

Survey and Value Assessment of Historically Protected Buildings in Wuhan -- Take Wuhan University Library as an Example

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Abstract. The Wuhan University Library is a testimony to the development of modern higher education in Wuhan, a crystallisation of the research and practice of modern Chinese and Western architects in China, a representative of modern Chinese educational architecture, and a valuable cultural heritage of the university. However, due to the rapid development of modern education, the conservation of modern university architecture has not received sufficient attention and its current state of conservation is worrying. At present, not much research has been done on the library buildings of Wuhan University, and there are few comprehensive descriptions of their current state, as well as historical record information. This paper therefore focuses on research, through field studies and hand-drawn sketches, and analyses the conservation and use of the building in terms of its structure, and ranks the data in order of importance. Finally, by analysing the current problems and causes, conservation strategies are proposed in the hope that they will have some impact on the conservation of university buildings in Wuhan.

Keywords: Wuhan University; Modern architecture; Protecting buildings; Architectural Heritage.

1. Introduction

After the Opium War, China experienced a semi-feudal and semi-colonial society for more than a hundred years. During this period, the development of Chinese architecture was in a state of convergence between the East and the West. The Western architectural system and the traditional Chinese architectural system formed an intricate coexistence, collision and intermingling on the territory of China.

Modern Chinese architecture should occupy an important position in China's architectural history, they broke through the traditional system, so that Chinese architecture began to enter a new period of extensive cultural exchanges with foreign architecture. The historical information they have preserved is extremely rich and should be an important part of China's cultural heritage. Most of these buildings have survived to the present day and have been utilized for production and life after the establishment of new China. Some important buildings had a great influence on the city planning and construction after the liberation.

Located in Wuchang, the campus of Wuhan University, tested for more than half a century, is still so beautiful, spectacular and sturdy, with high value of use, and is one of the most beautiful campuses in China's institutions of higher learning. It joins the East Lake Scenic Area, enriches the scenery of the East Lake and makes it an inseparable part of the scenic area.

For these architectural works of historical and artistic value, we should recognize and pass them on. This is of great practical significance to the study of the history of the development of Chinese architecture, and to the study of the history of China's modern politics, economy, culture and foreign relations.

2. Organization of the Text

2.1 Overview of the architectural heritage of higher education institutions

2.1.1 Architectural Heritage Value System for Colleges and Universities

Heritage value system is the fundamental of all heritage protection activities through the cognition and judgment of the value of university architectural heritage, and then determine the protection object, clarify the protection idea, for the development of university architectural heritage protection strategy, coordination of protection and development of the contradiction between the important practical significance. "Conservation refers to all the activities carried out for the preservation of monuments and heritage sites, their environments and other related elements. The purpose of protection is to preserve its historical information and its value truly and completely through technical and management measures. Cognition and judgment of the value of architectural heritage is the basis for us to determine the architectural heritage to carry out protection work, and it is also an important basis for us to formulate protection measures. After decades of development, our country has constructed the value system of protection of cultural relics and monuments in accordance with the reality, which serves as the basis for guiding the heritage protection work. Therefore, the identification and protection of campus architectural heritage needs to be based on the value of architectural heritage as the identification standard.

2.1.2 Status of architectural heritage preservation in higher education

In 2001, a number of campus buildings such as the early buildings of Tsinghua University and the early buildings of Wuhan University were announced as national key cultural relics protection units, which was the first time in the history of New China that the architectural heritage of universities was included in the national cultural relics protection system", and the value of the architectural heritage of universities has gradually been emphasized.

As of the announcement of the seventh batch of national key cultural relics protection units in 2013, more than 30 university architectural heritages have been included and protected. However, compared with the overall number of university architectural heritage, they are only a small part of it, belonging to the "elite" heritage with great cultural relic value. Campus construction is a continuation of the development process, the longer the history of a campus, the more profound the performance of the condensed materialization, many campus buildings not included in the protection of the object, from the architectural features, architectural functions, emotional value, etc., still reflects the campus tradition, but also a part of the campus historical environment and historical memory. At the same time, because it has not been announced as a protection unit or outstanding historical buildings, these campus buildings often become the demolition of modern campus construction replacement object, resulting in the severance of the university culture.

"The essentials of historical monuments include not only individual buildings, but also urban or rural environments from which a unique civilization, a meaningful development, or a witness to a historical event can be identified" In recent decades, as the concept of cultural heritage protection in China continues to mature and the protection system continues to be improved, it has been the formation of cultural relics protection units, historical There are many levels and types of protection, such as buildings. However, it is not difficult to find out through Table 1 that in the protection of university architectural heritage, the "point" is often taken as the basic unit, and in the process of protection, only the protection of the architectural heritage itself is often emphasized, while the environmental elements that are closely related to the architectural heritage are not given due attention. The environmental elements not only include the geographical and natural environment that reflects the concept of site selection and construction, and the various types of structures that complement the function of architectural heritage, but also include the related remains that reflect the continuity and continuity of the university culture, and once architectural heritage is detached from these environmental elements, it will lead to a direct loss of the value of the heritage.

