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Research on the Protection Strategy of Excellent Historical Buildings in Universities

-- Wuhan University as an Example

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Abstract. Wuhan university began in the late qing dynasty huguang governor zhang Zhidong founded self-improvement school and founded in 1913 the national wuchang higher normal school, after one hundred of development, left numerous, rich types, unique architectural cultural heritage, their common memory and inheriting the history of Wuhan university context, is a symbol of the humanistic spirit of Wuhan university and the whole city. In this regard, the protection value of historical buildings on Wuhan University campus is analyzed, the protection problems of historical buildings in Wuhan universities are summarized, and the corresponding protection strategies are put forward to provide reference for the protection and inheritance of excellent historical buildings on campus.

Keywords: Architectural Heritage; Protection Value; Protection Strategy; Wuhan University.

1. Introduction

Many colleges and universities in China were founded in the early days of the founding of the People's Republic of China. Among these campuses, more and more early university buildings were judged as excellent historical buildings for a history of more than 50 years and a unique value. However, these historical buildings are often not properly protected and repaired in colleges and universities for various reasons. On the one hand, the public does not have a clear and complete understanding of the protection value of excellent historical buildings, and on the other hand, there is a contradiction between the development of the campus and the historical buildings. Therefore, this paper analyzes the value of excellent historical buildings in colleges and universities, expounds the relationship between them and the development of campus, and hopes to promote the protection of excellent historical buildings in colleges and universities.

2. Related Research Results and Literature Review

2.1. Foreign Cases and Theories

Foreign universities have a long history, so they also provide a lot of useful experience and case reference in the study of campus and building renewal. Most of the foreign research cases in this paper choose the renovation of campus buildings with a long history in Europe and America. Foreign studies of historical campus and architectural theories include: four studies on campus architecture by Richard Dobel (Richard. Dober), an American architectural theorist named "the father of campus planning": Campus Planning (Campus Planning) summarizes the experience of the construction and expansion of university campuses after World War II, Campus Design (Campus Design) and Campus Architecture (Campus Architecture) focus on building types, Campus Landscape (Campus Landscapse) discusses the relationship between landscape and aesthetics in terms of the external environment. In his book College and University Architecture, David J. Newman, an American architect and planner from Stanford University, describes the examples of new construction to expansion in foreign colleges and universities through a large number of actual pictures and design drawings.

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2.2. Domestic Theory

The research on college campus architecture in China reflects the relative lag of practice and theory, especially in the deep cultural connotation, and there are still many deficiencies. In China, campus planning is mostly studied through urban design methods. The cultural dilemma in university campus construction has the objective reasons of social environment and the limitations of theoretical research. The spatial research on university campuses in China began in the 1980s, and a number of research results represented by master's thesis appeared. Among them, the more famous are Xu Weiguo's master thesis "Research on Modern Chinese University Campus" (1986), and Yuan Tiesheng's master thesis "Research on Contemporary Chinese University Campus" (1993). In 1994, the book Architecture, Planning and Environmental Design of Higher Universities, compiled by Zhou Yihu and Song Zefang, two professors from Tsinghua University, is an early monograph on the planning and design of university campuses in China, some of which involves the problem of campus reconstruction and expansion.

2.3. Research Methods and Research Framework

This paper is the intersection of the planning and design of university buildings and the protection and renewal of historical buildings. It not only involves campus planning and single building design, but also needs to apply the relevant technical knowledge of historical building protection and update and restoration. Therefore, this paper draws on historical architecture by using the method of comparing cases and the method of interdisciplinary analysis. It is hoped that by collecting relevant information as much as possible, extracting cases for analysis, sorting out, sorting out and summarizing various methods such as historical update, campus planning and single architectural design.

In the field research, the author collected cases on the spot, verified and experienced the humanistic atmosphere of traditional universities, understood the architecture and culture of universities, observed the results of renewal and transformation, and made an important way of use evaluation. Based on the differences in geography and architecture, the author divides these universities into three regions: North China, Central China and South China. Such as domestic traditional campus concentrated city field visit research, and select a representative of the traditional university campus questionnaires, the representative cases through statistical methods, for a series of historical campus and construction related projects of statistical analysis, not only on the perceptual, more can get some objective data from the rational number, better support the protection of traditional campus buildings and update.

