THE SEQUENCE OF THE SUPREME AND MUNDANE:
CASE STUDIES OF THE CHINESE URBAN ORDER

By

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Abstract:
After decades of urbanization and growth, Chinese cities are experiencing rapid renewal and redevelopment. The revolutionary changes in city form are accompanied by not only prosperity and wealth, but also chaotic environment and life. On the one hand, the current international style of urban design, which is largely copied from abroad, applies homogeneous grids and modern buildings without much concerns of the context. On the other hand, the past traditions have been forgotten or frowned upon. It is time for planners and urban designers to reflect on the question: will there be any relevant components from the past tradition which will prove to be valuable for contemporary Chinese cities?

In what follows I want to explore an appropriated model of urban design which provides attractive environment and strengthened identities for contemporary Chinese cities. Different from previous approaches, my study focuses on the urban sequence which refers to the ordered configuration in a succession along urban routes.

There are five chapters in this thesis. I start with a brief introduction to the definition and categorization of urban order and sequence. Then I looked at the vocabulary of sequence in pre-modern Chinese cities, including walls, gates, urban routes, paifang archways, the fabric of module, and landmarks. The application of sequential principles from the courtyard house to the plan of a capital is examined, and the basic features of Chinese sequence are summarized. Afterwards, the transformation of urban sequence is reveal through contemporary cases. Here I looked at how Chang'an Street and the danwei space in contemporary Chinese inherited the political and social sequence of the past with new architecture language and larger scales. An additional discussion on contemporary Chinese urban design models are provided, including stylistic architecture, urban conservation, and the international style of urban design. Further, I proposed the model of sequential design based on reinvented principles from traditional urban sequence. These principles, which originated from the authoritarian politics, Confucius hierarchy, and urban control, were adapted to match modern democratic society and market economy. Lastly, I conclude that the model of sequential design will create livable and attractive urban environment. And it is capable of bring consistency to large urban projects.

Thesis supervisor: Professor Dennis Frenchman
Title: Professor of the Practice of Urban Design

Thesis reader: Professor John P. de Monchaux
Title: Professor of Architecture and Urban Planning

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Table of Figures

Index

I. Introduction:

A real city is more than a patchwork of individual locations. The meaning of city form has been constantly enriched when people perceive, memorize, and relate various places to their own lives. To a modern urbanite, a legible city can rarely be experienced in stillness. For him, the urban experience always consists of a series of scenes captured on the urban routes, including pedestrian trails, streets highways, railroads, or even the waterways. The snapshots of buildings, streets, open space, together with urban activities produce a continuous sequence, which is perceived, accumulated and remembered as a holistic image of the urban environment. Moreover, the improvement of modern science and technology has accelerated the pace of space-time experiencing, while the transportation advancement, live-work radius expansion, and globalization have built up stronger ties among individual urban locations.

Most cities today are designed, if they have ever been designed at all, in a different way than they are experienced in motion. In other words, the spatial sequences have not been given enough significance in contemporary urban design. The views on major urban paths are more than often ignored; the cityscapes are no longer ordered for the purpose of legibility and clarity. The location of urban functionality and program are largely driven by economic forces and contingent choices, and the distribution patterns of public space are mostly fragmented and random. Zoning divides the urban areas in a two dimensional plane from above. In general, there are little efforts to make meaningful connections among the streetscape, programs, and activities along major paths where the images of the cities are constructed.

The order and sequence of city forms paralleled the concept of space and time in art forms. The ordering appeared in most art forms relating to space, such as architecture, painting, graphic design, and sculpture. Yet the sequence existed in arts forms that are related to time, including music, dance, literature and poetry, etc. Although each art form differs from the others in the media for expression and discipline, they share a number of principles in common, such as the rhythm, variation, contrast, and repetition. Many prominent architects apply the ordered sequence in their design to create dramatic architectural experiences. A number of Frank Lloyd Wright's architecture pieces, for instance, are good examples of internal sequence. From the entrance to the main

chamber, his design provides striking contrasts and delicate treatment in space.

