

From the Traditional Courtyard Houses to Large-Scale Residential Buildings in Beijing - How  
Modern Development Impacted a Unique Architectural Heritage and Mode of Living  
A Design Research - Creation Perspective

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## **Abstract**

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Beijing, a city steeped in history and architectural grandeur, has undergone significant changes due to modernization and globalization. The traditional housing — Siheyuan [courtyard houses], symbolic of its cultural heritage, have witnessed extensive deterioration, gradually changed to Soviet-style residences and later evolved into modern high-rise dwellings.

This thesis aims to conduct a comprehensive analysis of Beijing's housing transformation over the last century and clarify the underlying reasons for this change. Also, this research goes beyond the visual dimension of housing to explore the cultural identity that is intrinsically linked to housing in Beijing. To achieve these objectives, a hermeneutic approach is employed. The research encompasses a literature review, typology study, and interviews. Additionally, a creation proposal is developed to enhance the understanding of the impact of modern development on Beijing. The creation takes the form of a visually compelling photo montage, aiming to raise awareness among designers and architects about the need to preserve Beijing's unique cultural heritage embedded within its traditional housing.

In conclusion, this study puts forth a series of recommendations and design guidelines that provide valuable tools for future development in Beijing. These proposals emphasize the preservation of cultural heritage within the residential design, ensuring that the city's rich traditions are safeguarded for generations to come.

*Keywords:* Beijing, housing transformation, courtyard house, Soviet-style compound, modern dwelling, cultural identity

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## Chapter 1

### 1.1 Background and Context

Throughout history, human civilization has evolved and maintained a historical link with the built environment. Over time, with the multifaceted interaction of evolution and human adaptability to the surrounding environment, every place and region formed the unique living features that differentiate it from other places (Salman, 2018). Beijing, the capital of China, has served as the national capital since the Liao Dynasty in the tenth century A.D., and has been the regional political centre of China since the Warring States period (451-233 B.C) (Gautbatz, 1995).

Beijing's urban pattern and architectural features are remarkable and unique. Since Marco Polo visited China, Beijing has always been the object of praise of planners worldwide. American urban planner Edmund Bacon (1976) described the Old City of Beijing as "possibly the greatest single work of man on the face of the earth." In the traditional housing of Beijing, a unique Siheyuan [courtyard house] was formed. Originating in the Han Dynasty (200 B.C.-300 A.D.), it has a history as long as that of the city itself, having slowly developed over two thousand years (Casault, 1987).

At the beginning of the 20th century, with the fall of the Qing Dynasty, China gradually moved from a feudal society to a modern country. In the process of China's modernization, traditional architecture has been exposed to extensive deterioration and destruction due to rapid modernization, economic development and globalization (Liu et al., 2011). The residential design did not follow the traditional model but took another path that gradually changed to Soviet-style residences and later evolved into modern high-rise dwellings.

Today, most Chinese contemporary architecture does not tend to show local and regional characteristics. Indifferent office buildings dominate the skyline of the city. Even in residential areas, the buildings lack the identity of the place entirely (Botton, 2007). This uncontrolled



metropolitan transformation has not only changed the appearance of dwellings but also affected the way people live and interact with their living spaces, leading to a loss of cultural heritage and traditions.

## **1.2 Interpretation lens**

This thesis aims to conduct a comprehensive analysis of Beijing's housing transformation over the last century and clarify the underlying reasons for this change. Also, this research goes beyond the visual dimension of housing to explore the cultural identity that is intrinsically linked to housing in Beijing.

To achieve this goal, this thesis delves into the historical, social, and economic factors driving Beijing's housing transformation, including the impact of rapid urbanization, economic growth, and globalization. It also examines the role of government policy in shaping the urban housing landscape. Additionally, this thesis aims to gain a deeper understanding of Beijing's housing transformation since the early 20th century by conducting analyses of housing spatial layouts and photos. Furthermore, this thesis emphasizes the importance of cultural identity in housing. In parallel, interviews are conducted with residents in Beijing to gain knowledge of their living habits and traditions. This thesis also discovers the implications of preserving cultural heritage under globalization and modernization. As part of the ongoing discussion about how housing shapes a community's identity, it is hoped that this analysis will contribute to the discussion.

## **1.3 Methodology**

This research uses a hermeneutic approach complemented by a research-creation method. First, a literature review is conducted on the notions of modernization of Beijing housing and cultural identity. Studying and discussing the major theories, try to conduct further research. This research draws on Lu's (2005) *Modern Urban Housing in China 1840-2000* to distinguish the development stages of modern housing. The book divided housing development into three periods, 1840-1948 (semi-feudal and semi-colonial period), 1949-1978 (communist era) and 1979-2000 (development era) (Lu et al., 2005). According to the modernization of Beijing

housing and the continuous evolution of its modern residence in recent decades, this paper sets the research interval as the early 20th century, 1949-1978 and 1979-present.

Second, a typology study is used to select the most representative nine residential housings from courtyard houses, Soviet-style housing and modern dwellings in Beijing. Through comparative analysis of its layouts and photos, we explore its distinctive architectural characteristics and how modernization has imposed and influenced domestic spaces.

Third, interviews are conducted with residents in Beijing from three groups, which are people who have living experience in courtyard houses, Soviet-style compounds and modern dwellings. Comparative and descriptive questions are asked. The purpose of conducting interviews is to understand the various living experiences in different spaces and figure out residents' views about the distinctive living habitats in the modern context.

To complement the research, a creation proposal deepens the reflection on the impact of modern development on China's capital city. Taking the form of a photo montage, the creation piece has the objective to translate visually the impact of lost heritage and aims to sensitize designers and architects to the preservation of the unique cultural traits of Beijing's housing traditions. In conclusion, a series of recommendations and design guidelines are proposed, offering design tools for the improvement of the future development of Beijing for the preservation of the cultural heritage in residential design.

## **Chapter 2**

### **2.1 Problem Statement**

In the modern age, every place is relatively linked to the global information network, which is more or less affected by cultural globalization: it leads to an alteration in its local culture and its image or identity (Nijman, 1999). Architecture can be considered as the most evident physical artifacts of any culture, it has distinctive qualities and expresses the uniqueness of a region (McLennan, 2006). Beijing, as the capital of an ancient civilization, has a profound history and embraces rich vernacular architecture, which represents its unique culture and deep tradition. However, due to the force of modernization, Beijing's traditional housing has evolved into a box-like building type and the local characteristics are almost erased, which leads to the issue of varying degrees of cultural identity loss (Liu et al., 2011). In the Chinese architecture development process, it is largely limited to copying the architectural form, while ignoring the context and semantics of the building itself (He, 2021).

### **2.2 Theory**

This section discusses China's overall housing modernization process and its social and historical background. Based on the overall development of housing in China, Beijing's housing transformation in the period of the early 20th century to the 21st century is addressed. At the same time, cultural identity and its link with housing are also introduced.

#### **2.2.1 Modern Housing Development in China**

The analysis of the development process of Beijing housing cannot be separated from the analysis of China's politics, economy, modernization and many historical backgrounds. In *Modern Urban Housing in China 1840-2000*, Lu (2005) introduced three stages of modern housing in China, 1840-1948 (semi-feudal and semi-colonial period), 1949-1978 (Communist era), and 1979-2000 (development era). The timeframe was divided by integrating three dimensions: politics, the economy, and housing development. This research develops Lu's time

frame based on the housing development in Beijing. The three periods studied in this paper are the early 20th century, 1949-1978, and 1979 to the present.

This section will first analyze China's overall housing development and its historical and social background and establish an overall understanding of China's domestic space transformation and evolution since the early 20th century.

### **The Early 20th Century — The Germ of Modern Housing in a Transitional Period from a Semi-feudal Society to a Modern Society**

1911, the feudal rule of the Qing Dynasty was overthrown, and the average household size in China was on a downward trend, which affected the evolution of residential scales and unit types. The transformation of the economic model forced the collapse of the traditional economy, which led to the miniaturization of families. During the feudal society, the average family size in China was between two to nine people and between five to six people by the end of the Qing Dynasty (Lu et al., 2005). After the Qing Dynasty was overthrown, many rural migrants went to cities to earn a living with a low income, which limited the number of people in a family. Meanwhile, this migration also disintegrated the traditional multi-generation family.

On the other hand, the middle class's adoption of new ideological concepts is another significant factor contributing to the trend of family miniaturization (Lu et al., 2005). At the beginning of the 20th century, scholars who embraced the Western view of the family as free and progressive began to severely criticize the traditional Chinese marriage system, promoting the values of freedom and democracy in China. Some scholars even proposed changes to the family system, advocating for equality, freedom, and women's liberation. With the help of population mobility, many individuals were able to break free from the constraints of large feudal families and establish small monogamous households. This shift towards smaller households had a direct impact on the subsequent evolution of residential unit types and scales.

Due to the Second Sino-Japanese War (1937-1945), a large number of houses in the country were severely damaged. In the cities destroyed by the war, the number of houses decreased sharply, and housing resources were very short. Facing stable population growth after the war, the demand for housing increased. This situation has led to a housing shortage, and most of the housing sources relied on the re-arrangement of existing houses.

### **1949 to 1978 — Housing Development in the Period of Socialist Planned Economy**

Before 1949, housing in China was primarily privately owned. After establishing the People's Republic of China, with the formation of socialist public ownership, the new government confiscated the property of bureaucratic capitalists and formed public real estate on this basis (Lu et al., 2005). During this period, China's economic foundation was weak. The new government adopted a public ownership system or a semi-supply system for some urban residents, dividing the supply of consumer goods into several levels to ensure the supply of essential consumer goods. Housing was also one of the contents provided (Shang, 2001). Under the system, each work unit and enterprise was responsible for constructing its employee housing. Every work unit, regardless of the size of the residential area, must establish a set of necessary living welfare facilities to meet employees' basic needs. Therefore, the work unit became a self-sufficient living unit. As a result, residents had access to necessities without leaving their living area, and the entire city became composed of these individual "unit societies."

On February 14, 1950, the "Sino-Soviet Treaty of Friendship, Alliance and Mutual Assistance" was signed. China and the Soviet Union formally formed a strategic alliance. The cooperation between China and the Soviet Union in urban construction has promoted China's infrastructure construction to a certain extent (Fu et al., 2015). In urban construction, under the economic support and technical guidance of the Soviet Union, quite a number of "Soviet-style buildings" were built in the city (Wang, 2018), including the remodelled Khrushchev-style residential buildings. Khrushchev-style residential buildings, also known as "large collective buildings," which was translated from the French "Le Grand Ensemble" (Fu et al., 2015). "Le Grand Ensemble" refers to a large collection of low-cost housing, which was built in an economical and

efficient manner with the aim of solving housing problems as soon as possible (Fu et al., 2015). To ensure affordability and standardization, residential planning and design in China during this time aimed to unify the design of a five-story prefabricated panel structure with a small kitchen, toilet, hall, and corridor. These types of dwellings were referred to as "Dabanlou" and "Tongzilou." The government took control of residential construction, prioritizing cost control and standardization in construction methods (Lu et al., 2005).

Under the public ownership housing system and the cooperation between China and the Soviet Union, in these 30 years, residential buildings have mainly adopted low-tech brick-concrete structures. During this period, the Soviet Union greatly impacted Chinese architecture. In the mid-1950s, The relationship between China and the Soviet Union went from friendly to broken. Simultaneously, urban residential construction evolved from the introduction of a large number of Soviet architecture to the reflection and improvement of Soviet architecture (Lu et al., 2005).

### **1979 to Current — Housing Development after China's Economic Reform**

At the end of the 1970s, China carried out market-oriented reform of the public ownership housing system. The housing system gradually shifted from the governmental supply to the market supply (Zhu, 2007). The government started to transfer the property ownership rights of public ownership housing from government-owned to people through purchasing (Guowuyuan bangongting, 1988). At the same time, China started its commercialization of housing, which allowed private construction companies to build houses and encourages foreign business and real estate companies to develop housing (Zhang et al., 1998).

In 1979, China started the Economic Reform. With the development of the economy, cities attracted more and more people to migrate. Urban construction had also begun to increase the tolerance of the population. During this period, housing construction's development direction was to pursue quantity and ease the contradiction of housing tension. Some areas began to try the discussion and practice of residential commercialization (Lu et al., 2005).

As economic development progressed, households experienced an increase in their consumption levels. This, coupled with the growing popularity of household appliances such as refrigerators, electric fans, TVs, washing machines, air conditioners, and more, led to the need for expanding residential areas. However, as each appliance had specific usage requirements, it became essential to incorporate these constraints into residential design. Additionally, the quality of life improved with the need for a more diversified range of family activities such as gatherings, entertainment, study, and work. This necessitated the creation of flexible space divisions within relatively smaller homes to meet these demands.

In the mid-1980s, with the deepening of the reform of housing commercialization, the centre focus of the design began to lean toward the function of housing.

During the late 1990s, there was a significant enhancement in the quality of residential properties. Following the surge in real estate development and enthusiasm during the 1980s and early 1990s, the real estate market in the late 1990s became more rational and professional. This resulted in "people" becoming an increasingly vital factor (Lu et al., 2005) in various aspects of the real estate industry, including planning, layout design, and creating residential culture. As the proportion of personal housing consumption rose, the appearance of houses became increasingly important to homeowners.

Entering the 21st century, especially after the outbreak of SARS in 2003, people were no longer satisfied with the quality of housing in the general sense of a "living place," and their demand for housing made a qualitative leap (Jin et al., 2019). With the booming and fierce competition in the real estate market, the quality of housing became the focus of architects' consideration in the design process.

