The New Directions of Typological Study in Han-Houses

Wei-Ju Wang

Assistant Professor, Department of Interior Design, Shu-De University
Kouhsung, Taiwan, vivi@mail.stu.edu.tw

Abstract: There are three fi elds in th e development o f typ ological stud y: first is th e d ebate on architectural theory for establishing design method. Its purpose is "creation"; the second is based on a viewpoint that types mean t he deep s tructure. T hey thought types as species and classified with system. I t in tent to seek the deep understanding, it's a "r esearch"; and f urthermore, New Urbanism that use types as the language of urban design, aim to "control" environment by analysis on type. Anyhow, at the viewpoint of types as the social entities, the deep understanding on types conduces to the debate on such social and cultural issue, therefore, this article will focus on "type control" on traditional environment.

In the view of types mean the deep structure; it reveals that a new direction will be established necessarily on t ypological s tudies, e specially i n Han -Housings res earches: t ypes have t o be classified, by their dee p struct ure. T hey can be differentiated, bu t can no t to b e sep arated absolutely and simply at the same time. Inevitably, typology will move toward complexity.

Key words: typological study, understanding, classify, descriptive language, evolution

1. The Development of Typology

In architectural typology: time, geography, race, ethnics, function, and structure are considered major categories whereas formation is am ong the m inor categories. Ho wever, fun ction and stru cture fail to give an in -depth picture of the essence of the category. J.N.L Durand embarked on the categorization with geometry, hoping to get beyond simple descriptive categorizations and to analyze the significant features. Geometry proved to be an effective approach to formal study. In the 19th century, De Quincy laid the foundation of typology and claimed that topology is the transcendental nature where as arc hitecture is the embodied. He debated on the origin of architecture and asserted that form came from form; architecture is a con ventional conception with which the common opinions for the society are expressed. Therefore, history is composed of series of derivation.

In general, typology, t hroughout i ts de velopment, can be cat egorized into t hree fields. The first a rea is t he models of architectural theories, derived from J. N. L. Durand's geometrical analysis and modern scholars' (e.g. Aldo Rossi) design methodology. These models serve for the "creativity" targeting architecture and city. The second area of typology is the retrospection by John Habraken and Guido Francescato in the 19th century on De Quincy's statement that typology is a set of essential internal structure. According to the retrospection, types are considered species of spatial forms and the environment is co mprehended systematically, with the purpose of "conducting comprehensive research" on the target species. Finally, the typological language adopted in New

Urbanism and architectural management for the use of urban design serves to "restrict."

2. Typology of Houses

Traditionally, h ouses are not th e th eme o f arch itectural research. Th e h istory an d t heories of arch itectural research ha d been lac king system atic reside ntial m ethodology until the s econd hal f of the 20th ce ntury w hen typology revived in Europe. The residential research is partially based on the collection of fundamental data and anthropological argum ent. Th e pi oneers of Chinese residential resear ch are D un-chen Li u an d Zi -ping Li u, whose research is mainly on commonly descriptive categories like time, geography, ethnics, and geometry. The research has provided substantial data, although efficient system is still needed.

Therefore, a new typological method on Han-Houses is required. Typological research seeks to read the structure more d eeply i n ad dition to comparison and description. On ly with t he kn owledge can we distinguish t he categories a nd t he rel ationships am ong t ypes, which a re referred t o as the esse nce o f ev olution am ong t ypes shown by relationship.

3. New Directions of Typological Study

3.1 Derivation of Types

Derivation of types includes the range of types. Typology is not a fixed form. Instead, the system of typological description is capable of spontaneous derivation, whose examples may be found but not have the opportunity to be presented. Take the m odel of Han-Houses as a si mple ex ample. In the typo logical d escription system, th e prototype is the model of "one bright and two dark" facets and the rules of growth and termination are included. There are indeed real cases t hat are derivative of the growth ru les. A massive group of residential housing was found in Gushan Tow n, Yong-chen, Fu -jian Pro vince, without finishing of sp atial form b ut with co mplete finishing of the exterior appearance, which shows great extent of social consensus.

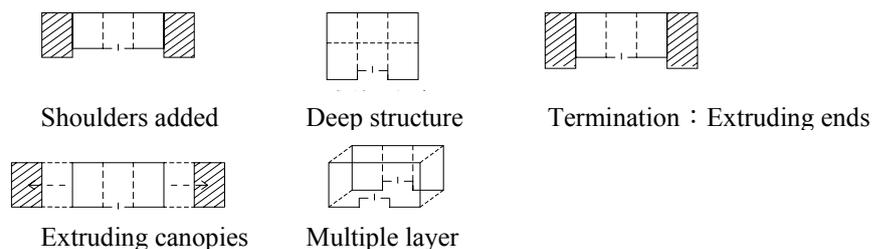| Shoulders added | Deep structure | Termination：Extruding ends |