I.A. What is the Urban Order and Sequence?

The urban order is a broad concept. It refers to a prescribed arrangement of the physical city form by either centralized opinions or common consent. Also, it includes the layout of institutional and organizational components. The urban sequence stands for ordered configurations in a succession along urban paths. The sequence is the perception of ordered configuration recognizable on human scale. It is not to be revealed at the first glance, but will be unfolded eventually in a time interval. The succession of entities may follow the rhythmic pattern of A, A, B, B, or a processional crescendo of A, B, C, D.

A consciously designed urban sequence occurs in various cultures over history, and the motivations and outcome for those sequences varied significantly. However, a sequential space exhibits shared characteristics which could clearly distinguish itself from a non-sequential one:

1. **Directionality of Space:**

Different from a chaotic or homogeneous urban pattern, a designed sequence gives Identifiable directionality in tune with its direction of circulation. The space of sequence, which usually takes the form of a street, a plaza, or an axis, channels spectators' movement along preconceived routes. Thereby its spatial feature unfolds in time intervals following a fixed order.

2. **Order of elements:**

The sequential elements, including spatial territories and building forms are organized in consistent principles. The location, form, and relationship among these elements are usually coordinated toward an identifiable whole rather than a patchwork of isolated spots. Normally, hierarchies are established in both the building form and the road pattern.

3. **Coordinated Plan**

Coordinated plan often comes into play in the design of urban sequence. The plan may take the form of a centralized decision from above, or exists as the agreement among varies stakeholders.

It is worth noting that sequences could be observed in urban cases where conscious design efforts were absent. Many medieval Italian towns, for example, exhibited high degrees of uniformity and order. Yet there was no evidence that a centralized plan ever existed. The sequences in these towns, which were made out of a collection of individual design decisions, were more likely to emerge from spontaneous growth and repetitive refinement. Although these were many prominent examples of this kind, the self-grown urban sequences are generous complex and contingent which are different from the modern practice of city design and planning. My thesis, therefore, will focus on the preconceived sequences instead of the self-grown ones.

The preconceived urban sequences could be categorized into four basic types, based on their usage and motivation: 1) the political sequence, 2) the ritualistic sequence, 3) the memorial sequence, and 4) the commercial sequence.