3. The Category of University Architectural Heritage

Under the current cultural heritage protection system in China, the university architectural heritage belongs to two major categories: immovable cultural relic buildings and historical buildings. Immovable cultural relics buildings also include cultural relics buildings that have been announced as cultural relics protected units at all levels and immovable cultural relics that have not been approved. "Historical buildings are designed that reflect historical features and local characteristics, and are not registered as immovable cultural relics protected units." These are the categories of architectural heritage at the legal level. In addition, architectural heritage is a process of continuous growth, inheritance and continuation. With the change of The Times, the continuous "appreciation" of heritage value and the deepening of people's cognition of value, some traditional buildings or modern buildings not listed in the cultural relic protection units in the past are likely to become the protection objects of laws and regulations in the future. For colleges and universities, they are also valuable historical and cultural resources reflecting the profound cultural precipitation of the campus. On the basis of this cognition, the university architectural heritage studied in this paper is a relatively open category, which includes not only part of the architectural relics included in the protected objects, but also the part with certain value but has not yet been included in the protected objects.

3.1. Value System of University Architectural Heritage

The value system of cultural relics is the foundation of all cultural relics protection activities. Through the cognition and evaluation of the value of architectural heritage in colleges and universities, the protection object is determined and clarifying the protection idea has important practical significance for formulating the protection of architectural heritage strategy in colleges and universities and coordinating the contradiction between protection and development. "Protection means all activities undertaken for the preservation of cultural relics and historic sites and their environment and other related elements. The purpose of protection is to preserve truly and completely its historical information and its value through technical and management measures ". The cognition and evaluation of the value of the architectural heritage is the basis for us to determine the architectural heritage and carry out the protection work, and also an important basis for us to formulate the protection measures. After decades of development, China has built the protection value system of cultural relics and historic sites according to the actual situation, which serves as the basis for guiding the heritage protection work. Therefore, the identification and protection of campus architectural heritage needs to reflect the value of architectural heritage as the discrimination standard. The Guidelines for the Protection of Cultural Relics and Historical Monuments in China expounds the value of cultural relics and historic sites as follows: " The value of cultural relics and historic sites includes historical value, artistic value, scientific value, social value and cultural value. Social value includes memory, emotion, education and other contents, while cultural value includes cultural diversity, the continuation of cultural tradition, intangible cultural heritage elements and other related contents." This value standard is generally applicable to the value evaluation of architectural heritage, which provides us with the standard framework of evaluation. At the same time, we also realize that any heritage has its own uniqueness, which is formed under a specific historical and cultural background. The evaluation of the value of the heritage needs to fully clarify the historical characteristics, cultural characteristics and design concepts contained in the building. on this basis, According to the development process of various universities and the campus site selection and architectural characteristics, It can be found that the value of university architectural heritage is mainly reflected: (1) historical value —— witness the important course of campus development; Associated with major events or important people; It occupies an important position in the history of architecture, history of education and history of campus construction; (2) Artistic value —— is the work of art in campus buildings (including space composition, modeling, decoration, type, etc.); With the natural landscape to reflect, Can enrich the overall campus environment, Reflect the landscape art; Make the campus surrounding environment has a sense of continuity in time; (3) Scientific value —— In terms of site selection and planning and layout, Scientific and traditional ideas or advanced ideas reflected, It is a special or representative architectural style of a certain period; Structure, materials, and process, Representing the scientific and technological level of the time, Or an important link in the process of science and technology development; (4) Social and cultural value —— is the cultural carrier and spiritual symbol of the campus and even the city; In the social development, education has been active.

4. Current Status of Architectural Heritage Protection in Colleges and Universities

In 2001, a number of campus buildings, such as the early architecture of Tsinghua University and Wuhan University, were announced as national key cultural relics protection units. This was the first time in the history of New China that university architectural heritage was included in the national cultural relics protection system, and the value of university architectural heritage was gradually paid attention to. By 2013, the seventh batch of national key cultural relics protection units had been announced, and more than 30 university architectural heritages had been included and protected. However, compared with the overall number of university architectural heritages, they are only a small part of them (Table 1), and belong to the "elite" heritage with great cultural value. The construction of a campus is a continuous development process. The longer the history of a campus, the deeper the physical performance. Many campus buildings not included in the protection objects

still reflect the campus tradition from the aspects of architectural characteristics, architectural functions and emotional value, and are also a part of the campus historical environment and historical memory. At the same time, because it has not been announced as protected units or excellent historical buildings, these campus buildings often become the object of the demolition and replacement of modern campus construction, resulting in the separation of the context of colleges and universities. The essentials of historical sites include not only a single building, but also an urban or rural environment where a unique civilization, a meaningful development, or a historical event is witnessed." In recent decades, with the continuous maturity of China's cultural heritage protection concept and the continuous improvement of the protection system, various levels and protection types such as cultural relics protection units and historical buildings have been formed. However, it is not difficult to find in Table 1 that in the protection of the architectural heritage in colleges and universities, "point" is often the basic unit, and in the process of protection, they often only pay attention to the protection of the architectural heritage itself, but the environmental elements closely related to the architectural heritage are not paid due attention. Environmental elements not only include the geographical and natural environment that reflects the concept of site selection and construction, and various structures that supplement the function of architectural heritage, but also the related relics that reflect the cultural continuity and continuity of colleges and universities. Once the architectural heritage is separated from these environmental elements, it will lead to the direct loss of heritage value.

