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Combination of the Chinese and Tibetan Architectural Languages——a Case Study of three Halls of Wusutuzhao in Inner Mongolia

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Abstract. In order to study the architectural style of Mongolian lamaist temple combining the han and Tibetan styles, this paper analyzes three main halls of the temple built in different periods in the same village. Secondly, the process of deformation and combination of spatial prototype is decomposed through illustration. The following conclusions are drawn: 1. The temple architecture of lamaism in Inner Mongolia flexibly utilizes the architectural vocabulary of the two language families on the premise of satisfying the architectural function and accurately expressing the religious connotation; 2.2. The two architectural languages use different spatial dominant principles to express similar spatial connotations and reflect the basic cognition of buddhist cosmology; 3. With the improvement of the craftsman's ability to master the two languages, the ways of integration of the two languages are always changing, and the manifestations of the palace are diversified.

1. Introduction

The language of space is global for that it is rooted in many of the most fundamental human characteristics. This forms the spatial "regional dialects", which form the important characteristics of local culture. Mastery of the language can be distinguished by careful observation of the localities and connotations of these dialects.

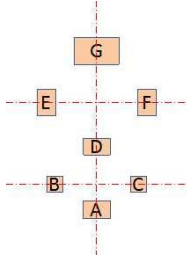
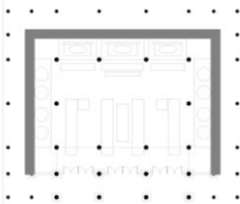
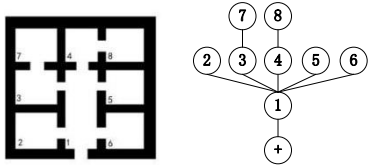
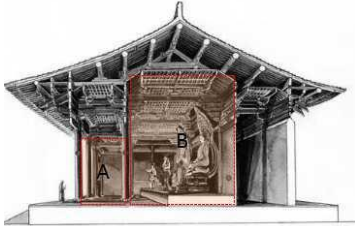
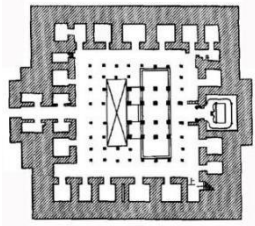
Chinese architectural style and Tibetan architectural style are two kinds of architectural language systems that have been developed and matured. They each have relatively fixed expression grammar, and the two architectural languages have completely different starting points in the design space (Table 1).

In the Chinese architectural language family, the overall layout is by means of monomer addition. Each building is an independent monomer, which is combined to form a group. The plane form of each monomer in the group is a rectangle, which is a horizontal extension of the planar nature of the space, and the changes in depth and height are slightly monotonous. The function has universality, which is similar to the general space of Smith. In the interior of the building, by means of plane configuration and people's psychological concept, the space is divided to achieve the purpose of space limitation. The spatial division is formed through the psychological suggestion, which is the spatial consciousness expression of Chinese culture's emphasis on "meaning".



In the Tibetan architectural language family, the overall layout is to create external space inside and internal space outside, with interwoven and overlapping Spaces. Individual buildings are designed in a way that the whole is designed first and then the parts are subtracted. Each unit space is like a cave dug out of an entity, and a series of caves constitute a whole building, what is closely related to the construction method and reflects the Tibetan people's spatial consciousness. The relationship between each spatial division has strict organizational characteristics, which is not limited to the plane, but also extends to the vertical dimension, with a strong sense of three-dimensional. Therefore, the concept of topological space is needed to understand the relationship between each unit space.