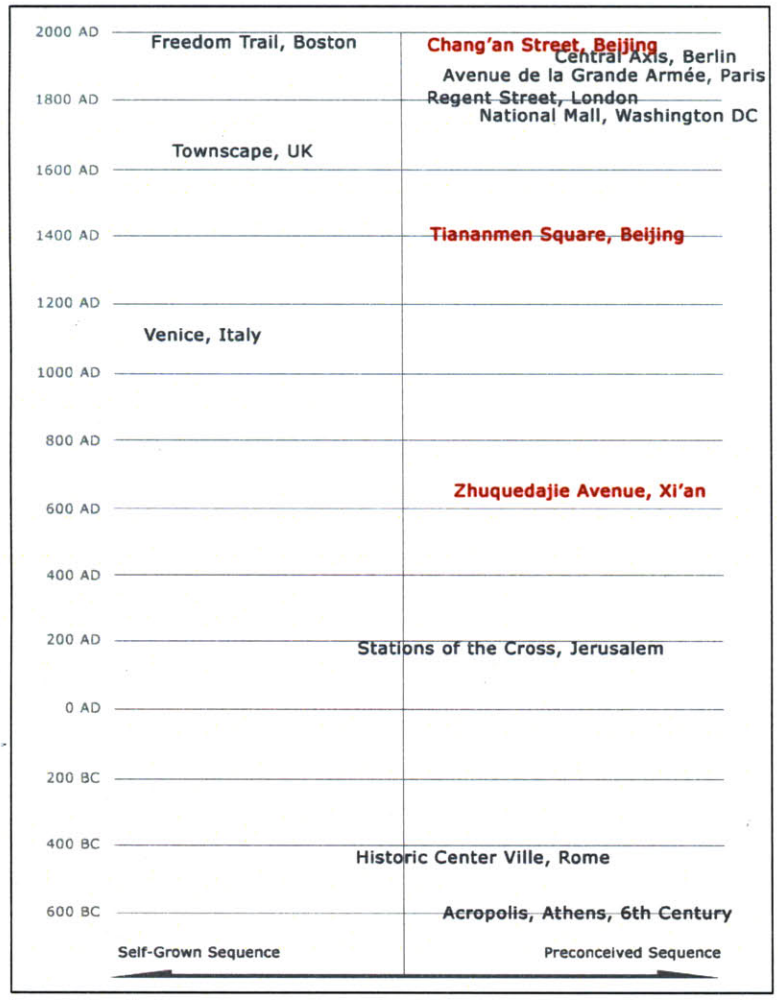

Figure 1. Renowned Examples of Urban Sequence.

The political sequence is the most commonly seen one. Normally planned from above by centralized powers, a political sequence serves as an icon of the state. Often, a political sequence is a reflection of the actual political order of the state, which has the resources, motivation, and needs for political manifestation. For instance, many European cities were planned with state-of-the-art political sequences. The city of Rome, for instance, adopted a meticulous arrangement of iconic forms and spaces connected by diagonal routes. A tour in Rome reveals the elaborate sequence consisted of pleasant surprise and splendor. The city beautiful movement had shaped many cities with artistic principles, famous examples including John Nash's plan for the Regent Street in London, where the path between Carlton House and Regent's Park was glorified as a ceremonial route; Haussmann's renovation plan for Paris input similar efforts into the design of urban paths. His modern boulevards have highly regulated façade, while monuments and public space were arranged along the routes. Albert Speer's plan for Berlin in 1939 was an extreme case where tremendous buildings and monuments were organized along a three mile central axis to glorify the capital of the Third Reich. Other famous examples include Pennsylvania Avenue in Washington D.C., and Chang'an Street in Beijing, etc.

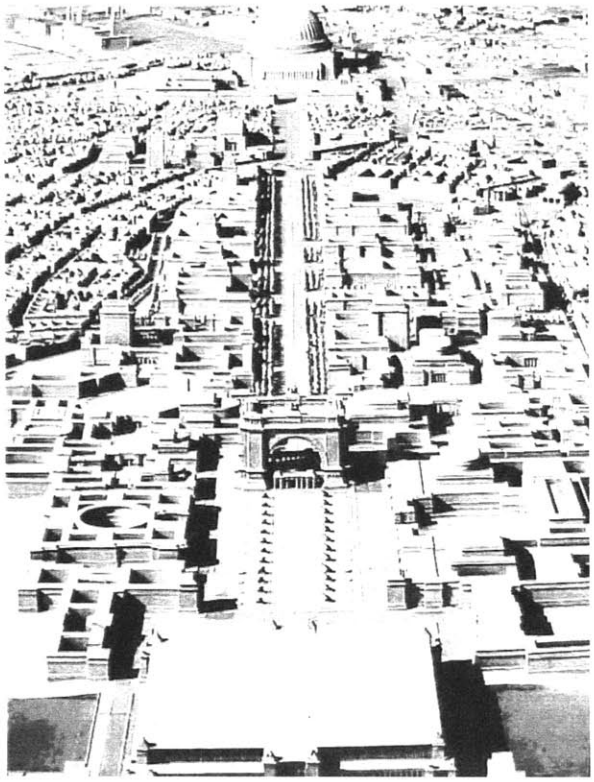

Figure 2. The Planned Sequence of Berlin, by Albert Speers, 1939

The ritualistic sequence is another category of urban sequence of religious origins. In European traditions, the sequential spaces were often associated with pilgrimage tours or parade routines. The routes functioned as normal urban streets, yet they were transformed into special venues during festivals and celebrations. These routes were either positive designed to attract pilgrims, or passively adapted to accommodate ritualistic activities. Julian Beinart had examined the pilgrimage tours in medieval European cities, where elaborations were put to promote their religious images and lure pilgrims[1]. Another famous example was known as the Stations of the Cross in Jerusalem. The Christian route meandered through the alleys of Jerusalem, yet it was remembered as the route which Jesus took during his last hours and was honored by his follow Christians. Each of the fourteen stations, either a church or a square along the route, had recorded a chief scene of Jesus' sufferings and death. In the season of lent, prayers moved in sequence along these stations as a spiritual pilgrimage.

