

roads, combined with four ring roads and some radial roads, formed the new circulation system and the radial-concentric spatial pattern of the socialist capital, the change to the road system reveals the influence of functionalism.

The transformation of the space between Tian-an Men and Zheng-yang Men provides examples of changes to three physical elements of Beijing: the city's important institutions, the city's spatial organization and the city's circulation system. The transformation of these physical elements was closely connected to the changes in the political, ideological, and social conditions of the urban society. This case study clearly illustrates the process by which the "imperial place" changed to the "people's place". Changes here were at the public scale, the traditional north-south axis of the city was preserved even intensified during the reconstruction of people's square, but at the same time, the reconstruction of Tiananmen Square also embodied change to the whole city's circulation pattern in response to functionalism.

Relationship between the City and the Courtyard House

Traditional Courtyard Houses

While changes were occurring at the scale of the city, other changes were occurring at the domestic scale of the individual house. Most of the courtyard houses in Beijing were built during the Ming and the Qing dynasties. The courtyard house and the city share a similar layout, use of organizing axis, clear boundaries, and similar social structures. Living in a courtyard house is like living in a miniature city, and the courtyard house clearly reflected life in imperial Beijing. The changes to the social conditions that influenced the city also affected the courtyard houses. After 1949, Beijing changed from an imperial ideal city to a socialist capital. The dominant ideology of Chinese Communist leaders was to "transform consumer-cities into producer-cities". This policy results in substantial growth. Beijing's urban population grew rapidly to provide labor for the productive activities within the city. And the courtyard houses were affected by the urban growth. Therefore, providing more housing for workers was needed.

Because of the shortage of housing, the courtyard houses which used to be owned by one family became compounds occupied by many families. Informal structures were haphazardly added into the old courtyards. These new structures served a wide range of functions, from residents' extended living spaces, to kitchens and storage areas. These

disordered courtyard houses lacked privacy and open public space. Those new structures that faced north did not get any sunshine. (Figure 4.19, Figure 4.20) The living condition in these courtyard houses was crowded and the quality of life deteriorated.

