

TPOLOGY METHODOLOGY

Theoretical Thinking of POPS Typology

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I Introduction

Among so many theoretic methods in design process, typology is always seen as a specific and quick approach. In twentieth-century, the discussion of typology in architectural realm was ranked at the first echelon, especially during 1960s and 1970s. In postmodern architectural discourse, this kind of method was taken as dominated design principle. However, the discussion and thinking of typology tended to focus on the outer appearance of architecture, resulting the misunderstanding that "typology is a matter of classifying forms and functions as simply and unequivocally as possible"¹. This superficial understanding was mainly related with both historiographically problematic and conceptually imprecise aspect. First, it couldn't be overlooked the relevance of history and architectural practice. Modernisation prevailed in the city, asking for integration of "the abstract, formal architecture of modernism into the context and structures of the historically grown cityscapes of Rome or Paris"². To slow down this procedure, postmodern architects sought for medium that could response to modernisation while still concern historic antiquity. However, narrow understanding of typology limited formal invention and created a peculiar "collage phenomenon" of postmodernism. It is clear that deeper analysis and a renewed consideration of architectural typology should proposed to correct the previous imprecise concept of typology.

To reposition the typological approach in architectural formation, it is necessary to distinguish the term "type" and "typology" conceptually. According to the lecture by Robert A. Gorny, "type" is a category of things based on defining characteristic formal or structural traits, while "typology" is attempting to frame a systematic approach to types. When define "type" itself as the internal structure of architecture which contains³ infinite possibility of formal variation and further structural modification, it meanwhile reveals that a specific typological solution could be the crucial clue between an historical process and an architect's individual design. It should be pointed out is that types are extracted from past time, and remain stable despite adjustment and arrangement because of historic context, and have a close relationship with diagram-the

¹ Werner Oechslin, Premises for the Resumption of the Discussion of Typology

² Robert Alexander Gorny, Lecture in TU Delft, Oct 8, 2019

³ Carlo Giulio Argan, 'Sul concetto di tipologia architettonica', in, Karl Oettinger, Mohammed Rassem, eds, *Festschrift für Hans Sedlmayr* (Munich, Beck, 1962), pp. 96–101; English translation, 'On the Typology of Architecture' by Joseph Rykwert in *Architectural Design*, 33 (1963), pp. 564–565; 565.

only intermediary between conceptual thinking and material representation. Based on separation of type and typology, we should focus on the changeable thinking in postmodernism from type to typology-employing formation, consolidation instead of diagrammatic thinking under historical arrangements. Thus, for typological approach, “how” the elements changed in history is much more significant than “what” consists of the form in current time.

Since my graduation topic will focus on the POPS¹ in New York, it will be quite useful to use typology method during research. Since POPS is a unique spatial type between public realm and private realm, developing and experiencing for several periods within a short history, it is necessary to explore the specific variation and deeper socio-historic background behind. Thus, the topic of this thesis will be how theoretical thinking and practical investigation of typology approach provide developmental potentiality for POPS?

II Research-Methodological Discussion

To explore the characteristics of POPS, typological approach can be the most powerful method not only to classify elements in different stages but also to discover and compare historiographic transformations. Since POPS was born under specific condition-the conflict between rapid capitalism and public demands. To mitigate the tension of the resource competition, this new type of space was introduced in highly dense city. Privately owned public space, is actually a products of city zoning regulation in New York, which offer opening public spaces and greenery in a dense city. From 1961 the zoning regulation was carried out, private developers will lease a part of ground floor space in exchange for bonus floor area or waivers. As time went on, the policy changed for several times to improve the quality of POPS, and to guarantee these spaces are used well rather than merely a waste of land. Therefore, heterogeneous elements are implemented into POPS in different stages under political requirements. Besides, due to improvement on social value system, more attention are paid on how to integrate public spaces to existing city contexts. Changed policies and social environment account for different categories of current existing POPS with specific characteristics, which also need combine both literature search and grammatic analysis to distinguish how POPS developed during past few decades.

On the other hand, when the discussion refers to “space”, it couldn’t be neglect that “who” will be connected to the space. For POPS, two major groups are involved in this term, one is the public, who operate the spaces while the private developers are another group who owned the spaces. The relationship between these two groups experienced alternation as well. Except for concrete architectural components which can be easily observed by eyes, abstract connection with human even society is also one dispensable part of researching typology.

Compared to other methodological approaches, typology is a much more concrete tool to support research and design work, and its functions always change as working contents alter.

