

Research on The Development and Integration of Chinese Ancient Architecture in Modern Urban Planning

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Abstract. This paper studies and analyzes the development cases of ancient buildings in different historical backgrounds. It mainly compares the Beijing City Wall which was destroyed with The Dujiangyan Water Conservancy Project and Beijing-Hangzhou Grand, which are protected and sustainably developed in modern society Canal reflects the development and integration of ancient Chinese architecture in urban planning. The study explores how to promote sustainable development policies while preserving and utilizing ancient buildings, through the combination of modern technology and traditional architecture, to achieve the inheritance and innovation of cultural heritage in the city. The study pointed out that through reasonable protection and renovation, ancient buildings can not only preserve the historical culture of the city but also bring economic and social benefits to the city through innovative design. Several cases of positive and negative impacts are mentioned in the paper, which is a valuable experience and lesson for other relics and ancient buildings. In addition, the paper further points out the future difficulties in the development and integration of Chinese ancient architecture in urban planning and will continue to explore how to realize the transformation of modern functions of historical buildings based on cultural inheritance, to actively shape the future development direction of the city.

Keywords: Urban planning; ancient architecture; Chinese architecture.

1. Introduction

This paper mainly summarizes the development and integration progress of China's ancient buildings in modern urban planning, studies and analyzes in detail some positive and negative impacts on development examples, and finally discusses how to protect ancient buildings while carrying out a new policy of sustainable development through the analysis and summary of the current situation. It further elucidates the future direction of China's efforts on ancient architecture in modern urban planning. The study demonstrates the possibility of integrating ancient Chinese architecture with modern urban planning and highlights the need for cultural heritage to continue to play a positive role in modern society. This is not just about preserving the past, but positively shaping the future.

2. Background

Nowadays, with the continuous development and progress of society and science and technology, the infrastructure and construction resources enjoyed by human beings are increasingly developing and infinitely expanded. In the evolution of modernization and technology, human habitat has changed from natural caves or nest trees in primitive society, to stone and wood frame houses and palaces in feudal society, and then to the elusive skyscrapers made of glass, steel, and reinforced concrete in modern society. From the initial just enough to meet the needs of human survival, shelter from the wind and rain, the house has evolved because of different civilizations and beliefs. From adding many exquisite sculptures and murals to the building, it has developed to simplify many ancient cumbersome decorations to adapt to the modern fast-paced life, forming the most popular modern mainstream modernist architecture. However, at the same time as human innovation and exploration of architecture, it has become a big problem to maintain and preserve the development and integration of ancient architecture modern architectural construction, and overall urban planning. In China's 5,000 years of history, there were 83 dynasties and 56 ethnic groups, and the evolution of different



dynasties and ethnic groups also affected the evolution of architectural styles on this land. Jin claims that different periods correspond to different ideas of urban construction [1]. With such a huge architectural culture, what is China's solution to the development and integration of traditional architecture in modern urban planning? Next, this paper will do detailed research and analysis through X aspects and examples of many cities in China. As a long history and multicultural country, Jin's research indicates that the existence of urban planning in China dates back to 2600 BC [1]. The Dujiangyan Dujiangyan Irrigation System built in 256 BC, and the Beijing-Hangzhou Grand Canal, built in 605, have served as flood control and transportation until now, and are still in operation today. After 604 years and more than 2,700 years of history, the Forbidden City and the Great Wall in Beijing are now in constant repair so that tourists can visit the most ancient features. The wide and narrow alleys of the 18th century in Chengdu have been transformed into commercial streets and integrated with modern social life. Y. Liu, Dupre, and Jin think, that because of the development of modern society, traditional urban planning gradually disappeared, and the main purpose is to promote the growth of the urban economy [2]. In 9,597,000 square kilometers of China, there are many examples of the integration and development of such ancient buildings with modern cities. However, in addition to these famous examples of success, there are bound to be lessons of failure for various historical reasons.