After 2008, there were fewer restrictions on construction, which caused fierce competition in the real estate market, resulting in the emergence of many new residential design concepts.

### **2.2.2 Modernization and Beijing's Living Habitat**

Modernization refers to the impact of globalization, including the dimension of economic and technological development as well as urbanization. Under the influence of modernization, an "international style" of architecture has propagated to all countries (King, 2004), even including China which has deep roots of traditional architectural forms for thousands of years. According to the data developed by Duan (2016), there were more than 26,000 courtyard houses in Beijing at the end of the 18th century. However, there were only 923 well-preserved courtyards in 2016. Meanwhile, a variety of new housing forms emerged under the influence of modernization, but the majority of them did not follow the model of traditional housing (Liu et al., 2011). Based on the status quo of massive destruction of traditional housing and the homogeneity of modern dwellings in Beijing, Chinese writer Feng Jicai (2000), who is dedicated to Chinese cultural protection, advocates that the Chinese government is more focused on cultural relics protection, but merely cultural preservation in terms of preserving traditional architecture. Cultural relics are classic humanistic creations in the historical process and mainly based on royal and religious buildings. However, traditional culture in architecture is mostly represented by traditional residential housing. The inhabitants of traditional housing retain a lot of historical and cultural wealth, and the unique spirit to the area (Feng, 2000). In Feng's perspective, protecting traditional buildings means protecting and transmitting culture to future generations and sustaining cultural identity. In other words, if a country or a city loses its cultural identity and tradition in housing, self-identities that reflect people's cultural characteristics will also gradually disappear.

In the case of Beijing, housing development has been a complex and multifaceted issue due to the rapid population growth, government decisions, historical and cultural significance and many other factors. This chapter will analyze the housing development in Beijing and introduce the main housing types through three time periods: the early 20th century, 1949 to 1978 and 1979 to the present.



## **The Early 20th Century**

At the beginning of the 20th century, many Chinese port cities were influenced by Western architecture. The trend of home miniaturization made small-size house designs more and more common in these areas. The types of residences introduced from abroad include townhouses, apartments and verandah houses (Lu et al., 2005). Nevertheless, at this time, the main form of residence in Beijing was still the courtyard house. Western styles of decorations were only minimally influential, and there is only minimal evidence of Chinese-Western hybrid decorative styles at this time (Jia, 2009).

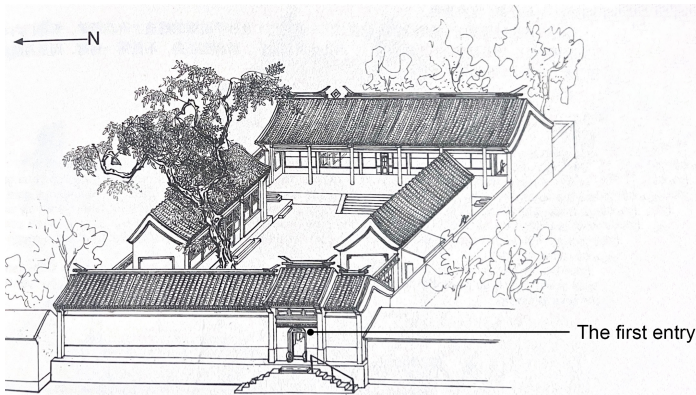
Courtyard houses in China have a long history, and the remains of courtyard houses from the Western Zhou Dynasty (1045 BC – 771 BC) were found in Shaanxi Province (Ma, 1999, p. 2). During the Wei, Jin and North-south Dynasties (220 AD – 589 AD), courtyard houses continued to develop and became China's main housing form. Many traditional Chinese houses are in the form of enclosed courtyards, and Beijing courtyard houses are the most typical type (Jia, 2009).

Beijing is situated in the northwestern region of the North China plains and experiences harsh weather conditions, characterized by chilly and gusty winters and hot summers. The city is prone to frequent sandstorms due to its close proximity to the Gobi desert towards the north, which results in a considerable amount of dust accumulation in the area (Broudehoux, 1994). The design of Beijing's courtyard houses significantly reflect the condition of the local environment, as it was developed in response to the climate and geographical features of the region. The courtyard house is designed to provide a comfortable living environment with hot summers, cold winters, frequent sandstorms, and dry weather (Jia, 2009, p. 11).

The pattern of the Beijing courtyard house is generally rectangular. The basic units of ancient Chinese courtyards were "jin" and "kua" (Ye, 2009). "Jin" means the relationship between the front and back. As many yards as there are vertical, they are called as many "jin" courtyards. In simpler terms, the number of jin yards are determined by the numbers of entry doors. The entry doors are called "yi jin [first entry]," "er jin [second entry]," and so on, according to its location (see Figures 1 and 2). If there is only a single yard, we call it a "yi jin yuan" [single-entry yard];

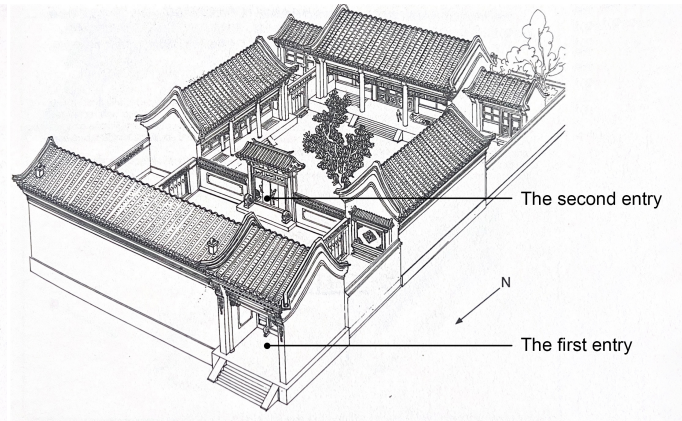
if two yards are connected vertically, we call it a "er jin yuan [two-entry yard]." According to the number of courtyards, there are also "three-entry courtyards," "four-entry courtyards," etc. (Ma, 1999, p. 15). "Kua" means the relationship between the courtyards left and right in parallel. As many yards as there are horizontal, they can be called "dong kua yuan [east cross yard]" and "xi kua yuan [west cross yard]" according to the siege (Ma, 1999, p. 15).

**Figure 1**



An example of single-entry courtyard —  
Caochang Hutong  
(Zheng, 2002)

**Figure 2**



An example of two-entry courtyard —  
Nanzhugan Hutong  
(Zheng, 2003)

The old Beijingers called the courtyard house "Sihe fang [enclosed house]" and, as the name implies, it is an enclosed building with rooms on four sides which surround an inner square courtyard (Jia, 2009, p. 4). The housing is surrounded by a high wall that seals the house from the outside world (Casault, 1987). The surrounding walls of the courtyard provide a barrier against wind and sand, while the inner courtyard allows for natural ventilation. Meanwhile, the inner courtyard is also conducive to drainage and rainwater collection, and various plants can be planted to form a humid environment (Hou, 1997). For sociocultural reasons related to Feng Shui, entrances and exits are usually located in the southeast corner (Casault, 1987), which represents auspiciousness. In addition, many courtyard houses in Beijing feature a "welcoming hall" or "screen wall" at the entrance, which helps to filter and block dust and sand before entering the main living space. The roof of the courtyard house is composed of two curved lines, which can effectively drain the rainwater falling on the roof and endow the building with a unique, elegant aesthetic feeling (Jia, 2009, p. 11). Almost all buildings in Beijing adopt exact

north, south, west or east orientation, with a maximum deviation of one to two degrees (Jia, 2009, p. 28). Courtyard houses are generally arranged on a north-south orientation (Stave, 1988), which receives the most sunlight and warmth during winter. This orientation also helps to maximize natural light, reducing the need for artificial lighting.

In terms of materials and construction techniques, the foundation of the courtyard is mainly rammed earth. The material used is called "Huitu", which contains 70% loess and 30% lime (Jia, 2009, p. 101). After mixing evenly, it is repeatedly rammed and sprinkled with water to ensure that it is dense. The main timber frameworks in the courtyard are connected by "Sunmao" (mortise and tenon joints). "Sun" refers to the raised part attached to the wood component, and "mao" refers to the concave part, and the "sun" is inserted into the "mao" so that the two components are connected and fixed (Jia, 2009, p. 105).

The dimension and height of the courtyard and its construction materials indicate a family's social status and wealth (Zhang, 1983). This kind of class expression is also reflected in the gates of the courtyard houses. Different gates represent officials of different ranks, wealthy businessmen or ordinary residents. The door has become a direct reflection of the family's social status, but the form of the door is not always the same. When someone in the family becomes an official, the family will replace the gate with the corresponding style. When families have declined, and they also replaced the gates with corresponding ones (Jia, 2009).

The architectural elements are extremely particular in courtyard houses. The decoration, carvings, and coloured paintings of Beijing courtyard houses embody folk customs and traditional culture and express people's pursuit of happiness, beauty, wealth, and auspiciousness (Gu et al., 2010). For example, the pattern composed of bats and longevity characters means "good luck and longevity," and the pattern of rose flowers in the vase means "safety in all seasons." Red is the courtyard houses' primary colour, supplemented by green. The intense colour combination of red and green creates a strong visual impact, which is very suitable for the living environment in northern China, because the winter in the north is long and the

colour palate during winter is monotonous. Green and red can better animate the monotonous and bleak atmosphere, giving vitality to the house.

Hutongs are narrow alleys comprised of rows of courtyard residences. These neighbourhoods were established by joining one courtyard house with another, ultimately forming a series of hutongs interconnected with one another. As inhabitants traverse the hutongs to enter or exit their courtyards, it becomes apparent that these alleyways serve not only as passages connecting each courtyard, but also as a link that connects every family within the community.

During the period of the Republic of China (1912 AD -1949AD), due to the influx of a large number of immigrants into Beijing, housing was in short supply. In the past, only one family lived in a courtyard house. As more and more residents moved in, two, three or even more than a dozen families lived in a courtyard house, becoming what Beijingers call a "Dazayuan" (a compound with many families living together) (Shan et al., 2010).

### **1949 to 1978**

After establishing the People's Republic of China in 1949, with the formation of socialist public ownership, the government adopted a public housing ownership system (Lu et al., 2005), which means the government or work units allocated housing to residences (Gaubatz, 1995).

During 1949-1957, China and the Soviet Union established close cooperation. The Soviet model profoundly impacted China's urban construction during this period (Lu et al., 2005). Urban housing construction introduced Soviet architectural standards, and aesthetics became a secondary housing design issue.

During the early 1950s, Beijing developed the strategy of gated communities, and the concept of "neighbourhood unit" was introduced (see Figure 3). According to the planning proposal, each neighbourhood unit was intended to have a population of around 5,000 people (Tan, 2002). Ideally, the neighbourhood unit was constructed on the site of the residents' work unit (Gaubatz,

1995). The primary schools, entertainment facilities, and daily commodity supply facilities were situated at the center of the area, with residential buildings built around it. This ensured that traveling from each residence to the neighborhood center was convenient, while the urban highways ran around its periphery, minimizing traffic on the inner roads and ensuring pedestrian safety and a quite residential environment.

**Figure 3**



An example of "neighbourhood unit" — Baiwanzhuang  
(Beijingshi Guihua he Ziranziyuan Weiyuanhui, n.d.)

In 1955, the Beijing Architectural Design Institute created the first general-purpose layout called "Type II residence." This layout was designed under the guidance of Soviet experts, and two variations were produced. The first design featured two households on each floor, each with three to four bedrooms and an average construction area of 98.88m<sup>2</sup>. The other design consisted of three households on each floor, each with two rooms and an average area of 62.92m<sup>2</sup>. The "Type II residence" is a four-story brick-concrete structure with a Soviet-style wooden truss roof. Standardization and industrialization were emphasized during the construction process, with the floor slab consisting of a 30cm-thick prefabricated concrete board, and the stair treads also being prefabricated (Jin et al., 2019).

The Soviet-style housing design did not entirely fit China's economy and population at that time (Cui, 2018). The apartments were too large, but due to limited housing availability, multiple families had to share a single residence. As a result, each household was re-divided into smaller units, which resulted in some families not receiving any sunlight throughout the year (Lu et al., 2005).

In 1957, the Central Ministry of Construction determined that the standard of the "Type II residences" was too high and not suitable for China's economy and population at that time. As a result, Beijing formulated four principles of residential design based on the research of residential buildings in Shanghai, Nanjing, Wuhan, and other places. The principles included reasonable layout, application of new technologies, a per capita living area not exceeding 4m<sup>2</sup>, and a living area not less than 50% (Jin et al., 2019). These principles led to the design of three standard residential layouts, namely 701A (89.1m<sup>2</sup>/household), 701B (65.89m<sup>2</sup>/household), and 701C (46.5~52m<sup>2</sup>/household) (see Figure 4). Among these layouts, 701C was the most popular and widely adopted by the society (Jin et al., 2019). However, even with the implementation of these new standards, by 1957, nearly one-third of the city's workers still did not have access to housing. This highlights the severe shortage of housing in Beijing at the time (Dong et al., 2019).

**Figure 4**



The layout of the 701C residence  
(Zhuzhai Sheji Wushinian, 1999)

Under the situation of promoting "anti-waste" throughout the country, the "Regulations on Housing Economic Indicators" was promulgated in 1957. According to this regulation, 8011-4 (40.71m<sup>2</sup>/household), 8011-7 (37.00m<sup>2</sup>/household), and 8012-5 (36.6m<sup>2</sup>/household) were designed in 1958 (Jin et al., 2019). As a result of strict limitations on space and cost, the living room, bathroom, and kitchen were all quite small in size. Additionally, the indoor aisle and bathroom door were narrow, the indoor ceiling was low, and the walls and floor slabs were thin.