2.2 Overview of Wuhan University's Architectural Heritage

2.2.1 A Brief History of Wuhan University

Wuhan University is one of the institutions of higher learning in China with a long history. Her predecessor, is in the self-strengthening school (1893-1897) and dialect school (1897 a 1911 in 1913 Wuchang higher teacher training school (1913-1923). Thereafter, has been successively renamed - National Wuchang Normal University (1923-1924) National Wuchang University (1924-1926), National Wuchang Sun Yat-sen University (1926-1927), National Wuhan University (1928-1949) and the study of (1949), so far there have been more than seventy years of history. From the establishment of Wuchang Higher Normal School in 1913 to the Wuchang Sun Yat-sen University before 1928, the school site has been in Wuchang East factory mouth.

Wuhan University existing campus was first created in 1928, the nationalist government decided to reorganize Wuchang Zhongshan University to form the National Wuhan University. In the same year, the Wuhan University new school building construction equipment committee was established and appointed Li Siguang, a famous scientist, as the chairman of the committee. Immediately after Li Siguang, Ye Jacob and others began in the Wuchang East Lake shore of the Lujia Mountain (later by Wen Yiduo for the "Luo Jia Mountain") around the survey of the new school site, preparing for the construction of the new school building. The first phase of the project in March 1, 1929 officially broke ground. In the process of selecting the site and construction of the school building, it had received strong support from Mr. Cai Yuanpei, the Minister of Education of the National Government, and was later subjected to many interventions by the local government and officials, and it was only through the school's efforts that the project could be carried out smoothly.

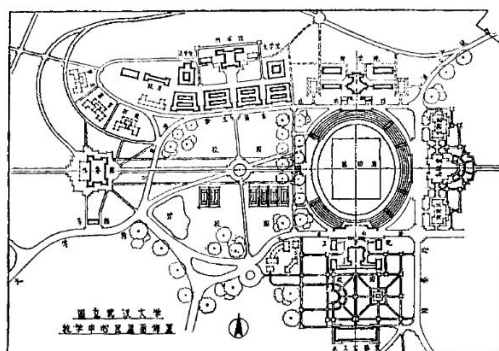


Fig. 1 General arrangement of Wuhan University Teaching Center

2.2.2 Overview of Wuhan University Library

In 1930, American architect F. H. Kales (1899-1979) designed the Wuhan University Library, which was completed in 1933 by the Hankou Hanxie Sheng Construction Factory in one year. The library is located at the northern foot of Luoga Mountain on the shore of the East Lake in Wuhan, and is now the seat of the collection department of Wuhan University Library. The complex is built on a hill, with the main building on the north side of the hill and the grammar schools on the east and west sides. There is a row of student dormitories on the south slope, up to four floors, shaped like a high wall, with three arches, which can be reached by steps to the library. The overall layout of the building complex is magnificent and has become a landmark landscape on the campus.

The library has a floor area of 6,000 square meters, with an I-shaped plan, one floor underground and five floors above ground. The functions of the building are divided into four parts: catalog, search, reading, library and auxiliary services. The first floor has the main entrance and the east and west side entrances, which are connected to the catalog searching desk and the central reading hall through a circular corridor, and is flanked by multi-storey bookstores with a capacity of 500,000 books. The building design incorporates elements of classical Chinese architecture, with green glazed tiles on the roof, harmonizing with the campus environment. The main entrance on the south façade is a three-bay single-cavity door, adopting Western-style double-link corridor columns,

combined with traditional Chinese bird-title parts, and the roof is a single-eave hermetic roof, with the arch design referring to the Qing style. The top floor of the central body is octagonal, symbolizing the meaning of the ancient book collection, the top platform north and south corners were equipped with a corner stone and a small tower, the parapet is decorated with a double-dragon kissing spire, which enhances the visual effect of the building.

The complex embodies the fusion of Chinese and Western architectural theories and techniques, retaining the solemnity and elegance of classical Chinese architecture while incorporating modern functional requirements, making it an important cultural landmark on the campus of Wuhan University.

2.3 Conservation Strategies for the Architectural Heritage of Wuhan University

2.3.1 Overall protection strategy

Establish the concept of holistic protection and expand the breadth and depth of protection. With regard to the categories and value characteristics of the architectural heritage of Wuhan University, delineate multi-level protection areas and formulate differentiated protection and management measures to ensure the integrity, authenticity and continuity of the architectural heritage and its environment. Combined with the campus planning layout in the 1930s, the scope of the core protection area is appropriately extended to include the sports ground, air-raid shelter and other structures, so as to strengthen the overall protection of the early buildings and their surrounding environment. Take Lujia Mountain, Lion Mountain, Tuan Mountain and other natural elements as the main body, set up general protection zones, strictly control construction activities, and maintain the landscape pattern and ecological landscape of the campus. Expand the construction control zone, especially the area near the East Lake, regulate the form, style, volume, color and height of the buildings, protect the skyline of the early buildings and the Lujia Mountain, and maintain the landscape coordination with the East Lake Scenic Area.