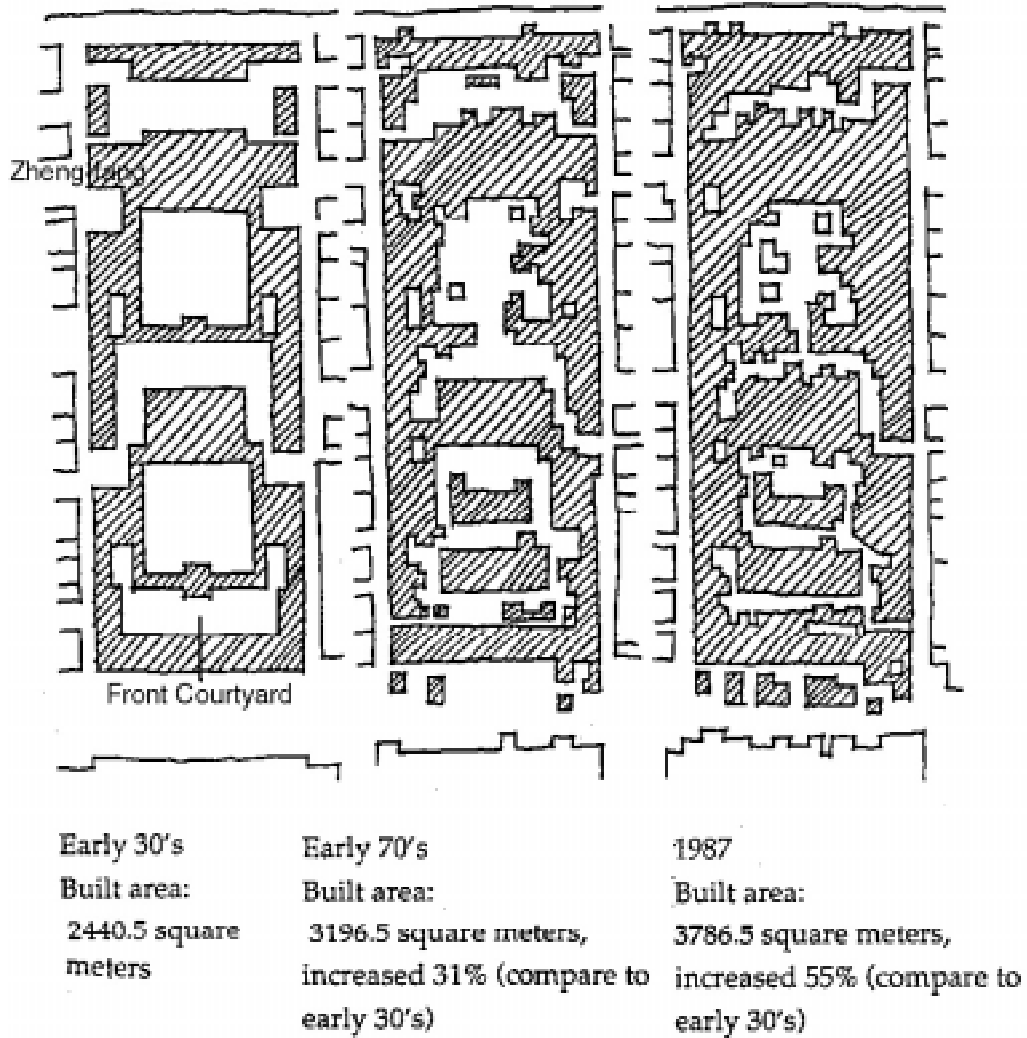


Figure 4.19 Changes of Courtyard House (from Wang, 1995)

Figure 4.19 illustrates the changes to the courtyard houses. First, the originally one family house became a multiple family dwelling with informal structures added in the courtyard. In this multiple family dwelling, there was no longer a principal room (*Zheng-fang*) which was only used by the master. The social structure changed, the traditional symbolism of the master's power was gone. Despite these changes, the structures were still symmetrically situated on each side of the main north-south axis and the walled boundary of the courtyard house still remained. As we noted in the front

sections, the layout of the new city had changed greatly and the imperial power no longer existed, the boundary of city had been demolished, but the city's north-south axis was kept at city scale. Overall, both of the city and the courtyard house are organized along the north-south axis. The courtyard house still can be regarded as the miniature of the city, the life changes in the courtyard house reflects the changes in the social condition of Beijing.



Figure 4.20 Informal Structures in the Courtyard Houses (from He, 1990)

Two types of Housing Developed after 1949

The new ideology in the socialist era brought more workers into the city and provided more housing for the workers. Providing better housing in reaction to the crowded and unhealthy living conditions became the main concern in the socialist era. To meet this concern, two types of housing were developed after 1949, both were greatly influenced by functionalism. The first new type of housing was four or five story apartment house (Figure 4.21, Figure 4.22). The second typical housing type developed in Beijing after 1949 was the high-rise apartment building (Figure 4.22). Both apartment housing types reflected the influence of the new “international style”, and increased the population density by the addition of more stories. The new types of housing also responded to concerns for the people's health. Large open spaces were left to provide easy access to sunlight and greenery for all the apartment residents (Figure 4.21). In some ways, the living condition was improved compared to the crowded courtyard house of the

1980s (Figure 4.19, 4.20). But in both new apartment housing types, the large scale open space can not be used in the traditional way or used sufficiently by the residents, especially by the people who live above the first floor. The human scale in the traditional courtyard house and the relationship of the indoor and outdoor space were ignored in these vast spaces. Even though more privacy was achieved for the inhabitants because each single family lived in a unit, there was little open public space for the social communication compared with the traditional courtyard houses, the nice relationship with neighborhood is also very important factor in creating a nice community. The local culture was abandoned, these international style building types strongly contrasted with old Beijing and traditional courtyard houses because they did not have the north-south axis arrangement and the traditional roofscape of the courtyard houses. Easy vehicle circulation was an important factor in the spatial organization of the new communities that used these housing with automobile accessibility provided for each building. The traditional spatial order of domestic scale Beijing was abandoned by these new “international style” apartments.



Figure 4.21 Mid-rise Apartment of Beijing (From Zheng, 1995, p.73)



Figure 4.22 (from Zheng, 1995, p.74)

Case Study II – New Type of Courtyard House

In response to loss of traditional spatial and social orders in the two new types of housing, a new type of courtyard house was proposed by a research group of Tsinghua University in the early 1990s. Their new type of courtyard house expresses both the new social structure and ideology of people while providing better living conditions for the working people. These new courtyard houses were designed to improve living conditions, provide public space for people's activities, and increase the population density.