In 1965, 31 sets of "Simple Housing" layouts were designed under the influence of the idea of "production first, living later" (Jin et al., 2019). In the design, the apartment was not equipped with heating, bathroom or kitchen. Due to the shortage of housing resources, some office buildings were gradually transformed into dormitories for single employees or collective dormitories for students (Shan et al., 2010).

During 1966-1976, China experienced the "Cultural Revolution." The economy was severely damaged, and residential development was stalled (Lu et al., 2005). The per-capita living area in 1967 was 3.88m<sup>2</sup> (Tan, 2002). According to statistics, in the first month of the "Cultural Revolution," more than 114,000 households in Beijing were ransacked, more than 1,700 people were killed, and 85,000 people were expelled from Beijing (Beijing Today, 1989). After 1968, many people left their original residences in Beijing and moved to rural areas to work, which objectively eased the housing shortage of urban residents (Tan, 2002).

By the late 1970s, a significant number of individuals returned to the city after years spent in rural areas during the cultural revolution, and an increasing number of people seeking employment were migrating to the city (Gaubatz, 1995). The rapid population growth and slow housing construction led to more severe problems for Beijing's living conditions, laying the groundwork for the large-scale construction of high-rise residential buildings in China. By the late 1970s, the most densely populated area of the city witnessed population densities surpassing 57,000 individuals per square kilometre (Gan, 1990).

From 1949 to 1978, the area of newly-built residential buildings in Beijing was 29,530,450m<sup>2</sup>, of which 16,131,000m<sup>2</sup> were designed by the Beijing Architectural Design Institute, accounting for 54.6% (Jin et al., 2019). During this period, the residential buildings were uniformly composed of brick exterior wall load-bearing structures and reinforced concrete prefabricated floors; The number of floors in the buildings ranged from three to six and remained relatively constant. Despite frequent changes in residential standards due to political and economic factors, the

building standards remained low, resulting in poor living conditions. Furthermore, the building's plan and facade were relatively monotonous.

Over a span of 30 years, the housing area for households in Beijing remained largely stagnant, and in some cases, even decreased. In 1949, the per-capita living area was 4.75m<sup>2</sup> (Tan, 2002). Although it increased slightly to 4.79m<sup>2</sup> in 1952, it quickly dropped to only 3.70m<sup>2</sup> in 1957 and further declined to 3.68m<sup>2</sup> in 1965. By 1970, it had only increased slightly to 4.36m<sup>2</sup>, and by 1979, the per-capita living area was 4.57m<sup>2</sup> (Shang, 2001).

### **1979 to Current**

Since 1979, Beijing has experienced a major housing-construction boom (Gaubatz, 1995). Under the general environment of China's economic reform, Beijing's urban housing construction and living standards have undergone tremendous changes. In 1980, the per-capita living area reached 4.79m<sup>2</sup>, surpassing the level in 1949 (Tan, 2002). The planning and construction of urban housing in Beijing have embarked on a fast development track. The housing conditions and living environment of the urban population have undergone tremendous changes.

In the 1980s, Beijing began implementing its housing commercialization policy, which accelerated the construction of new housing projects. With the deepening of the housing reform, Beijing's housing allocation gradually changed from public ownership housing to market-based commodity housing (Shan et al., 2010).

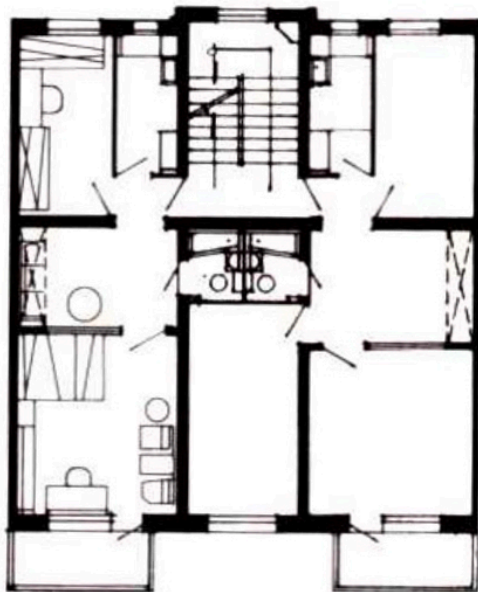
Since the end of 1978, Beijing Architectural Design Institute successfully compiled 21 types and 89 sets of general residential plans, called "Beijing 80 and 81 Series Residences," breaking through some old frames and styles in previous residential designs (Jin et al., 2019). In response to the existing problems and defects of residential buildings, the government established three requirements for this set of designs. Firstly, it aimed to expand the usable area by appropriately reducing floor height without increasing investment. Secondly, since residential buildings in Beijing had long been constructed using standard layouts, the Beijing Architectural Design



Institute adopted a design competition scheme to create multiple multi-storey housing layouts with distinct characteristics. These new layouts feature improvements such as upgraded squatting toilets to full bathrooms with toilets, washbasins, and showers, and kitchen areas with added sockets and reserved spaces for refrigerators and washing machines to accommodate the development of household appliances. Thirdly, the designs focused on the aesthetics of interior design, using new lightweight building materials to reduce housing costs (Zhao, 1999).

The 80-2 design scheme was awarded in a competition and was chosen for its reasonable and compact layout, excellent ventilation, land-saving features, and flexible unit combination (see Figures 5 and 6). This design was widely implemented throughout Beijing due to its numerous advantages, as noted in *Zhuzhai Sheji Wushinian* (1999).

**Figure 5**



The middle unit layout of 80-2  
(Zhuzhai Sheji Wushinian, 1999)

**Figure 6**

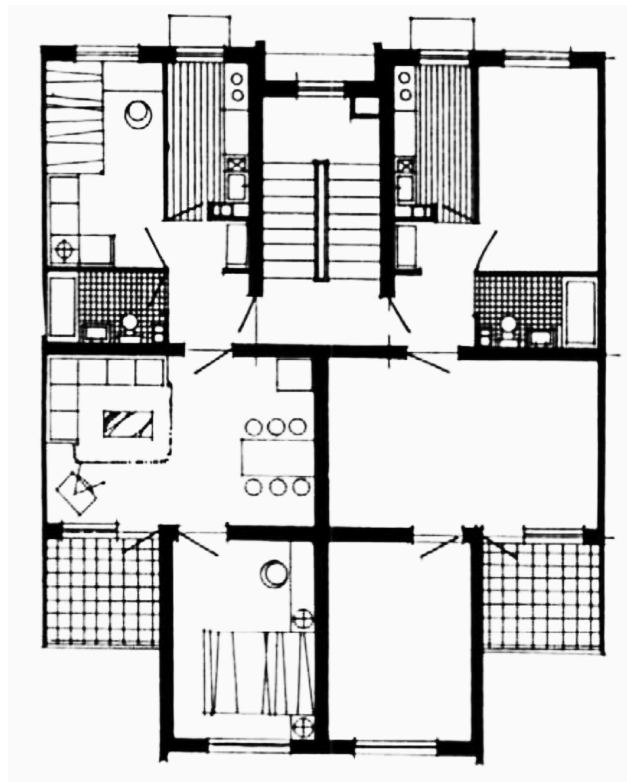


The side unit layout of 80-2  
(Zhuzhai Sheji Wushinian, 1999)

During that period, the majority of residential buildings had more than ten floors, with the tallest reaching approximately 20 floors. These buildings featured prefabricated floors and exterior walls, while the interior walls were cast in place, as described in *City Housing Magazine* (2019).

To ensure that residential designs were more reasonable and practical, the Beijing Architectural Design Institute conducted a questionnaire survey of over 1,000 households living in the 80 and 81 series of residences. The investigation revealed that families required more activity space, larger kitchens and bathrooms, and better positioning and detailed design of refrigerators and washing machines (Jin et al., 2019).

**Figure 7**



The layout of 87-1 residence  
(Zhuzhai Sheji Wushinian, 1999)

Based on the research findings, the Beijing Architectural Design Institute proposed the 86-90 series of residences (see Figure 7). These designs featured several key characteristics: firstly, the expansion of living room areas to accommodate dining and family activities; secondly, increased sizes of kitchens and bathrooms; thirdly, In order to save land, promoted apartments with wide depth and narrow width; and finally, an increased variety of facade designs (Zhao, 1999).

According to Zhao (1999), only a limited number of housing varieties were available to meet the high demand for housing construction volume, which was set at 5,000,000m<sup>2</sup> per year. Some practical housing designs were widely adopted, while others had low adoption rates, resulting in the phenomenon of homogeneity in housing again. In order to address this issue and diversify residential designs, the Beijing Architectural Design Institute organized a new residential scheme competition in June 1989. The competition aimed to reflect five key requirements: reasonable functionality, diverse design types, varied facade designs, improved kitchen and bathroom designs, and coordinated indoor and outdoor environments with a focus on energy saving, sound insulation, and heat preservation (Jin et al., 2019).

In the wake of China's economic boom in the 1990s, there was a surge in demand for improved residential buildings in Beijing, leading to an annual construction scale of five to seven million square meters (Jin et al., 2019). This period marked a significant departure from the uniform and inflexible housing designs of the 1980s, with a greater emphasis on more sophisticated planning and design strategies for high-rise residential buildings. As a result, the exterior of housing units became increasingly diverse and varied.

In the late 1990s, the residential market in Beijing saw the emergence of high-end apartments and mixed-use buildings that combined commercial and residential spaces. The internal structure of these residences was more diversified, prioritizing comfort, aesthetics, and functionality (Tan, 2002). Moreover, some architects began to draw inspiration from European architectural styles, as seen in the Liyuan Apartment complex built in 1999. Located in the Wangfujing area of Beijing, the building's exterior design imitates neoclassical architecture (Zhuzhai Sheji Wushinian, 1999, p.154).

From 1979 to 1999, the construction of residential buildings in Beijing skyrocketed, with a total of 122,200,000m<sup>2</sup> of newly-built residential areas. By 1999, the per capita residential area for urban residents in the city increased to 14m<sup>2</sup> per-capita (Zhao, 1999). As the new century began, living standards continued to improve, and by 2008, the per-capita residential area for urban

residents in Beijing had increased to 21.56m<sup>2</sup>, an over three-fold increase from 6.7m<sup>2</sup> in 1978 (Shan et al., 2010). With the prosperity and fierce competition in the real estate market and people's higher expectations for housing quality, the residential types are becoming more and more diverse. Many architects started to experiment with embedding traditional Chinese elements in housing, such as the Zhuquemen Community, which was completed in 2008. But its design was limited to copying traditional architectural elements or characteristics, which lacks deep thinking and research.

### **2.2.3 Cultural Identity**

Identity is importantly 'marked out by difference' (Woodward, 1997: 9), and different identifying identity boundaries can be small or great (Neill, 2003). In other words, identity means being different and unique from others. It can be applied to a thing, person, society, or country (Salman, 2018). Inglis (2006) stated that: "identity is constituted in terms of what is ultimately important to an individual." Certain factors also constitute "identity," such as people (society, community), place (region, geography, topography and climate) and culture (tradition, customs, language, religion and artifacts). Culture is one of the main factors that define identity because it is related to the person who created this culture (Salman, 2018). Vibhavari Jani (2011), in her edited book *Diversity in Design: Perspectives from the Non-Western World*, explains that culture refers to: "... distinctive way of life that represents values, customs, and norms of a group of people who pass these traditional values from one generation to the next. This learned way of life then reflects upon social, political, educational, and economic institutions; value and belief systems; and languages and artifacts" (p.xx). In terms of cultural identity, Hall (n.d.) refers to it in the sense of a shared culture, a sort of collective "one true self" hiding inside the many other, more superficial or artificially imposed "selves," which people with a shared history and ancestry hold in common. Thus, the term cultural identity can be summarized as how people perceive themselves and their relationship with the world, which is unique and crucial to both individuals and culturally identical groups. However, under the process of modern development, cultural identity seems to be challenged. As Neill (2003) advocates that 'globalization' is not only an economic process but also a series of events that confront cultures and connect them together.

The individualization under the sense of globalization is confronted with a process of dilution of traditional local culture (Nijman, 1999).

Sameness brought by modern culture has appeared in almost all fields, including architecture. Globalization of technology and production methods has brought the separation of people and traditional spaces, and regional culture characteristics have gradually declined. Standardized commodity production has led to more mediocre designs, which causes the suppression of architectural and cultural diversity and the homogenization of architectural environments (Wu, 1999). Juhani Pallasmaa, in his essay *Newness, Tradition and Identity — Existential Meaning in Architecture*, says that: "...an interest in the significance of tradition is today usually seen as nostalgia and conservatism. In our age, obsessed with progress, the eyes are exclusively fixated on the present and the future. During the past few decades, uniqueness and newness have become the sole criteria for quality in architecture, design and art. The coherence and harmony of landscapes and cityscapes, and their rich historical layering are not any more seen as essential objectives of architecture" (p.6). Today, uniqueness and newness have replaced the pursuit of existential meaning and emotional impact, which has led to homogeneity, repetitiousness and monotony (Pallasmaa, 2013).

Buildings serve as carriers of profound messages and intricate manifestations of society's imagination (Müller, 2008). The basic message of architecture is an expression of existence: how is human being perceived in this world? It is the task of architecture to help us discover deeper meaning and purpose as we experience our own existence; architecture helps us understand and remember our identity (Pallasmaa, 2013). Cultural identity in terms of housing relates to the significance and meaning of places for its inhabitants. It carries dwellers' unique values, attitudes, cultural and historical backgrounds. However, homogeneity in housing has become a common phenomenon, posing a threat to both the diversity and the cultural identity embedded in local buildings. This sameness can indeed threaten people's individual identity (Neill, 2003).

