

A Study on Reference to Traditional Chinese Cities through Contemporary Chinese Architects' Design Theories

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1. Introduction

1.1 Background and Aim

The development of cities in China has been through thousands of years with the earliest recorded urban planning theories from 770 B.C. Nowadays, traditional Chinese cities are known for their precious cultural heritage with showing the unique cityscapes. Since the reform and opening-up in 1978, research on traditional Chinese cities has gained more attention which encouraged an increasing number of architects to apply various aspects of traditional Chinese cities to their works.

This study extracted contemporary Chinese architects' design descriptions referring to traditional Chinese cities from the articles in architectural magazines¹⁾ as materials to analyze architects' recognition and the reinterpretation of traditional Chinese cities.

This research aims to clarify architects' thoughts on the connection between architectural tradition and contemporary design practice in China with traditional Chinese cities as example.²⁾

1.2 Research Methodology

Selected texts are analyzed based on four parts. First part is Architects' Recognition, which is about architects' understanding of traditional Chinese cities. Second part is Reference Object, where traditional Chinese cities are divided into Whole and Partial. Third part is Focus Point, which refers to the characteristics of Reference Object that architects pay attention to. Last part is Design Approach, which shows the way architects apply the Focus Point to their works. As the example in Fig.1 shows, architects focus on the composition pattern of the old city of northern China, which is considered as an expression of regional identity. When applying this Focus Point, the architects directly immitate the pattern of old cities to the plan of exhibition hall design.

2. Architects' Recognition of Traditional Chinese Cities

Based on the KJ Method, the contents of Architects' Recognition of traditional Chinese cities are analyzed and illustrated in Fig.2. The mapping shows the relationships between different cases and divides

them into 2 groups: **Environment** and **Culture**. **Environment** contains Built Environment and Social Environment. Built Environment is about built space, Social Environment is about social life and production. **Culture** contains Regional Identity and Historical Carrier. Regional Identity is about characteristics that define and distinguish a specific geographic area, Historical Carrier means the media preserving and transmitting historical and cultural significance. In **Environment**, Architects' Recognition tends toward Built Environment. And in **Culture**, Architects' Recognition tends toward Regional Identity.

3. Reference of Traditional Chinese Cities

3.1 Classification of Reference Objects

As shown in Fig.3, the Reference Object belong to specific cities with Beijing and Suzhou being mentioned most frequently, or non-specific cities. Reference Object is categorized into 2 major categories: **Whole** and **Partial**. **Whole** refers to **City Itself**, while **Partial** contains city elements such as **Traffic Element**, **Defensive Facility**, and **City Block**. **City Block** contains Neighborhood, Commercial Area, Government Area, and Religious Area. According to the frequency of each category, **City Itself** (47), **Traffic Element** (45), **Defensive Facility** (38), and **City Block** (42) are relatively balanced.

3.2 Focus Point of Reference Objects

As shown in the upper part of Fig.4, Focus Point is divided into 5: **Form**, **Composition**, **Layout**, **Scale**, **Material & Color**. Among them, the largest ones are **Form** and **Composition**. Furthermore, 29 combinations of Reference Object and Focus Point are shown in Fig.4. Among them, 7 typical combinations with the largest number of each category are found: <W×Co>, <P1×La>, <P2×Fo>, <P3×Sc>, <P4×Fo>, <P5×Fo>, <P6×Fo>. Overall, considering Reference Object, **City Itself**, **Defensive Facility**, and **Traffic Element**, which possess distinctive and unique characteristics, show a clear tendency in their Focus Points. In contrast, **City Block**, with its varied nature and functions, has a more diverse range of Focus Points.


No.	Volume	Title of Work	Location	Function	Architect
33-1	2000-01	Shanghai Urban Planning Exhibition Center	Shanghai	Exhibition center	ECADI
					

Fig.1 Example of Analysis

4. Design Approach of Reference

As shown in the upper part of Fig.5, Design Approach is divided into 3: **Imitation**, **Modification**, and **Transformation**. **Imitation** means to directly apply Focus Point to a design. **Modification** means to make some adjustments to Focus Point, while the essential parts are retained. **Transformation** means to change Focus Point completely. Among them, **Modification** is the largest one, approaching 50% of all cases. The second largest one is **Imitation**, making up around 36%. This reflects that when architects refer to traditional Chinese cities, they tend to make adjustments based on references while considering the actual circumstances.

5. Comprehensive Analysis of Reference Object and Design Approach

In this chapter, the relationship among Architects' Recognition in Chapter 2, Reference Object and Focus Point in Chapter 3, Design Approach in Chapter 4 is analyzed to figure out architects' thoughts on the connection between architectural tradition and contemporary design practice. Fig.5 illustrates Design Approach on the horizontal axis and 4 combinations of Reference Object and Focus Point on the vertical axis, while Architects' Recognition is marked inside. The grey areas exemplify 6 representative types to show the tendency.