3. Case Analysis

3.1. Beijing City Wall

In the process of urban planning, the Chinese government lacks scientific and reasonable strategies for the protection and utilization of the Beijing city wall, which leads to the disappearance of historical sites and the breakdown of cultural heritage in today's society. This is a case of failed ancient architecture in modern urban planning. Beijing City Wall, as an ancient Chinese social defense system and a symbol of urban planning, has gone through the historical baptism of different dynasties and has an unusual cultural symbol and historical imprint for Beijing. Unfortunately, in the development of modern society and the historical background at that time, it had to encounter serious problems of destruction, forgetting, and improper reconstruction. In Peng's opinion, wall 'is a unique way for Chinese people to understand and define cities [3]. The city wall of Beijing is the city wall of Shuntianfu, the capital of the last two dynasties in Chinese history, Ming and Qing dynasties, and is an important part of the Beijing city of Ming and Qing dynasties. During the Ming and Qing dynasties, great attention was paid to the protection and repair of the walls of Beijing. Until 1900, the city of Beijing remained intact. During the Boxer Rebellion in 1900, the British army broke open the outer city wall and the Temple of Heaven wall on the east side of Yongding Gate, which was the first time that the wall of Beijing was broken open. In addition, the British Army also opened the east wall of the outer city to the south of the East Gate in 1901. Between 1912 and 1949, the government of the Republic of China opened several passageways in the city wall to facilitate transportation. According to Peng, after the Second World War and the Chinese Civil War, the government of the People's Republic of China came to power in a radical and overwhelming mood of revival and revolution [3]. After 1949, when the government of the People's Republic of China took over Beijing, the city wall was completely demolished during the decade-long Cultural Revolution. Despite Liang Sicheng's dedication to the protection of Beijing's ancient city walls, he did his best to prevent it, due to the special historical background and the revolutionary wave at that time, such a precious ancient wall of Beijing was still demolished [3]. Although this kind of demolition satisfies the transportation needs of the modern city, it also destroys the overall pattern of the ancient city of Beijing and separates the traditional spatial layout and the continuation of cultural history. Besides that, countless ancient buildings and cultural relics were damaged and destroyed during the Cultural Revolution in China: The "Wutai Mountain" in Shanxi Province had more than 300 temples before the Cultural Revolution, and only about 30 after that. By the 1960s, all of the Wong Tai Sin temples in Guangdong and Zhejiang had been destroyed, and no Wong Tai Sin temples apparently survived anywhere in the coastal provinces [4]. During the Cultural Revolution, temple statues were destroyed and the monks

were forced to leave [5]. Under the historical background of the ideology of communism and the proletariat at that time, all ancient buildings related to religion and traditional culture were regarded as remnants of feudal society and were banned by China at that time. As stated by Liu, Dupre and Jin, the upsurge of thought in different historical backgrounds influenced urban planning in different periods [2]. This revolution, which began in 1966 and ended in 1976, led to widespread social and urban development across the country. The urbanization of this period had an irreversible negative impact on many ancient buildings, especially the city walls of Beijing. Although the needs of social development at that time received much attention, the traditional pattern of the ancient city and the protection of cultural heritage are equally worthy of attention. The historical and cultural value of the Beijing City Wall has not been adequately preserved in this process, which brings valuable lessons to the heritage protection work today. The destruction of Chinese ancient architecture during the Cultural Revolution is both material and spiritual. If modern urban planning truly realizes the integration of cultural inheritance and functional innovation, it must be based on respect for history and rational use of cultural heritage. This lesson not only applies to the protection and development of the Beijing city wall but also provides an important reference for the management of ancient architectural heritage in other cities in China. In the process of urban planning, the Chinese government lacks scientific and reasonable protection and utilization measures, resulting in the irreversible loss of an important part of this cultural heritage. The rapid urbanization process combined with the lack of foresight in historical preservation has led to the fragmentation of historical sites and the fading of cultural memory. The fate of the Beijing Wall reminds us that urban development without careful planning can lead to the destruction of valuable historical heritage and disconnect society from its cultural roots.

4. The Dujiangyan Water Conservancy Project and Beijing-Hangzhou Grand Canal

On the contrary, as two major water conservancy projects in ancient China, the Dujiangyan Water Conservancy Project and Beijing-Hangzhou Grand Canal not only continue their basic water conservancy functions in modern urban planning but also successfully realize the integration with modern cities through ecological protection and cultural inheritance. First of all, from the perspective of ecological protection, these two major projects not only show the wisdom of ancient agricultural society, but also highly fit the modern environmental protection concept, so that their functions have been continued from ancient times to play an important role for more than 2,000 years. (The Dujiangyan Water Conservancy Project was built in 256 BC and has a history of 2,278 years. The construction process of the Beijing-Hangzhou Grand Canal is relatively complicated, the earliest can be traced back to 486 BC, and has a history of about 2,508 years.) As early as 2000 years ago, the Dujiangyan Water Conservancy Project realized scientific and environmental protection water resources management. The hydraulic structures of the Fish Mouth, Feisha Dam, and Baopingkou Aqueduct are designed to work together perfectly given the natural situation [6]. This use of natural and sustainable water resources not only ensures the soil, water and agricultural irrigation of Chengdu Plain but also meets the needs of ecological protection in a modern society with high environmental pollution. In the development of today's urban planning, Dujiangyan not only maintains the original traditional water conservancy operation mode and function, but also forms a green and healthy ecosystem through the protection of the surrounding environment, becoming an important ecological area of Chengdu city. At the same time, as the longest artificial canal in the world, the natural environment along the Beijing-Hangzhou Grand Canal has been managed and protected for a long time, and a complete ecological system has gradually formed on both sides of the canal. This system provides valuable water resources and natural landscapes for the city, which has been continued since ancient times and meets the needs of modern cities for ecological green space.