Throughout human history, housing has served as a reflection of people's activities and lifestyles. By examining the architectural styles of the past, we can gain insight into how people lived, communicated, and valued aesthetics. Architecture defines our identity as individuals and as a society. In light of the issue of homogeneity in modern Chinese architecture, cultural identity has become a critical concern. The quest for a "Chinese Modern" has been a continuous pursuit throughout the 20th century, as architects strive to create a modern style that reflects China's unique cultural heritage (Lu et al., 2008).

## Chapter 3

### 3.1 Comparative Analyses of Layouts and Photos

This section focuses on the typology of residences to select the most representative examples of courtyard houses, Soviet-style compounds, and modern high-rise dwellings from the early 20th century to the 21st century in Beijing, and analyze their plans and elevations. Through a comparative analysis, we explore the distinctive architectural characteristics and study how modern culture has imposed and influenced domestic spaces.

In the process of selecting representative examples, I draw upon valuable resources such as *Modern Urban Housing in China 1840-2000*, *Beijing Siheyuan* [Beijing Courtyard House] and *Zhuzhai Sheji Wushinian* [Fifty Years of Residential Design — Selected Works of Beijing Institute of Architectural Design & Research]. Additionally, I conducted field visits and investigations in Beijing, further enhancing my understanding of the local housing landscape. By combining these resources and firsthand experiences, I meticulously curated a diverse and representative selection of housing types, ensuring their inclusivity and accuracy.

#### 1. Qi Baishi's Former Residence in Yu'er Hutong — A Single-entry Courtyard House

The former residence of Qi Baishi in Yu'er Hutong is a classic example of a "single-entry courtyard" design (see Figures 8 and 9).

Figure 8



The inner yard in Qi Baishi's former residence  
(Xu, 2014)

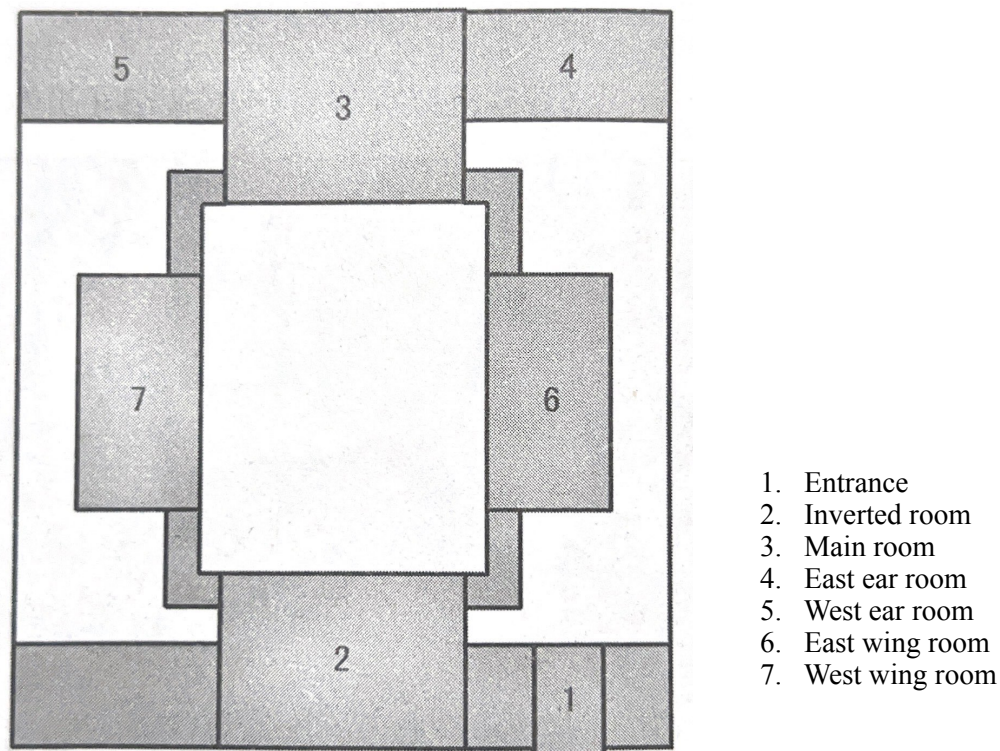
Figure 9



The corridor in front of the west wing room  
(Xu, 2014)

The inner yard (see Figure 10) is almost square-shaped, with the entrance situated at the southeast corner. The three "zhengfang [main rooms]" are located on the north side, which is typically the highest-level building in the whole residence and where the oldest and most respected people in the family reside. The middle room of the "zhengfang" is the family room, while the other two are the master's bedrooms. There are also three "erfang [ear rooms]" on the east and west sides of the main rooms, which resemble ears in plan, hence the name. The ear room is usually utilized for storage. Additionally, there are three rooms located on the east and west sides, known as "xiangfang [wing rooms]." Typically, the children of the family reside in these rooms. The "daozuofang [inverted room]" is situated in the south, serving as a combination of a living room and a study. All the rooms are interconnected by corridors. This type of courtyard is small in scale, it is suitable for families with a small number of people.

**Figure 10**



The layout of Qi Baishi's former residence  
(Jia, 2009)



## 2. Mei Lanfang's Former Residence — A Three-entry Courtyard House

Mei Lanfang's former residence (see Figure 11 and 12) is located at No. 9 Huguosi Street, Xicheng district. It was initially the stable of Prince Yi's residence in the late Qing Dynasty and was later renovated into a residence. It is a three-entry courtyard house, covering an area of more than 700m<sup>2</sup>.

**Figure 11**



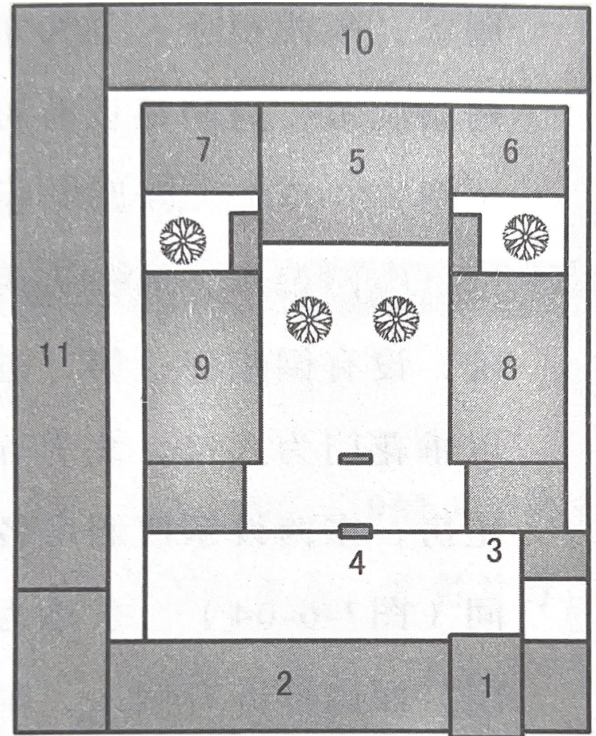
The entrance of Mei Lanfang's former residence  
(Tang, n.d.)

**Figure 12**



The main room of Mei Lanfang's former residence  
(Xia, 2022)

**Figure 13**



The layout of  
Mei Lanfang's former residence  
(Jia, 2009)

1. Entrance
2. Inverted room
3. Screen wall
4. Second door
5. Main room
6. East ear room
7. West ear room
8. East wing room
9. West wing room
10. Backside room
11. West cross room

The gate (see Figure 13) is located in the southeast corner, and there are five "dao zuo fang [inverted rooms]" on the left of the entrance and one on the right side. Upon entering the second yard, three main rooms can be found on the north side, along with three wing rooms on both the east and west sides that are interconnected via corridors. The third yard is relatively narrow, and there is a small cross courtyard located on the west side, which includes a row of rooms serving as auxiliary spaces. The inner yard is filled with a variety of plants, and the house owner often used this space to exercise and play with his grandchildren.

### 3. Rongyuanzhai — A Four-entry Courtyard House

**Figure 14**



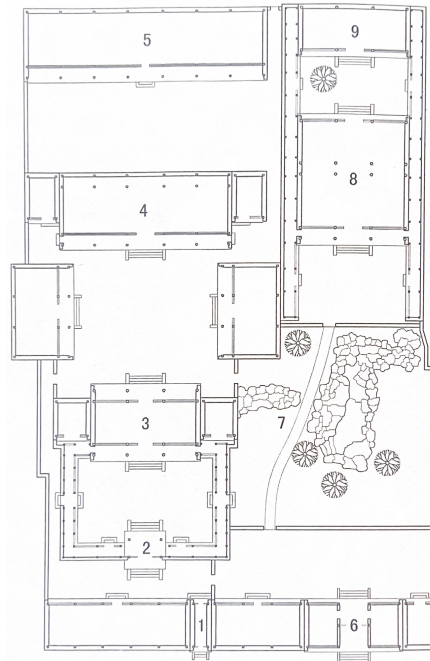
The renovated entrance in Rongyuanzhai  
(Bai, 2015)

**Figure 15**



Decorations on the west second entry door in  
Rongyuanzhai  
(Bai, 2015)

**Figure 16**



The layout of Rongyuanzhai  
(Jia, 2009)

1. West entrance
2. West second entry door
3. Main rooms in the west second yard
4. Main rooms in the west third yard
5. West backside rooms
6. East entrance
7. Garden
8. Main rooms in the east third yard
9. East backside rooms

Rongyuanzhai (see Figures 14 and 15) is situated in Mao'er Hutong, Dongcheng. The residence is comprised of two courtyards, the East yard and the West yard, both of which have a four-entry layout (see Figure 16).

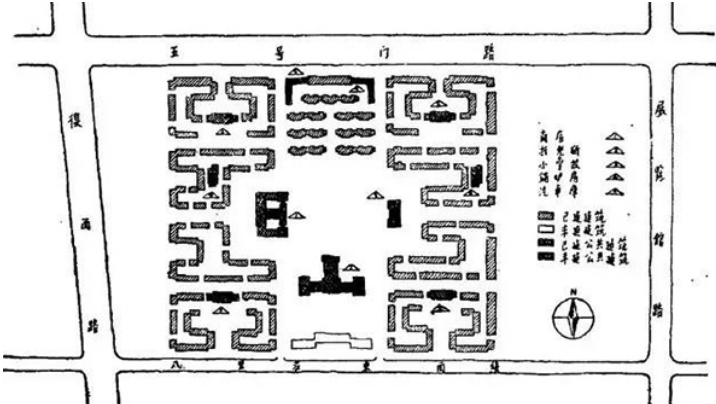
Upon entering through the West entrance, the inverted rooms are located on the south side, and the second entry door is on the north side. After passing through the second entry door, there are three main rooms located on the north side, which were used as living rooms. The left and right sides of the main rooms contain two ear rooms, and all rooms in the second entry yard are connected by a corridor. The third entry yard is more spacious and served as the main living space. It consists of five main rooms on the north side, with three wing rooms on the east and west sides. The ear rooms are located on the two sides of the main rooms. In the fourth entry courtyard, there are seven back rooms located on the north side. On entering the East entrance, there is a garden with rockery and ponds. The East courtyard consists of three large main rooms, with corridors running through to the northernmost wall on the east and west sides of the main rooms. The northernmost part of the East yard is made up of three inverted houses. The West yard of the Rongyuanzhai courtyard house now serves as a Dazayuan with multiple households residing in it. Regrettably, the original entrance was demolished to make way for three additional rooms (see Figure 14). The exterior wood carvings and decorations were also not adequately preserved (see Figure 15). On a brighter note, the interior decoration of the main building in the west yard remains intact. Meanwhile, the east yard was converted into an office, and the main rooms and garden were repurposed as buildings. It is worth noting that in 1984, the Rongyuanzhai courtyard house was recognized as a cultural relic protection unit in Beijing (Jia, 2009).

#### **4. Baiwanzhuang**

The construction of Baiwanzhuang (see Figure 17) started to build in 1951 and was completed in 1956 (Wang, 2018). It adopted the Soviet-style "large collective buildings" residential model (Cui, 2018., p. 54). The complex comprised three main types of residences: three-story

apartments (see Figure 18), two-story townhouses in the middle, and three-story Tongzilou dormitories on the east side (Wang, 2018).

**Figure 17**



Hand drawing of the general layout of Baiwanzhuang (Zhang Kaiji, n.d.)

**Figure 18**

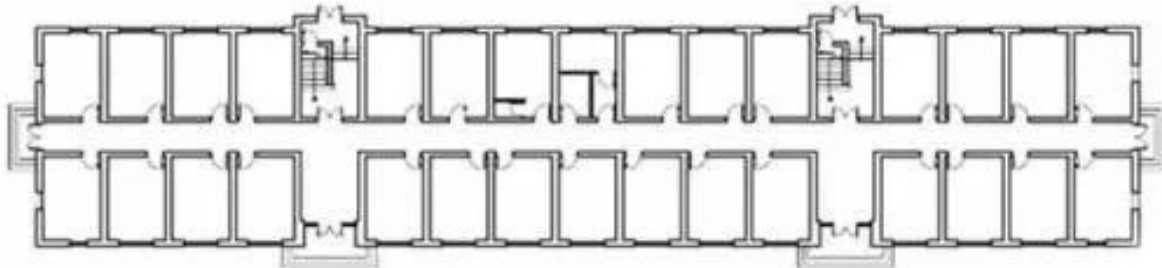


The three-story apartments in Baiwanzhuang (Zhongguo Qingnian Guihuashi Lianmeng, n.d.)

