

Innovative Application of Traditional Chinese Cultural Symbols in Contemporary Architecture

Qiang Liu, Nan Shi*

School of Civil Engineering and Architecture, University of Jinan, Jinan, Shandong, China

Abstract: Traditional Chinese culture, with its distinctive nationality and regionalism, is a valuable source of creative elements for Chinese architecture, and also an effective weapon to cope with the impact of “internationalization” and “standardization”. In this paper, traditional cultural elements are symbolically categorized, dissected and innovated through architectural semiotics to explore the characteristics and application significance of traditional cultural symbols in contemporary architectural design. Moreover, case studies are conducted to derive the correct expression of traditional Chinese culture in contemporary architectural design, with a view to finding out a universal path for applying traditional cultural symbols in architecture.

1. Introduction

Every nation’s culture, throughout its history, has produced its own architecture, which has flourished and declined along with the culture. From the perspective of semiotics, China’s architectural heritage is a rich and unique heritage of architectural symbols. The idea of “symbols” has been recorded since the earliest times in ancient China. It is mentioned in The I Ching, Appendix III: The Great Appendix Section I that “Hence these (diagrams) are denominated Semblances (or emblematic figures, the Hsiang)”. The Hsiang, or emblematic figures, are pictorial representations of the same. The so-called “same” is a symbol, and “images abstracting from viewing” is exactly the process of symbol creation. Traditional cultural symbols are the concentrated embodiment of traditional culture, which not only contain deep traditional cultural connotations but also cater to the aesthetic interest of modern people in architecture. In the practice of architectural design in recent years, traditional cultural elements have begun to be valued, tapped and utilized by an increasing number of designers who aim to enhance the cultural flavor of architecture via the extraction and utilization of elemental symbols. Considering the cultural and historical characteristics of traditional cultural elements, it is determined that the application of their symbolic expressions in architectural design should follow historical and scientific rules and avoid arbitrary, blind and subjective application. In this regard, an in-depth and targeted analytical study of the application of traditional cultural symbols in architectural design is requested.

2. Figures and tables Semiotics and Architecture

2.1. semiotics and architecture

Symbol consciousness has existed in both Chinese and Western architecture for a long time. Architecture, as a product of typical human creative activities, integrates technology and artistry and is both practical and aesthetic. Its symbolic features are strong and profound. Any real existing architecture is actually a system of media that can cause certain behaviors. In other words, architecture takes material means to form certain forms to express certain ideas and thoughts^[1]. It can be found from the study of the symbolic theory that the symbol is the medium to convey information, and the visual information of architecture is conveyed by the symbol. Once a simple architectural symbol is combined with social culture, the meaning it expresses will be richer. The existence of symbolic relationships allows for the simultaneous expression of multiple meanings of architectural symbols. Norberg-Schulz summarized these meanings into four aspects: ① the values of all social strata; ② the significance of culture, especially the significance of cosmology and religious belief; ③ the significance of ideology; ④ the value of the economy. In fact, the symbolic meaning of architectural symbols does not appear occasionally. It is gradually formed by the structural similarity between symbols and the content they express after a long period of evolution. Once this symbolic meaning is established by convention, people will naturally think of its established symbolic meaning as soon as they see an entity similar to this symbolic image. In this case, the symbol has expanded from the

* Corresponding author: 848205366@qq.com

practical to the symbolic level in terms of meaning and has transformed from a general symbol to a symbolic one in terms of its own value, just as the Arc de Triomphe symbolizes victory and the “cross” symbolizes Christianity.

2.2. Evolution of traditional architectural symbols

Each component of architecture and its combination undoubtedly has its own specific function of use, and any specific form of each component actually connotes human experience and history, expressing a wealth of meaning^[2]. In the process of summarizing and analyzing traditional Chinese cultural symbols, it is obvious to conclude that architectural symbols are one of the most widely used traditional cultural symbols in practice, and they are also the richest in adapting to the changes of the times.

Symbols are changeable, which stems from the change of symbol carrier and the change of the audience’s thinking under the background of the times. This feature is especially obvious in the present architectural symbol system, where there are roughly two symbol systems: the modern architectural symbol system and the traditional symbol system. The two are not defined by a clear division of time and form, i.e., with the emergence of the latest architectural thoughts, the architectural style in the early stage of the new architectural process may be incorporated into the traditional architectural symbol system. This is a slow process that is beset with difficulties because the so-called “outdated” buildings are often functionally inappropriate, but in which symbols can be extracted that are applicable to contemporary architecture and necessarily have profound spiritual accumulation and cultural significance. Architecture is a kind of practical space art, which is constantly improved to conform to the development of the times and the change of ideas.