[1] Beinart, Julian, Image Construction in Premodern Cities, from Imaging the City, edited by Lawrence J. Vale and Sam Bass Warner Jr. The center for urban policy research, New Jersey, 2001, p.6

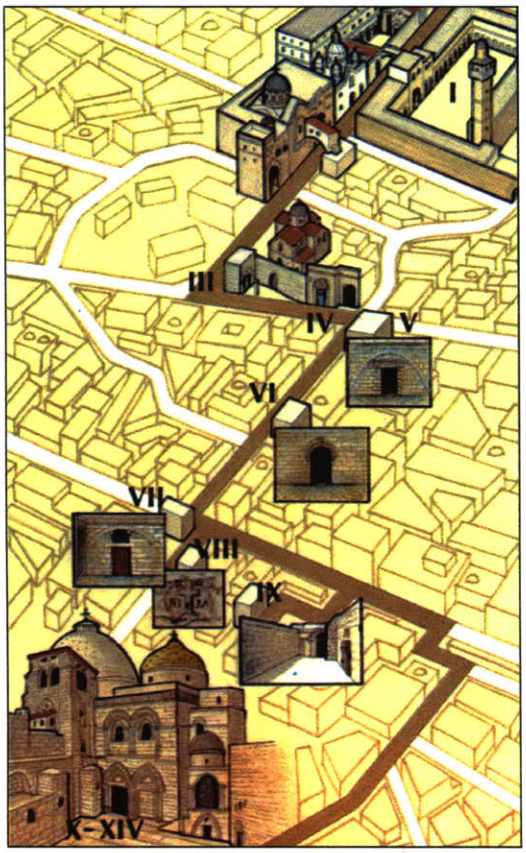

Figure 3. Stations of the Cross, Jerusalem[2]

The memorial sequence is used to memorize and exhibit certain events or history. Like a museum built into the city, its strategies were set to preserve and restore the original buildings and places along the route. The freedom trail in Boston (Figure 4) is a recent example. It was invented in 1958 with the purpose of better informing tourists of the history and stories. Instead of spending days hunting the churches, historic houses, and burying grounds all over the city, tourists were offered the option to go through these historic themes within hours. Clear signages were installed to navigate people through the convoluted Boston Streets; other facilities such as public transit station, souvenir shops, information, and service booths were distributed along the route. Although the pedestrian route followed a self-grown sequence -- there was little coordination among all the sixteen historic sites when they were initially built. The 2.5 miles long trail existed as a meaningful congregation of historic sites which would otherwise be occasionally encountered. It is now a circulation axis of the exhibition of Boston history, a museum built into the city.