The Baiwanzhuang residential area is characterized by the extensive use of top-grade red bricks, which is a hallmark of the Soviet architectural style (see Figure 18). This style was rooted in the harsh climatic conditions of the Soviet Union, where red tiles and walls were used to create a striking contrast against the snowy landscape during winter. In traditional Chinese culture, the colour red is often associated with auspiciousness, joy, unity, and loyalty. Therefore, the adoption of Soviet-style red brick building in Baiwanzhuang represented people's aspirations for a better

life, and red became the dominant colour of national construction in the early years of the People's Republic of China.

**Figure 19**



The floor plan of the dormitory in Baiwanzhuang  
([Baiwanzhuang Lishi Jianzhuqun: Yanhuoshengxi, lijiumixin], n.d.)

The design of the three-story apartments and two-story townhouses in Baiwanzhuang was considered to be of high standard during their time (Cui, 2018, p. 54). Each room was equipped with windows, heating, and good ventilation. The dormitory (see Figure 19) on the east side adopted an inner corridor layout with two staircases and about 30 rooms on each floor. However, the rooms had limited space and poor overall ventilation. They were not equipped with kitchens or bathrooms, and residents had to cook on stoves placed in the corridors. Similarly, to use the toilet or take showers, residents had to go to the public toilets and public baths located within the community.

## **5. Xingfucun**

Xingfucun (see Figures 20 and 21), constructed in 1959, is a prime example of a "verandah-style" dwelling that evolved from Soviet-style housing. Its layout placed the traffic corridor on the north side of the house plan, and the apartments were arranged side by side along the corridor (see Figure 22). Each house had bedrooms at the southern end, while the northern end near the corridor was reserved for the kitchen and bathroom. In comparison to the inner corridor-type residence, the verandah-style residence ensured that each household had good ventilation and a south-facing bedroom with ample natural lighting (see Figures 23 and 24). During this era, most housing lacked a living room, and the bedroom served as a multifunctional space for dining, entertaining, family gatherings, and sleeping.

**Figure 20**



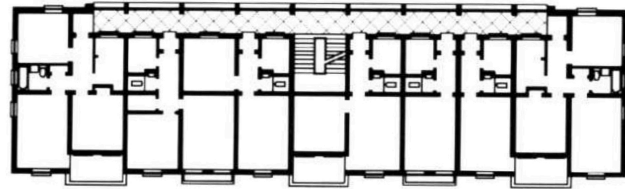
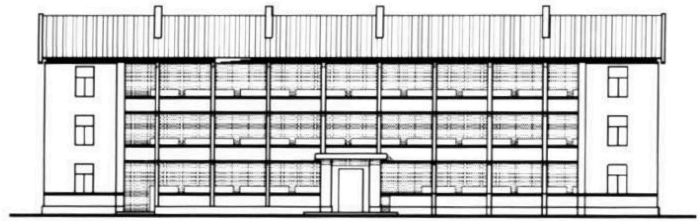
Xingfucun  
(Lu et al., 2005)

**Figure 21**



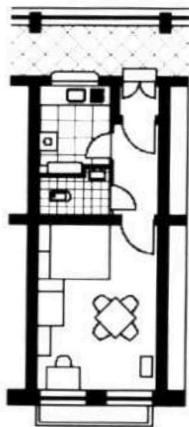
Xingfucun  
(Lu et al., 2005)

**Figure 22**



The section and layout of Xingfucun  
(Lu et al., 2005)

**Figure 23**



Single bedroom layout in Xingfucun  
(Lu et al., 2005)

**Figure 24**



Two bedroom layouts in Xingfucun  
(Lu et al., 2005)

Instead of the exact reproduction of Soviet-style housing, Xingfucun inherited the characteristics of facing south in traditional Chinese houses, which was more suitable for the weather in Beijing and the living habits of local people (Lu et al., 2005).

## 6. Jianchang Hutong "Simple" Housing

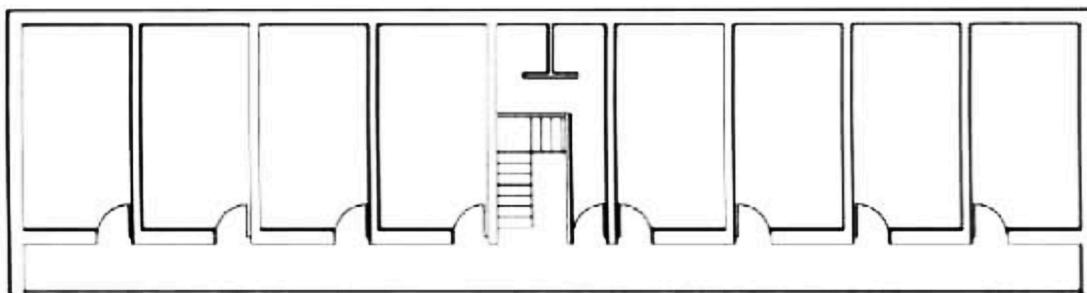
The Jianchang Hutong simple housing (see Figure 25), constructed in 1966, represents the low standard dwellings built during that era. The building spanned three stories, with eight rooms on each level linked by connecting corridors (see Figure 26). The individual rooms were not equipped with kitchens or bathrooms, forcing residents to cook their meals in the corridors. The building featured a centralized water supply and communal toilets, rendering it more akin to a dormitory than a proper residence.

**Figure 25**



Jianchang hutong simple housing  
(Lu et al., 2005)

**Figure 26**



The floor plan of Jianchang hutong simple housing  
(Lu et al., 2005)

## 7. Fangzhuang

Fangzhuang (see Figure 27), a large-scale residential area in Beijing, was completed in 1990 after its development in the early 1980s. The planned land area was 147.0 square hectares and a total construction area of 2,660,000m<sup>2</sup>, including 1,810,000m<sup>2</sup> of residential buildings (50 Years of Residential Design, 1999, p.100). This community served as a model for large high-rise residential areas in other parts of Beijing. Its planning, design, and construction processes not only provided valuable experience but also set a standard for future similar projects.

**Figure 27**



Fangzhuang  
(Zhuzhai Sheji Wushinian, 1999)

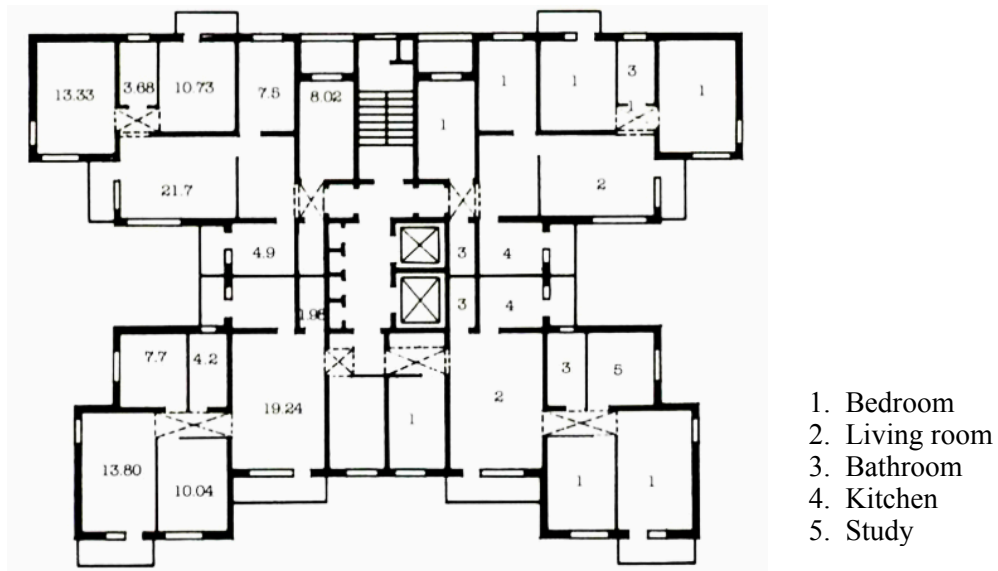
Fangzhuang is divided into four districts by cross-shaped roads, known as Fangguyuan, Fangchengyuan, Fangqunyuan, and Fangxingyuan. Each district has a ring-shaped road that runs through its center, creating a convenient and safe transportation network. In the northwest of Fangzhuang lies Fangguyuan, which includes a shopping mall, a cultural and sports center, and a central garden spanning 6.5 hectares (Zhuzhai Sheji Wushinian, 1999, p. 101).

The residential buildings in Fangguyuan are designed with two elevators per unit and four residences on each floor (see Figure 28). The overall design of the buildings evolved from the box-like facades influenced by the Soviet era to a more modern faceted geometry. This design



also allows for better lighting and ventilation, ensuring that each household receives ample sunlight.

**Figure 28**



The floor plan of fangguyuan-26  
(Zhuzhai Sheji Wushinian, 1999)

## 8. Liyuan Apartment

Liyuan Apartment, constructed in 1999, is a high-end residential building located in Wangfujing, Beijing (see Figure 29). The apartment's design consists of a compact layout, with each floor having three elevators and seventeen apartments. It consists of a rectangular structure, with a total construction area of 40,800m<sup>2</sup>, and underground construction accounting for 11,300m<sup>2</sup>.

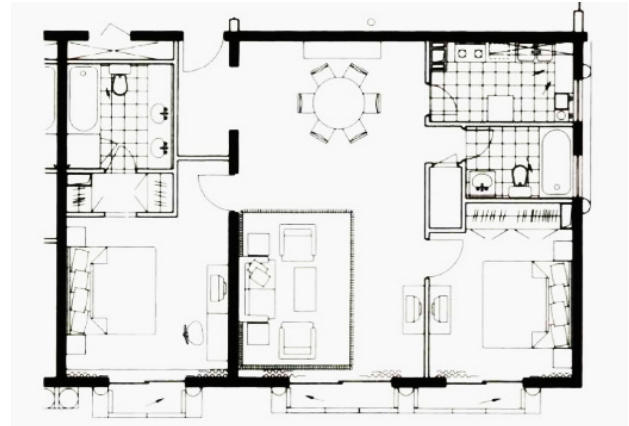
The apartment model outlined below is equipped with two bedrooms, a living room, a dining room, a kitchen, and two bathrooms (see Figure 30). The design represents a shift towards more practical and spacious living spaces compared to the residences constructed before 1979, showcasing an emphasis on living quality. At the same time, the apartment provides more space for family activities, such as the living room and dining room.

**Figure 29**



Liyuan apartment  
(Zhuzhai Sheji Wushinian, 1999)

**Figure 30**



A two-bedrooms layout in Liyuan apartment  
(Zhuzhai Sheji Wushinian, 1999)

In *Zhuzhai Sheji Wushinian* [50 Years of Residential Design], the author expresses a desire to explore neoclassicist architecture from a modern perspective and create new forms and concepts using new materials. However, this approach reveals a preference for European architectural styles and a disregard for the local cultural background of Beijing. The residential design merely appropriates architectural elements and symbols without considering their meaning in the context of Beijing's cultural heritage. This raises important questions about the role of architecture in shaping cultural identity and the need for architects to understand local cultural elements and values.

## **9. Zhuquemen**

Zhuquemen is a high-end community, completed in 2008, covers 11.4 hectares and has a total construction area of 210,000m<sup>2</sup>. The community comprises 30 buildings, including 23 residential buildings, six villas, and one office building. Although the architect attempted to integrate traditional Chinese architectural elements into the design, the community's architectural appearance does not reflect the characteristics of Beijing courtyard houses. Instead, it draws on the style of the Huizhou-style buildings in the Jiangnan area (see Figure 31), which needs more deep thinking and research on Beijing's traditional dwelling.

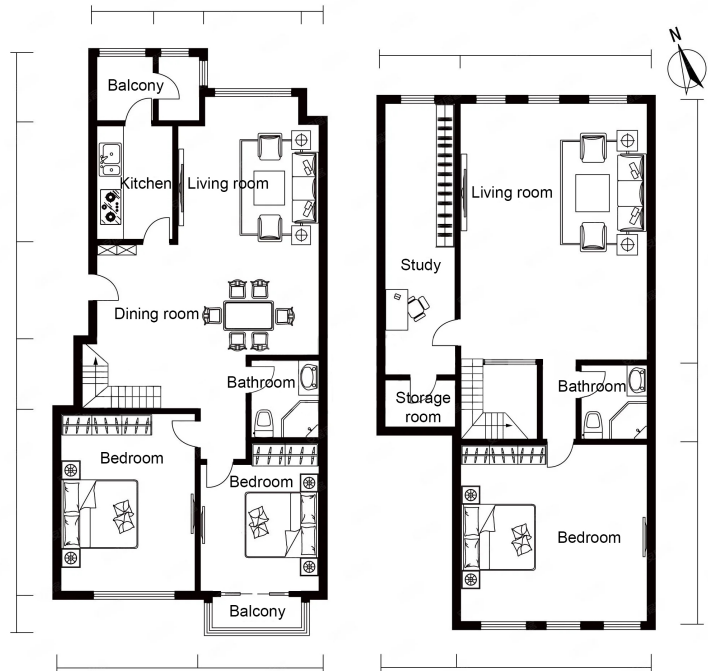
The following apartment types are equipped with two living rooms, a kitchen, a dining room, a study, a storage room, a balcony for washing machines and drying clothes, a viewing balcony, two bathrooms, and three bedrooms (see Figure 32). The three bedrooms are placed on the south side, which receives more sunlight.

