Analysis on extraction methods of Chinese ancient architectural elements

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Abstract. The language of ancient Chinese architecture includes materials, structures and art of ancient Chinese architecture. The classical architectural language is recast as the motif, part of the essence is copied from the noumenon of architecture and passed on to the new architecture, making the new architecture not only have certain historical and cultural significance, but also have contemporary characteristics, which is the current exploration direction of regional architecture. This paper expounds the methods of extracting the motif of Chinese ancient architectural elements in contemporary Chinese modern architectural design, hoping to provide some directions for future traditional architectural design.

1. Extraction of elements

1.1. Representational inheritance
The extraction and application of elements can be divided into two levels: one is to use the extracted motif representatively in creation, so as to play the role of strengthening the theme and form a strong sense of rhythm, order and rhythm. This method of representation, through the repetition of the same element, often pursues the formal beauty of architecture, and architecture is full of changes in the unity. In today's real estate development, in order to reflect the regional representation of the nation, this kind of creation method is often adopted: for example, in the design of Yuantai Tienlai Huayu community in Chuxiong Yi autonomous region, the element construction of the Yi nationality earthen residence is repeatedly applied to the construction of the epidermis.

Fig 1. The Tianlai community of chuxiong
a. Plot plan
b. Primitive village
This creation has received mixed reviews. According to some feedback, elements are combined according to the rules of generation of meaning, such as adding components and patterns of traditional buildings on the building epidermis, which has a tendency of purely starting from the form, and has the suspicion of "commercial collage". Deliver visual information to people. Therefore, in more and more practical designs, modern architectural language is used to simplify or imitate the formal elements of traditional architecture, which is applied to the skin of new architecture. Excessive piling makes the design somewhat concrete and deviates from the trend of regionalism. From the author's point of view, the function of architecture and its surrounding environment are the basic points of architecture and the basic basis of creation.

1.2. Functional inheritance
In the second tendency, in the process of copying elements, the consideration is more about applying symbols as functional pattern language to modern design, refining with modern construction language and reducing complexity. Such as on the design of the new terminal building of resemblance, in the heart of the plane layout of the atrium space of the courtyard space in traditional residence apply to the new terminal in the hall, trying to terminal design and pleasant green space, enriching the connotation of the space, so in the terminal layout, speak the traditional local-style dwelling houses elements - stretched out, combining with the landscape sketch design, refining three independent courtyard space as a motif, in the process of actual use, too cohesive courtyard shape achieves good anticipated effect (see figure 2). In the design of the roof, the subsection of the roof of the Dai Buddhist temple was used for reference, and the tedious collage was improved, fully reflecting the classical beauty and the sense of The Times. The refined vision is put in the slope roof construction of traditional Dai nationality residential houses. In the creation process, in order to solve the problem of the building's back and forth levels, the elevation difference is used to form different levels of roof rising and falling on the facade. The Dai roof as a prototype of different sizes tiled on the roof, highlighting the ethnic characteristics.

![Image](image1.png)

a. The old terminal

![Image](image2.png)

b. Local dai dwellings

Fig 2. Rendering of the terminal

2. Refactoring fusion
2.1. Element rebuild
The reconstruction of residential symbol language is to break up the traditional symbolic language again, belonging to the deconstruction rule in modern language -- that is, to break up and decompose the original composition relationship. The notion that form follows function. On the basis of summarizing the modern architectural language created by modern architects, Saville put forward the language system of modern architecture, and these principles belong to the category of language interpretation. In terms of spatial relations, the general scale relations of traditional architecture are preserved, but in the treatment of detailed features, the traditional system and modern elements are
reconstructed again. Using modern and diversified structural language and material language (such as aluminum alloy, reinforced concrete, metal louver, etc.), the construction mode of modernity reflects the traditional construction mode. So that the traditional meaning in the modern building play an incisively and vividly role.