5.1 Main Tendency of Representation

Among Design Approach, **Modification** is more balanced across all combinations of Reference Object and Focus Point, while **Imitation** and **Transformation** are more prominent in some particular combinations. Comparing the proportion of Design Approach within each combination of Reference Object and Focus Point, when referring to **City Itself** and **Defensive Facility**, architects actively use a variety of approaches. The reason could be that **City Itself** refers to the whole city, while **Defensive Facility** is a kind of typical symbolic objects that can represent traditional Chinese cities. Meanwhile, **Traffic Element** and **City Block** have a clear tendency towards **Imitation** and **Modification**, while almost none towards **Transformation**. The reason could be that the characteristics of traditional Chinese cities' roads and blocks are still highly applicable in contemporary times, and architects are most often able to apply them directly or with some minor modifications to their designs.

5.2 Relationship between Reference Object and Architects' Recognition

Regarding the relationship between Reference Object and Architects' Recognition, since **City Itself** holds the image of the whole city, and **Traffic Element** is also closely related to the overall traditional Chinese cities' image as a whole, architects seem to value their built and social environments. For **Defensive Facility**, which has special historical and traditional

functionality, architects seem to believe that these elements can convey cultural meaning in contemporary times. By comparison, since **City Block** are tied to varied urban life functions, architects seem to believe that these elements hold both valuable environmental aspects and culture connotations.

5.3 Further Analysis on Representation Types

The detailed tendency of each combination of Reference Object and Focus point are analyzed.

When architects refer to **City Itself**, they tend to pay attention to **Composition** (31/47). Within this combination ($W \times Co$), the predominant Design Approach is **Modification** (19/31), where Architects' Recognition tends to be related with **Environment** (11/19). The reason could be that traditional Chinese cities have their own well-developed and unique urban planning systems, with unique plan compositions as a result. When architects apply them to their designs, it seems that they tend to modify them to better suit contemporary situations.

When architects refer to **Defensive Facility**, they tend to pay attention to **Form** (23/38). Within this combination ($P2 \times Fo$), Design Approach shows a balance of **Imitation** (7/23), **Modification** (8/23), **Transformation** (8/23), and Architects' Recognition tends to be related with **Culture** (15/23). The reason could be that the defensive facilities, such as city walls and city gates, carry unique and distinctive stylistic features and have been preserved as historical or cultural heritage till this day. When architects apply them to their designs, they tend to use a variety of design approaches.

When architects refer to **Traffic Element**, they tend to pay attention to **Layout** (23/45). Within this combination ($P1 \times La$), architects tend to use **Imitation** (16/22), where Architects' Recognition tends to be related with **Environment** (9/16). The reason could be that the most distinctive characteristic of traffic elements in traditional Chinese cities is the organized layout of roads, which remains highly relevant in contemporary design, allowing architects to apply it in their works directly.

When architects refer to **City Block**, they tend to pay attention to **Form** (14/42). Within this combination ($P3 \times Fo$), architects tend to use **Imitation** (6/14) and **Modification** (6/14) to apply Focus Point to their works, where Architects' Recognition tends to be related with **Culture** (8/12). The reason is thought to be that blocks in traditional Chinese cities with a variety of functions have their own unique stylistic features, which makes architects tend to focus on their forms and use imitation and modifications when referring to them. Since traditional city blocks often have more distinctive regional identities and historical sites, architects seem to believe that they have corresponding regional characteristics and rich cultural and historical connotations.