4.1. The Contradiction between Protection and Development is Prominent

In the past 20 years, due to the large-scale adjustment and expansion of colleges and universities, the old school buildings and classrooms can no longer meet the requirements of modern teaching in terms of quantity and function. In order to meet the needs of development, the campus has been rapidly expanded and constructed. On the one hand, cultural relics protection buildings are absolutely protected due to legal constraints, and their utilization and renewal are restricted; due to the weak concept of protection, historical buildings lack the guidance and normative documents for transformation and renewal, which is difficult to update, and weak in practicality (volume, etc.), thus they are not valued. On the other hand, in history, there are few college students, the construction plot ratio is low, and the planning layout adopts decentralized garden layout. On the basis of the established spatial pattern, modern campus construction is often built where there is open space, showing an overall disorder. At the same time, the new buildings develop to a larger volume and higher height; in the architectural creation, lack of research on campus historical buildings, the phenomenon of "bring doctrine" is common, the new buildings are the same and lack of historical and cultural continuity, can not form their own unique style. In this context, the protection and development can only contradict each other, and the historical pattern and overall style of the traditional campus can not be highlighted, resulting in the rupture of the historical context of the campus.

5. The Overall Characteristics of the Architectural Heritage of Wuhan University

From 1893 to 1928, Wuhan University went through an important historical period from the dialect school, and then to Wuchang Military Academy, National Wuchang Normal School, National Wuchang Normal University and National Wuchang Sun Yat-sen University, through an important historical period, which was also the starting point of its campus context. This time of campus construction is mainly for Wuchang three Buddha Pavilion chao Street and Wuchang East factory mouth two sites. Due to the changes of history, the old site has long since disappeared. In 2004, the foreign teacher villa of dialect school moved to Mulan Lake (Yulin Village) in Huangpi District, Wuhan city, is the only physical architectural remains in this period. Dialect school foreign faculty villa site is located in wuchang district first righteousness road 71, for a combination of Chinese and western buildings, plane is square, broad three 25.5 meters, deep between 23.3 meters, with sandstone platform, about 1.2 meters high (empty for the basement), surrounded by corridors, with western-

style fireplace, wooden roof, hip roof, roof covered with small green tiles. In 1926, the Ye Ting Independent Regiment of the Fourth Army of the National Revolutionary Army conquered Wuchang and expanded it into the 24th Division of the National Revolutionary Army. Ye Ting served as division commander and commander of the Wuhan Garrison, and set up a division here. In 1998, the site was announced as a cultural relic protection unit of Wuhan for its outstanding value during the Great Revolution; in 2008, the site was announced as a cultural relic protection unit of Hubei Province as a part of Yulin Ancient Buildings. People's cognition of the building always lies in the value of its revolutionary cultural relics, but the value of the architectural heritage of Wuhan University has not been valued. In terms of the identity of the university architectural heritage, the building also has important cultural relic value and social value. Firstly, in terms of historical value, the building is the only architectural relic of Wuhan University, which has important historical evidence value; secondly, in terms of scientific value and artistic value, the building has reasonable design, advanced function, calm and simple shape, reflecting the integration of Chinese and Western culture in this period, and is also an important physical relic of the transition from Chinese traditional architecture to modern architecture; again, in terms of social value, it supports the memory of Wuhan University, which is an important example of the development of Chinese modern educational history.

Figure 1. Engineering College

Figure 2. Villa of Dialect School of Wuhan University (after relocation)

5.1. The Early Campus Planning and Construction Period of Wuhan University in 1928-1949

In 1928, Mr.CAI Yuanpei personally proposed and appointed geologist Li Siguang as the chairman of the National Building Equipment Committee for New School Buildings of Wuhan University, responsible for the site selection and planning of the new school buildings, and American architect Kls was responsible for the design. Since then, the construction of Wuhan University, which can be called a masterpiece of modern Chinese campus architecture, began. In August of the same year, the New Building Equipment Committee of National Wuhan University was established. In November, Luojiashan (later Luojiashan) and Lion Rock were selected as the new sites. In March 1929, the survey and planning of the campus was started, the main axis of the campus was determined, and the survey of the new school building was completed. In October, the general design drawing of the campus was approved. In March 1930, the new school building project was started. The campus construction is divided into two phases of construction projects, the first phase (March 1930-February 1932) mainly includes the school of arts, school of science, male dormitory, student dining hall and club, the first residential area, the second residential area, staff, sports ground, and archway of National Wuhan University; the second phase (February 1932-July 1937) mainly includes library, gymnasium, central hydraulic laboratory, Luojiashan water tower, practice factory, power plant, some living housing, law school, school of Science (expansion), college of engineering and agriculture