¹ POPS: Privately owned public spaces

First of all, after collecting adequate materials, typology as a heuristic technique orientates the analytic direction. To summarize homogeneity emerging consistently in the space structure and compare heterogeneity varied in each stage by diagrams, tables, data sheets and so on which are frequently used as techniques in typological approach, can interpret abstract formation process into intelligible knowledge. This step actually consolidates the research work and lay the foundation for design work afterwards. Rather than merely collection and category, it's more important to discover deeper reasons and potential possibilities behind external phenomenon, and here typological method wields its power helping to find developmental clues under eventual representations.

From the discussion that how typological approach plays a role from the initial research stage to the final representation stage, it can be confirmed that this methodology does help to frame efficient workflow and promote creation on basis of existing structures, especially for those derived from the same type.

III Research-Methodological Reflection

When talking about “design”, there always comes with a question: how design can be worked out? Theoretically, if we focus on “design” itself, it's actually a product by creative organization.¹ The design process is more like an “assembly process” in which “designers address a variety of formal themes” including order and contrast, size and proportion, rhythm and interspace, etc, to create new architectural objects. Though the design process may be subjective and inimitable, there will remain a scientific clue to analyse systematically since designer inevitably utilize sources of knowledge and information. The formal themes and applied sources provide possibility to identify specific types of design. And design typologies can organize these elements systematically while also provide the guiding light of understanding of specific design.

Back to architectural design, compared to other design fields, scientific design methodology is clearly much more crucial to be identified and needed to guide the organisation process. The essential basis of compatibility of elements in design can be more clearly identified if the approach to the project is thought as a type of practice, the physical arrangement is considered as a spatial type and the functional specification as a type of use.² P.F. Smith: “The most successful buildings are those which clearly express their elements but which, at the same time, come across as wholes which are much greater than the sum of their parts. This is the primary aesthetic “dialectic” in architecture. Aesthetic success demands that orderliness wins, but not too easily. There has to be sufficient complexity to make the perception of unity a worth-while mental achievement”.³ Apparently, typology can erect connection bridge among individual elements and integrate them in one united system.

¹ Ways To Study and Research, *Design Research and Typology*, chap. 11

² Martin Symes, “Typological Thinking in Architectural Practice,” in *Ordering Space: Types in Architecture and Design*, ed. Karen A. Frank, Lynda H. Schneekloth (New York : Van Nostrand Reinhold, 1994), 167

³ Ways To Study and Research, *Design Research and Typology*, chap. 11

Typology is a systematic method used to help researcher in every field to identify and clarify the phenomenon, generally it involves abstraction, reduction and schematization. Typology word is definitely related to the type concept and the meanings. Here more explicit classification need to be illustrated, especially for architecture realm: There are two different ways to consider the relationship between typology and architecture. The first one is a superficial clue directly with design: typology as a form of knowledge that can be applied directly to the design work. Another one is a bit abstract and uncatchable: typology as a encountered zone between inhabitants and architects.¹ From wider perspective, “types is a corpus of shared knowledge and conventions that structure knowledge, action, and material culture”.² Typology system works as chains of information transferring the image, the representation and the product between inhabitants and architects.

Though derived from ancient time with lots of criticism and suspicion, architectural typology as a main design methodology is still used in contemporary architecture. However, with rapid alterations in modern society, traditional typological approach is no longer fit in the changeable architectural environment. Rem Koolhaas criticized that typology is only valid when it is interpreted in its most primitive terms not in a specific term. That reminds us to consider the modifications of classical typology. And for Julia W. Robinson, there are three possible ways to consider type³: first, adjustments for particular environment. When applying the existing building type or prototype to specific circumstances of a given architectural problem, some adjustments ought to be conducted to these circumstances. Secondly, cooperation with time. The building types always change with evolution of society and developed architectural theories as time goes, while their nature remains a constant question. Thirdly, creation of a new type. Sometimes there exists no applicable type, then the question will arise that how to create a new type in the context of the existing types and how these existing types can be used to help design.

Therefore, it is urgent to redefine and reinterpret the subject of typology, which leads designers to cope with arrangements appropriately in constantly shifting environments. For contemporary architecture, typology is valuable “in a process that begins with a type in a flexible context that can be proliferated in multiple locations regardless of its typical relationship with forms” rather than “confined to a fixed type or a specific structure associated with a program”.⁴ These are challenges as well as opportunities for reframing typological methodology.