**Figure 31**



Zhuquemen community  
(Lei, n.d.)

**Figure 32**



A three bedrooms layout in Zhuquemen  
(Anjuke, n.d.)

### 3.2 Interview with Residents in Beijing

The purpose of the interviews was to gain insights from Beijing residents on the evolution of housing in the city. To achieve this, I interviewed residents from three groups: those living in courtyard houses, Soviet-style houses, and modern houses.

To ensure a comprehensive recruitment approach, I employed two primary methods: online recruitment through popular Chinese platforms like Zhihu and WeChat; and physical poster placement across Beijing.

On Zhihu and WeChat, I strategically shared recruitment information to reach a broad audience. For the poster placement, I selected areas based on the distribution of housing types, focusing on Courtyard houses/Dazayuan, Soviet-style compounds and modern housing. Courtyard houses are mainly located within Beijing's Second Ring Road, and I targeted locations such as Xilou Hutong, Beixin Hutong, and Fangjia Hutong, where Courtyard houses/Dazayuan are concentrated. Additionally, I placed posters in areas with existing Soviet-style architecture, including Baiwanzhuang, Maofangnan Xiaoqu, and Jiuxianqiao Sijiefang, among others. To capture a broader demographic, I also placed posters in modern communities across different districts of Beijing. For instance, in Chaoyang District, I targeted Huafangyicheng and Soho Xiandaicheng, while in Haidian District, I focused on areas such as Bajiajiayuan. These strategic poster placements aimed to attract a diverse pool of potential interviewees from various housing and architectural backgrounds in Beijing.

Upon receiving the registration information, I carefully screened and evaluated the volunteers to ensure they met the specific research criteria.

My questions (see Appendix 1) covered various aspects of their past and present living spaces, including basic information such as size and resident population, as well as their personal experiences and memories associated with their living spaces. I also asked for their opinions on the changes that have occurred in Beijing's housing landscape over the years. The interviews were conducted with the aim of having meaningful conversations with local residents, and each one lasted for a minimum of 30 minutes, with the longest interview lasting 90 minutes.

Interviewee 1, Mr. Wei, was born in 1955 and has resided in courtyard houses since birth. He and his wife have lived in the current courtyard house for 40 years, with a living area of about 80m<sup>2</sup>. With his expertise as a bricklayer of courtyard houses, Mr. Wei possesses a profound understanding of courtyard house construction. However, he believes the fact that genuine courtyard houses are few and far between in modern-day Beijing. Most well-preserved courtyards have either been converted into tourist attractions, hotels or Airbnb properties. For

Mr. Wei, these places are no longer true courtyards since they lack genuine occupants and, as a result, have lost their souls. On the other hand, the courtyard houses where most people reside are turned into Dazayuan, where several households live in one courtyard. Sadly, some of these dwellings have a smaller living area and a poor living environment.

Mr. Wei believes that modern-day homes have made people indifferent toward each other, and that courtyard houses provide a unique opportunity for neighbours to communicate and show care for one another. As such, he cherishes the intimate relationships fostered in such spaces.

The demolition of a significant number of courtyard houses is a negative phenomenon according to Mr. Wei. It results in the loss of tradition. He believes the fact that the vast majority of people appear to be unconcerned with the preservation of traditional buildings, and the construction techniques of traditional buildings are being lost.

Interviewee 2, born in the early 1940s, has resided in the same courtyard since birth. Initially, his family occupied the entire courtyard house, which subsequently evolved into a Dazayuan with five households now living in the same space. At present, he and his wife occupy the former main room of the courtyard, which covers an area of around 50m<sup>2</sup>. This area is equipped with contemporary amenities, such as a kitchen and a bathroom.

During our conversation, he fondly recollected the memories of playing with his siblings in the inner yard during his childhood and the grandeur of the courtyard in bygone days. He also complained over the disarray of the Dazayuan and the destruction caused to the original structures. Notably, he proudly exhibited the only antique item in their home, the doorknob, which has witnessed his growth and the history of Beijing.

Our interview was conducted in the hutong in front of his home; there, I had the opportunity to witness the close relationships among the neighbours. Every time a resident walked by us, they

warmly greeted us and engaged in a conversation, a unique experience I have not encountered in modern dwellings.

Interviewee 3, born in the late 1980s, resided in a Dazayuan until 1998. The Dazayuan accommodated two families, and his family lived in the west wing rooms. His parents shared a large room of less than 20m<sup>2</sup> with him, and his grandma occupied a smaller space located in the southwest corner of the yard. The courtyard had a kitchen and a tiny bathroom situated on the south side. The bathroom was only operational in summer, and in winter, they had to bathe in the public bathroom.

During our conversation, he shared numerous fascinating anecdotes about his childhood, including playing water fights with friends during the summer and visiting other households with a bowl and chopsticks for dinner at night. He also revealed that the most inconvenient part of living in the courtyard house was visiting the public bathroom on bitterly cold winter nights.

He further explained how Beijing underwent rapid changes after successfully bidding for the Olympic Games. The courtyard house where he lived was demolished, and towering skyscrapers took its place.

Interviewee 4, born in the 1970s, resides in a room within a Dazayuan with his family of three in the space of less than 20m<sup>2</sup>. They divided the room with a screen into two bedrooms, and one of the larger bedrooms served as bedroom, living room and dining room. There was also an incompletely-enclosed bathroom in the room.

He strongly advocates that courtyard houses foster intimate neighbourhood relationships, a feature lacking in modern homes where communication between people is minimal. The design of the courtyard house cultivates social connections, which is a benefit not present in modern architecture.

He believes that the demolition of a large number of Beijing courtyard houses was the only way for Beijing to modernize. In the past, facing the pressure of economic development, China could not coexist with the protection of courtyard houses and city development.

He believes that housing is an embodiment of culture, and existing courtyard houses must undergo proper preservation and maintenance. Additionally, the architectural form of the courtyard house should also be perpetuated in some ways, but he notes that contemporary Chinese society lacks an environment that promotes the continuing pervasiveness of traditional architecture. He himself desires to contribute to the inheritance of tradition in modern houses, but he lacks the resources and financial means to do so.

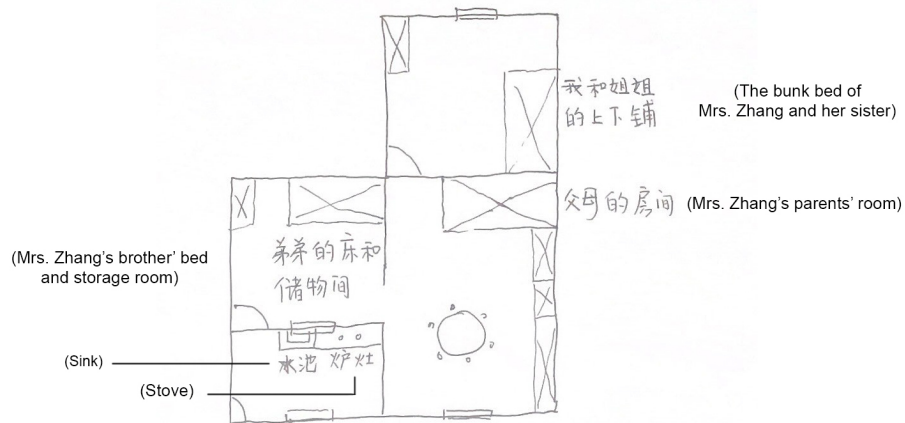
Interviewee 5 resided in a Dazayuan from 2006 to 2016. Although the entire courtyard's living area was around 200m<sup>2</sup>, ten households were living there. The largest space was 30m<sup>2</sup>, while the smallest was under 10m<sup>2</sup>. The interviewee lived in an approximately 10m<sup>2</sup> room with only a bed and a desk. He could not cook in the room and had to use the public toilet outside the courtyard. Similarly, he had to go to the public bathroom to shower. According to him, the neighbours were not as friendly and helpful as the popular perception of courtyard houses. However, his fondness for courtyard houses persisted, and he has even published related articles on the protection of courtyard houses in several magazines and periodicals.

He believes that modern residences in Beijing suffer from homogenization, and the current approach to the legacy of courtyard house merely represents a simplistic appropriation of traditional architectural symbols. Instead, a more reasonable approach must be found to carry on the tradition. He advocates that since courtyard houses embody cultural values, their destruction will result in the loss of collective memory.

Interviewee 6, Mrs. Zhang, lived in a Soviet-style building with her parents, brothers, and sister from the age of six (1975) until the age of sixteen (1985). The building was designed in a "verandah-style" layout, with a traffic corridor on the north side and apartments placed side by

side along the corridor. The building had three floors, with eight households on each floor and no bathroom facilities inside. If they needed to use the bathroom, residents had to walk about 50 meters to the public bathroom outside. Mrs. Zhang's home was at the end of the corridor, with a room size of about 30m<sup>2</sup>. Due to the limited interior space, her family used the hallway as their kitchen (see Figure 33).

**Figure 33**



Drawing by Mrs. Zhang

She shared with me the daily routine of cooking and eating. There was no kitchen inside the house, so every family had to cook in the corridor. As children, they would go to different people's homes to eat every day, which was also the happiest part of her childhood memories. Sharing the common spaces created an intimate neighbourhood relationship amongst residents. However, the uneven distribution of public space could also cause conflicts. She identified two main flaws of this type of residence: 1) lack of modernization, such as no toilet, heating, and hot water; 2) no dedicated family activity space, as sleeping, eating, and studying all had to be done in the same room. Despite its flaws, Ms. Zhang believes that the advantage of this type of residence is the common corridor, which becomes the place where each family communicates on a daily basis, promoting close neighbourly relationships.

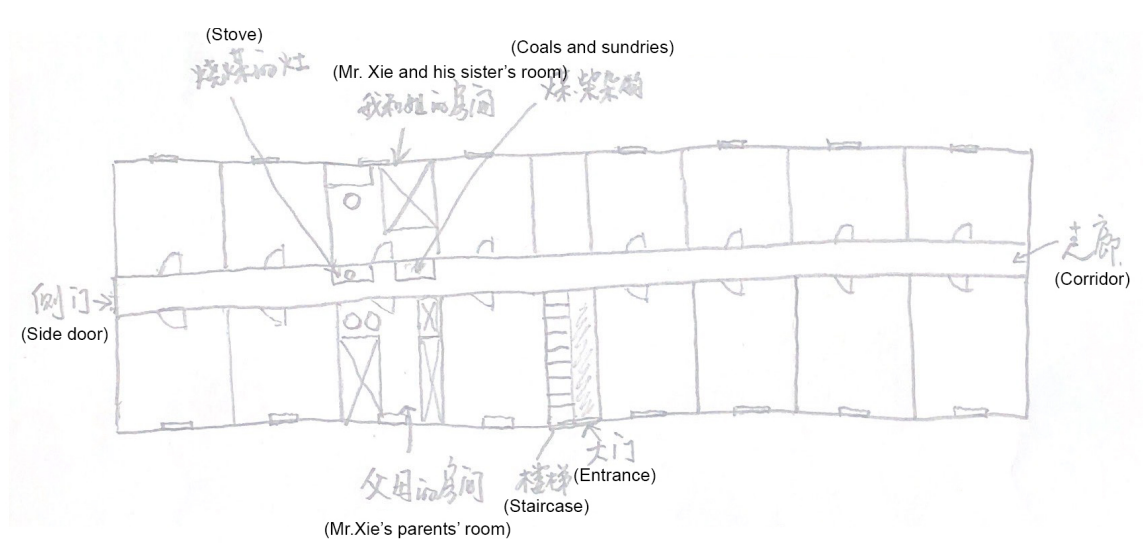


Interviewee 7, Mr. Xie, shared his experience living in a Soviet-style residence from the time he was born in 1968 until he moved out in 1984. The building resembled a dormitory, with two floors and sixteen apartments on each floor, and had an internal corridor layout (see Figures 34 and 35). Each room was approximately 10m<sup>2</sup> and had been allocated according to each family's population, job title, and number of years of employment. Mr. Xie's family, consisting of four members, was assigned two rooms (see Figure 35).

**Figure 34**



**Figure 35**



Drawing by Mr. Xie

Unfortunately, the apartment had neither a toilet nor kitchen. Public faucets were situated at both ends of the building, and the public restrooms were about 200 meters away.

Mr. Xie recounted that due to the shared corridor between rooms, doors were often left open, leading to a lack of privacy. Cooking was done in the hall using firewood or coal, resulting in poor air quality throughout the building. The corridor was also crowded with coal and kitchen utensils, leaving little space for movement. Despite these challenges, Xie's childhood memories in the residence were pleasant. He and his childhood friends often took advantage of the dim light, and objects placed in the hallway, to play hide-and-seek in that space. He enjoyed the communal dining experience and listening to stories under the big tree outside the building during summer with his friends.