The college (unfinished) and a total of 17, a total of 30 early construction projects 68, a construction area of 78,596 square meters. In April 1938, Wuhan was surrounded by the Japanese army on three sides, and Wuhan University was forced to move west to Leshan. In October 1946. In 1947, the office building of the Agricultural College was completed, and in 1948, the buildings and facilities such as the June 1 Massacre were established.

Figure 3. The Memorial Pavilion of the June 1 Massacre (built in 1948)

According to the design requirements of "practical, strong, economic, beautiful and the traditional shape of Chinese nation", the construction of the early buildings of Wuhan University, integrating the strengths of Chinese and Western cultures, showing the beauty of geographical environment and the beauty of humanistic architecture, thus achieving the most dazzling period in the history of planning and construction of Wuhan University. In terms of site selection, it follows the fine tradition of the site selection and location of ancient Chinese academies and the traditional concept of "the benevolent enjoy the mountain, the wise enjoy the water". It follows the mountain, leaning against Luojiashan and facing the East Lake, forming the campus natural environment with beautiful scenery and beautiful environment. In late November 1932, after lecturing at Wuhan University, Hu Shi said, " The site is good, the plan is great, and the scenery are nothing to schools in China. "In the planning layout, follow the The Chinese traditional architectural principle of" symmetrical axis, main and orderly, central palace, four corners ", with the library as the planning center and commanding point of the whole campus, combined with the self, but the environment adopts scattered, radial layout, forming a rich and diverse, orderly building group. In the architectural form of introduction, the

western classical style, integrating the length of Chinese and Western architecture, formed the early buildings with beautiful shape and distinctive characteristics. In terms of architectural functions, the design techniques such as the high atrium of the glass roof of the School of Technology, the large-span steel structure of Song Qing Gymnasium, the large reinforced concrete dome of the School of Science, as well as the application of many new materials and technologies, all represent the advanced construction technology in this period, which can still meet the teaching needs to a certain extent. At the same time, with the changes of history, they are the witness of the campus historical context and the relevant figures and major events in this historical period. The beauty of Wuhan University lies in the organic integration and mutual gain of the beauty of geographical environment and the beauty of humanistic architecture. Together, they create a " clear spring, and short and long sound. Poor years bamboo roots, and I read " beautiful artistic conception, embodies the humanistic spirit of campus, both be short of one cannot, the environment including building dependent mountain drainage, line of sight corridor and planning pattern, etc., in addition, the early construction of the stadium, bomb shelter and other structures is also one of the important contents, has the important value. For example, the sports ground built in 1931, from the campus space layout, the sports field is the intersection of the two main axes of the campus, for the place of gathering gas, in the function, for the campus sports meeting, physical exercise necessary place. During the Anti-Japanese War, Chiang Kai-shek witnessed a series of major events during the war; after the founding of the People's Republic of China, MAO Zedong met with students here, expressing the party's care and expectations for the numerous students. Therefore, these environmental elements should also be included as an important part of the campus remains and historical context.

Figure 4. One of the 18 buildings in Luojiashan teachers' dormitory area (Zhou Enlai and his wife lived here during the Anti-Japanese War)

6. Protection Strategy

6.1. Time Activation Strategy Updated Activation Strategy

Most of the campus historical buildings were built in 1950 or before, and their use mode and efficiency cannot adapt to the situation of college education in the new era. This requires designers to be flexible in handling existing historic buildings and exploring ways of balancing new needs while protecting their value. For example, in the background of discipline refinement and increasing categories, there is often a phenomenon of one discipline being divided into multiple disciplines, such as the separation of architecture and civil engineering, which puts forward the need for redividing functions or expanding the space of the original historical building of the college. For such changes, the designer should reasonably choose the scale and way of transforming or updating the original building, such as retaining the original facade and redividing the internal space, or building it like the second floor of the east, while maintaining the original texture and architectural style.