[2] Image Source: http://198.62.75.1/www1/jsc/TVCmenu.html, May 2007

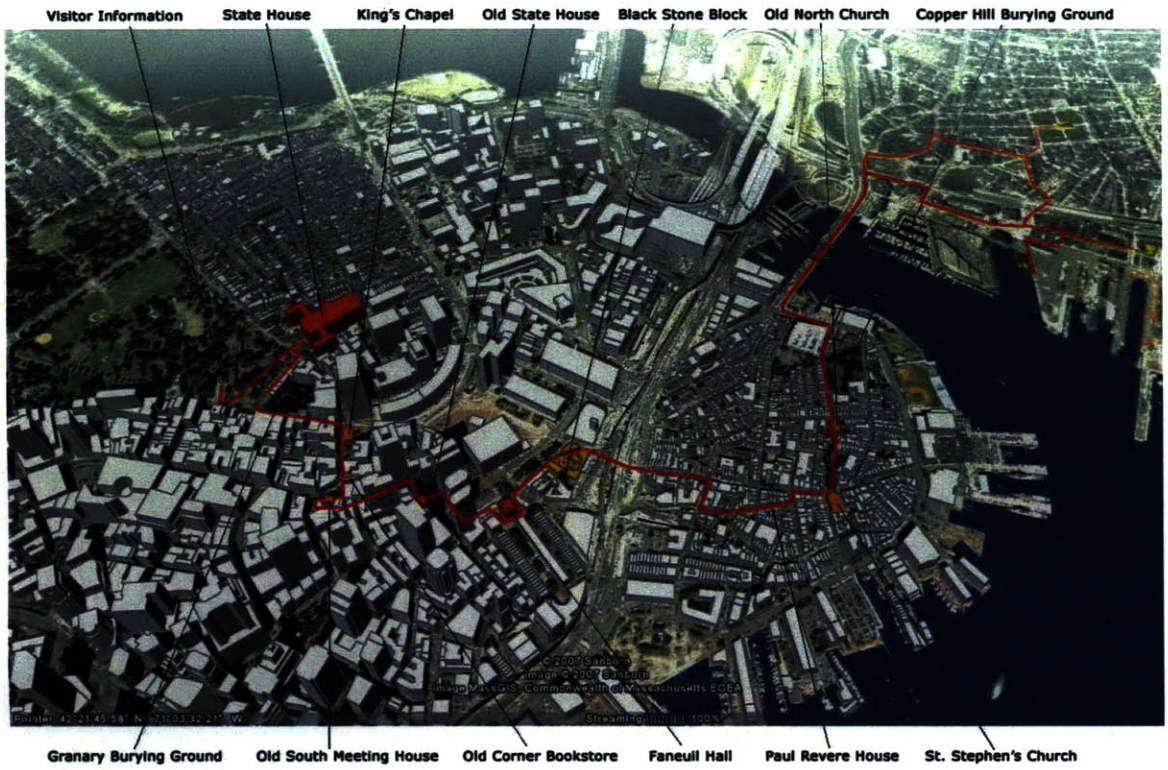

Figure 4. The Freedom Trail in Boston, redrawn from Google Earth.

The commercial sequence is an invention of the market economy. It occurs in retails venues such as a main street, shopping malls, and fast food restaurants, etc. Based on elaborate studies on consumer behavior, the commercial sequence has been constantly refined to suit the market. From the parking entrances to the anchor stores, the circulation, commodity location, and interior design are skillfully manipulated. In fact, the commercial sequence is designed with the purpose of creating pleasant shopping experience meanwhile maximizing efficiency and sales.

In history, the design of urban sequence prevailed in major cities from various cultural spheres. The Avenue des Champs Elysées in Paris, the Regent Street in London, national mall in Washington DC, and the central axes in Ancient Beijing were famous examples of this kind. Nowadays, however, these urban sequences have been associated with exclusion, unscientific, or even anti-democratic decision making. European boulevards were criticized for their purpose of impressing guests; the walled cities in East Asia were charged with social segregation and authoritarianism. Moreover, not only the positioning of functional components in ancient order is deemed outdated,

but the principles of urban sequence are also considered dangerous. With the basic value of democracy, equity and freedom of choice which only emerged in the last century of the entire urban history, the modern city claims the traditional urban order as superstitious and oppressive which needs to be abandoned.

However, modern democratic cities, after abandoning the design of urban sequence, have failed to establish an equivalent model with satisfactory spatial quality. This has been revealed in Richard Sennett's observation on modern Western cities, in which "the sensory deprivation, the dullness, the monotony, and the tactile sterility"[3] prevailed. The boulevards were replaced by homogeneous grid patterns; the ordering of building forms became obsolete; the urban wholeness perished, and the once ordered urban environment has been obscured by piecemeal design decisions.

