THE PAST, CONTEMPORARY AND FUTURE UTILITY OF BEIJING COURTYARDS

BY

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THESIS

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ABSTRACT

This project tackles the practical value of traditional courtyards in Beijing. It features a utilitarian perspective—examining the relevance of the courtyards on both macro- and micro-levels through mapping. The value of the project lies in its primary endeavor to introduce the concept of mutation into the controversy over the value of Beijing courtyards and to present an alternative for the present framework of preserving and design of the courtyards. In order to categorize the traditional courtyard typologies, five typical examples are selected as case studies. Both the social/historical context and the historical mutation of the individual courtyard are examined. This macro-level mapping sets the framework and leads to the more focused study of the most significant courtyard in a quest to determine the utility of the courtyard for its occupants. Based on the synthesis of the two levels of mapping, the ultimate utility of the courtyards in Beijing is expressed as the ability of the government to control the residents and the structural quality to facilitate the capacity of the space to allow occupants to organize themselves. Both types of utilities are inherent in the logic of the structure, which could be, and should be, transcended. A set of design criteria articulates the utility in detail and guides reader through the continuous realization of utility in a future uncertain, social trajectory. Finally an illustration of the criteria concludes the project.
ACKNOWLEDGEMENTS

Thinking of the process, perhaps the most frequent and strong thought is that, a lot of what has been told to us by the faculty have gradually become so true to me. Yes, knowing through the experience is even more important than the result especially for a master student. Since to the most degree, thesis research is more of an exploration into the unknown field, thus it is also a challenge to the inner-self of the student. If the student can really accomplish something, it will be no doubt a super encouragement to his/her confidence. Moreover, if such process and ideally the results are really appreciated by the student, it will also be a great inspiration for more individual potential.

Apparently I can not articulate every detail. But I have to address the great appreciation to the incredible help of my committee members, my family and my friends. My chief advisor Professor Sears is the leading source of my inspiration. I have learned a lot from his straightforward, objective and innovative comments. Professor Hays perfectly played a supplemental role in this process. Professor Deming is the leading figure who helped me criticize the process and gave me significant courage. My family, especially my father told me a lot about the subject of my study. Emotionally it has been a great dream for him to do something for our old residence. My mother, over sixty years old, accompanied my on site investigation in case some even older hostile residents hit me out (it happened). But there are good memories with strangers. I have done some incredibly successful interviews and archive hunting works with the help of some celebrities of diverse backgrounds and some officials. My fellow students helped me on certain spots both emotionally and intelligently too. But on the whole, I can’t imagine reaching the same spot ultimately with another committee composition. At some points I feel so regretful for not being able to address these thanks to those lovely people publicly. But now I am leaving, prolonging the process independently will undoubtedly be the highest form of thank. Thanks!
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CHAPTER 1 INTRODUCTION

1.1 THE MUTATION OF BEIJING’S LANDSCAPE

Through a brief reflection of our built environment over the past decades or centuries, it would be clear that nothing remains exactly static. The seemingly immobile and rigid spaces have constantly been changed not only by nature, but also by human forces, our changing ideology and improving technologies. The only thing that is consistent is change. Mutation is the constant state of both our human and natural environment. Our cities, which are the direct production of the development of technologies and evolvement of our ideology, are one of the main manifestations of such mutating process. Just as Rem Koolhaas stated: “Throughout the century, the modernization process has reached various peaks of intensity in various cultures. Inventions have always come out of it, new modes have been developed, sometimes unconsciously: mutations have continuously affected the city and what it represents.” (Koolhaas 2001, 309)

Undoubtedly, mutation is the theme of Beijing especially in the 20th century considering the drastic natural and artificial forces that have imposed upon both China and the city. Beijing is no common judging from an urban developmental view: “it is a unique example of capital-city design in China. It is the largest imperial capital in Chinese urban history, and it crystallizes the evolution of traditional urban Chinese capitals during different imperial periods.”(Wu 1999, 32) The larger mutating condition is also reflected at neighborhood level. In The Last Days of Old Beijing, Michael Meyer depicts his living experience in one of Beijing’s oldest neighborhoods - Dazhalan, which is composed of three thousand single-story courtyards and used to be the city’s famed “entertainment, artisan, and antique district”, though still flourishing with civic and commercial atmosphere in its original style, it was rotting and facing the fortune of being bulldozed to the ground because of the poor living conditions there.
However Dazhalan is only an episode during the modernization of the old Beijing. Strolling around Beijing, one must be astonished by the pace of the changing appearance the city exhibits. Such intensive shift, while improving people's living conditions and diversifying the old capital’s landscape, has not been always deemed to be a felicity to the city or its residents. “In the past few years, much of what remained to make China's capital an extraordinary city has been systematically destroyed in favor of characterless boulevards and brutalist, bathroom-tile-clad architecture, all choked by a cloud of traffic pollution.” (That was Beijing, 2000) Such may be the most typical censure being heard today that is mournful at the loss of age-old fabric of Beijing. Also gone with it is the organic and robust neighborhood which is deemed to be the most precious production of the fabric.

Though there are people arguing for the necessity of the tabula rasa for a promised future of the old city, the forced extinction of the courtyards is problematic to be verified. At least the departure point of the renovation of the capital half a century ago was highly controversial. According to the narratives of Wu, Liangyong the panic should be traced back to the burgeon of the theory and practice of low-cost housing for the working class and the later development of high-rise housing form around early 20th century in the West. Yet “when economic depression and fascist reaction began to oppress Europe in the 1930s, some of the innovators spent time in the Soviet Union testing their ideas further. It was from the USSR, then, that this influence on housing design and urban planning passed on to China in the 1950s.” (Wu 1999, 87) Also considering the fact that “there had been no tradition of restoration in China: successive dynasties ordered other emperor’s buildings razed or converted to their own designs.” (Knapp 2008, 277) Thus “the newly established government seized the opportunity to rebuild the cities as models of socialist organization and ideology.” (Gaubatz, 1999) Then there is the pervasively deemed miserable consequence: “The impact of modernist theories and methodologies on Chinese architecture and planning has been to
produce even more simplistic attitudes towards the urban environment than was the case in the West. This was due to the extreme utilitarianism forced on the Chinese profession by poverty and political upheaval.” (Wu 1999, 90) To be utilitarian seems justifiable throughout the time. But being in a state of extreme is bound to beget the loss of the virtue that should be valued and inherited. One pervasively being criticized about the pursuit of such extreme is the collapse of the ability to be self-sustained which induces the sense of a community. In Sorkin, Micheal’s article Learning from the hutong of Beijing and the lilong of Shanghai, this virtue is detected in the longtang (or lilong) of Shanghai which is deemed to share the similar organizational genius with Beijing’s courtyards and is expressed as “housing the necessities of daily life and powerfully conducing a sense of community via the inevitability of encounter with one's neighbors in the lanes.” (Sorkin, 2008)

The renovations of the capital, though lasted long enough to break down much of the original urban tissue, has gradually come to the point of calmness to reflect the aftermath: “As Beijing’s urban development progressed, there gradually emerged an awareness of the need to preserve the larger-scale historic buildings.” (Wu 1999, 44) Then, with the second master plan was published in the late 1980s, “the renewal of the Old City’s derelict houses became an explicit goal of municipal policy.” (Wu 1999, 44) The subsequent two versions of urban planning of Beijing further emphasized the historical and cultural significance of the city. The aforementioned famed neighborhood - Dazhalan was reconstructed under such principle of inheriting and preserving the city’s historical atmosphere and was rehabilitated according to its original appearance and function - Dazhalan markets.