First, the new courtyard house developments keep the traditional chessboard patterns of residential block and Hutong (residential lane) (Figure 4.23). The typical traditional block which includes three or four courtyards and some buildings is around 80 meters' long, and about 250 meters' wide. Each new proposed block will contain 6 unit new types of *siheyuan*. One unit is around 35-40 meter wide and 80 meter long. (Figure 4.24, 4.25, 4.26, and 4.27) (Wu and others, 1996) The new courtyard houses are two or

three stories tall and can increase the population density compared with the traditional courtyard house. Each new unit is occupied by a single family. Rather than the vast open space of the new mid-rise and high-rise housing, the space in the new courtyard houses is broken down to small-scale courtyards. Large balconies are provided for the residents in the second and third floor that connect with the courtyards and enhance the relationship to nature and outdoor space and express the traditional spirit of space. At the same time, the traditional roofscape is preserved in these new courtyard houses, creating the harmonious relationship with the traditional courtyard houses (See Figure 4.28: Comparison of four housing)

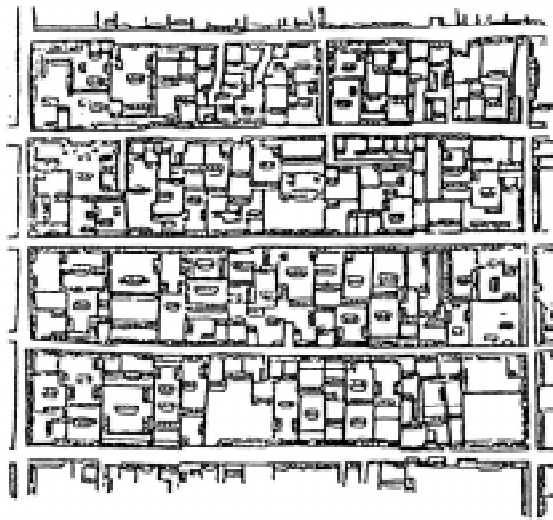


Figure 4.23 Traditional Street Pattern (from Dong, 1988)

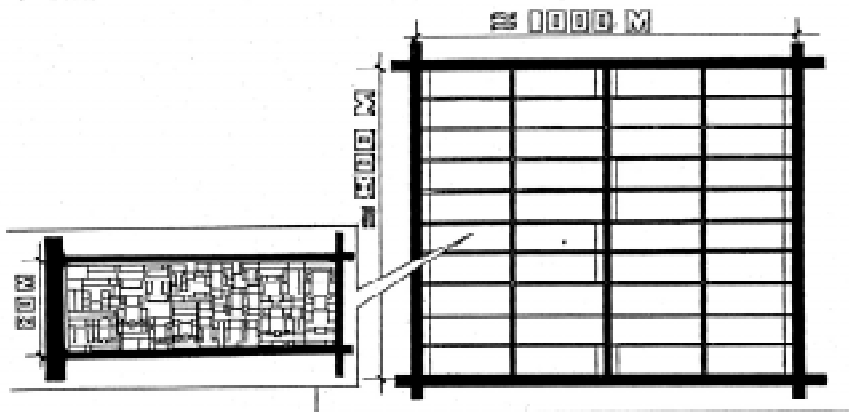
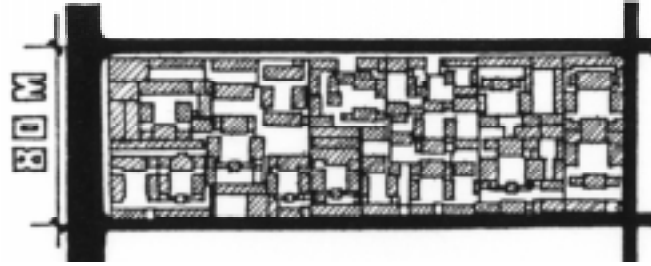
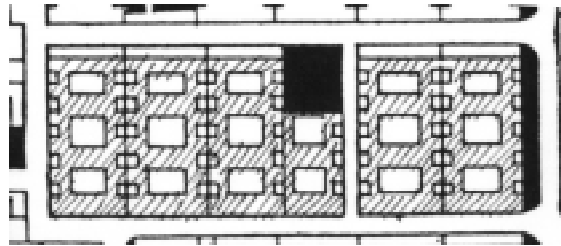