![First floor plan](image1)

![Perspective](image2)

**Fig 3. Golf club design**

In the monomer design of golf club of Yunnan normal university, the author aims to make the building harmonized with the environment and have regional characteristics. Trying to extract abstract symbol from traditional local-style dwelling houses, such as: eaves and column board, through modern composition technique, highlight the different forms of concave window and the integration of the traditional rammed earth material, this will be the traditional rammed earth material, modern glass, reinforced concrete, stone, such as that, create a modern, and traditional architectural style, make the wall body to produce a false or true commensurate art and visual effect, the composition of natural grille shading system, effectively block the external thermal radiation make club space to obtain good ventilated daylighting, created a cool world

2.2 **Element integration**

The fusion of architectural elements is a code composed of a collection of architectural elements and building rules. In the broad sense of architecture by Wu Liangyong, the so-called motif integration is to extract the most distinctive part of the traditional image, focus on improvement, and use it as the motif in the current design and creation.

In Pu-erh tea plum lake hotel restaurant design, adhere to the combination of culture, ecological, regional design concept, to refine the culture essence of Pu-erh tea city leisure, health, beautiful, designers on the basis of local residential characteristics, the overhead of the traditional technique or partial aerial characteristics combined with the hotel complex is good design. Architects attempt to build and green mountain depend on each other. In order to pursue the beauty and change of architectural form, national architectural elements are injected into modern vocabulary to emphasize the mutual penetration of ecology and architecture. In terms of building materials, the facade is made of traditional wood and glass is partially added to reflect the modern features of the building, making the building image transparent and open and close and the roof stacked and combined

3. **Abstract variation of elements**

3.1. **Abstraction of elements**
This method extracts certain conceptual relations from the prototype of traditional architectural language, sorts them out, abstracts, simplifies and sublimates them, summarizes and refines the new vocabulary similar to the traditional form, and organically organizes into modern architectural language, making it more modern. When using this method to make abstract simplification, we should pay attention to the essence of traditional architectural vocabulary and the part that can best express the connotation of traditional residential houses. We should extract the most representative symbols and make them highly simplified, abstract and reprocessed. In addition, we should keep the overall spirit of the prototype to form the "spirit like symbol". This treatment technique is a mainstream trend in current practice. For example, Xishuangbanna Xiongcheng teashan commercial center design, the modern cutting of the Windows and walls of the gable facades into irregular shapes, and the traditional volume has been highly abstract and simplified. The pieces are stacked up. Blinking does seem to grab people's attention. To a certain extent, this kind of highly processed symbolic works now seem to go into the wind of constructivism. Nowadays, in order to show the true connotation of local culture. Architects tend to seek symbols or images that embody traditional culture and local characteristics from the numerous traditional architectural cases and phenomena. Good typological type paradigms are not specific forms or images. The unity of architecture and environment mainly refers to the organic nature of the connection between the two, which is reflected not only in the physical combination and facade treatment of the building, but also in the organization and arrangement of the internal space.

3.2. Elements variation

In the design of the headquarter of Lancang tea garden enterprise, the energy saving architectural form of the local traditional residential green building is combined in the appearance design, and a kind of green shell is formed spontaneously in the modeling process, so that the green vegetation can permeate into the interior of the space to create a pleasant Shared space. In the application of architectural semiotics of architectural pattern language, it belongs to a kind of signifier system similar to language symbol system. It means to abstract the appearance, materials and USES of the building from their respective functions of use, strip off the formalism coat, and obtain the cultural significance of non-architecture. Alexander divided the cultural phenomena in history into "unconscious culture" and "conscious culture". He believed that the original "unconscious culture" had an internal mechanism, which would naturally give rise to a form in harmony with the context, namely, pattern language. Therefore, we should treat the reality of traditional architecture correctly, and pay more attention to innovation while inheriting and returning to the tradition, so as to adapt it to the requirements of The Times. As Kurokawa put it: "we make a deep analysis of a language (style), select the distinctive language (component), and use modern methods to abstract, improve and recreate it."
4. Conclusion

The extraction technique of motif elements in ancient Chinese architecture is to make the whole design have a certain traditional culture, to extract some simple and typical classical architectural elements, and to simplify, abstract and reintegrate them into modern architecture. In the process of design, we should correctly view the practical application of traditional architecture, and pay more attention to innovation while returning to the tradition, so that it can adapt to the development requirements of time.

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