1.2 THE MUTATION OF THE TRADITIONAL COURTYARDS IN BEIJING

The mutation of Beijing’s urban landscape is best expressed in the city’s unique tradition of walled courtyards. According to Wu, Liangyong, the architectural form of
courtyard house in China, though is common in the world, does have the features that
distinguish it from the other parts of the world: “it has had a particularly close relationship
with the planned layout of irrigation channels, settlements, markets, and street grids. This is
especially true of the Beijing courtyard house - the Siheyuan.” (Wu 1999, 66) Thus the
traditional courtyards and the city of Beijing share an identical morphology. Moreover, as
Wu, Liangyong stated, the hierarchical formation of the city’s urban fabric (the room - the
building-the courtyard compound-the hutong - the neighborhood - the street block - the city)
“combined with the characteristic low, undulating, and tree-dominated roofscape, is what
most distinguishes Beijing from the cities of the West.” (Wu 1999, 66)

The courtyard house, which first appeared in China about two thousands years ago and
appeared in Beijing at least 700 years ago, has successfully evolved with the transition of
ideology and the development of productivity. Part of the reason should be attributed to the
simple yet flexible and highly modularized plan and structure of the courtyard, thus it “may
be adapted to a great variety of uses.” (Wu 1999, 80) To be specific, “A courtyard house may
be occupied by one family or shared by a few. Some courtyard house complexes were
adapted to temples in the past, and many have been turned into offices today, which
exemplifies their versatility.” (Wu 1999, 80)

However, “from the social and technological points of view, courtyard houses – the
artifacts of the hierarchical Chinese feudal society built with traditional technology – have
lost their old reasons for existence in most regions of China.” (Wu 1999, 82) This must be
true in Beijing too since most of the courtyards have been bulldozed since the foundation of
New country. An indirect figure can demonstrate such striking contrast: “There were 3,250
hutongs when the CPC came to power in 1949. By 2004, according to the Beijing Urban
Planning Society, only 1,204 remained.” (Stone, 2008) Thus Beijing’s landscape has been
intensively changed as aforementioned as a result of the disintegration of its original
composing elements and hierarchical structures. Besides the top-down organized demolition, there are also bottom up forces applied to the survived courtyards. Such alteration has transformed the courtyards into various conditions and appearances. First, there are courtyards that have decayed into compounds. Many of these are “notorious for pungent communal toilets and dodgy coal-fired boilers.” (Allen 2007, 48) Whereas there are also gentrified courtyards which “have once again become the ultimate Beijing real estate status symbol.” (Allen 2007, 48) Private sectors and individuals who have detected the beneficial potential of courtyards bought and reconstructed them into decent dwellings and sell them at a high figure. And they are still popular: “Would-be owners view courtyard houses as the epitome of Chinese domestic life, entwined with 5,000 years of history that's worth the hefty price tag.” (Allen 2007, 48) Other than that, more and more traditional courtyards have been transformed into bars, stores and hotels. Though these renovated courtyards have altered their traditional and classical appearance to different degree, they prolong the life-span of these age-old fabrics and enable them to thrive again as significant tourism magnets in Beijing.

The Cultural Heritage and Historic Zoning Plan (Figure 1.1) best summarizes the status quo of the traditional courtyards in Beijing. The once thriving urban components have shrunk to several patches of protection zones defined by the local government. Within the protected areas, there are courtyards still being constantly maintained for residential uses, transformed and renovated to sites for entertaining uses, and permanently preserved for their historical values. Beyond the protected boundaries, large patches of courtyards are poorly maintained and deteriorating, being dismantled and ultimately being substituted by modern structures. Even with this promulgated plans, those remaining old residential areas are still facing the risk of being encroached by modern structures. According to the report by the writer of Robert .Marquand, “…only about 5 percent of the hutong of yore will survive once the dust clears. The official figure is 25 to 30 percent, but these numbers include the massive imperial
palace complex of the Forbidden City, ceremonial temples, and a large park.” (Marquand, 2001)

**Figure 1.1**: China Academy of Urban Planning & Design, Cultural Heritage And Historic Zoning Within The Old City Of Beijing; Master Planning of Beijing, 2004-2010; 12, 2004.

1.3 THE CONTROVERSY BETWEEN THE TWO OPPOSING STANCES AND THE ALTERNATIVE PERSPECTIVE

Obviously, as the traditional courtyards constantly vanish and diversify, Beijing will never be the same as the one the older generations are familiar with. Though the traditional courtyards have been the theme of the city for hundreds of years, there should be the landscape that belongs to a pre-courtyard era and undoubtedly a pro-courtyard landscape. Thus the crux seems to be the pace of the transition of the landscape and the acceptability of the pace to the inhabitants.

Therefore, there are experts like Wu, Liangyong who chant for the “inspiring cityscape” (Wu 1999, 35) created by the courtyards: “it is the infinitely variable and yet
clearly identifiable spatial arrangements of courtyards and pavilions that provides the richness and splendor of Beijing’s urban space. Even the plain and simple appearance of the humbler buildings plays a part by throwing into sharp relief the brilliance of the monumental edifices. This design heritage should not be overlooked.” (Wu 1999, 56) And architect who criticizes the contemporary housing design strategies: “Merely condensing the existing fabric of development to achieve higher density and efficiency does not address the needs of ownership, individuality, privacy, and community in ways that move our development patterns towards living places that are as meaningful as they are efficient.” (Habraken, 1999) Among the residents, the most pervasive outlook towards the value of Beijing’s courtyard is its symbolism; put alternatively, the culture that embodies by the courtyards. This is best exemplified in a focused dialogue in the article The Demise of Courtyard Homes: “Chinese courtyards also integrate relationships, families, landscaping and Oriental mysticism, including fengshui and the I Ching. We must preserve this.” (Valerie, 2008) However such attitude seems to be an instinct cultivated by the society rather than the product of a dialectic enquiry.

There are also specialists like Leach, Neil who brings forth a radical yet dialectic viewpoint: “what once seemed ugly may appear less objectionable after a period of time.” (Leach 2002, 12) Accordingly, the present pervasively deemed ugly, monotonous and alienating landscape of Beijing has the potential to be perceived as “familiar and homely” (Leach 2002, 12) This notion is reasonable especially considering the future generations who might take the presently deemed “inauthentic” landscape for granted and treat it as the authentic identity of their living environment. Moreover, like Neil, Leach stated: “there can be no ‘authentic’ reality, since ‘authenticity’ is itself nothing more than a projection. No matter how ‘real’ the world may seem, all perception must remain a ‘construction’ – a negotiation between hard objective materialities and the ‘gloss’ of subjective interpretation.”
Such definition terminates the controversy over the authentic value of the courtyards.

Thinking of the future urban condition, there comes the concept of metapolis - “a working hypothesis” that “encompasses and exceeds the classical notion of metropolis” and further challenges the reminiscent conceptual framework: “The metapolis is the bearer of a new reality: the globalization of the urban condition. It represents freedom, emancipation from the pressures of history and geographical location, the distribution of new scales and programs, the downloading of formalist exercises, the development of business strategies, the abandonment of the architectural object, the intermixing of various cultural references, the development of new materials, the quest for the new.” (Simeoforidis 2001, 419)

In considering “the quest for the new”, there comes the verification of the uncertain state of human landscape. Just as Attali Jean stated: “If there is to be a new urbanism, it will not be based on the twin fantasies of order and omnipotence; it will be the staging of uncertainty; it will no longer be concerned with the arrangement of more or less permanent objects but with the irrigation of territories with potential” (Attali 2001, 270) “The uncertainty that mature capitalism has developed is an integral part of its very nature.” Thus “Uncertainty is no longer sudden, or unexpected, providing we closely observe what is happening around us. It is the probable, considered and accounted for outcome of human actions.” (Wise 2003, 23)
CHAPTER 2 METHODOLOGY

2.1 CONCEPTUAL FRAMEWORK

Mutation is not a newly developed concept, it is a term most used in scientific observation of natural phenomena and has gradually become an embedded essence of our relationship to the society and our natural environment. Also, its intensity is boosted to a much higher level under the present globalizing circumstances. So does the urge and curiosity to study the phenomena of mutation. To set the departure point of such inquiries, it would be necessary to concretize the mutating phenomena and locate them into something so that we can observe, record and analyze. In *USE - Uncertain States of Europe*, the logic of setting our physical world as the subject of our study is verified: “The physical world is the main sphere for the manifestation of economic, social and cultural phenomenon. It is not that these phenomena occur in the physical territory before they occur in other spheres of reality; not at all - the energies shaping them are essentially a-spatial. The central issue, as we said earlier, is that all these processes become legible and comparable in physical space. Indeed, space changes at a slower pace than behaviors of habitation and therefore interposes tension on them. The clues and evidence of new life styles are registered in this tension. And we have to learn to decipher this tension.” (Wise 2003, 20)

The changing pictures of the traditional courtyards, as a form of architecture and a type of urban tissue, are endowed with the clues to the pattern of social development. As with the statement of Yorgos Simeoforidis: “‘The ephemeralization, dispersal and mobilization of architecture,’ incites us to view architecture as an event, a situation that involves the work of OMA/Rem Koolhaas, Elias Zenghelis, Bernard Tschumi, Jean Nouvel, and Toyo Ito, architects who have gone beyond the style parade to consider the phenomena and programs of mass society.” (Simeoforidis 2002, 414-425) Moreover, “A dwelling, however, is more than a static vessel for daily life. As humanized space, the dwelling is symbolic of family
unity and sanctuary, a public statement of status as well as tangible expression of the family’s aspirations. It is a dynamic entity that expresses in varying degrees the changing relationships within the family, symbolizing and accommodating evolving hierarchical patterns.” (Knapp 1989, 36) Thus it is expected that a systematized observation and interpretation of the historic and present conditions of several specific traditional courtyards in Beijing would be able to inform the mutating patterns of the courtyards. Such conceptual framework is based on a nexus between living space and society. An examination into either of the two can help to interpret the other: “Spatial analysis is crucial for any examination of human societies because it is through spatial interaction that people integrate local and personal knowledge with larger political-economic processes.” (Low, 1996) This is because that the living space is where the most fundamental interaction in human society happens, which is the basic component of social mechanism: “Living spaces are places where, through interaction, individuals learn about others and the social, economic, ideological and political aspects of the world around them.” (Acharya, 2005)