Figure 4.24 New Street Pattern of the Residential Block



Existing Old Residential Block



New Residential Block propose by the Research group
Figure 4.25 (comparison between the old and new residential block)

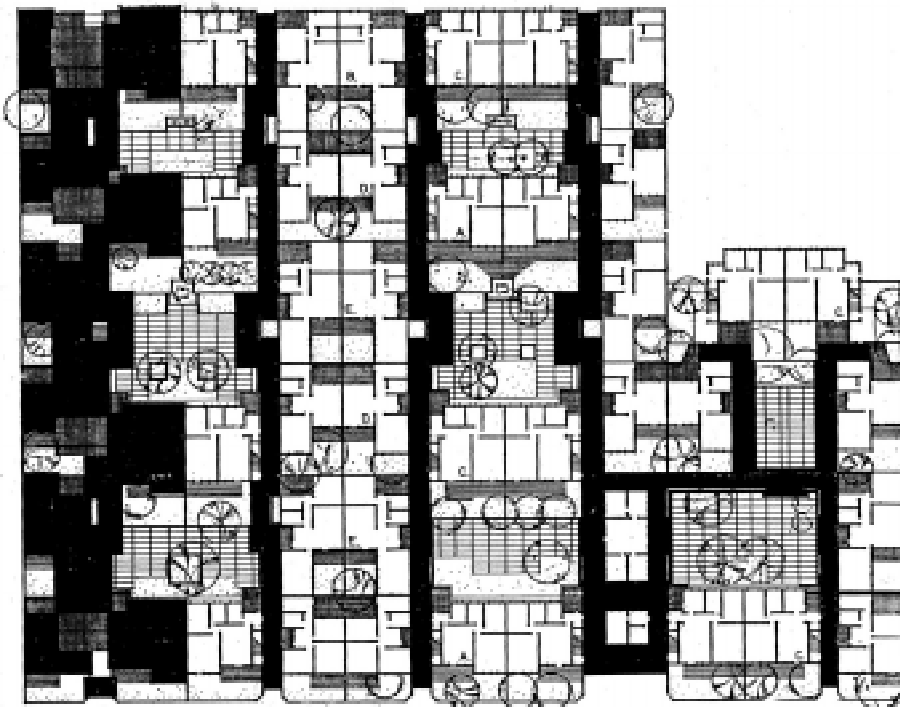


Figure 4.26 Plan of the Proposal of new Courtyard House

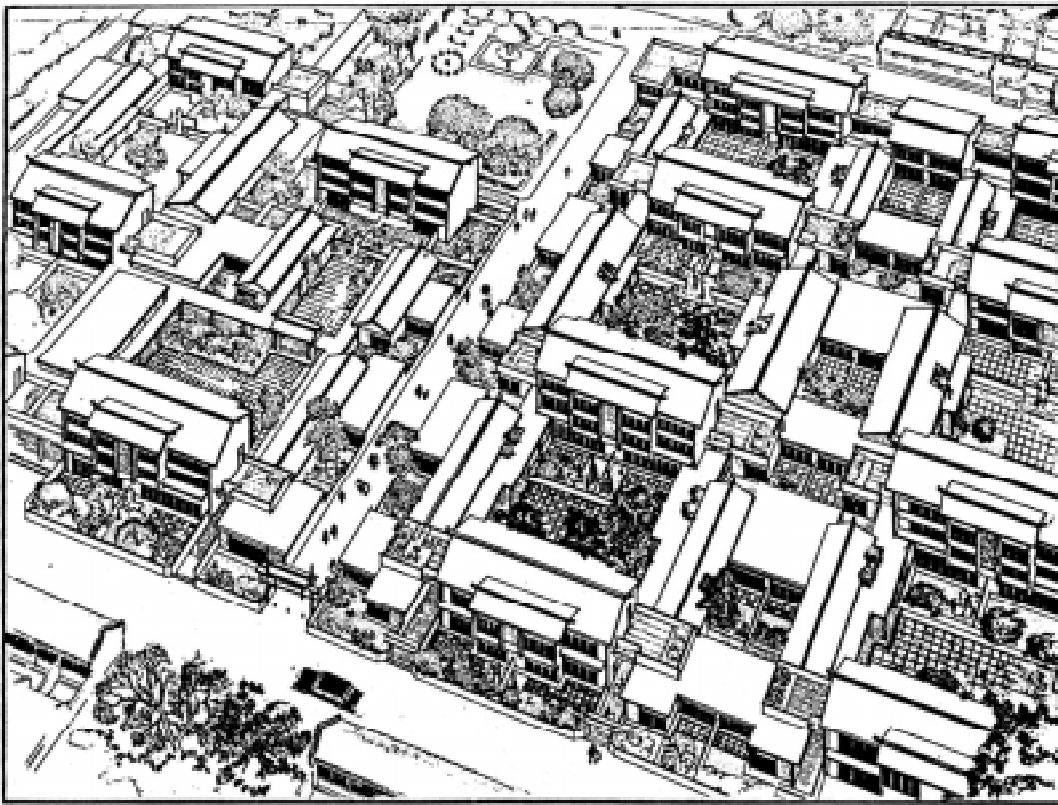
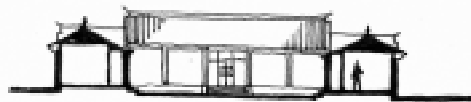
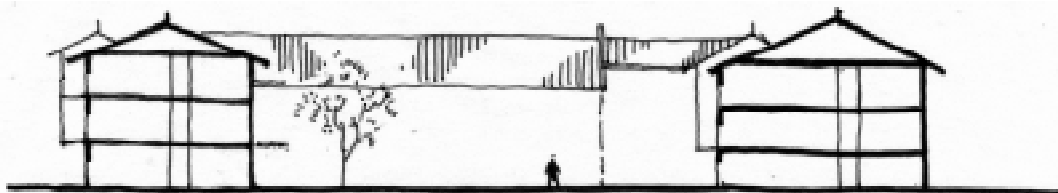