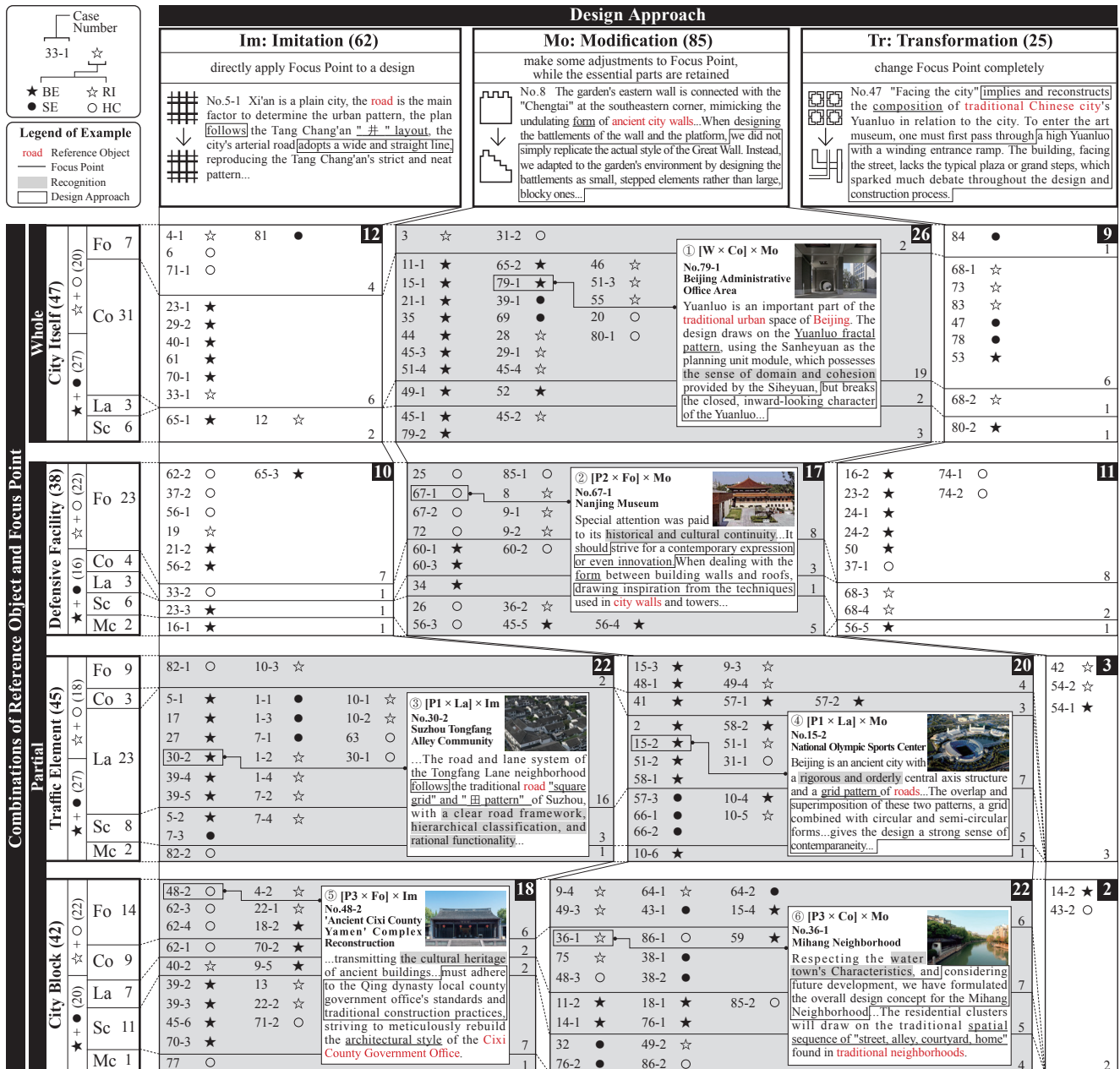


Fig.5 Relationship between Architects' Recognition, Reference Object, Focus Point & Design Approach

6. Conclusion

This study takes traditional Chinese cities as a research object to analyze how Chinese contemporary architects refer to traditional architecture and represent their qualities in design works. Chapters 2, 3, and 4 classify and analyze Architects' Recognition, Reference Object and Focus Point, and Design Approach. Chapter 5 makes a comprehensive analysis to clarify the relationships and tendencies between architects' understanding of traditional Chinese cities and what they pay attention to within each category of Reference Object and Design Approach to figure out the reasons for such tendencies. Overall, in terms of Architects' Recognition, Reference Object and Focus Point, it is evident that architects' understanding of traditional Chinese cities is very rich and wide-ranging. However,

in terms of Design Approach, the proportion of Transformation is very small, indicating that architects lack consideration of how to apply Focus Point to their design works. It reflects that while architects deeply understand traditional Chinese cities, they still need to more actively apply them into contemporary designs.

Notes:

- 1) The magazine of *Architectural Journal* (建筑学报), which is one of the most important journals to represent architects' works in the field of Architecture in China, is selected as the source of research materials. It publishes projects and design descriptions.
- 2) Articles are selected from the period of 1978 (when China started the reform and opening-up policy) to 2023. Totally 86 projects and 172 cases are selected.

Year	1978-1990	1991-2000	2001-2010	2011-2020	2021-2023	Num. of Cases in a Projects	1	2	3	4	5	6
Num. of Projects	15	20	21	23	7		37	31	6	7	3	2

Tab.1 Research Materials and Numbers

Reference:

1. HE Yeju: *History of Urban Planning in Ancient China*, China Architecture & Building Press, 2003.
2. PAN Guxi: *History of Chinese Architecture*, China Architecture & Building Press, 2008.
3. WU Qingzhou: *The Construction of Ancient Chinese Cities and Biomimetic Imagery*, China Architecture & Building Press, 2013.