| Extruding canopies | Multiple layer |

Figure.1 Rules of growth and termination of the model of Han-Houses

3.2 Evolution of Types

Three linguistic-like issues emerge when architectural typology and lin guistics are co mbined: origin, evolution, and use. Evolution becomes an i nevitable process of residence as a l iving being. The discussion of the origin is beneficial to the understanding of the evolution and type differentiation. With the identification of the prototypes, we can understand the internal momentum of an d historical change at di fferent times in the situation where the types al ter by i tself or hy brid wi th o ne a nother. Fr om the t ypological pers pective, t he rel ationship bet ween residence and ethnics is simply corresponding. Compared to the villages of foreigners, the architecture of tho se of locals is not transplanted completely. As for the discussion of origin, the San-ho-yuan[1] (Fig 2.) of Taiwan and

south-east area in China shares the same concept of wings. The wings with more than ten rooms in southern Taiwan that never appeared in China but are pre dictable derivative forms according to the rules of derivation. The house types in the original villages have been mixed with the San-ho-yuan due to the immigration to Taiwan, immigration scale, or construction-related factors and thus appear in various forms in Taiwan now. The hybrid structure can be found in massive buildings like Rong-de-tang in Yuan-lin of Taiwan (Fig 3.).
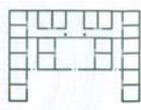

Figure 2. The san-ho-yuan in south-east of China

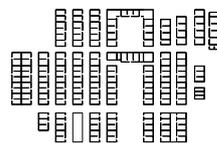by (NCKU) laboratory of professor M.H. Wang

Figure 3. Rong-de-tang in Yuang-lin, Taiwan

by (NCKU) laboratory of professor M.H. Wang

Note1: San-ho-yuan: a traditional Taiwanese architecture where the central building is attached with two wings perpendicularly to either side

As for the observation of semi-autonomic evolution of form, the relationship between form and construction is identified. Take the type-(wei-long-wu) of Hakkha as an example (Fig 4.). The half-moon pond in the front and the half-circle room behind the main building form the concept of "surround," meaning the core building encircled by the other buildings. The concept can also be found in Taiwan.

The residence in middle of Taiwan, with the same ancestral origin, tries hard to imitate the form of wei-long-wu in the original villages, but obviously the techniques did not move along with the form. Although the residence has been greatly influenced, wei-long-wu was presented as the circular boundary behind in middle of Taiwan. The concept of "surround" can be seen as a formal concept which exists in response to social need. This concept of spatial form has been constantly interpreted with entity. Obviously, formal concepts can still be detached from constructed buildings and be represented even after the disappearance of construction technology. Furthermore, the same example of wei-long-wu can be applied to illustrate the relationship between form and use.
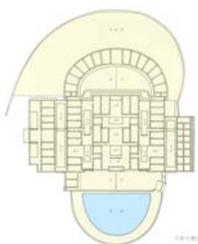

Figure.4 wei-long-wu, China

Figur e.5 wei-long-wu, Taiwan

Figure.6 wei-long-wu, Taiwan

4. Descriptive Language of Type

According to the theories of typological research, the first step to construct knowledge is to describe the target under research. As a social entity, typology includes the geography, living, spatial form, entity form, and decorative language. The new direction of typological study at Han-Houses must carry multiple meanings at different levels, emphasize space allocation, and procedurally and comprehensively describe the changing patterns and relevance between types over time.For this reason, there are five layers of the coding of Han-houses: 1. Base Schema-- space allocation that determines the belief, tradition and liberation of their dwellers, as concept- "surround" that mention above. 2. Operational Schema—practical operations regarding space allocation. 3. Form Tactics-- structure and techniques. 4. Building Tactics"-- structure and techniques. 5. Surface Program—

imagery. These five layers could be relevant or irrelevant to each other at different levels.

Therefore Bas e Sc hema decides the c oding of s pace allo cation co nceptually, an d Operational Sch ema accomplishes it. As a m atter of fact, most of the form ative differences of the sam e type of houses were due t o different conditions at the time they were built. The Operational Schema, second to the concepts of Base Schema, might have to be adjusted or modified according to the conditions then.
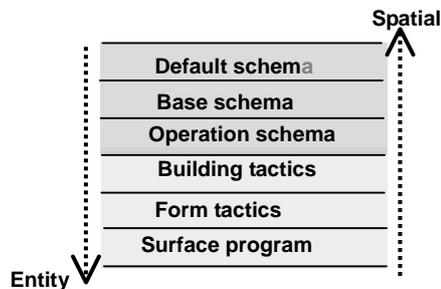

Figure.7 Structure of Han-Houses Type

With dynamic and multiple-layered descriptions, the new typological study is able to record the procedures of the development of Base Schema and Operational Schema. And since the Operational Schema always had been adjusted according to practical conditions during construction, dynamic and multiple-layer descriptions are to replace the shape grammar that is apt to describe forms and techniques.Unlike the research on architectural forms, this study emphasizes the planning and building concepts and goals of Han-Houses. The typological coding is not suggesting deconstruct or reconstruct every element of each study object. In fact, descriptions of building concepts are to present the diversity of forms; consequently they can't be used as absolute and reversible productive language.

Though this study follows a part of the absolute categories condition that pioneer research has set up, there are still many contradicts and disagreements between them. The goals of this study attempts to propose a more flexible category system in order to fully present the complex reality of types.

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