Figure 4.27 Perspective of the New Courtyard Houses

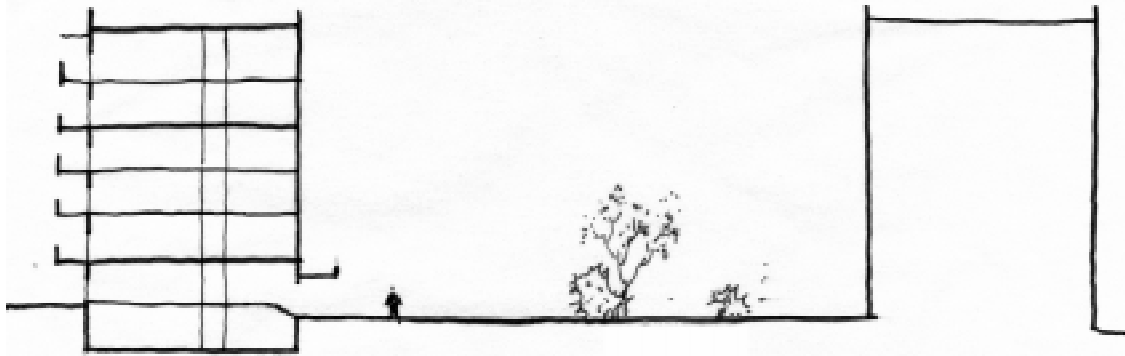


Traditional Courtyard House

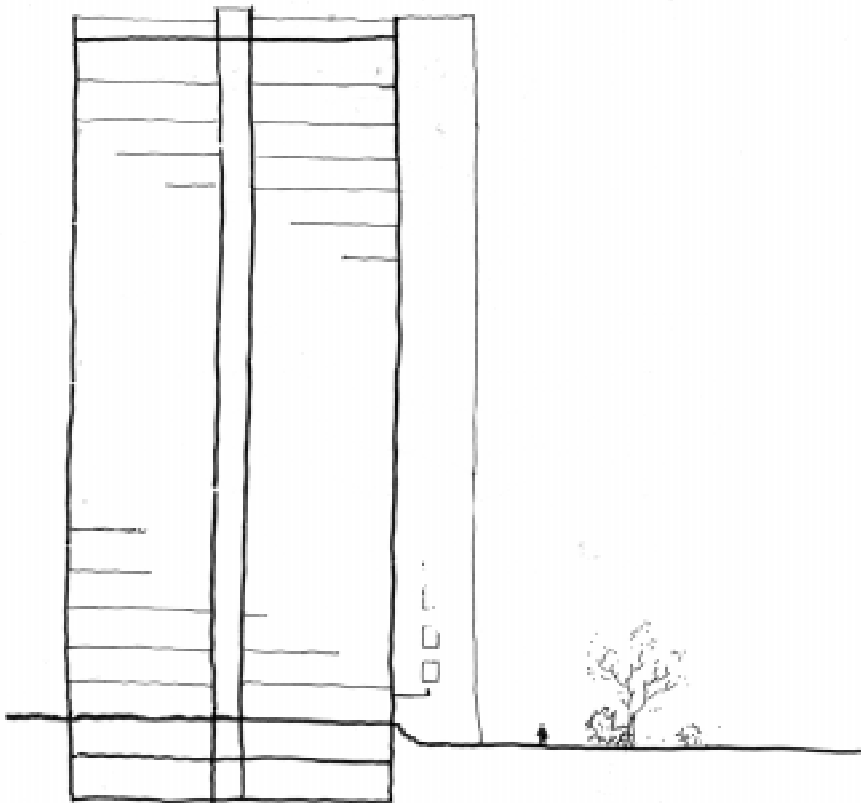


New Courtyard House

Figure 4.28 Section of the Traditional House and the New Courtyard House



Mid-rise Apartment



High-rise Apartment

Figure 4.29 Section of the Mid-rise and High-rise Apartment

The case studies reveal a possible relationship between the house and city: The courtyards in the residential districts are the center of people's activities at the domestic scale, and the city's largest square – Tiananmen Square is the new center of the city and people's activities at the public and national scale. The people's activities and social

contacts are accommodated at these two different scales of people's places. Both types of places reflect the new social need and ideology of the city's residents.

The case studies provide examples of the transformation of the city at two different scales: from Zheng-yang Men to Tian-an Men on the public and national scale, and the new type of courtyard house on domestic scale. The changes illustrated in these case studies articulates some principals which reflect the new ideology of people in socialist era and preserve the historical and aesthetic values of the important traditional elements of the city.

Chapter Five

Findings

The case studies provide examples of the transformation of the city at two different scales: from Zheng-yang Men to Tian-an Men on the public and national scale, and the new type of courtyard house on domestic scale. The changes illustrated in these case studies articulates some principals which reflect the new ideology of people in socialist era and preserve the historical and aesthetic values of the important traditional elements of the city.

The main objective of this study is to articulate principles to guide further development of Beijing; principles which both reflect the new ideology of the people in the socialist era and which preserve the historical and aesthetic values of the city's traditional structuring elements. These two case studies allow us to begin to establish a set of principles that new development in Beijing could follow. Importantly, these principles could be applied at a variety of scales in the city.