I.B. The Chinese urban Sequences

The design of urban sequence existed in cities of many cultures, yet this thesis will examine cases from Chinese scenarios. Examples will be selected in mostly capital cities and, especially in Beijing. Two types of sequence, the political and social ones, are of particular significance and will fall into the research focus of this thesis. Analysis and conclusions will be made primarily for Chinese scenarios, yet I do believe that these principles and methodologies could later be extended to other cities in the rest of the world.

The reason for applying Chinese cases is not only because of my familiarity. In Chinese cities one will found conscious traditions in the designing of urban sequences. The sequence, which is found in historic heritages and archeological discoveries, has been covered by canonical literature of urban design and architecture such as the *Kaogongji*[4],

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[3] Sennett, Richard, Flesh and Stone: the Body and the City in Western Civilization. 1994

[4] *Kaogongji, (Notes on the Inspection of Engineering Work) a book from Zhou Dynasty which recorded the then planning system of the capital city of Luoyi. The book says: The Wang Cheng (imperial city) built by artisan was in a square pattern, stretching nine lion each side and each inset with three city gates. Within the city there were nine horizontal streets and nine vertical streets, each wide enough to accommodate nine carts running parallel (the center of the city was a palatial town); set up on the left side of the palatial town was an ancestral temple for worshipping the ancestors of Emperor Zhou; on the right side was a Sheji Altar for worshipping the god of the land and the god of grain. In front of the palace was a square called "Wai Chao" (looking outside), and at the back of the palace was a market. Records of the KaoGongji indicate it was a square city with a symmetrical axis. The palatial town was located in the most important*

and *Guanzi*[5]. Also, many contemporary scholarly researches have covered this topic. For instance, Yahong Shen has recognized the sequence as a critical characteristic in Chinese cities:

> *" the experience of people moving in the environment did not come from a picture with affixed visual point but from the whole process. The impression was gradually accumulated, collected, and finally formed as people move on routes with the passing of time. Therefore, the organization and design of sequence in the built environment is the soul of traditional Chinese architectural and urban design.*[6]*"*

Also, the tradition of Chinese urban sequence had influenced other East Asian countries. Augustin Berque's is fascinated with the poetic feature of Japanese cities, in which he had found the "stamping of the Chinese civilization": "this (the Japanese city) becomes a theatricalization of the environment, a dramaturgy, i.e. a playing with the unfolding of action over time." [7]

The sequence of a pre-modern Chinese city exhibited following characters: axes of sequence, hierarchy of space, self-similarity, enclosure, and control. These characters were seen in a variety of urban typologies, from the smallest courtyard to the biggest capital city. Prescribed by the Confucius belief, the sequence existed in palaces, government bureaus, royal temples and mausoleums. Also the spatial sequence prevailed in the folk architecture tradition such as courtyard housing complex, ancestral temples, small villages and towns.

These basic characters of sequence were even reflected in other disciplines of the Chinese design family, including landscape and gardens. The memorial sequence in the plan of Ming Tomb was another prominent example of monuments unfolds in order.

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position at the center of the Wang Cheng. The temple for worshipping ancestors and the altar for worshipping the god of the land and the god of grain stood respectively on the left and right.

[5] *Guanzi, or (Writings of) Master Guan, is an encyclopedic compilation of Chinese philosophical materials named after the 7th century BC philosopher Guan Zhong.*

[6] *Shen, Yahong, The Ordering of the Chinese City, Doctoral Dissertation, Graduate School of Design, Harvard University, 1994, p.77*

[7] Augustin Berque, *Japan : cities and social bonds*; translated by Chris Turner, Pilkington press 2005, p.24

Gideon Golany mentioned that "in-motion viewing allows visitors to move through the garden and continually came across new perspectives, thus stimulating his or her curiosity to see more."[8] Also, Augustine Berque found the correspondence in Japanese gardens: "the organization of space engages the visitor himself in a kind of choreography: the path one selects around the garden, the punctuation of the scenes, each of which is an event – the whole space implies and ordains certain movement."[9]