Secondly, in terms of cultural inheritance, the two major projects have endowed the city with new cultural vitality through the combination of historical culture and modern urban culture. As an important symbol of ancient Shu culture, Dujiangyan has become one of the world's cultural heritage after modernization, attracting a large number of tourists and displaying its profound historical and

cultural value through museums, exhibition halls, and other forms. In the process of modern urban development, the government attaches great importance to the protection and inheritance of Dujiangyan's history and culture, making this ancient project an important part of Chengdu's cultural tourism. Similarly, the cities along the Beijing-Hangzhou Grand Canal have developed a unique canal culture based on the Grand Canal, and many ancient canal sites such as Bridges, docks, and shipyards have been restored and integrated into modern urban life. According to Chen, Wang, Sun, and Zhang as an important part of traditional culture, intangible culture has always been the carrier of regional spiritual culture [7]. This not only allows citizens and tourists to experience the historic charm of the canal but also makes the canal an important carrier of the city's cultural display.

In addition, these two major water projects have not only maintained their original functions in modern urban planning and development but also re-expanded them. The core water facilities in Dujiangyan still play the role of regulating water levels and preventing floods, and the surrounding area has been developed into a tourist attraction of modern society, providing more possible functional space for modern society. At the same time, after the partial adjustment of the Beijing-Hangzhou Grand Canal, ecological parks and cultural blocks are also planned around the reach of the canal, which promotes the development of the urban economy. It has become a unique and beautiful landmark in modern urban planning.

In a recent study, Jin concluded that to strengthen the identity of the existing heritage and renew the identity of the old neighborhood, we believe it is crucial, from a heritage perspective, to reconnect the social and spatial networks through the revitalization of third places in Shaocheng [8]. Dujiangyan Water Conservancy Project and Beijing-Hangzhou Grand Canal not only continue their basic water conservancy functions but also achieve a successful integration with modern cities through ecological protection and cultural inheritance. The protection and utilization of these two major water conservancy projects not only reflect the respect for history and culture but also provide valuable experience for the sustainable development of ancient buildings in modern urban planning.

In general, it is through the combination of ecological protection, cultural inheritance, and modernization that Dujiangyan and the Beijing-Hangzhou Grand Canal have not only maintained their lasting influence in water conservancy functions but also integrated into modern life through diversified urban planning. This successful integration provides a valuable example of modern urban planning and sustainable development, demonstrating the vitality and value of historical and cultural heritage in the context of the new era.

In addition, there are many examples of such ancient architectural functions being used for sustainable development in China. The Forbidden City was built in the Ming Dynasty, and it was based on the basis of the central axis left by the Yuan Dynasty, and in the Qing Dynasty, the last feudal dynasty in China, it was used as the imperial palace [9]. Now the Palace Museum has become a representative of Beijing's scenic spots, as China's best-preserved royal residence, attracting a large number of tourists to visit. Or the Kuan Zhai Alley in Chengdu, an ancient group building street in the downtown of the modern city, has now developed into a mature commercial street, which has completely integrated into the development of modern society, but also retains the style and layout of ancient buildings. Kuanzhai consists of three parallel alleys with traditional courtyards in between, which are Kuan Alley, Zhai Alley, and Jing Alley [10]. This unique style of commercial street also attracts a large number of tourists to visit, while taking a look at the ancient street style, but also for modern entertainment. According to Kealy, Loughlin, and Stefano F. Musso, these ancient buildings are not only cultural and historical significance, but also intellectual property and economic instruments [11]. This urban planning and design has greatly improved the local economic development, which not only brings more attention and supervision to ancient buildings but also enables the government to spend more funds on the maintenance and care of ancient buildings.

5. Conclusion

In conclusion, in the long historical development, the historical background of different periods has a close relationship with the development of urban planning. As an important part of China's urban planning process, the development and integration of ancient architecture in modern urban planning shows the close combination of cultural inheritance and innovation. Through the protection and transformation of historical buildings, not only can preserve the unique historical imprint of a city, but also make historical buildings have a second life of sustainable development, and can greatly improve the local economy and improve the quality of life of residents. Modernizing innovation and transformation based on this respect for traditional culture provides valuable experience and lessons for other cities with historic buildings. In future urban planning, how to continue to balance the sustainable development and integration of ancient buildings in the rapidly developing modern society is a topic and challenge that Chinese society needs to continue to explore.

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