**Figure 36**

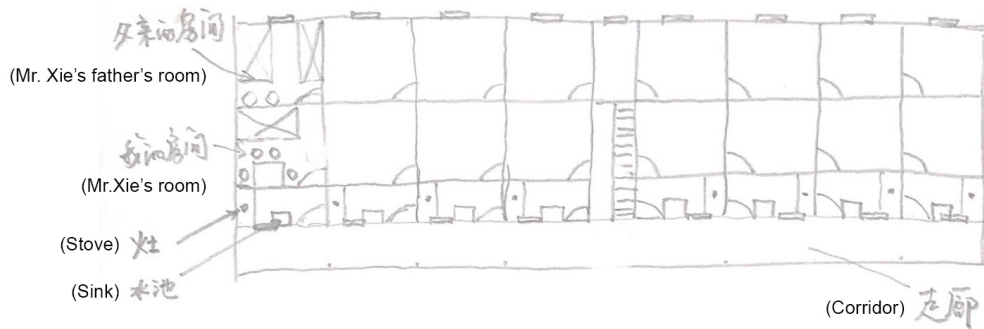


Drawing by Mr. Xie

Between 1984 and 1986, Mr. Xie moved to another Soviet-style building with a "verandah-style" structure (see Figure 36), consisting of two floors and eight households on each floor, in which each house was about 25m<sup>2</sup> (see Figure 37). This apartment had three rooms, including a kitchen and two bedrooms, with one of the bedrooms lacking windows. Although this building had better privacy, Mr. Xie felt that the community relationships were still close. He attributed this to the fact that most residents in Soviet-style buildings shared similar social experiences and family backgrounds since they came from the same working unit. Mr. Xie believes that this kind of living arrangement fostered a harmonious and intimate neighbourhood relationship. He thinks this kind of living mode is better than the current situation where people living in commercial housing know nothing about their neighbours.

When talked about modern housing, Mr. Xie expressed that most residents in Beijing prioritize comfort, cost-effectiveness, and proximity to schools over inheriting traditional housing and regional characteristics. However, many Beijingers still value housing with Beijing's traditional housing and regional characteristics, including himself.

**Figure 37**



Drawing by Mr. Xie

Interviewee 8 was born in the 1940s and grew up in a small Dazayuan that housed two families. Despite sharing public areas, the relationship between the two households was harmonious, with no significant conflicts. The inverted room in the south was used as a shared kitchen and dining area, while her family lived in the east wing, and the other household lived in the main room and west wing. The inner yard was used to raise chickens and grow vegetables. As a child, she fondly recalls chasing hens to lay eggs and celebrating the Chinese New Year in the lively courtyard.

In the 1970s, she moved to a Soviet-style building with three floors with eight households on each floor. Her family of four lived in a 40m<sup>2</sup> apartment comprising two bedrooms, a kitchen, and a small bathroom. She explained that, at the time, apartments like hers were of a high standard. She believes although the Soviet-style residences were not traditional buildings in Beijing, they hold an important memory for that generation. In the late 1990s, she moved to a modern high-rise residence, and after several moves, she now resides in a 180m<sup>2</sup> high-rise apartment with her daughter and son-in-law. While she appreciates the spaciousness, comfort, and modern amenities of the modern house, she cannot think of other advantages besides these.

She expressed disappointment in not knowing her neighbours and being limited to talking on her mobile phone every day.

Interviewee 9, born in 1993, has lived in modern high-rise residences since birth. Currently, he is living in a 120m<sup>2</sup> apartment with his mother. He considers the living room the most crucial space in the apartment since it is where he spends the most time with his mother, such as watching sports and exercising. He expressed his concern that cultural inheritance is not given enough importance in China. He believes that traditional architectural techniques are being lost due to the lack of skilled craftsmen and a supportive social environment. He emphasized the need for more protection of traditional houses, and suggested that the government should also focus on educating people about the historical and cultural significance of these buildings beyond just their architectural form. He believes this will help people appreciate traditional housing's value in the context of their times.

The interviews shed light on the current state of housing in Beijing. It was observed that most of the courtyard houses were transformed into Dazayuan, which have low living standards and cramped living spaces. Surprisingly, the residents of these Dazayuan — including interviewee four, who lives in an area with his wife and daughter in an area of less than 20m<sup>2</sup> — seem nevertheless to enjoy living there and are unwilling to move out even if the living conditions are difficult. Their level of attachment and belonging to the courtyard house is truly remarkable.

Residents of Soviet-style housing complexes generally expressed dissatisfaction with the design, which lacked modern amenities and privacy, and provided small living spaces with poor ventilation and lighting. However, the communal living form based on work units created a more harmonious and lively environment, promoting communication between neighbours. During the interviews, two interviewees mentioned that they bought apartments in the same community as their colleagues. They enjoy this kind of lifestyle where neighbours help each other and often get together.

The majority of interviewees have living experience in modern dwellings, and while they appreciated the comfort and spaciousness, The majority of interviewees have living experience in modern dwellings, and while they appreciated the comfort and spaciousness, they found it hard to identify its cultural value.

Overall, the interviews highlighted the urgency of preserving the existing courtyard houses and establishing a connection between the future development of modern houses and traditional houses.

### **3.3 Rethinking Cultural Identity of Beijing's Modern Housing Design**

In the insightful dialogue captured within *Conversations with I.M. Pei: Light is the Key*, Boehm (2000) engaged in a profound interview with the renowned architect I.M. Pei. Pei highlighted the significance of architectural origins by stating, "Buildings must come from their own historical roots, just like a tree must come from cultivated land." However, China's housing development has followed a markedly contrasting trajectory.

During China's modernization process, the local and regional characteristics of Chinese architecture have gradually lost their unique expressiveness. Residences in Beijing were first influenced by the Soviet Union, and later influenced by modern architecture from the West, which gradually transformed housing from a courtyard configuration into a box-like structure. In the process of development, the housing form is largely limited to copying the architectural form or its elements, while ignoring the context and semantics of the building itself. Therefore, the development of Chinese modern housing lacks the inheritance of traditional culture and ignores the original architectural semantics when accepting Soviet or Western modern design. Culture has its local characteristics, and there are great differences between Chinese traditional culture and Soviet or Western culture in terms of historical experience, cognitive structure and way of thinking. According to King (2008), understanding the modern identities portrayed in architectural and building forms requires a contextual approach, as there is no identity detached from its social, cultural, historical, or geographical context. Therefore, traditional architecture

must be constantly reconstructed within the framework of the modernization process. Chinese architects need to find the balance of the relationship between the foreign ideas, technologies and artifacts with Chinese culture. Following this study, I have identified key aspects of how to inherit traditional housing and regain cultural identity in Beijing's modern housing.

### 1. Inheritance of symbolic elements

Inheritance of symbolic elements is the explicit legacy of traditional architecture. It is an important way for the development and perpetuation of tradition. In the process of sustaining traditional architectural characteristics in modern residences in Beijing, it is necessary for the architects to study traditional architecture and the context behind it, to summarize and refine it. It is crucial, in other words, to find suitable ways to combine tradition with contemporary people's living habits and modern construction techniques.

Unfortunately, however, many modern architectural designs often "inherit" the tradition by simply applying the traditional shape, components and decorative elements. Take the Zhuquemen community mentioned in the analysis as an example. The design of the community adopts the architectural style of "white walls and gray tiles" of Huizhou architecture. Copying such a building to Beijing is no more than a simple collage of a symbolic architectural style that ignores its original materials, geographical conditions and climate reasons behind the formation of traditional buildings.

In short, when modern housing borrows from the legacy of traditional Chinese design and architecture, it is necessary to place that architecture in the original context, judge that architecture's value and efficacy in its current era, and make it reasonable in that era's social context.

### 2. The legacy of spatial configuration

Particular spatial configuration are the implicit legacy of tradition architecture in Chinese modern architecture. Utilizing these spatial precedents is imperative to enhance people's

experience of their living spaces as a cultural inheritance, and imbue those spaces with intangible spiritual and meaningful connotations.

The Suzhou Museum designed by IM Pei as an example. Suzhou Museum's architectural space narrative draws on the organization of traditional Jiangnan gardens. In the process of architectural design, the large-scale museum was divided into five components, which are responsible for different functional spaces and display areas. The various rooms are connected through the traffic corridors inside the building, and the building is enclosed around the inner central courtyard. This not only breaks the conventional configuration typically found in museums, where architecture takes precedence, but it also blends together gardens and architectural elements that align harmoniously with the traditional Chinese courtyard house and local residential style (Tong et al., 2022). Making the building achieve a deep cultural connection with the surrounding environment and creating a traditional architectural experience with modern architecture, this creation of spatial experience effectively reflects the cultural connotations of its architectural inheritance from diverse perspective.

Through the interviews, it becomes apparent that both traditional courtyard homes and Soviet-style residences have provided a forum for interaction among neighbours, fulfilling the Chinese belief that "near neighbours are better than distant relatives." Thus, contemporary housing should adopt this attribute of traditional architecture in order to foster closer relationships among people. By approaching modern architecture with an understanding of people's daily lives in traditional homes, we can create modern living spaces that offer a similar experience to that of traditional residences.

### 3. Appropriate application of traditional materials

Appropriate application of traditional materials in modern houses can make dwellers have a deeper sense of intimacy with tradition. With the rapid development of science and technology, a large number of new building materials have emerged in modern houses. The extensive

application of modern building materials is the result of the development of science and technology, but it also brings a sense of alienation from architecture.

Pallasmaa (2016) pointed out that contemporary cities are visual cities, seem at a distance and external to oneself. The essence of traditional architecture is related to the sense of touch, rather than the power of vision. The transition from the tactile realm to the predominance of visual, then, is seen as a kind of loss of intimacy. Natural materials such as wood and stone define the character of Architecture (Rapoport, 1969); they allow our gaze to penetrate their surfaces and convince us of their physical reality. These materials reveal their age and past and tell stories about themselves and about the history of their users. However, today's machine-made materials, such as large-scale glass, polished metals, and synthetic plastics, tend to present their hard surfaces to our eyes, concealing their age and materiality (Pallasmaa, 2016).

Applying some proportion of traditional materials in housing can not only achieve the purpose of saving energy and resources, but also resonates with the local cultural characteristics of the built environment. Through the application of traditional materials, creating an understanding of the past, and a deeper connection can be fostered between the present-day residents and the tradition that they have inherited.



## Chapter 4

### 4.1 Creation Piece — Modern Mirage

The research-creation piece is comprised two parts, and is based on research into Beijing's housing development and interviews with local residents. The first design (see Figure 38) aims to criticize the current state of courtyard houses and society's apathetic attitude towards them. The ghostly effect of the design represents the prevalent condition of courtyard houses: many have been demolished, and few remain well-preserved. The falling leaves symbolize the disappearance of tradition. Accompanying the image is an ancient Chinese poem urging readers to cherish what we have; it literally means: gather sweet flowers while you may, do not wait for the flower to fade and regret you did not cherish it.

Figure 38



Modern Mirage

The work presents a small ruin made up of architectural elements from a courtyard house, carefully selected based on interviews conducted with courtyard house residents (see Figures 39 and 40). The chosen elements are significant representations of the cultural value embodied by

courtyard houses. At the centre of the ruin lies a typical Qing Dynasty chair, which symbolizes the generational heritage and family history associated with courtyard houses. Through the story of an interviewee who had a similar chair in his childhood home, we see the emotional connection and sense of continuity that courtyard houses evoke. A traditional door handle made of copper is placed in the lower left corner, which represents the cultural significance and emotional connection embodied by non-human elements. Through an interview with a courtyard house resident who still lives in the home where he was born, we have learned, as indicted above, about the family's history and how this door handle played a role in their lives. Every time he touched the handle, he felt a connection to his relatives, his parents, and those who had passed away, as it had witnessed the rise and fall of his entire family. The artwork seeks to convey the idea that non-human elements also have stories and histories, and that they can form a crucial part of a person's tradition, culture, and identity. By highlighting the cultural significance of everyday objects like a door handle or a chair, the artwork aims to promote awareness of the value of preserving traditional housing and cultural heritage.

**Figure 39**



Modern Mirage

**Figure 40**



Modern Mirage

The second design incorporates courtyard houses as the main body, alongside huge concrete blocks. The courtyard houses symbolize traditional housing, while the massive, random concrete blocks represent the modern architecture that is fast overtaking the city (see Figures 41 and 42). The picture also features a modern poem that describes the harmonious scene of traditional houses. To capture the disappearing life scene, the font is represented by splitting all parts of each character.

The work aims to convey two meanings. Firstly, it highlights the conflict between modern and traditional housing in contemporary China, where high-rise buildings are viewed as symbols of prosperity, and old buildings are seen as backward. The intense aggression of modern architecture against traditional architecture not only invades traditional architecture but also breaks down the culture and tradition carried by it.

Figure 41



Modern Mirage

Figure 42



Modern Mirage

Secondly, the design reflects the current state of Beijing residences. While some architects have attempted to incorporate traditional architectural elements and culture in modern dwellings, most

have resorted to copying architecture styles or elements without in-depth thinking and research. The fusion of tradition and modernity in this design represents the lost of modern housing in inheriting tradition.

## Chapter 5

### 5.1 Implication

In previous studies, there have been numerous examinations of the development of Chinese and Beijing architecture. However, these studies primarily focused on public and imperial buildings, neglecting the scope of housing development. While there are some existing studies on Chinese housing development, such as *Modern Urban Housing in China 1840-2000* and *Zhuzhai Sheji Wushinian* [50 Years of Residential Design], limited research has been conducted regarding housing development in Beijing. As philosopher Alain de Botton (2006) discusses in "The Architecture of Happiness," a home is not solely a material structure but also a spiritual sanctuary. Despite the many hardships faced by residents, each room within their dwelling can evoke unique happiness through the power of architecture. As an essential and inseparable place for people, a house exerts a significant and nuanced influence on our daily lives and habits. Through my research, I aspire to raise awareness of the importance of dwellings and understanding of preserving traditional houses and disseminating cultural heritage in modern homes in today's globalized world. Based on my findings, I also aim to reconstruct traditional housing within the framework of modernization. It is hoped to contribute to future research and development in the field of residential architecture in Beijing.