Ideally, this study can provide new insight into the features of the changing status in contemporary urban space of Beijing. For example, in an age of compact housing pressure and trend, this study could serve as an initial probe into the question of “How can compact development, as a possible framework for sustainable development, be architecturally and spatially articulated, in a way that addresses local values of space, ownership, and neighborhood and leads to meaningful and desirable living environments.” (Andrew, 2008)

2.2 METHOD

To implement the study, the strategy to specify the previously justified space and diverse evidences are needed to be established and collected. In the study of the uncertain state of Europe, Multiplicity (a research organization that brings together scholars, artists and
architects to study the urban condition – definition cited from USE) “gather a diversity of evidence on one specific condition.” And “observes a phenomenon concerning space-relating to immigration, or transformation of production structures, or innovation in lifestyles-and then stratifies the information: data and people, the findings available on the spot and the images of the places, the written documents and the available zenithal view, the interviews with the leading agents and witnesses and an analysis of available literature.” (Wise 2003, 20) Then, through the investigation and observation of clues in each specific case, “the explanation of processes that possess an immaterial matrix and a ‘horizontal’ dynamic” can be developed “even though they are manifested in tangible space.” (Wise 2003, 20)

Representational forms are also important for the work with spatial evidence. Aside from narratives, mapping may be an effective way to present and analyze the collected information. “A map is a visual means to present information. Since “all cartography leaves the author’s hand or ideology; consequently the diagram goes beyond the pure documentation, and proposes a way to see the world.” (Mapping, 2006) Therefore, far from a mere description of the site, maps can be very informative if the data and information can be logically and creatively collected, processed, rearranged and represented. Thus it is envisioned that by constructing “an eidetic argument in space-time geometry” (Corner 1999, 165), the visual format is better approach through which to exhibit and communicate the information emits from a mutational situation. Just as what James Corner stated: “With regard to design, how one maps, draws, conceptualizes, imagines and projects inevitably conditions what is built and what effects that construction may exercise in time.” (Corner 1999, 12) This primary inquiry can also help to answer the question of what possible contributions or vantage points these maps can create for a more comprehensive understanding of the status quo and for a better strategy for future development.

Now that the technique is decided, there needs to be logic to guide through the study.
What has been justified and emphasized in the introduction is the mutational process; this implies the idea of utility which functions as the permanent theme in this changing landscape. Thus the key is the quest into the mechanism of the formation of the utility. This perspective is the crux in this project. As previously mentioned, there are two distinct attitudes to the traditional Beijing’s courtyards which lead to the long time fierce debate between two camps. On one side, the courtyards are considered to be the products under certain ideologies and irrelevant to contemporary social settings, thus they should give way to modern constructions. On the other hand, the historical and the social ecological virtues of the courtyards are highly valued, thus both the original entities and the architectural typologies should be preserved. Under such circumstances, the utility means the relevancies between the courtyards and two levels of settings. One is on the urban level, which is the relevance between the courtyards and the social settings. The other is on the micro level, which means the utility of the courtyards for their occupants. The integration of the two will articulate the totality. Each of them should be examined with corresponding scopes and strategies. (Figure 2.1)

Accordingly, the specific method adopted in this project is categorizing the courtyards into different typologies, conducting on site investigations, choosing several typical cases,
mapping their historical physical mutations according to the general measurement and the historical records. Then based on the first mapping project, choose the most significant one to zoom in and make diagrams to study its spatial relevance with its occupants. Next, distill the utilities based on the reflections and synthesis; formulate a set of criteria on the premise that the utility is still relevant in the future social contexts. Finally the project is ended with an illustration of the criteria.

With such research process, a deeper insight into the seeming chaos and an order underlying the phenomena can be expected. After all, “‘Chaos’ is not disorder, it is a ‘sublime’ order, which, in the evolution of physics, finds greater lays than those of simple geometry.” (Simeoforidis 2001, 414-425) Such claim should be able to be applied to our built environment as well, or the study of the mutational condition of the traditional courtyards would serve as one of the efforts for the decoding of our chaos human society. Moreover, it is also possible that such an order can serve to consolidate the background for a more powerful and effective design solution and a more promising future of the profession.
CHAPTER 3 TYPOLOGY STUDY OF THE COURTYARDS AND THE SELECTION OF THE FIVE CASES

3.1 TYPOLOGY STUDY OF THE COURTYARDS IN BEIJING

To select the typical courtyards, the first step is to categorize the courtyards into different typologies, since “Type is a model, a standard of reference that exemplifies qualities found in forms that are more complex.” (Hanlon 2009, 29) So the type is a concentrated representation of the multiple forces that have exerted their impacts upon the courtyards in Beijing.

There is more than one paradigm to categorize the courtyards. Wu, Liangyong, one of the authorities in the field of traditional Chinese architecture categorizes the courtyards into four types (Wu 1999, 83):

- Basic one-courtyard complex
- Longitudinal multi-courtyard complexes
- Latitudinal multi-courtyard complexes
- Mixed multi-courtyard complexes

Such definition of typologies is made based on the classic courtyard prototypes. However through the on site investigation, I found that there are few accessible courtyards that can fall into the longitudinal and latitudinal multi-courtyard complex categories. To coordinate with the reality, also because of the fact that the structure and size of a courtyard are decided by the basic unit—“Though built in different scales and sizes, all quadrangles are composed by basic units—a courtyard surrounded by rooms at 4 sides.” (Zhang 1997, 5) I reorganize the typologies made by Wu, Liangyong (Figure 3.1):

- Basic one-courtyard complexes—courtyard complex which contain only one unit.
- Medium multi-courtyard complexes—Courtyard complex which contains more than 3 units, with a major unit at the centre and side units at left and right.
- Large multi-courtyard complexes—Courtyard complex which contains more units than the medium courtyard complex does.

<table>
<thead>
<tr>
<th>Basic one-courtyard Complex</th>
<th>Medium multi-courtyard complexes</th>
<th>Large multi-courtyard complexes</th>
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<tr>
<td><img src="image1.png" alt="Diagram: Basic one-courtyard Complex" /></td>
<td><img src="image2.png" alt="Diagram: Medium multi-courtyard complexes" /></td>
<td><img src="image3.png" alt="Diagram: Large multi-courtyard complexes" /></td>
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**Figure 3.1:** The three typologies adopted in this project.

### 3.2 THE SELECTION OF FIVE TYPICAL COURTYARDS

According to the typologies and the principle that the courtyards should represent diverse functions and conditions, five courtyards are selected (Figure 3.2). These cases have different sizes, compositions, and different historical and present functions (from factories, private clinic to bars); all have contributed to their diverse present conditions and their fortunes.
Courtyard 1—No. 83 & No. 85 DongSi Sitiao

No. 83 & No. 85 in Dongsitiao Hutong is a large courtyard complex. Today, according to its residents, there are more than 100 families living within it. Though this courtyard is in a bad condition, the local government could not implement renovation because of the ownership issues. Parts of the residents are employees of a governmental department. Most of the others are renters who migrate from all parts of China to the capital in search for a career with limited properties. Their living in this courtyard complex is a matter of expediency.

Typologically, this courtyard belongs to the large multi-courtyard complex. Because each small courtyard component is enclosed by buildings constructed in different ages, and there had been a series of functional changes, none of them belongs to the typical courtyard type. This courtyard typifies those large residential courtyard complexes that are the communal properties of certain institutions or governmental departments.
Courtyard 2—No. 12 Fengsheng Hutong

No. 12 in Fengsheng Hutong is resided by 13 households. It sits within an old neighborhood, yet the majority of which have been dismantled and replaced with new residential areas consisted of high-rise apartment buildings. The infrastructures of the courtyards have been poorly maintained for a long time.

Typologically, this courtyard belongs to the medium multi-courtyard complex. Such publicly owned courtyard complex consist the general deteriorating fabric in Beijing’s older districts.

Courtyard 3—No. 61 Dongsi Sitiao

No. 61 in Dongsi Sitiao Hutong is a small courtyard sits in one of the oldest and superior traditional neighborhood in Beijing yet with the most decent condition among the courtyards that are still occupied by common people. The government renovated this courtyard right before Beijing’s Olympic Games. Because of its decent condition, the courtyard has attracted many tourists around the world.