Originated from pre-modern era, the Chinese urban sequence was a reflection of the authoritarian politics and social governance at that time. It later stood the test of history and became an integral component of Chinese urban culture. However, the sequence of the past is being replaced by contemporary urban design models whichare largely copied from abroad. These design models apply homogeneous grids and object buildings without much concerns of the urban context, and they have triggered revolutionary changes in city form which cut off the continuity of urban culture, diminished the original life style, and weakened urban livelihood as well. After decades of modernization and urbanization, it is time for Chinese planners and urban designers to reflect on their own tradition: will there be any relevant components of the urban sequence which will prove to be valuable for contemporary Chinese cities?

I.C. Research Framework

The thesis will be organized around the question: Will a reinvented urban sequence be a better way forward to improve the livability and strengthen the identities for contemporary Chinese cities? Or, are there values in the sequence and order of the past city form which could be extracted and reapplied to the design of contemporary Chinese cities? Also, how should Chinese cities keep pace with rapid growth at the same time retain their identities?

Firstly, the urban sequence in pre-modern Chinese cities will be dissected through case studies. Two types of sequences will be examined in detail: the political sequence and the social sequence. The political sequence refers to the ordering of space and path of political significance with the purpose of strengthening administrative hierarchies. The social sequence is the spatial configuration of the walled compounds, the basic

[8] Gideon S. Golany, Urban Design Ethnics in Ancient China, The Edwin. Mellen Press, 2001, p.202
[9] Berque, Augustin, *Japan : cities and social bonds*; translated by Chris Turner, Pilkington press 2005, p.24

component of Chinese urban fabric. The social sequence was planned as a tool of social control in order to regulation access, preserve privacy, and consolidate hierarchy. Meanwhile, the political and socio-economic forces as the causes will be discussed as well. My case are selected from mostly capital cities, including the Zhuquedajie Avenue in Chang'an of the Tang dynasty (618-917AD), and the Fuxingmen and Tiananmen Square area in Beijing of the Yuan, Ming and Qing Dynasty(1271- 1911 AD). This is because capital cities rest at the top of the ancient administrative hierarchy. The capital cities were once marked as the highest achievements of urban design and city planning, and their city forms were planned as the paradigms for the others to be modeled after. Also, the ancient capital cities are the most thoroughly studied examples, which are supported by ample archeological findings and literatures.

Secondly, the evolution of sequential pattern will be examined through contemporary case, including the Chang'an Street and *Danwei* space in Beijing. Comparisons will be made with their ancient counterparts, relevant political and socio-economic forces will be discussed.

Lastly, I will look at strategies of the sequence design for future Chinese cities. Faced with the changes in political regime, family structure, and economy structure, which parts of the sequential design are still desirable for Chinese cities? How to design such a sequence in an attractive, efficient, and democratic way?

	Political sequence	Social Sequence
Pre-modern Cases	Zhuquedajie Avenue, Chang'an, 700 AD Tiananmen Square, Beijing, 1500 AD	Courtyard Houses in pre-modern Beijing Yonghegong Temple, Beijing, 1700AD Foguangsi Temple, Shanxi Province, 800 AD
Contemporary Cases	Chang'an street, Beijing, 1950 - 2000	Danwei Compounds, Beijing1960