Simultaneously, the artwork can serve as an exhibit to critique the status quo of modern Chinese residences and courtyard houses while also increasing public consciousness regarding the preservation and inheritance of traditional housing. The exhibition format may consist of a hybrid approach, combining physical architecture models with virtual reality or utilizing projections alongside actual architectural models.

### 5.2 Limitation

This study has several potential limitations that need to be addressed. Firstly, the limited availability of residential floor plan records during the period of 1949-1978 poses a significant challenge. Many Soviet-style residences have been demolished or remodeled, resulting in a

shortage of reliable data sources. Consequently, the selection of housing during this period is restricted, limiting the scope of the study.

Secondly, the depth of communication with some interviewees is another potential limitation. During the initial stages of the interview, it was challenging to establish a comfortable rapport with some participants. This limitation hindered the development of a close relationship with the interviewees in a short period of time, which would have enabled more in-depth interviews that stimulate critical thinking.

Furthermore, the interviews I conducted were limited in number, and it is important to note that they may not provide a comprehensive representation of the population. Additionally, it is likely that the individuals who volunteered for these interviews already had a pre-existing interest in Beijing's traditional dwellings, which could introduce a certain degree of bias into their perspectives.

Lastly, one of the challenges I encountered in this study was the translation of Chinese to English. As this study is based in China, it involves a significant number of professional terms related to Chinese traditional architecture and government policies that require accurate translation. The correct translation of these technical terms is crucial to ensure that readers understand their meaning and contextual background. However, translating these terms accurately poses a significant challenge that requires expertise in both languages. Therefore, I strived to ensure that the translated terms were clear and concise, and that readers could better understand their meanings and contextual significance.

## References

[A Three Bedrooms Layout in Zhuquemen]. (n.d.). [https://www.sohu.com/a/633632773\\_121335569](https://www.sohu.com/a/633632773_121335569).

Bacon, Edmund N. (1976). *Design of Cities*. Revised edition, Viking Press, p. 244.

Bai, Y. (2015). *The Renovated Entrance in Rongyuanzhai*.

Bai, Y. (2015). *Decorations on the West Second Entry Door in Rongyuanzhai*.

[Baiwanzhuang Lishi Jianzhuqun: Yanhuoshengxi, lijiumixin]. (n.d.). *The Floor Plan of the Dormitory in Baiwanzhaung*. [https://www.sohu.com/a/633632773\\_121335569](https://www.sohu.com/a/633632773_121335569).

Beijing Today, *Beijing Yanshan Publishing House*, 1989 edition, p. 83.

Boehm, G. V. (2000). *Conversations with I.M. Pei: Light is the Key*. Prestel.

Botton, A. (2006). *The Architecture of Happiness*. Pantheon Books.

Broudehoux, A. M. (1994). *Neighborhood Regeneration In Beijing*.

City Housing Magazine. (2019). Woyu beijing zhai Jianshe de qishi nian — fang Beijing shizhengfu zhuanjiaguwen Yang Sixin [My 70 years of experience with urban housing construction in Beijing - An interview with Yang Sixin, a specialist consultant for the Beijing Municipal Government].



Cui, Y. (2018). You Beijing baiwanzhaung zhuzhaiqu kan chengshijianshe de bianqian [Historical changes in urban construction seen from the Baiwanzhuang residential area in Beijing]. *Architecture Review*, 53-55.

Casault, A. (1987). The Beijing Courtyard House. *Open House International*, 1987, 31-41.

Dong, J., & Ma, C. (2019). Beijing chengshizhuzhai jianshe de shejiheshishi (1949—1966) [Design and implementation of urban housing construction in Beijing (1949-1966)]. *Communist Party History Studies*, (12).

Duan, B.(2016). *Beijing siheyuan zhi* [Beijing Courtyard Journal]. Beijing Publishing Press.

Feng, J. (2000). *Local Culture Conference*, Beijing.

Fu, Y., & Yang, H. (2015). Chuyi sushijianzhufengge he chengshilishijianzhubao hu — yi hefeishi weili [The attempting discussion on Soviet-Style architecture and historical buildings preservation]. *China Development*, 15(3), 60.

Gan, G. (1990). Perspective of Urban Land Use in Beijing. *GeoJournal* 20, 359–364. <https://doi.org/10.1007/BF00174975>.

Gaubatz, P. (1995). Changing Beijing. *Geographical Review*, 79-96. Taylor & Francis, Ltd.

Gaubatz, P. (1999). China's Urban Transformation: Patterns and Processes of Morphological Change in Beijing, Shanghai and Guangzhou. *Urban Studies*, 36(9), 1495–1521. <https://doi.org/10.1080/0042098992890>

Gu, N., Song, J., & Sun, W. (2010). Qianxi Beijingsiheyuan de wenhuaneihan he jianzhutese [Analysis of the cultural connotation and architectural characteristics of Beijing's siheyuan]. *Shanxi Architecture*, 36(20).

Guowuyuan Bangongting 国务院办公厅. (1998) [State Council General Office]. (1988). Guanyu zhuanfa guowuyuan zhufang zhidu gaige lingdao xiaozu "guli zhigong goumai gongyou jiu zhufang yijian" de tongzhi [Notice on forwarding the opinion of the state council housing system reform leading group "encouraging workers to purchase old public housing"].

Hall, S. (n.d.). Cultural Identity and Diaspora. *Framework*, no.36.

He, Y. (2021). Zhongguo xiandaijianzhu de wenhuachuanchengxingsikao [Cultural Inheritance Thinking of Chinese Modern Architecture]. *Jiangxi Jiancai*.

Hou, Y. B. (1997). *Zhongguo jianzhu meixue* [Chinese Architectural Aesthetics]. Heilongjiang Science and Technology Press.

Inglis, F. (2006). Universalism and Difference: The Separation of Culture and Politics. *British Journal of Canadian Studies*, 19(2), 165–176. <https://doi.org/10.3828/bjcs.19.2.4>.

Jia, J. (2009). *Beijing Siheyuan* [Beijing Courtyard House]. Tsinghua University Press.

Jin, L., & Miao, M. (2019). Xinzhongguo chengshi zhuzhai 70nian (1949-2019) - Beijing [70 Years of Urban Residential Housing in New China (1949-2019) - Beijing]. *Urban Residential Housing*.

King, A. (2004). Spaces of Global Cultures: Architecture, Urbanism, Identity (1st ed.). Routledge. <https://doi.org/10.4324/9780203483121>.

King, A. D. (2008). Architecture, Globalization and Identity. In P. Herrle & E. Wegerhoff (Eds.), *Architecture and Identity*. Lit.

Lei, G. (n.d.) *Zhuquemen community*.

Liu, Q., Liu, H., Yu, J. (2011) *Expression of Chinese Traditional Culture in Contemporary Architectural Design* [Zhongguo chuantong wenhua zai dangdai jianzhusheji zhong de biaoda].

Lu, J., Luo, P., Zhang, J. (2005). *Modern Urban Housing in China 1840-2000*. Tsinghua University Press.

Ma, B. (1999). *Beijing Siheyuan Jianzhu* [Beijing Courtyard Houses]. Tianjin University Press. (p. 15).

McLennan, JF. (2006). *The Philosophy of Sustainable Design*.

Müller, C. (2008). Images of Switzerland at the World Fairs - Ephemeral Architecture as a Symbol of National Identity? In P. Herrle & E. Wegerhoff (Eds.), *Architecture and identity*. Lit.

Nijman, J. (1999). Cultural Globalization and the Identity of Place: The Reconstruction of Amsterdam. *Ecumene*, 6(2), 146–164. <https://doi.org/10.1177/096746089900600202>.

Neill, W. (2003). *Urban Planning and Cultural Identity*. Routledge.

Pallasmaa, J. (2013). Newness, Tradition and Identity — Existential Meaning in Architecture. *Docomomo Journal*, (49).

Pallasmaa, J. (2016). *The Eyes of the Skin: Architecture and the Senses*, China Building Industry Press.

Rapoport, A (1969). *House Form and Culture*, Pearson Education.

Shan, H., & Lu, L. (2010). Beijing Zhuzhai de Bianqian [Changes in Beijing Housing]. *Yuanzhuokafei*.

Shang, G. (2001). 1949nianyihou Beijingshi Jiatingzhufangmoshi de Bianqian [Changes in the Family Housing Model in Beijing after 1949]. China Academic Journal Publishing House.

Stave, B. M. (1988). A Conversation With Zhou Lei: Urban History and Development in Beijing. *Journal of Urban History*, 254-268.

Tan, L. (2002). Jiefanghou Beijing Chengshi Zhuzhai de Guihuahejianshe [Planning and Construction of Urban Housing in Beijing after the Liberation]. *Contemporary Chinese History Studies*, 9(6).

Tang, G. (n.d.). *The Entrance of Mei Lanfang's Former Residence*.

Tong, Y., Guo, Y., Wang, R., & Wang, T. (2022). Jianzhumoshiyuyan yu Suzhoubowuguan [The Architectural Pattern Language and Suzhou Museum]. *Urbanism and Architecture*, 2022(24).

Wang, H. (2018). 20 Shiji “Sushijianzhu” Yichanlunli Wenhua chutan — Yi Beijing Baiwanzhuang Weili [Exploration on the Ethical and Cultural Heritage of "Soviet-style Architecture" in the 20th Century: A Case Study of the Baiwanzhuang Residential Area in Beijing]. *Meiyu Shidai (City Edition)*.

Wu, L. (1999). Shijizhijiao Zhanwang Jianzhuxue de Weilai — Guojijianxie Diershijie Shijiejianzhushi Dahui Zhuzhibaogao [The Future of Architecture at the Turn of the Century: The Future of Architecture at the Turn of the Century: A Case Study of the Future of Architecture at the Turn of the Century].

Keynote Speech at the 20th World Congress of Architects of the International Union of Architects]. *Architecture*.

Xia, R. (2022). *The Main Room of Mei Lanfang's Former Residence*.

Xu, N. (2014). *The Inner Yard in Qi Baishi's Former Residence*.

Xu, N. (2014). *The Corridor in Front of the West Wing Room*.

Ye, Z. (2009). *Beijing Minju* [Beijing Dwellings]. China Industrial Construction Press.

Zhang, B. (1983). Plan d'Urbanisme Pour une Capitale où Il Fera Bon Vivre. *La Chine en Construction*, janvier, 8-13.

Zhang, H., et al. (1998). *Zhuzhai Jingjixue* [Residential Economics]. Shanghai University of Finance and Economics Press.

Zhao, J. (1999). Kaituochuangxin Jiyitengfei (1979-1999) [Innovating and Remembering the Progress (1979-1999)]. *50 Years of Residential Design*. China Architecture & Building Press.

Zheng, X. (2012). *Laobeijing Minju Zhaiyuan* [Old Beijing's Courtyard Houses]. Academy Press.

Zhongguo Qingnian Guihuashi Lianmeng, (n.d.). *The Three-story Apartments in Baiwanzhaung*

Zhu, Y. (2007). *Zhufangzhidu Gaige: Zhengcechuangxin yu Zhufanggongping* [Housing System Reform: Policy Innovation and Housing Equity]. Sun Yat-Sen University Press.

*Zhuzhai Sheji Wushinian* [Fifty Years of Residential Design — Selected Works of Beijing Institute of Architectural Design & Research]. (1999). China Architecture and Building Press.

## **Appendix**

### **Interview Transcripts**

(This interview has undergone the Ethics Approval process)

What type of housing are you currently residing in? (e.g., courtyard house, Soviet compound, high-rise dwelling)

What types of housing have you lived in before? (e.g., courtyard house, Soviet compound, high-rise dwelling)

Who do you currently or previously live(d) with?

Describe your home in three words.

Aside from basic activities like eating, sleeping, using the restroom, and showering, what takes up most of your time at home?

Are there any activities you mentioned that you engage in with someone else?

What do you typically do at home with your family members or roommates?

On a scale of zero to ten, rate the quality of communication with your family members or roommates (zero indicates less than ten minutes of communication per day and minimal interaction, mainly focused on watching TV, using mobile phones or computers, while ten represents infrequent use of mobile phones, computers, and TV, and a substantial amount of time spent with family members or roommates, engaging in deep conversations.)

Which area of your home is most important to you? What do you usually do there, and why is it significant?

Do you know your neighbours? When was the last time you had a conversation with them?

What kind of relationship would you like to have with your neighbours? How do you envision your ideal relationship with them?

Does your home provide you with a sense of belonging? Rate it on a scale of one to ten based on this criterion.

Please rate your overall satisfaction with your home on a scale of one to ten. Additionally, could you provide some insights into what aspects of your home satisfy you and which ones do not meet your expectations?

Use three words to describe your impressions of courtyards, Soviet-style houses, and modern high-rise buildings.

Do you believe that your living environment can influence your lifestyle?

If you were to live in a courtyard house, Soviet-style compound, or modern housing, do you think your way of living would change accordingly? If so, how?

Which type of residence is more conducive to preserving Chinese traditional culture?

Do you think it is necessary to incorporate Chinese elements and traditions into residential design?

Do you think Beijing's contemporary residences have Beijing's unique modern attributes?



Should residential buildings in Beijing reflect contemporary characteristics unique to the city?

Do you believe the transition from courtyard houses to Soviet-style and modern buildings has led to increasingly homogeneous living spaces in Beijing?

Do you have any belongings in your current or previous home that evoke special emotions and memories for you?

Could you please share a memorable story that occurred within your home and left a strong impression on you?

If you could create your ideal residence, what would it look like? Imagine returning home after a day of work—describe the scene or feeling you would expect upon opening the door.

Can you roughly draw what your (old) home looks like?