Typologically, since this courtyard only consists of a single inner courtyard, thus it belongs to the basic one-courtyard complex.

Courtyard 4—Mei Lanfang’s Residence

No. 19 in Huguosi Street is the former Residence of Chinese famous Beijing Opera singer— Mei Lan Fang (1894-1961).

Typologically, this courtyard belongs to the medium multi-courtyard complex. Structurally, this courtyard is typical though it has a courtyard strip on the west side of the main unit, which functions as the posteriorial shielding courtyard. There are many other such residential courtyards of celebrities that are well preserved and have been renovated to give shape to their original appearance. Generally, they are of similar sizes and structures, frozen to be constant all the time.
**Courtyard 5—Passby Bar (No. 128 South Luoguxiang)**

No. 128 in South Luoguxiang is the location of one of the most famous bars in Beijing. It is the first bar that opened in this oldest neighborhood in Beijing. The traditional neighborhood in this area has around 700 year’s history.

This courtyard only consists of the minimum components— the basic four houses standing on the four directions and an open space in the middle. The wing houses have been significantly expanded to enlarge the interior space. The gate is open next to one of the wing rooms, which is very rare. Typologically, it is difficult to categorize this courtyard into even the smallest type. However, in today’s traditional neighborhood, such courtyards exist pervasively and function diversely. Thus this bar serves as a supplement to the one-courtyard complex type in the study. It is actually the architectural decorations that closely adhere to the traditional style that still remind people of its original identity.

To sum up, among the five courtyards, three of them are still of residential use. As for the other two, one of them is of commercial use and the other is converted to a museum. The dimensions and historical backgrounds of the five courtyards can typify most of the courtyards in Beijing.

### 3.3 ARCHITECTURAL AND SPATIAL FEATURES OF TRADITIONAL COURTYARDS IN BEIJING

To map the physical historical mutation of the five courtyards, some significant architectural characteristics need to be articulated (Figure 3.3). These architectural features are clues of the social status of the properties and the historical experiences they have gone through.
The spatial compositions

The design and construction of courtyards are highly modularized. It is actually in accordance with the module of traditional Chinese architectures. According to Wu, Liangyong, “the number of bays, the number of purlins and the height of the columns” are the three elements that decide the spatial dimension of courtyards. (Wu 1999, 80) Below is a description of the general structure of a common medium-sized multi-courtyard complex:

“Quadrangles with 2 or more units are generally divided into Nei Zhai (Inner Quarters) and Wai Zhai (Outer Quarters) by means of having a separating wall built along the southern end of wing rooms on the east and west sides, thus the courtyard is divided into 2 parts—inside the wall is the inner quarter, and outside, the outer quarter. An inner entrance is open on the wall so that people can go to and fro.” (Zhang 1997, 5)

The entry gate

There are mainly 6 types of gates in Beijing’s Courtyards, each with its own identifiable features and corresponding symbolizations.

1. Gates of residences of former princes—as the name suggests, they belong to the people of highest hierarchies, usually of 3 to 5 bays wide with 1 pair to 3 pairs of doors. The
The overall dimension, the spacious area outside the gate and material (only wood) signify the
magnificence of the households.

2. Guang Liang Gates—this type of gates is second to the gates of residences of
princes. Larger portions of these two types are similar, only that they are less spacious, with
only one bay across and fewer decorations compared to the gates of the highest ranks.

3. Jin Zhu Gates—this type of gates are said to be a ramification of Guang Liang Gates.
Though with only 1 bay across and less are outside the gates, they are also the symbols of
official households.

4. Man Zi Gates—as the picture shows, there is almost no space out of the gates, and
only the panels are made of wood. This is said to be forms developed from Guang Liang
Gates and Jin Zhu Gates, commonly used by wealthy households among ordinary people.

5. Ru Yi Gates—there are generally three categories of Ru Yi Gates—large, medium
and small gates. Each correlates with the financial capacity of the households. Such type of
gate is usually adopted by people wealth yet lower political status. (Zhang 1997, 13)

6. Wall-typed Gates—this is the least sophisticated among these types of gates, thus
the most common type adopted by the majority of the ordinary citizens.

- The screen wall

The screen walls are used to block the vision from outside to the inside of the courtyards.
Usually the screen walls are made of stone and carved with low reliefs to express some
auspicious expectations.

- Chui Hua Men (festooned gate)

In a larger courtyard compound which is composed of more than one unit, there will be
a Chui Hua Men built as a threshold on the walls which separate the inner unit and the outer
unit. The decorations and materials greatly diversified the types of Chui Hua Men—from the
most humble to the most sophisticated, the financial and social status of the household is
clearly displayed. Today, in newly renovated or newly built courtyards, this type of gates have been largely simplified or even completely neglected to accommodate contemporary living requirements.

- The inner quarter

This part of the courtyard are surrounded by the principle house sits on the north side—usually resided by the owner of the property, the side houses sit on west and east side which accommodate the family members of lower hierarchies. The Chui Hua Men and the walls define the south boundary of the inner quarter.

- The corridor

Traditionally, a corridor connects the houses in the inner quarter and the Chui Hua Men. This architectural annex provides convenience in times of bad weather, also it adds an additional spatial layer to the courtyards and are commonly be conceived as a spatial transition between completely closed spaces—the houses to the completely open spaces—the courtyard in the middle. In some non-typical courtyards with more complex spaces, the corridors also link the several open spaces in the courtyards together.

- The step

The step is a significant symbol in traditional Chinese architecture. Conventionally, steps are composed of odd numbers, from one step to as many as 7 steps. The greater the number of steps, the greater the significance of the corresponding houses. In the past, the steps are made of granite, yet today they are usually substituted with cement.

- The roof

The roof represents one of the most significant Chinese architectural characteristics and achievements. The utmost sophisticated structures and decorations make it the major articulation of both the status of the buildings and the owners. Usually there is a hierarchical difference among and within courtyards, which leads to the diverse types of roofs.
The materials and styles of the roof tile can also articulate the condition of the houses and their occupants.

- Others

Diverse decorations can be found on traditional courtyard houses. The sophistication of their design and style reflect both the social status of the household and the position of the specific houses within the courtyard, for example, the drawings of some auspicious pattern at the end of each rafter, the wood and brick carvings and style of gate piers.

The reading of a courtyard also entails the identification of the quality of the construction craftsmanship and the materials. For instance, the traditional way of constructing the walls and the floor is using rice milk to join the adjacent bricks together, thus there will be no spaces between the bricks. Such construction can only be applied to courtyard houses of the most superior households. For the common people, the construction is much more simplified, but there are still some differences which can communicate the general conditions of the structures and their owners.

Generally, for people who have little knowledge of traditional Beijing’s courtyards, the aforementioned architectural components might not be that apparent. However that is where the virtues of Chinese architecture lie in—they harmoniously form the organic whole space. Only when one is familiar enough with those structures and the spaces they formed, the unique temperament/nuances would start to emerge. They are the essence of traditional Chinese architecture and a long-time distilled expression of a vernacular culture. Nowadays, most of them have been degenerated into the architectural expressions of certain ideology, just like the physical condition of the courtyards themselves, together with those hierarchical nuances. Especially in those residential courtyards complexes, these architectural traditions are seldom kept and substituted with whatever material at hand to expand and claim the area of their properties.
CHAPTER 4 THE NEXUS BETWEEN THE COURTYARDS AND THE SOCIAL CONTEXT IN BEIJING

4.1 EXAMINATION OF THE HISTORY OF BEIJING’S SOCIAL CONTEXT

There has not been a widely accepted opinion concerning the emergence of the first courtyard in Beijing. However there is a hypothesis that the original prototype was built during 1027-711BC in Shaanxi province. Diverse elements have contributed to this prototype, for instance, the aforementioned emphasis on order and the respect in traditional Chinese culture. Together with the regulation of the regime at the time, the base plan of the capital was decided: “(The government) had an imperial edict promulgated, saying that among inhabitants of the old city, who wanted to move into the capital, priority contained 8 mu of land.” Which was distributed to officials and merchants moving into the capital to build their houses, and the grand-scaled formation of traditional quadrangle residences in Beijing began. ” (Zhang 1997, 1)

From the Yuan Dynasty to the mid of Qing Dynasty, the design and construction of the courtyards in Beijing hadn’t changed much comparing to the changes happened after the mid or late Qing dynasty, when a more intensive yet passive interaction with the other parts of the world were gradually taking place. This can be called a westernization period.