Table1: Comparison of Chinese and Tibetan architectural languages

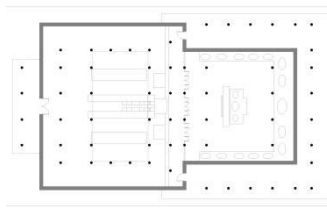
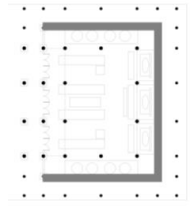
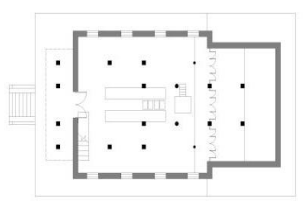
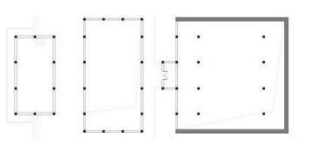
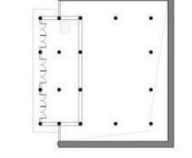
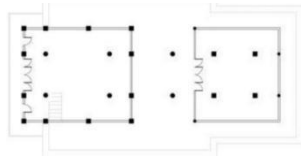
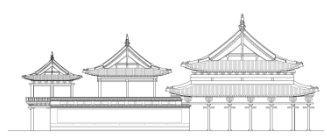
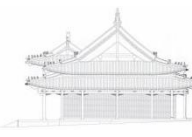
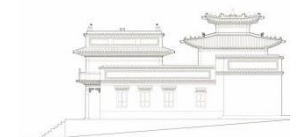
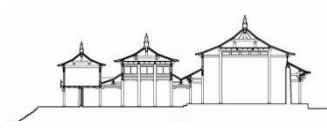
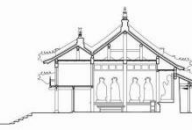
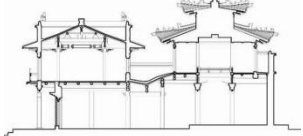
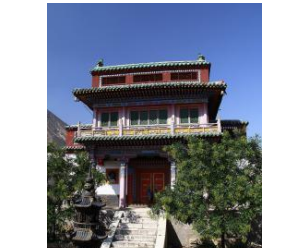
	Department of Chinese architecture	Tibetan architectural family
The overall layout		
	The monomers are added repeatedly to form a group	Monomers interweave, overlap and contain each other to form a whole
Individual buildings		
	Horizontal extension of the planar nature of the space, the space function has versatility	Space has a strong sense of three-dimensional, spatial organization needs to use topological concept analysis
Space division		
	Spatial division is realized through plane configuration and psychological implication	The spatial division is realized through concrete walls

Inner Mongolia Tibetan Buddhist temple is the product of the fusion, is the product of the "prototype" through a series of processing, in meet the building function and accurate expression under the premise of religious connotation, flexible use of architectural vocabulary of two languages, the Chinese type within the structure of language, by reorganizing the space division, in order to satisfy the demands of the function of religion, architecture form is very rich. Taking Wusutu called as the research object, and built in different period of the three main halls for parsing, by illustration, search for Chinese type building Germanic build way paradigm, Tibetan architecture space shape of prototype (that is, the spatial characteristics of the various functional units), combining the fusion of two kinds of vocabulary, clarify the deformation process of the prototype and combinations.

2. Research Object Summary

Wusutuzhao is located in the northwest corner of Hohhot, Inner Mongolia. The temple is built on the mountain, and the road leading to the temple is thick with shrubs and trees on both sides. In its heyday, it was composed of 7 adjoining temples, namely, Qingyuan temple as the center, Changshou temple in the east, Dongchafang in the west, Faxi temple in the northeast, Yaowang temple in the northwest, Luohan temple in the north and Facheng guangshou temple in the north (Figure 1). As time goes by, four of the temples have been damaged on different degrees. Only Qingyuan temple, Changshou temple and Faxi temple are well preserved. This paper takes the main hall of the three temples as the research object (Table 2).

Table 2: A list of survey objects

	Qiinyuan temple	Changshou temple	Faxi temple
The first floor flat			
the second floor flat			
building facade			
building section			
building photos			

3. Space language study of three halls

The architecture is understood and recognized by people through its appearance. The architectural form of Tibetan Buddhism temple is magnificent and it has strong religious charm. The relationship between architecture a simple relationship between the observer and the observed object, but the inner space that needs to be experienced with all the senses and the whole body and mind, which is the significance of religious architecture. In this paper, the research on the combination of the two architectural languages is based on the essence of architecture -- form and space.