First, the primary north-south axis of old Beijing is the essence of traditional urban planning in the city, and should be preserved and intensified by any further development. During the reconstruction of Tiananmen Square, the traditional north-south axis was preserved and intensified by the addition of new monuments on the north-south axis, and by the placement of new buildings surrounding the square and creating edges for the open public space. This provides an example how to construct new institutions on the north-south axis in the future. The Reconstruction of Tiananmen Square also clearly illustrates the process how the "imperial place" changed to the "people's place" in keeping with socialist ideology. The people's place must glorify the power and dignity of people and provide space for people's activities. Following this example, more and more people's places (institutions) should be placed on the north-south axis and connect people's activities. Like Tiananmen Square, these new institutions will create a more open sequence on the north-south axis compared to the old sequence which has formed by the nesting of enclosures. The new open sequence on the north-south axis contrast with the old enclosures. The different levels of contrasts and symmetries along the north-south axis enrich the spatial sequence, and also reflect the complexity of the new ideal

city – Beijing. Beijing becomes not only a historic city which represents the splendid Chinese cultural heritage, but also a people’s capital which expresses the new ideology of the people and emphasizes and enriches the quality of the people’s real life.

Second, future housing development must improve living conditions, increasing population density, provide more open space for better social contact and closer relationship with nature, preserve the traditional chessboard street pattern, and create a harmonious relationship with the old courtyard houses. The proposal by the research group in Tsinghua University for their new type of courtyard house is an imaginative example that would solve the present problems in housing. Their two or three story courtyard house can increase the population density, preserve small-scale courtyards, and enhance the residents’ relationship to nature and create outdoor space which expresses the traditional Chinese spirit of space. The courtyard spaces would provide for outdoor activities and create opportunity for better social contact while preserving a certain level of privacy. At the same time, the traditional roofscape and chessboard pattern are preserved by these new courtyard houses, creating the harmonious relationship with the remaining traditional courtyard houses.