Implement key protection for buildings reflecting the historical lineage, important changes and humanistic spirit of Wuhan University, and include the foreign faculty villa of the Dialect Academy and the Leshan Temple of Literature in the scope of declaration of national key cultural relics protection units, so as to upgrade the level of cultural relics and safeguard the integrity of the historical lineage. Establish an evaluation system for architectural heritage, carry out dynamic value assessment, start the identification and protection of architectural heritage of the 1950s and 1960s, and promote its inclusion in the list of historic buildings for protection.

2.3.2 Hierarchical protection strategy

Differentiated protection measures are implemented according to the value orientation of Wuhan University's architectural heritage, combined with the grading system of immovable cultural relics and historical buildings. For the 48 national key cultural relics protection units in 17 places, the principles of not changing the original status, authenticity, integrity and minimum intervention are strictly followed to comprehensively protect their form, structure, plan layout, façade appearance and internal decoration, and to ensure that the utilization process is based on the premise of cultural relics' safety and highlights the social benefits. The 22 buildings of the 1950s and 1960s are divided into four levels of protection according to the "Regulations on the Protection of Historical and Cultural Landscape Blocks and Outstanding Historical Buildings in Wuhan City", in accordance with the principle of "giving priority to protection, repairing the old as if it were the old, and applying the principles of safety", and with reference to the requirements for the protection of outstanding historical buildings, and based on the architectural value and degree of intactness:

- 1) First-level protection: not change the external shape of the building, finishing materials, color and internal structural system, layout and decoration, the use of the function should try to restore the original design function, in line with the requirements of the protection plan.

- 2) Secondary protection: not change the external shape, finishing materials, color and the main internal structural system, layout and characteristics of the decorative, allowing other parts of the

internal appropriate adjustments, the use of the function should be consistent with the guidelines for heritage protection.

3) Tertiary protection: no change in building elevation and structural system, internal adjustment is allowed.

4) Level 4 protection: no change of the main façade, other parts are allowed to be adjusted.

Among them, Grade I and Grade II protection corresponds to Grade I and Grade II excellent historical buildings in the "Wuhan Excellent Historical Buildings Graded Protection and Evaluation Management Measures"; Grade III and Grade IV protection applies to buildings whose value is lower than the standard of excellent historical buildings, but still belongs to the category of architectural heritage. Enhance the pertinence and adaptability of protection measures through graded protection.

2.3.3 Sustainable Development Conservation Strategy

Sustainable development is a key strategy to maintain the vitality of a historic campus. Architectural heritage conservation not only aims to preserve the historical lineage, but also supports the development and cultural heritage of the campus. From the perspective of architectural heritage conservation at Wuhan University, sustainable development covers two aspects: first, optimizing the renewal and utilization of the heritage according to the principle of hierarchical conservation, giving full play to its function and cultural heritage; second, coordinating the relationship between historical and modern buildings in the renewal of the campus, and facilitating the organic growth of the campus.

Based on value assessment and hierarchical protection, differentiated renewal strategies are adopted for different architectural heritages. For the 17 national key cultural relics protection units, priority will be given to the protection of the buildings and the environment, the renewal method should ensure that the value of the relics is not jeopardized, the new part of the building should be reversible, and the function should be to continue the original function or to be used as a place for display and research, highlighting the public welfare and sustainability. For the 22 historic buildings, Grade I buildings can be strictly controlled in terms of utilization intensity with reference to the standards for heritage conservation units; Grade II buildings are allowed to be moderately renewed internally under the premise of protecting their core values; and other categories of historic buildings are to be utilized in a more efficient manner to meet the needs of modern use.

In order to cope with the problem of disorderly construction on campus, Wuhan University should follow the policy of "protection first, salvage first, rational utilization, and strengthened management" under the guidance of the department of cultural relics protection, improve the "Early Architectural Conservation Plan of Wuhan University", and ensure that cultural relics and buildings and their environments are effectively protected, so as to achieve a balance between cultural relics protection and campus development.

3. Summary

The readability and inheritance of historical space in the physical environment of historical buildings is retained the connotation and significance of its environment should not be forgotten, but with the architectural space together to be inherited, the old library of Wudan University is to tell the history, connecting the future of the architectural carrier of the campus of historical buildings and the protection and reuse of the building is closely related to us we should add a force to the development of it.

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