Traditional Chinese architectural symbols are constantly improved and developed on the basis of historical experience. Traditional symbols are the concentrated essence of history and culture and are produced within a certain period and region. They are the reflection of people’s lifestyle, living environment and living culture, and with great stability. However, traditional architectural symbols are not static in meaning but vary with time, place, and social context. Architectural symbols are rich in multiple meanings and can be used flexibly in pictorial, indicative and symbolic ways according to the needs of expression. On the basis of understanding, we should take its “shape” and extend its “meaning” so as to spread its “spirit”. Only in this way can the rich connotation of traditional Chinese symbolic culture be fully explored, so that it can be extended and developed in modern architectural design.

3. Classification of symbols

Symbol consciousness has existed in both Chinese and Western architecture for a long time. The architectural

symbols in traditional Chinese cultural symbols can also show the symbolic nature of architecture. As a symbol of nationality, architecture has been rooted in China’s profound cultural soil. The architectural symbols of traditional cultural symbols mainly include the following elements: ① Architectural forms, such as pagoda shape, roof shape and wall shape in temple buildings, architectural shapes of different regions and nationalities; ② Architectural colors, such as “Forbidden City Red” and yellow glazed tiles used in the buildings of the Forbidden City, and “white wall and black tiles” in Suzhou gardens, are all symbols with unique Chinese impression; ③ architectural components, traditional components, decorations and practices in architecture are also a kind of symbols. Such as the bucket arch under the eaves of buildings in the Ming and Qing Dynasties, various columns in buildings, railings and platform bases of buildings, etc. ④ building materials, which are commonly used in ancient buildings and regional buildings. Such as wood in wooden structures, bamboo in drywall buildings, yellow tiles, black tiles, brick and stone in ancient buildings, etc. ⑤ architectural gardens, ancient gardens in China are also a kind of architectural symbols.

4. Methods and Steps of Applying Traditional Cultural Symbols

4.1. Understand the use function of architecture

It is necessary to accurately grasp the semantic and emotional images of architecture due to the use function itself, i.e., to understand the first function of architecture. As a practical art, architecture’s function is of decisive significance^[4]. Architects must respect the first function of the architecture and be faithful to the expression of the architecture itself when starting to design. In designing a hospital building, for example, it is important to maintain the concise streamlined and clear division that medical places have, which to some extent determines the form and image of the building. Therefore, grasping the function is the first priority.

4.2. Grasp the symbolic connotation of architecture

Grasping the symbolic connotation of architecture is the second function of architecture. It is necessary to understand the information that the designed architecture needs to convey and find out the location of the architecture^[5]. If the positioning of the architecture is a landmark building, the architecture must be clearly iconic and convey its essential symbolic connotation; If the positioning of the architecture is a comfortable living space, the priority should be placed by architects on creating a pleasant environmental atmosphere during construction. Grasping the positioning of architecture is an essential prerequisite for determining the volume and shape of architecture and selecting the cultural symbols of traditional architecture.

4.3. In-depth research

To make clear the local regional culture and customs, it is necessary to carry out a field investigation of the location of the building to comprehensively study the existing traditional cultural symbols and sort out the regional context^[6]. The available traditional cultural symbols should be sorted out so that the semantics of the symbols in the historical and cultural context can be prepared for the architectural extraction of symbols.

4.4. Matching selection

Suitable traditional architectural cultural symbols should be selected by combining the use function of architecture, regional positioning of architecture and regional cultural characteristics. In the process of selection, comprehensive consideration should be given to the semantic matching between architecture and symbols, such as whether the volume of architecture matches the form of symbols. An overly cumbersome and meticulous form would not be suitable for full-scale application on a large architecture, and even if it were to be used, it would need to be improved and abstracted. It is a key step to determine the traditional architectural symbols used in buildings. On the basis of the symbolic meaning and emotional image conveyed by a part of the whole building determined by the architectural function and connotation, the traditional architectural symbols used must closely fit the previous part of the theme and strengthen and expand the theme

4.5. Refining and innovation

After determining the traditional architectural symbols used, it is essential to refine and innovate the symbols according to the theme of the times and the technical background. The innovation of traditional symbols applied to modern architecture should not be passive water without roots, but a re-creation based on a thorough and accurate understanding of the meaning of architectural symbols and the nature of traditional cultural symbols, using modern technical means and the way of thinking of the times. The innovation of traditional cultural symbols should be the highlight and feature of architecture, and it should also be the continuation and expansion of the life of traditional cultural symbols.