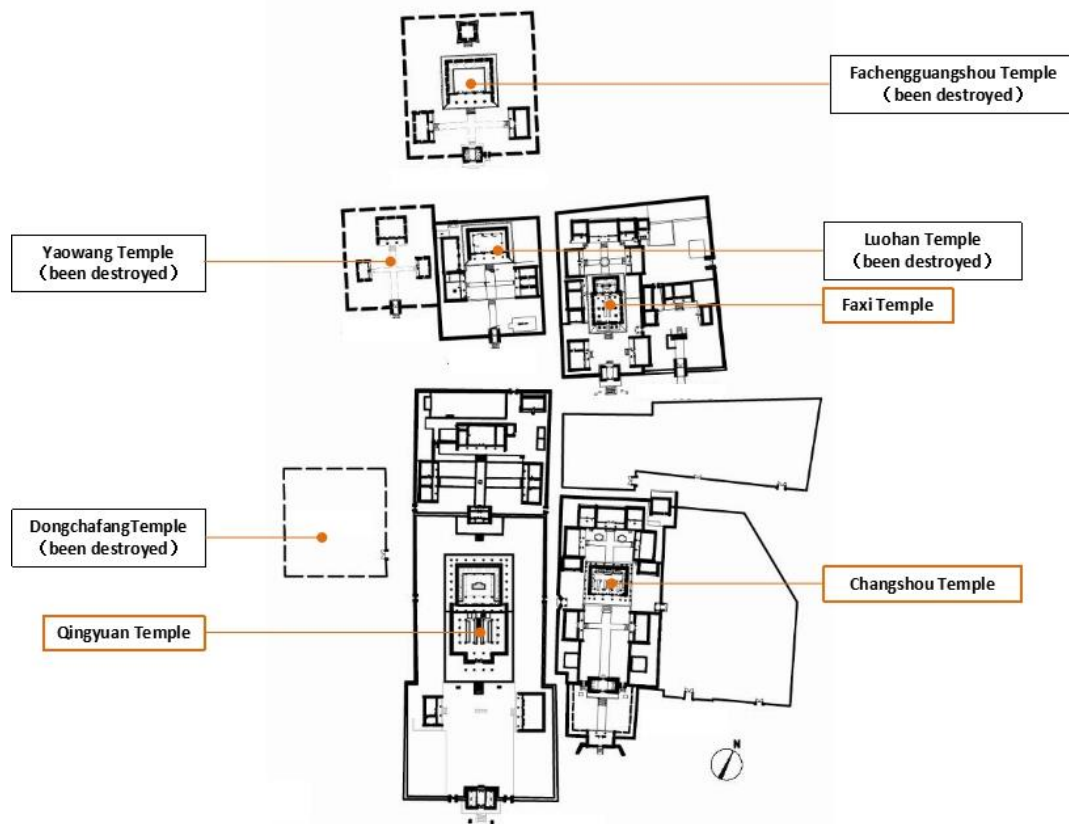


Figure 1: The total plan

3.1. The combination of architectural language

Qingyuan temple is composed of three monomer buildings. The front hall is a two-story pavilion building, and the Sutra hall and the Buddhist hall have colonnades. From the perspective of architectural vocabulary, only the Sutra hall adopts the Tibetan eave wall. Faxi temple is composed of two monomers, with a portico in the front hall and without portico in the back. In addition to Tibetan eaves wall, also in the first hall eaves column add wall, the roof hidden, imitation Tibetan flat roof. Changshou temple is also composed of two monomers, the front hall is a pavilion building, the back hall has a colonnade, the whole building did not use Tibetan architectural vocabulary.

3.2. The combination of spatial awareness

The construction process of Tibetan Buddhist temple building in Inner Mongolia is the game of spatial processing technology of two architectural languages of Chinese and Tibetan, which is the product of organic combination of spatial elements and structural elements, and expresses the integration of spatial consciousness of two architectural languages.

From building space form, the starting point of Chinese type construction of traditional architecture design is adapted to form function, first of all to build a structure, then carefully analyses the proportion relation, draw a satisfactory form, then turned to the internal space, the function should not be restricted by the facade design, structure should not be restricted by function.

In this way, Chinese architecture emphasizes the aesthetic consideration of the outer shell, while weakening the spatial treatment of the interior. This kind can give the space that USES any function, show negative function sex. From the perspective of spatial consciousness, the individual relations among the constituent groups are juxtaposed, and the relations among the three halls can be clearly expressed in the form of collection, that is: $Q=\{A,B,C\}$; $C=\{A,C\}$; $F=\{B,D\}$ (Table 4).

Table 3: The physical and spatial language of the building

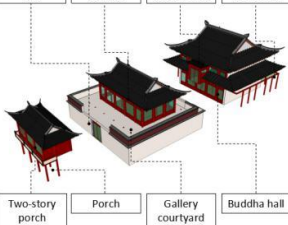
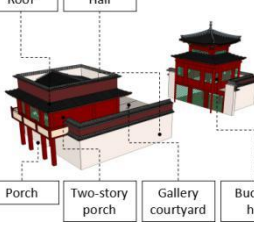
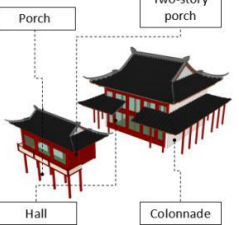
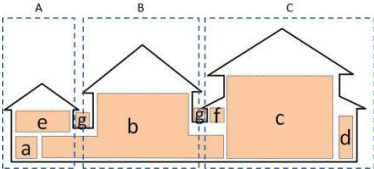
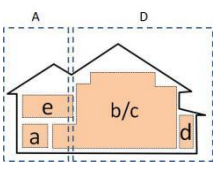
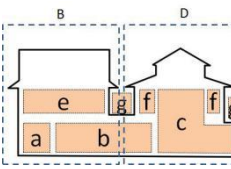
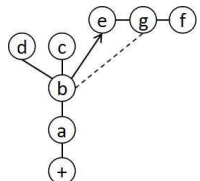
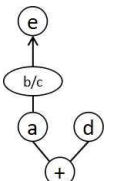
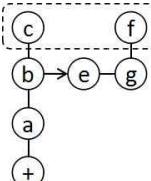
	Qiinyuan temple	Changshou temple	Faxi temple
the combination of architectural vocabulary			
monomer	3	2	2