¹ Sonay Ayyıldız, “Importance of Typological Analysis in Architecture for Cultural Continuity: An Example from Kocaeli (Turkey)” Kocaeli University, 2017

² Roderick J. Lawrence, “Types as Architectural Tool: Reinterpretation and Application,” in *Ordering Space: Types in Architecture and Design*, ed. Karen A. Frank, Lynda H. Schneekloth (New York : Van Nostrand Reinhold, 1994), 274

³ Julia W. Robinson, “The Question of Type,” in *Ordering Space: Types in Architecture and Design*, ed. Karen A. Frank, Lynda H. Schneekloth (New York : Van Nostrand Reinhold, 1994), 179

⁴ Jonghoon Im & Jiae Han, “Typological Design Strategy of FOA’s Architecture.” *Journal of Asian Architecture and Building Engineering*, 14:2(2015), 443-449

Typology as a fundamental principle of architecture	Typology as a manual for making architecture	Typology as a production tool for a new norm
Quatremère de Quincy	J. N. L. Durand	Walter Gropius
Typology as a principle of creation and rule for "model" Type as fundamental principle inherent to forms	Typology as a manual for creation based on a classification system Type as architectural elements	Typology as an obstacle to creating new architecture Type as a standard can be mass-produced
- Three essential types: hut, tent and cave - Model as a complete icon, Type as model's metaphorical imitation	- Represented a series of types for composition - Systematic combination of elements	- Argued the importance of prototype - Absence of the traditional and historical aspect
Aldo Rossi	Leon and Rob Krier	Le Courbusier
Typology as a logical principle prior to form Type as "the very idea of architecture"	Typology as a tool for reproducing the traditional composition of a city Type as geometrical pattern group	Typology should evolve towards the establishment of a new standard type Type as an object can be acquired in the production itself
- Types are elements that cannot be reduced - Asserted the importance of dialectical application	- Emphasized history and tradition - Repetition and adaptation of types to different local conditions	- Functionally appropriate form - Type (model) can be applied to multiple conditions

Table 1. Historical Transformation of Type and Typology Concepts¹

IV Positioning

Despite there are many arguments against typological procedures in architecture claim that they are a vestige of an age of craft, my views insist that it is untenable without considerable typologies. I believe typology have positive aspects of architecture in discovering the disciplinary organization and creating forms. This approach has its meanings in design fields as long as we can modify and reframe the concept to fit with contemporary architecture.

Considering the complexities and proliferation in contemporary society, it is necessary to review the value of individuality, specificity, language and peculiarity in architectural practice. We should develop this methodology beyond traditional typology, which stayed at a superficial layer-repetition, reproduction, and modification of precedents, towards core principles which can be established through transformation into abstract forms and structures and through evolution and proliferation as architectural applications. To secure internal consistency in design process, modifications to typology can be used as an efficient means to pave road for future project as well as accumulate knowledge of the practice, while another way is to clarify a series of different spatial compositions.

Typological features of POPS can be represented by using the typological analysis method. With this approach, differences created under specific conditions including policies and urban environment will have been stated and will contributed to the POPS' identity value and spatial developmental potentiality will have been provided. However, as stated before, instead of "repetition and reproduction" of the types, "evolution and proliferation" should be the core of typology. In this term, types should be transformed into an abstract prototype to shape various kinds of information into a form rather than control the complexity of contemporary architecture.

Thus, based on typological research, how can POPS be improved by typological design?

¹ Jonghoon Im & Jiae Han, "Typological Design Strategy of FOA's Architecture." Journal of Asian Architecture and Building Engineering, 14:2(2015), 443-449

There can be three typological strategies to guide the practical research and design of POPS. The first one is to treat typology as a tool for maintaining consistency in projects. The potential design logic derived from original POPS can be discovered as the core principle, that is, opening ground spaces for the public, which can then be applied to multiple locations through the process of evolution and proliferation. No matter where POPS is and what the shape of POPS is, the space should be designed as an opening place to the public. Secondly, use "prototype" as a principle for controlling various conditions or multiple variables instead of the traditional term "type" which is a fixed constant. A prototype is a rule of function that integrates information and concepts into one type in contemporary society and functions as an intermediate phase between information and form. In POPS project, "opening space connecting the private and the public" can be viewed as the prototype. Nevertheless numerous conditions need to be faced, always build bonding spaces between two groups using the prototype enables projects to be interconnected. The last strategy is to erect phylogenetic tree based on the concept of species as an effective alternative to traditional typology during research. When define POPS as a "species" with alternative characteristic according to a specific formula, it is clearly to see how POPS adjust itself to specific conditions. No matter what the final form is, it always derives from that phylogenesis tree and grows up through the specific formula as typology inevitably has the characteristics of division and classification by types.

In conclusion, architectural paradigms have changed continually throughout history, together with this process is the constant improvement of methodology approach. However, despite need more attempts to be complemented, it couldn't erase the contribution that typology made in architectural practice and the immense potentialities it has. To develop this kind of methodology, we should move the concept of typology away from the fixed precedents with traditional understanding and propose modifying it into an abstract structure of form, or a diagram that emphasizes the aspect of typology as a principle.

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