Before the mid of 19th century

This is the period during which the interaction that promoted the maturation of the courtyards in Beijing mostly happened. “Through Ming and Qing Dynasties, quadrangles of Beijing had been fixed and the construction was continuously being improved to meet the requirements of living, thus the quadrangle-styled residence like what people see today began to take shape.” (Zhang 1997, 1) From the formation of the module to the formation of the routine ornamental works, all reflect the influence from the other parts of China. The transition of the regime did not alter the general framework of the city and its
components—the courtyard. This is actually a process of reinforcement of the vernacular culture in the form of architecture.

Mid 19th century—1910

After the mid of 19th century, with the more intensive interaction with the western world, the architectural elements with western features started to emerge. At the same time, the inflow of a more modernized living style started finding its way into the courtyard, from the utilization of electricity, the emergence of toilet of modern style and the new ways of heating. This is the period within which the new infrastructure were started to be fixed into the courtyard. Such small scale and light renovation of the courtyard and the inflow of more people signified the start of an intensive mutation of the courtyards in Beijing.

1910—1949

Under the governing of the feudalistic regime, the courtyards were generally still maintained and constructed according to the hierarchical regulation at the time, though the adjustment of the social structure promoted by the westernization had already blurred the boundary among different typologies of courtyards. After the turnover of the last feudalistic dynasty, which is around the 1910s, the disappearance of the hierarchical regulation granted the freedom to build and renovate common people’s housing properties. Together with the continuous inflow of the population from around the country, courtyards with more flexible spatial arrangements started to emerge. According to the paper *The historical study of the traditional Beijing’s courtyard and its renovations*, the majority of the courtyards within this time period still maintained an integrated spatial structure, though most were shared among multiple households.

1949—1966

The independence of the republic of China signified a brand new era for the country, which also implies a brand new perspective for the courtyards. Before the notorious Cultural
Revolution, the original context of the city—the courtyards still existed with their general condition conserved, though most had been in bad condition due to the aging of the material. At that time, the courtyards were more of expediency for people without the capacity to pursue better living condition. Because the country at that time was only able to equip them with basic infrastructure, the courtyards were no good choice for ordinary people, except for the small group of people with power and wealth who could renovate the courtyards as much as possible.

1966-1978

The start of the Cultural Revolution means the debut of the ever disaster to the courtyards in Beijing. However, it is possible that such manmade disaster is the most powerful evidence of the non-irrelevance of the courtyard. The urgent was improving people’s living condition and settling as much population in the capital as possible. The derelict courtyards, which had already lost their spatial order due to the self-help housing activities of the residents, were dismantled on a large scale. For the government, fixing new infrastructure and the more frequent maintenance requirements meant nothing but huge burden. Practicality and efficiency were the primary and the only concern at that time.

1978- now

This is a period the government started to reflect upon the rush of renovating the city in the past decade and searched for new solutions for old city renovation. The motivation for this shift is the even worse urban chaos resulted from the random dismantle and construction of new high rise buildings, which is due to the lack of rational planning. The consequential disintegration of the original urban pattern/fabric, the disappearance of large area of superior courtyards and the deterioration of large amounts of residential courtyards had urged the government to put forward new policies aiming at “search for the lost order and fabric” (Rehabilitating the old city of Beijing 1999, 89) also for the reestablishment of historic image.
of the city. Then a series of policies were put forward, which have promoted some renovation experiments. For example, the so-called famous quasi-courtyards experiment project at Juer Hutong and the renovation of the courtyards neighborhood in Nan Chi Zi area.

All these efforts have led to the inquiry to the utility of the courtyards. At the same time, the courtyards were re-opened to private owners or institutes to alleviate the burden of the government. Therefore there have come the diverse renovation attempts aforementioned in the introduction. At policy level, multiple forces have been introduced to rationalize decision making process thus the government are being “more cautious about green lighting new development” (Yang, 2007). However, the effect of such cautiousness is still at the mercy of the changing higher institutions: “The pre-existing social and economic systems have not been abolished completely and new systems are in slow evolution. Transformations have been experimental and incremental, leading to the evolution of a dual system involving both the market and administrative mechanisms.”(Acharya, 2005)

In a word, Beijing, as the capital of the country, has been always doomed to experience the most drastic social change. The city itself is the first to reflect the changes of the ideology, especially when the communist party started to be in control of the country, for instance, the population explosion, the changes of demographic composition and the new functional zoning of the city. The discussion of the essence of the country and the regime may not be within the scope, however there is no doubt that such drastic social transformation is a permanent theme of the country—even at times of “peace”. (Figure 4.1)
4.2 MAPPING THE PHYSICAL MUTATION OF THE FIVE COURTYARDS

Accurate measurement of the courtyards is impractical due to the dimension and complexity of the sites. Thus the maps are general records of the site condition. The identification work was done as accurately as possible according to the historical information embodied by the structures. For example, the style of the lintels on windows signifies the construction of the building is around the end of Qing dynasty, which is from the end of 19th century to the first two decades of the 20th century. Strict chronological identification and recording of the site is out of the scope of the project. To reemphasize, the focus here is to examine the utility of the courtyards that has enable the courtyards to evolve with the social context. The utility exist as a nuance within the spaces defined by the architecture in the courtyards, rather than the architecture themselves.

The earliest maps of Beijing, which is also the earliest historic references of these courtyards—Qianlong Map of Beijing was made in the 1750s by some missionaries from Europe. Though the maps were made as accurate as possible using the measurement
techniques at the time, the identification of the specific architectures on the map is still problematic because of the ambiguous positions and dimension of the structures. At some points, the structures are even obscured and impossible to be seen. Without an archeological identification process, this map can not provide accurate information for all the five cases for this project. But it does can provide references when some general spatial context information for each courtyard is needed.

- Courtyard 1—No. 83 & No. 85 Dongsi Sitiao

Historically, this large courtyard complex had been the property of the government for a long time. According to my speculation, this courtyard in the very beginning was a large open space used for storage during Yuan dynasty. Then it was used as a storehouse and factory by the Qing government to make coins until the beginning of the 20th century. Because of the capacious open space, the later governments used it as schools and dormitories for military police. From the 1950s, this large courtyard complex has been used by one of the governmental departments as dormitory for its employees. Though the dilapidation of the courtyard houses and the poor living infrastructure has rendered the complex into a poor living space, it has attracted many immigrants from other parts of China due to its adjacency to the city center, which means the convenience of living and working.

Through the on site investigation, it has been clear that the shift of ownership and the elapsed time have left their marks on the built environments of the courtyard complex. From the oldest structures which were used as storehouses and factories to the structures used for dormitories, each additions were added to give shape to the classic type. It is around the 1950s when the general structure of the courtyard was consummated, which is also the time when the Feudalistic top-down organization completely collapsed. When the new government took over the country, they continued the function of the large complex as a dormitory for military police and inserted four strip-type houses with significantly small-scale open space
in between. Though this seemed to be a deviation away from the original framework, the resulting spatial framework is still the product of the negotiation between the new and the original structures. Then the occupants of this courtyard complex became the employees and their families of a governmental department. The sudden and uncontrollable population burst within the complex has led to the additional small structures added constantly until the present day. The original large-scale open space which was once used for production was subdivided in accordance with the module of the structures. Where the space is too small for subdivision, the additions were added as accretion to the original structures. Thus generally, the skeletal structures of the complex which form the classic type of courtyards still hold the progression of its physical mutation, no matter what those forces which have promoted the mutation are. At the same time, the shift of the occupants has encouraged the encroaching of the public open space, which is a process of claiming of the private territories. One direct consequence is the peeling away of the demarcated territories away from the original complex, temporarily or permanently. Thus the demarcations between the different courtyard complexes are blurred, forming the dynamic contents within the street pattern of the old city.
No. 12 in Fengsheng Hutong is the courtyard my family had lived for about around 50 years. This courtyard, according to the memory of my family, used to be one fourth of a much larger courtyard. Then in the middle 20th century, a series of significant spatial transformations were exerted to the courtyard as a result of the drastic social change. This
court yard was a private property of a family before 1960. With more people and families living there due to the shift of the ownership of the whole property, the condition of this courtyard had been seriously deteriorated. Today, this courtyard is one of the few courtyards that are still standing along this street, waiting to be dismantled.

This medium multi-courtyard complex is a classic example of the dynamic subdivision process aforementioned in the first case. The breaking away of this courtyard complex from the original larger courtyard matrix is a direct result of the radical change of the social context, which is the population explosion promoted by the new government. Then in the political upheaval in the 1960s and the 1970s, such population explosion continued in the name of improving the productivity. Facing the threat of the earthquake happened in 1976, the households responded by adding structures in the middle of the open space, forming a loop in the principle unit for people to circulate.
**Figure 4.3**: Figure-Ground Mapping of the Historical Mutation of Courtyard No. 12, Fengsheng Hutong.