5. Problems should be paid attention to in inheriting and innovating traditional culture

Inheriting traditional culture is not to be attached to the past, but to inherit the essence of traditional culture, which means the continuous development and renewal of traditional culture itself. The process of updating traditional culture is the process of mutual influence and interaction between traditional factors such as appropriate traditional culture and living customs and modern factors such as modern technical means and

modern new life characteristics. here are still many problems in the process of exploring the development of architecture, some of which mislead and even hinder the process of modern architecture in China. For example, many pseudo-historical and pseudo-folk-custom buildings have been built driven by commercial interests, which are not only incompatible with the environment but also destroy the inheritance of the regional architectural environment. Only by facing these problems squarely and finding the root causes can we promote the better development of contemporary architecture.

6. Application cases of traditional cultural symbols in architecture

6.1. T3 terminal building

In the design of the T3 terminal building of Capital International Airport, China element is skillfully used. In the design of the terminal building, the designer Norman Foster extracted the architectural symbols from Chinese and traditional cultural symbols, and mainly expressed the unique China style by using the red of China charm. Underneath the huge eaves of the exterior is a huge column support^[7], whose proportions, divisions and colors are similar to those of the “pike columns” used in ancient architecture. The pillar construction used in the outdoor overhanging support of the terminal building obviously uses the pillar symbols in the architectural symbols, and its application not only follows the form but also exerts its own function-bearing. This “pike columns” is a symbolic representation for contemporary times, representing the soul of ancient architecture in the past. Therefore, the application of traditional cultural symbols in the design of the T3 terminal building of Capital International Airport is not only to extract the symbolic meaning of images, but also to retain the first function of architectural symbol that is to express the initial function of the original building (Use the function) .

6.2. Jin State Museum Architecture

The planar outline of the Jin State Museum Architecture evolved from the map of the state of Jin State, and the cracked gap showed historical allusions to three families divided into Jin State. The interior space of the building follows the direction of the tomb, highlighting the plane image of the site, and fully displaying the historical information such as the tomb system and shape, while the whole is still integrated with the surrounding natural environment. Among them, the map of Jin State used as a calligraphy and painting symbol is a special calligraphy and painting symbol with practical functions. Different from calligraphy and artworks, the map is an appreciation product of pure spiritual level, and it also has the functions of indicating the direction and delimiting the scope. In the current design of the Jin State Museum, the first functions of the map of ancient

Jin State, such as indicating direction, marking place names, defining scope, etc., are no longer used at all, but only their representative significance for ancient Jin State is applied. It endows architecture with a new-era connotation of respecting history, nature and the environment.

7. Conclusion

For the modern expression of traditional culture, we should not only stay on the form level, but also understand the original meaning of traditional cultural symbols^[8], more importantly, we should grasp the connotation of symbols. The cultural accumulation of architecture in China for thousands of years is unique in the world architectural forest. Facing the challenge of the globalization trend of architectural culture, China architects should shoulder the mission of modernization of traditional architectural culture in China. This requires a deep understanding of traditional culture, especially the essence of traditional culture, knowing the essential connotation of traditional architectural culture in China, studying the origin, change and development of traditional culture from the depth of philosophy, and exploring the ideas of inheritance, development and innovation from the evolution of traditional architecture. Only in this way can the architectural symbolic language be continuously regenerated so that the cultural lineage can be continued, which is the correct expression of traditional Chinese culture in contemporary architectural design

References

1. Bao H. (2021) The Inheritance and Development of Traditional Architectural Culture in Modern Architectural Design. *J. Chinese Residential Facilities*, 163: 51–59.
2. He J. (2015) On How to inherit Chinese Traditional Architecture Culture in Modern Design. *J. Chinese and foreign architecture*, 176: 43–44.
3. Wang X (2019) The Inheritance and Application of Traditional Architectural Culture in Modern Architectural Design. *J. Shanxi Architecture*, 256: 31–35.
4. Jiang J. (2019) Inheritance and Development of Traditional Architectural culture in Modern Architectural design. *J. Engineering Technology Research*, 126: 31–36.
5. Jiang R. (2016) Research on the Method of Inheriting Chinese Traditional Architectural Culture in Modern Architectural Design. *J. Architectural Knowledge*, 166: 88–90.
6. Wang C. (2022) Research on Inheritance and Development of Traditional Architectural Culture. *J. Cultural Industry*, 236:18–20.
7. Ren F. (2016) Discussion on the Application of Traditional Architectural Culture in Modern

- Architectural Design. *J. Windows and Doors*, 126:25–27.
8. Xie J. (2016) Application of Traditional Culture in Public Building Design. *J. Building Materials and Decoration*, 188:55–57.