Table 4: The physical and spatial language of the building

	Qiinyuan temple	Changshou temple	Faxi temple
structure			
	$Q=\{A,B,C\}$	$C=\{A,C\}$	$F=\{B,D\}$
Spatial organization			

The space and structure of Tibetan architecture are unified. The relationship between each unit space is not limited to the plane, but also has vertical latitude. The internal space shows a strong three-dimensional sense. The unit is no longer "entity", but "space". Outside the internal space is not the natural space, and the ancillary space radiated by the building, but the external space created. Moreover, there is continuity between the Spaces of various attributes, so the concept of topological space is needed to understand the relationship between each unit space. To be specific, it is to create external space inside, and create internal space outside. The Spaces interweave and overlap with each other, and the attributes of each space are not absolute, but changeable. This means that the concept of internal space and external space relative to each other disappeared, the internal and external space connected to each other as an organic whole, with topological spatial characteristics (Table 4).

4. Conclusion

In a word, since the Ming dynasty, all kinds of Mongolian call temples have formed their own national characteristics by constantly summarizing and absorbing Tibetan and Chinese architectural techniques. For example, the plane of the mixed type Dadugong (sutra hall) of Chinese and Tibet is arranged and combined according to the form of Zhacang of the Tibetan temple, which is because the Tibetan Buddhism in the Mongolian region follows the religious ritual rules and the system of studying sutra of the Gelug sect monastery in Tibet. However, the specific construction materials, techniques and decorative arts must be completed by local or Chinese craftsmen, so the unique palace form of the integration of Chinese and Tibetan came into being.

By graphic method, build form and space shape of the temple prototype refining, learned that the structure of the three main halls system belong to the Chinese type architectural languages, organized by retaining components separated space division and the corresponding functional requirements of Tibetan Buddhist monks practice, related to Tibetan architectural space shape, figure 2 in the porch of the gate, the dynamic process of the formation of oratory, Buddha hall as an example, the analysis

shows that the fusion of two kinds of languages. Based on this fusion principle, the two architectural languages have their own characteristics in the final architectural forms under different historical backgrounds (Figure 2).

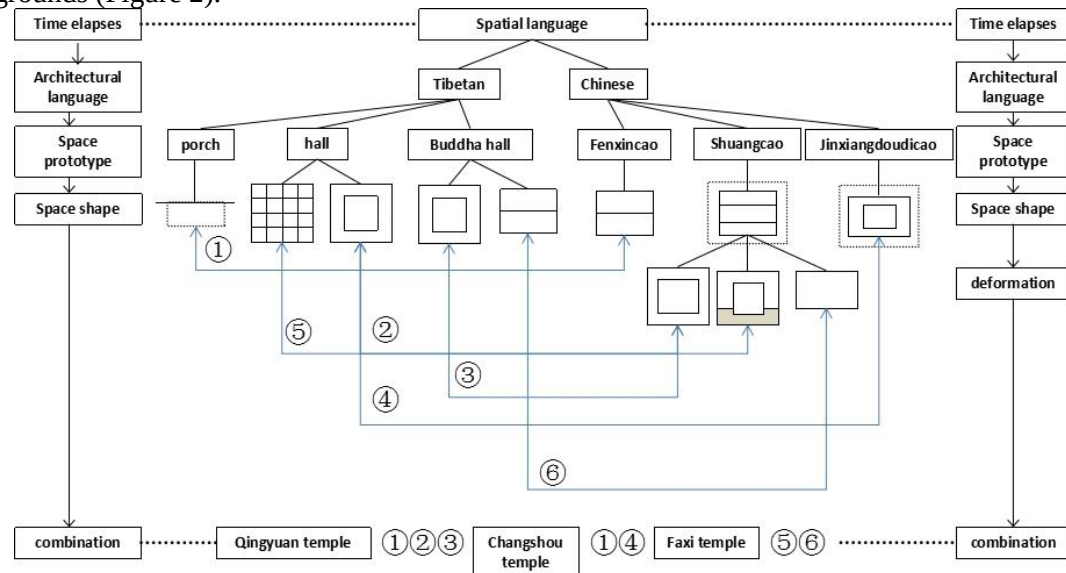


Figure 2: Analysis diagram of integration mode of architectural department

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