① 1910s ② 1950s ③ 1970s ④ 1990s ⑤ now
• Courtyard 3—No. 61 Dongsi Sitiao

This basic one-courtyard complex, according to the information provided by the oldest resident living there, has experienced slight transformation over time. The only significant change should be the separation of the posterial shielding rooms away from the courtyard. Other than that, the other rooms and general spatial framework have been preserved. The historical surrounding superiority of the neighborhood has contributed to the courtyard’s ideal condition. Many other small courtyards of similar type compose the base of courtyard reserve areas in Beijing.

On the earliest map of Beijing which was made in the 1750s, it is difficult to locate this courtyard. Even with the narratives of the oldest residents, it is not clear whether this courtyard has been part of a larger one. However it is clear that other than the separation of the posterial shielding rooms and the additional structures built as accretions to the original buildings, there are almost no more changes.
Figure 4.4: Figure-Ground Mapping of the Historical Mutation of Mei Lanfang’s Residence. ①1950s ②1980s ③now

The 1950s and 1980s figure-ground maps of this courtyard are made refer to the master thesis of *A Probe into the Renovation of the Traditional Beijing’s Courtyards in Contemporary Life Model* (Shi, 2008)

- Courtyard 4—Mei Lanfang’s Residence

According to the historical records, this courtyard is part of a larger imperial prince residence during the latter part of the nineteenth century. Due to the lack of maintenance, at the time this courtyard was given to Mei Lanfang, only the principle room and its two wing
rooms existed. The remaining structural buildings were reconstructed to form the typical courtyard space. After the death of Mei Lanfang in the 1960s, this courtyard had been left unused until the mid 1980s when the government decided to renovate this courtyard and made it the museum in memory of Mei Lan Fang. The renovation work was completed in 1984. Since then, this courtyard has not been significantly transformed.

![Figure 4.5: Figure-Ground Mapping of the Historical Mutation of Courtyard No.61, Dongsitiao.](image)

Legend
- Structures exist before 1960s
- Structures exist in the 1970s
- Structures exist after 1970s

- Courtyard 5—Passby Bar (Courtyard No. 108, South Luoguxiang)

According to the map made in 1750, this small courtyard is at the corner of a large multi-courtyard complex. The owner of this bar bought the courtyard from a real estate company and renovated it into a theme bar. This bar has injected a heterogeneous element in the larger neighborhood and the subsequent remarkable success has attracted more similar commercial entities, which has consequently transformed the whole neighborhood into a nest and shelter for people with creative minds and activities. The feature of this courtyard is not
its mutation over time, but when it comes to the point without the potential of future subdivision, how it functions dynamically to instigate a historic residential setting. The crux here is not a continuity of the architectural atmosphere but the transcendence of the historical context.

Legend
- Complexes of Passby Bar

**Figure 4.6:** Figure-Ground Mapping of the Historical Mutation of Courtyard No.108, South Luoguxiang.

4.3 REFLECTION OF THE CONNECTION BETWEEN THE MUTATION OF THEIR COURTYARDS AND THEIR CHANGING HISTORY

4.3.1 Interpretation of the mutational courtyards

**Figure 4.7:** Conceptual Mutation of the Courtyards Complexes.

Through the brief review of the history concerning the courtyards in Beijing, together with the mapping of the physical mutation of the five courtyards over time, a dialectic reflection can be generated at this point (Figure 4.7).
• The residential courtyard complexes incline to keep their classic appearances when they are owned by single households. That is, the courtyards can be arranged and maintained coherently. This is what the courtyards are originally intended for, which is the commonly perceived ideal state of the traditional courtyards in Beijing.

• Subdivision of the open space happens when the courtyards are facing the pressure of population explosion. Though the subdivision is an individual activity, there is still a pervasive spontaneous negotiation with this universal spatial framework. That is a subconscious adherence to the original spatial logic. When the original open space is limited, the additional structures will adhere to the structural buildings. Thus the open space is preserved. The subdivision is a complete bottom-up activity but is still organized by an intangible force—the utilities.

• Some questions can be generated based on the previous points. If the physical mutation is the epiphenomena of people’s life, which is enabled by the utility of the courtyards, then what is the utility? Put differently, what is the utility that has kept the courtyards mutated organically? Judging from the map, such organic mutation seems devotes to the integrity of the urban pattern. But an examination into the courtyards would make clear of the fact that the dilapidation of itself is an unavoidable trend. Then if the utility functions for a certain time period, whether there is such a threshold beyond which the utility will fade away with the traditional courtyard?

There is a premise need to be made. Most of the courtyards in today’s Beijing are actually constructed or renovated after the later part of Qing Dynasty. Those previous courtyards disappeared either naturally or artificially. Because of the majority of the material used in the construction of courtyards—from structures to decorations are wood and brick, they easily got dilapidated. Especially for those common people’s courtyards, which consist of the so called “background” for the magnificent Forbidden City, they constantly fell down
and have been reconstructed over time, forming the dynamic background. In contrast, the Forbidden City in the middle is a constant and static landscape.

Based on all these thoughts, the historic interaction between the courtyards and the social context can be distilled in this way: the time before the end the feudalism regime is for the formation and maturation of the courtyards typologies. The word “formation” and “maturation” should be quoted since judging from a dialectic perspective, there has never been an object that is highly developed and can be called “formed” and “matured”. The progression of history never stops. Historians and architects praise the traditional courtyard as a high-art of the past, which automatically endows it with a significance of nostalgia. This idea has degraded the courtyards into the so-called heritage. Rather, the most significant heritage in the evolvement of the courtyards during the hundreds of years is the present urban pattern/fabric and the architectural typologies. The pattern and typologies are of the same properties. They all set the framework that provides guidance for future development within it, rather than a handicap. Without the framework, there will be no such concept as liberation.

4.3.2 Discussion of the importance of the courtyard housing type based on the interpretation of the maps

Through the reflection of the historical mutational of the five courtyards (Figure 4.8), it is clear that the typical courtyards seldom exist. In realistic scenario, the components of courtyards negotiate with their spatial context to form the classic “fish-bone” like urban fabric (Wu 1999, 74). The typologies of courtyards we are familiar with today are an ideal distillation, just as Don Hanlon addresses: “Type is a model, a standard of reference that exemplifies qualities found in forms that are more complex.” (Hanlon 2009, 29) “Variations also occur over time. The type provides a baseline from which to gauge these changes, giving us a form to which we can compare all subsequent changes so that no matter how elaborate a
composition may become, there is still a primal referent form.” (Hanlon 2009, 34) Thus when the society experiences profound changes, variations of the typologies will doom to emerge.

Therefore it is not the courtyards themselves as specific style and their components that should be preserved. Rather, there is nothing that should be completely preserved in this context. It is the typologies that should be studied and developed. Thus there should not be any contradiction between the struggle to preserve the courtyards and the urgency to modernize and urbanize the city. However, the variations should be made more meticulously based upon an understanding of the utility of the courtyards in both macro and micro scales.

Another focal point generated here is that the physical mutation of the courtyards corresponds closely with the changing social context, and the changes always happen within a framework which enables the operation of people’s daily life and the existence of these structures (Figure 4.9). Thus every stage of the mutation process has its relevance. The dynamic mutation process embodies the virtue of the courtyards. The seeming deterioration is the epiphenomena of such functional mutation. The word “structure” is used because of the fact that at this point, the concept of courtyards has started to be blurred. The ambiguousness generated from the blurring of the traditional boundary of a courtyard complex not only implies its resiliency but also implies that the contemporary and future definition of the courtyard in Beijing should be broader than the original. According to the previous studies in this project, the largest courtyard complexes are the metaphorical matrix of the later series of mutation. The other four are the products of such mutational evolution. So the largest courtyard is the reservoir of the mutating dynamics. An examination into which will help to interpret the holistic utility of the courtyards.
Figure 4.8: Conceptual Mutation Process of the Courtyards Complexes
Figure 4.9: Mutation of Courtyards within Urban Blocks.
CHAPTER 5 DECODING THE TRACES OF THE UTILITY IN THE COURTYARDS

The focal point generated through the previous chapters is that the physical mutation of the courtyards corresponds closely with the changing social context. However the changes seem to always happen within a framework which enables the operation of people’s daily life and the existence of these structures. The word “structure” is used instead of traditional courtyards because of the fact that at this point, the concept of courtyards has started to be blurred. The ambiguousness generated from the blurring of the traditional boundary of a courtyard entity implies that the contemporary definition of the courtyard in Beijing should be broader than the original. Then the inquiry into the new definition should be based upon a transcendence of the utility distilled from the old. Since in Chinese social context, the courtyards exist for both the government as a device for control and living properties for the common people, then if the first horizontal study of the five cases is an endeavor to look into the interaction between the society and the courtyards, then there still necessitates another vertical study to decode the traces of people using the space within the courtyards. The integration of both studies would be able to lead to the new definition of the courtyards in Beijing.