6.2. Overall Planning Strategy of Integrated Protection

The theory of conservation and renewal of modern historical buildings began with the Athenian Charter in 1933, in which the first thought on the value of historical buildings and raised the protection

of buildings and areas of historical value. The Venice Charter of 1964 included historical environmental protection of a certain scale in its protection scope. In 1977, the Machu Picchu Charter for the first time included modern and contemporary excellent buildings into the scope of protection, which shows that the scope of building protection is constantly expanding. It is not difficult to see from this series of definition extension, for the protection of university historical buildings and update is not only as the protection of several isolated historical buildings on campus, and should be from point and surface, from the area and the overall protection rules, draw to guide the overall protection of campus historical buildings and update, its scope even not only include the entity of historical buildings, more should consider the land relationship and campus public space and other related elements. At the same time, for the update and construction of the campus, attention should be paid to the control of development intensity and height, and the materials and styles should also be considered. In addition, it can be adopted to improve the campus capacity while protecting the historical campus style.

6.3. Publicity Strategy of Value Popularization

The lack of protection of historical buildings in colleges and universities largely lies in the lack of protection awareness, especially the managers' cognition of the value of excellent historical buildings in colleges and universities. Therefore, the lectures and publicity activities related to historical buildings play a role that cannot be ignored. For example, Southeast University once held a series of lectures related to the historical features and protection and renewal of the Republic of China architecture in Nanjing, which not only deepened people's cognition of excellent historical buildings in universities, but also improved the popularity of campus historical buildings and universities.

6.4. Sustainable Development Protection Strategy

Sustainable development is an important strategy to maintain the vitality of the historical campus in the changes of The Times. The protection of architectural heritage is not only to retain the historical context, but also to create conditions for the construction and development of the campus and the inheritance and development of the cultural context. From the perspective of architectural heritage protection of Wuhan University, sustainable development mainly includes two aspects. On the one hand, according to the above principles and standards of the architectural heritage protection, give full play to the use of the campus building properties and the historical heritage properties; on the other hand, maintain the harmony between the historical campus and modern construction in the development of the campus, and promote the organic growth of campus buildings. According to the value evaluation and heritage classification of the architectural heritage of Wuhan University, the author believes that different renewal strategies should be followed to solve the problems of aging of the architectural heritage structure, outdated facilities and unsuitable functions. For 17 cultural relics protection units, due to its high value, and reflected in all aspects of building ontology, therefore, should choose not to damage the cultural relics ontology and its environment and can fully display its value and update and use way, any new add need to be evaluated, and reversible, to ensure no damage or interference, in the original function or used for display, research place, outstanding public welfare and sustainability. For 22 historical buildings, the comprehensive protection is not emphasized, highlighting the use value. According to the classification of historical buildings, Grade 1 excellent historical buildings can refer to the utilization method of the heritage protection unit and control the utilization intensity with only necessary improvement or addition; on the premise of proper protection. The other two types of historical buildings, while protecting the historical features, are mainly able to meet the needs of modern use and improve the utilization efficiency. The protection plan for the protection of cultural relics is the legal basis for the implementation of the protection of cultural relics and the basic means for the people's governments at all levels to guide and manage the protection of the protection of cultural relics. In view of the development state of the disorderly campus construction in Wuhan University, In order to correctly handle the relationship between cultural relics protection and school teaching development, Promote the sustainable development of the effective protection and rational utilization of cultural relics, Effectively protect the cultural relic

building body and its environment, The author suggests that, Wuhan University should, under the guidance of the cultural relics protection and management department, In accordance with the policy of "protection first, rescue first, rational utilization and strengthening management", The early Building Protection Plan of Wuhan University compiled by Zhejiang Ancient Architecture Design and Research Institute as soon as possible, It will be incorporated into the national economic and social development plan and urban and rural construction development plan according to the procedures. In order to ensure the protection planning is scientific, forward-looking and operability, planning content should be related to the Wuhan university campus overall development planning, regional, ecological protection, environmental management, land use and other kinds of specialized planning bit, up, on the planning measures to set reasonable protection scope, construction control, belt and construction development area, to conform to the actual protection, management and utilization measures, to facilitate the future work.

7. Conclusion

Excellent historical buildings in colleges and universities are not only the witness of history, but also the symbol of spiritual culture in colleges and universities. Nowadays, with the change of The Times, the value evaluation and protection management of this type of building have become more and more prominent, and the contradiction between it and the campus learning and life mode in the new era needs to be solved urgently. This paper conducts multi-angle consideration and hierarchical analysis from the three aspects of value evaluation, problem analysis and protection strategy of excellent historical buildings in colleges and universities, hoping to make typed analysis and direction suggestions for the protection and inheritance of historical buildings in colleges and universities in the future.

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