The two case studies reveal a possible new relationship between the courtyard house and the city: The courtyards in the residential districts will be the center of people’s activities at the domestic scale, just as the large open spaces proposed on the north-south axis, will become the spaces for people’s activities at the city level, and Tiananmen Square is the new center of the city and people’s activities. Different scales of people’s places (courtyard, plaza and square) will form the new city, while reflecting the new social needs and ideology of residents and preserving the historical and aesthetic value of the city’s traditional structuring elements.

Chapter Six

Conclusion

Beijing was carefully developed as an ideal imperial city. The defining physical elements of the city were: the walled boundary of the city, the Forbidden City (the most important institutions of the city), the axial alignment and nesting of enclosures (spatial organization), the city's circulation system, and the similarities of the city plan and the courtyard house (the relationship between city and courtyard house). All these elements defined and ordered space which brought the cosmos and society into a perfect geometric plan to demonstrate the ruler's absolutely authority.

With the transformation of the social system and ideology of people, the plan of Beijing was transformed into the people's capital of the socialist era. As such, the city must glorify the power and dignity of the people. During this transformation, all the physical elements that defined the old spatial order changed: the Forbidden City was transformed to a public museum; the new heart of city – Tiananmen Square was constructed for the ceremonial purpose of celebrating the achievements of socialist construction. Moreover, the walls of the old city and the Imperial City were demolished because of urban growth and the impact of functionalism; the nesting of enclosures was gone; the east-west Changan Boulevard formed a counter-axis to the primary north-south axis; ring roads and radial roads were added outside the traditional chessboard pattern to form a new concentric-radial road network. The traditional courtyard houses were greatly altered by the pressures of urban growth. Informal structures were added to the old courtyard houses, whose condition deteriorated. The clear similarities between the organization of the city and its courtyard houses no longer exist. New “international style” mid-rise and high-rise buildings influenced by functionalism have been built outside the city core. These new buildings ignored the local culture and human scale. They strongly contrast with old Beijing and the traditional courtyard houses. These new buildings provided more privacy for the inhabitants, but lack the open public space for social communication that distinguish the traditional courtyard houses. These changes to the physical elements of the city ignored the historical and aesthetic values of these traditional elements for utilitarian functions.

We as designers, play an important role in creating an urban environment for people. Providing the resolutions to solve existing problems is our responsibility. This study is very important because it provides us some principles to resolve the existing problems in developing Beijing. Two case studies were provided as examples of particular resolutions of existing problems at two different scales: from Zheng-yang Men to Tian-an Men addresses the public and national scale, while the new type of courtyard house focuses on the domestic scale. The changes of the physical elements illustrated in these two case studies define a new spatial order that reflects the ideology of the people in the socialist era (meaning) and preserve the historical and aesthetic values of the city's traditional physical elements.

Overall, the objectives of this study were successfully achieved: to identify the spatial order and meaning Beijing at different periods, to articulate principles to guide further development of Beijing, which reflect the new ideology of the people in socialist era and preserve the historical and aesthetic values of the traditional elements. These two case studies allow us to begin to establish a set of principle that new development in Beijing could follow. The principles to guide further development study of Beijing can also be used solve similar problems in the other traditional ideal cities. Connecting different scales of study to form an integrated design is a new dimension of this study. The previous studies of ideal city either addressed the domestic scale or public scale, this study links both scale.

To be a thesis on Master of Landscape Architecture, this study focuses on the cultural landscape of the city. Although the natural landscape and the relationship between dwelling and nature was mentioned in this study. It did not became the focus. The understanding developed in this thesis could be applied to other contexts in the city such as the relationship of the city and the new ideology to the natural landscapes. One city element for which these principles could be used is Beijing's parks. This is also a very interesting study since Beijing has many historical royal gardens from the imperial time that have been transformed from imperial gardens to public parks since 1949. The analysis of the changes to the physical elements in these parks reveals also the transformation of social conditions and the ideology of the people. The analysis of the changes to the physical elements and the people's ideology also could articulate

principles in the parks' developments: principles that reflect the new ideology of the people in the socialist era and preserve the historical and aesthetic values of the traditional park elements. This study could be used as a supplement to the whole study of transformation of ideal city – Beijing, an expanded study that would focus on both the cultural and natural landscape.

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