This chapter will target on the second focused study with Courtyard No. 83 & No. 85 being it’s because of the synthetic and typical properties.

5.1 DEVELOPMENT OF BEIJING COURTYARD TAXONOMY OF THE INTERACTION BETWEEN THE SPACE AND ITS OCCUPANTS

A set of taxonomy is necessary to be developed first to guide through this focused mapping study. However, the conceptual linkage between the taxonomy and the findings of this mapping project is not a strict scientific causal and linear relation. The traditional courtyards embody a great level of complexities and ambiguities which complicate the
mapping of the traces. If the mapping is conducted by someone who is not familiar with the lives within the courtyards, then the observation of the residents’ activities will only be a partial of the panorama. Thus the decision making process of the taxonomy involves a great extent of personal experiences. Though the mapping is done as objectively as possible, a certain level of subjectivity is unavoidable, which is also the essence of mapping.

- Territory of the household (Figure 5.1)

  This is to show the density of households within the courtyards. The household density impacts upon the scope of the private and public territory thus further affects the complexity level of people’s life within.

- Threshold (Figure 5.2)

  This is to describe the rhythm of the architectural and spatial properties of the courtyards. Rhythm is closely related to the convention of people’s life in a courtyard in that it is the result of a long time negotiation among tradition, the evolvement of the social context and the corresponding living requirements.

  As I have identified, there are generally three categories of thresholds in the courtyards: verandas, the intersections of two larger open spaces and the entrances defined by various gates of the courtyards. Verandas are linear elements that imply the transition progress from one space to another. The intersections are point spatial elements that imply a more direct transition between spaces. The areas defined by gates of the courtyards are more special than the previous two in that it is a linear transition area between spaces yet much shorter than the verandas and more official than the intersections.

- Themes of the surface/material (Figure 5.3)

  The courtyard is composed of various materials. Different social hierarchies are usually assigned correspondent materials. (Refer to previous chapters) Today, the hierarchy still exists, within and among different courtyard entities. At the same time, household
groceries flow into the courtyards thus further diversifies the appearance of the courtyards. However, the purpose here is not to catalog all the stuff stored within the space of the courtyards, but to categorize the theme of the space, which is the later step of the mapping project.

Choosing the material of the floor of the open space is not only due to the convenience of the articulation on maps, but also out of the typicalness of the floor. The type of material, the condition of the material, the alternatives of the material, and the like, all contribute to the expression of the utilization of the space and the architecture. For instance, which area is mostly used and what each patch is used for. According to my observation, the five major categories of materials are: earth, cement, asphalt, brick and stone.

- The earth mostly exists as the base for vegetations, whereas in most of the courtyard compounds, it also covers the path for people’s circulation due to the lack of maintenance.
- Cement is quite common for flooring material in today’s residential courtyard. Its convenience and lower cost make it a biggest expediency.
- Asphalt has been the material for roof because of its impermeability. For the same reason, it is used for flooring material when activities frequently involves water, such as washing clothes, watering the vegetations.
- Brick is the most common flooring material all the time in courtyards. The issue here is that there are numerous types of bricks, each is used specifically in relation to the hierarchy of the residents.
- Stone seldom exists as a flooring material. In most cases, it is used for steps. Such stone steps are rarely used today in the newly built or renovated courtyards, with cement and bricks as alternatives.

- View—the pattern of visual promenade (Figure 5.4)
The process of promenade contributes partially to the so called routine way of organization of daily activities. This routine can also be understood as the pattern formed by the vision progression, which is a result of the identification of both the structures and the void space in between. Thus the material, the dimension of the space and the structure all contribute to the formation of this routine/convention. In his book *COMPOSITIONS in ARCHITECTURE*, the author Hanlon articulates how the pattern of visual promenade functions in a courtyard, the same can be applied to the courtyards in Beijing as well:

“A carefully designed sequence of spaces controls movement from the main entrance through a succession of three principal courtyards. Each courtyard is entered in succession at a corner, from which two views present themselves. The first is a view diagonally across the space to reveal its largest dimension, and the second is toward the building that dominates the courtyard. These experiences connect by narrow, deep spaces, each of which places the viewer in the optimal position to appreciate the next pair of views.” (Hanlon 2009, 211)

- Themes of the spaces (Figure 5.5)

This is a categorization of the intensiveness of utilization of the open spaces in the courtyards. The analysis is made based on both on site observation and the previous mapping practice in this chapter.

- Potential (Figure 5.6)

Potential is the speculation of the future changing status of the courtyards—changes in terms of spatial merges or expansions. This speculation is made according to all the previous study of the site, with each mapping practice contributes to this category proportionally. As I have identified, the changes always emerge at points of thresholds and mainly in two modes: temporary and permanent.

Except for the breaking through of the present demarcations, claiming of the spaces surrounding the built structures by the residents has the potential to further subdivide the open space. At the same time, the original timeless structures, which have existed for dozens of years, are facing the fortune of being dismantled.
Figure 5.1: Diagram—Territory of Household.

Figure 5.2: Diagram—Material.
Figure 5.3: Diagram—Threshold.

Figure 5.4: Diagram—View.
Figure 5.5: Diagram—Theme of the Space.

Figure 5.6: Diagram—Potential.
5.2 INTERPRETATION UPON THE FOCUSED MAPPING AND INQUIRY INTO THE UTILITY BETWEEN THE COURTYARD AND ITS OCCUPANTS

At first sight, these diagrams exhibit a great extent of dynamics—the dynamic interaction between people and the spaces. Though there is a certain level of logic underlying the complex phenomena, the separated interpretation of the diagrams would be less meaningful since the courtyard complex is an integrated system. Thus an overlaying analysis of these diagrams is conducted to search for the possible patterns (Figure 5.7).

First, the courtyards allow the existence of a certain extent of privacy of each household, which is the core of various themes of territories. The territory of privacy tolerates the encroachment resulted from the mutation of its surrounding structures and spaces. So there is a constant negotiation between the two which implies the existence of a threshold for the encroachment. The breaking through of the threshold will lead to the collapse of the
functional living system (which is enabled by the utility) of the courtyards. The integrity of the threshold is the major premise for the courtyards to exist. If it does not exist any longer, that means it has come to the point of badly deteriorated and can not bare the load of common people’s lives any longer. Such mechanism can also be understood as the scenario of self-help housing activities within Beijing’s courtyards.

However, the functional living system is not only about the private territories, but also about the effective organization of daily activities within the open public space. The pattern of the daily activities is not a linear to and from between departure points and destinations; rather, it is about the stability of “stay” and the flexibility of the flow which connects the , because people’s activities in the courtyards mainly happen within their own private territories. Then it is the fluidity between these points of “stay” that integrates them into an organic whole—the courtyards. Therefore the utility is about the coexistence of both the stability of those private territories and fluidity of the open space.

At this point, the two mapping projects together can lead to the comment that if the courtyards function as a device for the regime to take control of the situation, then for the common residents, the courtyards are a media that mitigate the impacts of the transformation upon their lives. The former entails the existence of the latter. Much closer to the comments given by Werner Blaser: “the human being is ‘enclosed’, but not like an object within a vessel; ‘to be in a space’ is a way of existing” (West meets east Mies Van Der Rohe 2001, 10), the utility of the courtyard is a property of the space within. It should be able to be realized by limitless possibilities rather than be restricted within a certain kind of vessel. The crux is the guidance—in this case a set of criteria deducted from the distilled properties that function in this transitional time period. This is the ideal mode of design that should be adhered to: to facilitate the positive mutation in the means of delicate adjustment instead of a force to keep a static world.
CHAPTER 6 CONCLUSION AND ILLUSTRATION OF THE CRITERIA FOR FUTURE FORMATION OF THE COURTYARDS

6.1 THE VIRTUE OF THE TRADITIONAL COURTYARD AND SPECULATIVE CRITERIA FOR ITS FUTURE

There has always been logic that lies behind the evolvement of peopled areas, as suggested in an article describing the evolving history of Chicago: “The city’s history may have begun in human dreams that prophesized its rise, but those dreams laid their foundations on solid earth, tracing their destiny onto the land’s own patterns.” (Cronon 1991, 24) Even if the pattern is a product of the natural forces at the beginning, it gradually complicates itself with the involvement of human elements, which accrete onto the existed settings. Such complexity, which is resulted from the interaction between the creatures and their habitat, is a kind of representation of culture. In this sense, the courtyards in Beijing are representations of culture, which is changeable and should be changed with the dynamic interaction.

