planning of Pinghe Packaging Factory should be forward-looking. It is located in the Jiangnan Road business district with convenient transportation, and its architecture and creative industries are unique. With the development of tourism and the increase in the occupancy rate of merchants, it is not difficult to imagine that in the future, there will be a flow of people like the second factory in Chongqing. Therefore, in the planning of its moving line, it is necessary to fully take into account the huge human flow problem to be dealt with in the future.

Implementation Strategies and Measures

Restoration of Protected Heritage Buildings

Strictly protected buildings cannot change their original characteristics, and must maintain their existing original appearance in layout and appearance or be repaired according to their original characteristics; for cultural relics protection units, they must abide by the "People's Republic of China Cultural Relics". According to the relevant provisions of the Protection Law, the building shall be maintained or repaired as it is and with the same materials, so that it is as old as it is. The objects of general control include traditional buildings that have been preserved in their original state, traditional buildings that have been partially changed, and buildings that play an important and relatively important role in forming the continuity, logic and urban texture of urban space (or buildings). These buildings can be traditional or modern. The protected buildings under general control should be renovated, updated, refurbished and decorated on the

basis of retaining their existing characteristic parts (or elements) and based on the original characteristics of the building.⁷⁷

Restoration of Non-protected Traditional Buildings

Non-protected traditional architectural objects include traditional buildings other than protected traditional buildings that have been partially changed and only retain traditional architectural structures. Such buildings are generally not to be demolished, and the parts of the building facade and shape that do not conform to the historical features should be compulsorily renovated according to the requirements of the style and features of the block, so as to restore the original style of the building or reduce its impact on the environment of the historical block. conflict.

The update objects of non-protected buildings are mainly aimed at buildings that do not match their functions, are inconsistent with their location in terms of landscape and space, and have great conflicts and visual obstacles to the surrounding environment (including non-protected traditional and modern buildings). There are three main methods of renewal: First, reconstruction, that is, after demolishing, rebuilding the buildings that once existed in the block in the history according to the historical data, including the traditional buildings that were relocated here. The second is new construction, that is, after demolition, the new buildings in the style area and the historical style environment are more harmonious. New buildings, on the premise of not affecting the protection of key historical buildings, do not take the traditional "antique" and "retro" old ways, break the traditional thinking, encourage innovation, boldly adopt modern design ideas, emphasize contrast, in contrast Fusion in China, unification in contrast. The third is to no longer build after demolition, and use the open space as public space, public passage or greening according to functional requirements.

Conclusion

By putting forward reasonable planning strategies for protection and renewal of four different types of representative buildings, namely Bagong House, Jincheng Bank, Jianghanguan Building and Pinghe Packaging Factory, as typical cases, it will play an exemplary and guiding role in the renewal of the entire protective buildings. At the same time, from the overall point of

⁷⁷Wan Suchun. Analysis of Urban Spatial Form [M]. Beijing: Science Press, 2004.

view, the degree of protection of the building complex will be divided into protective buildings and non-protective buildings, and different renewal strategies will be adopted, so that the buildings in the Hankou Concession Area can be renovated and renovated with demonstration cases and corresponding types, and further Improve the building conditions and environment of the concession area, highlight the architectural style and characteristics, improve the functions of the city, improve the municipal infrastructure, and drive the overall construction and development.

CONCLUSION

The Hankou concession is a key historical and cultural protection area in Wuhan, but it is declining with the rapid economic development of Wuhan. The former glory of the city has become a thing of the past. Today, the original concession area, surrounded by the surrounding emerging urban space, seems to be a blurred area that is out of place in the urban space of Hankou, as if time is stagnant here. The historical district of Hankou concession needs to be rejuvenated. Its protection strategy not only needs to protect and update individual buildings, but also needs to consider from the perspective of urban space form, to alleviate the contradiction between the protection of historical districts and urban construction from two aspects: comprehensive and specific. Renewed building complexes, protected neighborhoods and emerging urban spaces are better integrated.

From an urban spatial perspective, the analysis of the historical development and current situation of the whole area, its functions focus on administration (administrative agencies during the colonial period, administrative units at all levels that moved in after the founding of the People's Republic of China), commerce (various factories, department stores), public (churches, art galleries, schools, hospitals), and residence. The superior geographical location and the predecessor of "country within a country" have laid the foundation for it to become today's comprehensive functional area, but it has also caused the area's functions to be superimposed to this day, which has caused considerable pressure on the use of buildings and functional land. Therefore, regarding the functional combination of the original Hankou concession area, it is necessary to rationally adjust various functional areas and appropriately replace the land use on the basis of the existing functional types and the space ratio of each function. Functional deletion. Commercial, administrative and residential functions have always occupied a special position in the Hankou Concession, constituting the cultural background of the area. However, in recent years, the relocation of aborigines has further expanded the already huge commercial space, gradually reducing the "authenticity of life" in the area. In the long run, this combination of functions will increase the already high land price in the concession area and force other functions to flow out. , which is not conducive to the sustainable development of the economy and society in the concession area. Therefore, first of all, we must pay attention to controlling

the scale of commercial functions and retain and develop residential functions. In addition, the ecological environment function is emphasized, and a virtuous circle is constructed by taking the resonance of culture and ecology as the consideration of various functions in the region.

In order to avoid the erosion of urban construction and at the same time give full play to its urban cultural value, the Hankou original concession style area must be manned from the aspects of spiritual culture and material culture. The spiritual culture of the historical and cultural blocks is a collection of unique behaviors and psychological states formed by the residents in the long-term living together in the original Hankou concession area, and it is the spiritual feedback to the original Hankou concession area. The real and continuous activities of the residents of the block not only determine the existence of the spiritual culture of the block, but also determine the style of the spiritual culture. Therefore, the real activities of "people" need to be emphasized in the protection and renewal. The coexistence of Han-style life and commerce carried by the exotic buildings is the spiritual and cultural feature of the original Hankou concession area. Therefore, in the renewal, the internal cultural factors are consciously balanced and the interference of external cultural factors is controlled. At the same time, the material culture of the historical and cultural block is the sum of the internal architectural system, the form of the street and road network, the spatial arrangement and the street landscape sketches. For a block that is constantly being updated, these are not static. Therefore, on the basis of adhering to the overall spatial pattern, it is necessary to do a good job in maintaining historical buildings, properly coordinate the new and old buildings, and select landscape sketches that fit the overall atmosphere to cultivate.

From the perspective of a single building, the conservation and reuse of representative historical buildings is a positive transformation and development model. Firstly, the reuse of the spatial resources of historical buildings can reduce architectural waste and save urban resources, and more realistically, the preservation and continuation of the original historical information of historical buildings is an effective protection of the city's cultural lineage and urban historical information, and can also effectively perpetuate the city's It is also an effective way to preserve the city's memory and enhance the sense of historical importance of urban development. On the other hand, modern interpretations of historical information are diverse and full of differences, so there are contradictions and uncertainties in the understanding of the new and the old, the traditional and the future, in the process of conservation and reuse of historical buildings. In the

design and renovation process of conservation and reuse of historic buildings, the logic of construction with original historical values is formed from the materials, structural forms and structural relationships of historic buildings, and the meaning of the original historical values of historic buildings is conveyed through the expression of these logical relationships. The relationship between material, structure, detailing and site environment is studied in order to clarify the strategy of linking the old and new elements in the conservation and reuse of historic buildings. The study also clarifies the purpose of conservation and reuse by analysing representative buildings as a whole, and summarises their response strategies.

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