What have been discussed in the earlier chapters are the mechanism of the interaction and the representation of the interaction. The product is a speculation of the trend of the social trajectory and distillation of the utilities of the courtyards. This chapter focuses on the continuation of the utilities based on an induction of the analysis then a deduction which ultimately leads to a set of criteria to enable the function of the utilities in various forms and settings.

As what has been previously articulated, the utility of Beijing’s courtyard lies in its function as the media between the changing society and the residents’ lives. After thousands of years Feudalism, China has entered an unstable transition period. The courtyards function as a buffer to mitigate the drastic social changes happened to Beijing. The courtyards set the initial point for later changes. The initial point is the classic version of courtyards and is actually the most ideal state of a courtyard, when enough open space is available for people’s
basic needs in terms of daily life and communication. Yet such state closely relates with the ownership of the whole courtyards. When the outside society is experiencing drastic social and natural changes, the ownership and uses of the courtyards shift as well. If the courtyard is passed on to a single owner, then the courtyard is likely to continue its previous state and maintained ideally. If the courtyard is occupied by multiple owners, then the instincts to build up their living territories subdivide the courtyard. First temporarily, then concrete demarcations show up, until the least possible size is reached for the subdivisions to still function as a courtyard. Thus the courtyard is seemingly deteriorating. However, this deteriorating state is precisely where the value of the courtyard lies. It allows changes to be made instantaneously, temporarily and permanently. This is a process of soundless negotiation, both within and beyond the original boundary of the courtyards. At the same time the order is kept by the very initial borders of the courtyards—the streets, which are actually the epiphenomena of the constant changes of the inner contents. This also suggests that a certain area of such structures is needed to form the base to absorb the constant and dynamic mutation of its each component.

Therefore, judged from a historical point of view, the mutation the courtyards enabled a hybrid core for the city. Such hybridity not only exhibits itself in the built structures but also in the hierarchies of the residents, which is the biggest feature of the capital. Thus the new structures that will be built from the debris of the previous traditional courtyards should corporate with the existing courtyards to continue the justified utility. Based on such premise, the new should physically evolve from the old. A transcendental controlling framework in this setting could be a new typology. In the field of architecture, the significance of typologies is highly valued: “a type prefigures basic characteristics of a design and places that design within a family of similar ideas.” (Hanlon 2009, 29) Beyond such cognitive familiarity, typology also grants the potential of diverse evolutions: “the use of a type as the basis or
starting point for design does not constrain or limit creativity. To the contrary, it allows the designer to establish at the outset an important quality of architectural form—familiarity. From there the designer can introduce new, innovative ideas.” (Don Hanlon 2009, 35)

The typology can be further materialized as the courtyard house—a ubiquitous type that efficiently accommodate the basic living requirements of the inhabitants. Another inductive interpretation of the relevance of the courtyard house in Beijing is the commonly acknowledged flowing space. There are interior and exterior fluidities embodied by the courtyards. The former allows the flexible daily basic interaction between the architectures and their users, which enables the integrity and continuity of the framework. This is what has been accentuated in the previous chapters.

In addition to the typology, the materialization of the utility should also emphasize the formal harmony with the existing structures, because the new constructions will ideally substitute the old to reform the base of the city. This successive process is doomed to take place in a long time period on the premise that the mutation of the urban core is not completely at the mercy of the top-down force. Equally important about the formal features lies in that they impact upon the operation of the individual entity, thus further influence the integrity of the base composed by the entities. In brief, the logic here can be best articulated as “Functions may be practical and utilitarian, or they may be metaphorical and symbolic; both are important in establishing the meaning of a design.” (Hanlon 2009, 35) Selected and transformed symbolic elements lead to the mental and physical continuity. In the case of Beijing’s courtyards, the elements could be the general style of the roof and color palette, whereas the material and structure should be in accordance with the logic of the time and the site, which is a matter of efficient utilization of the recourses and of integration of the new entities into their settings.

With this summarization, the cognitive progression of the whole project can be distilled
as follows.

The relevance of the courtyards with the city (the macro-utility) and speculation of the future social context:

- Considering the permanent theme of the city, the courtyard housing type will still enable the control of the government while serving as a buffer between the social change and people’s life;
- The further urbanization process will bring in much more population of diverse social hierarchies;
- The deterioration of the natural environment.

The relevance of the courtyards with the residents (the micro-utility) and the general requirements for their future evolvement:

- The need for the courtyards to correlate with the traditional courtyards. At the same time, the new design paradigm should tolerate the positive and negative development of the courtyards, which is to form an organic whole with the original urban components. This implies the physical coherence between the new design paradigm and the traditional courtyards design language;
- The possible coexistence of the urban poor and the wealthy group;
- The necessity to continue enabling the self-help housing activities;
- The potential of the new structures to physically connect with each other to form an organic base;
- The potential for the entities to develop vertically for flexible living capacity.

The above inductions and deductions finally lead to the following tentative criteria:

- The dimension of the parcel still adhere to the present urban pattern—the original urban grid;
- The continuation of courtyard house typology;
• Selective representation of the symbolic features of the existing traditional urban background;
• The potential for the entities to develop vertically for flexible living capacity;
• Within crowded urban context, the vision disturbance from the vertical development plan should be considered;
• Concise and economic spatial organization;
• The preservation of the communal green space (introduction of rooftop garden).

6.2 ILLUSTRATION OF THE CRITERIA

The criteria are guidance for future realization of the utility in the urban core of Beijing. However when put into practice the criteria are highly possible to be supplemented with additional entries or even be compromised by natural or artificial forces. In either occasion, the crux is the realization of those entries that target on the realization of the utility in the new design. As for the rest of the criteria, the more that are realized the better.

An illustration of the given criteria is meaningful in visualizing the possible product. It is also a test of the feasibility of the criteria. Following is an endeavor of such illustration which is a realization of all the entries of the criteria.
Figure 6.1: Vertical Development Strategy.

This illustration features with the adoption of the courtyard house typology as the decisive part situated on top of the entity to control the structures underneath. Figure 6.1 shows the conceptual development strategy of this illustration.

Functionally, each composing floor of the structure is organized to facilitate different levels of demands in terms of spontaneous transformation of the living space. Figure 6.6 shows the separated layers and connecting structures of the entity. The top floor is illustrated as a quasi-traditional courtyard with a rooftop garden in the middle surrounded by separated rooms. (Around 20m² each) This rooftop garden can be slightly designed and vegetated. The cognitive demarcation between the solid and the void space is rigid and has to be respected. The vision lines are directed to the centre of the garden to avoid visual disturbance to the most degree. The middle floor functions as a structural media. The supporting structure of the rooftop garden entails an encircling organization of the space. Other load-bearing structures guide the spatial subdivisions. However the subdivision on this floor is an activity decided by
the residents. Windowing of the middle floor permits diffusive vision lines of the residents. The spatial organization of this floor is diffusive too. The lower floor functions as the foundation of the whole building and is only housed with the support columns. Thus this space can tolerate diverse spatial redefinitions. It also serves to connect with other similar buildings to form the base of the city. Circulation system winds through the three floors while forming the communal recreational space.

**Figure 6.2**: Top View of the Illustration.

**Figure 6.3**: Profile of the Illustration.
Figure 6.4: Frontal View of the Illustration.

Figure 6.5: Perspective of the Entity.
Figure 6.6: Separated Layers and Connecting Structures of the Illustration.

Figure 6.7: Illustration of the Adaptability of the New Structure within the Urban Context.
Figure 6.8: Illustration of the Adaptability of the New Structure within the Urban Context.
Figure 6.9: Illustration of the Adaptability of the New Structure within the Urban Context.
6.3 SPECULATION OF THE FUTURE STUDY ON THIS TOPIC

This criteria needs to be revised in practice and by future studies in relevant projects. On one side, this project explores a new vantage point in the field of the studies about Beijing’s courtyards—a historical examination of the utility and a focused study of the dynamics of the courtyards through mapping. Because of the scarcity of similar paradigms in this field, the interpretation of the data and the final product are all inspired by the process, which is hard to predict completely at the beginning. On the other side, a certain proportion of the study is partially based on the personal experience of the author, for instance the establishment of the taxonomy and the interpretation of the two phases of mapping. Thus the process is dynamic and tentative, allows alternative interpretations of the same material generated in this study. After all, this kind of endeavors entails the sensitiveness to look through the phenomena and the ability to empathize with the creatures and the habitat. Both are limitless human capacities.
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