Figure 5. Case studies of Chinese urban order and sequence

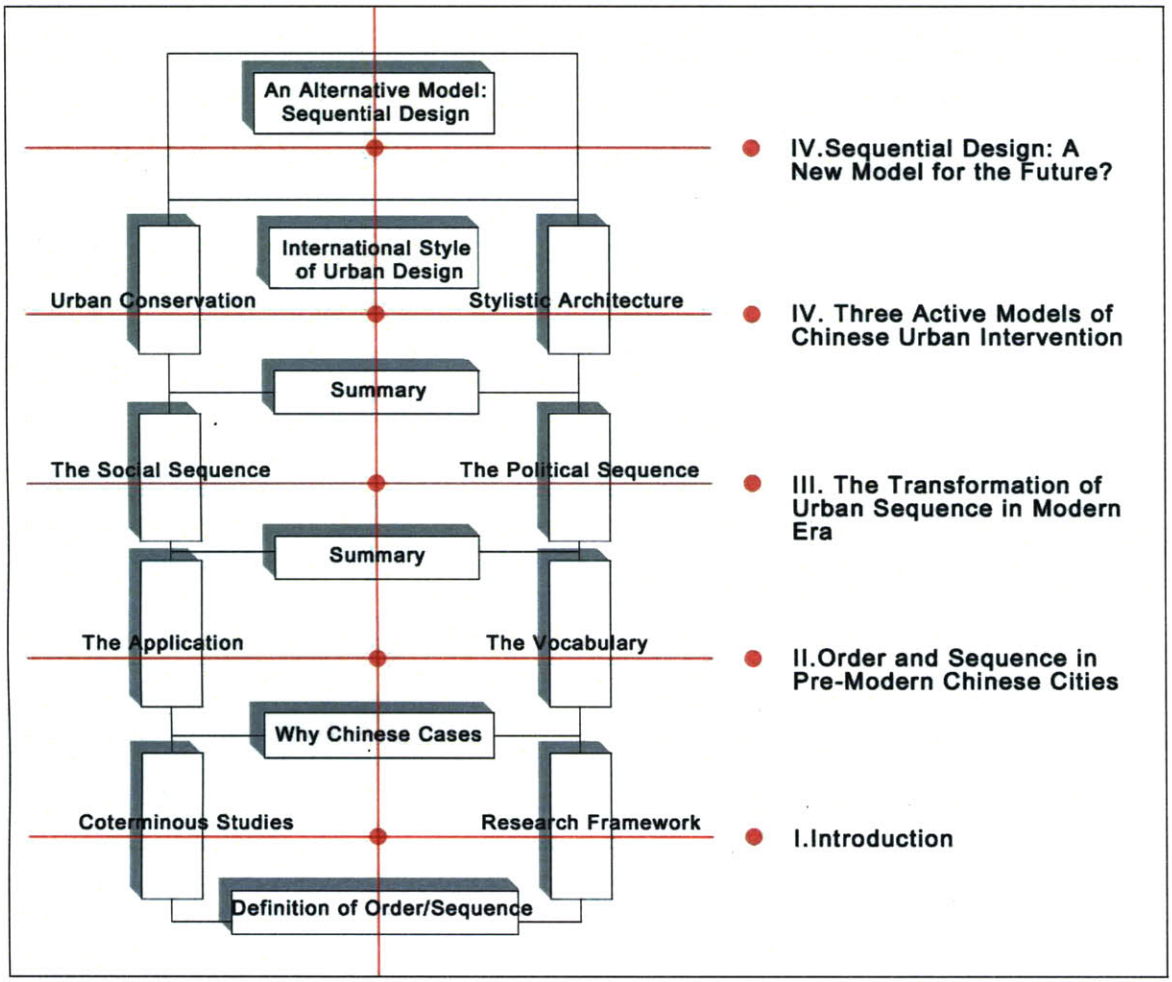

Figure 6. The Research Framework

I.D. Coterminous Studies

Before the modern discipline of urban design and city planning were invented, the significance of urban sequence has been recognized by architects and craftsman in different cultures. However, the design of urban order and sequence did not appear in academic research until the publication of The Image of the City. Kevin Lynch highlighted the urban path as one of the most important urban elements, whereas the design of path creates a holistic image to be perceived in motion:

> *"there is a final way of organizing a path or a set of paths, which will become of increasing importance in a world of great distances and high speeds. It might be called "melodic" in analogy to music. The events and characteristics along the path-landmarks, space changes, dynamic sensations – might be organized as a melodic line, perceived and imaged as a form which is experienced over a*

substantial time interval. Since the image would be of a total melody rather than a series of separated points ... The form might be the classical introduction-development-climax-conclusion sequence, or it might take more subtle shapes, such as those which avoid final conclusion. [10]"

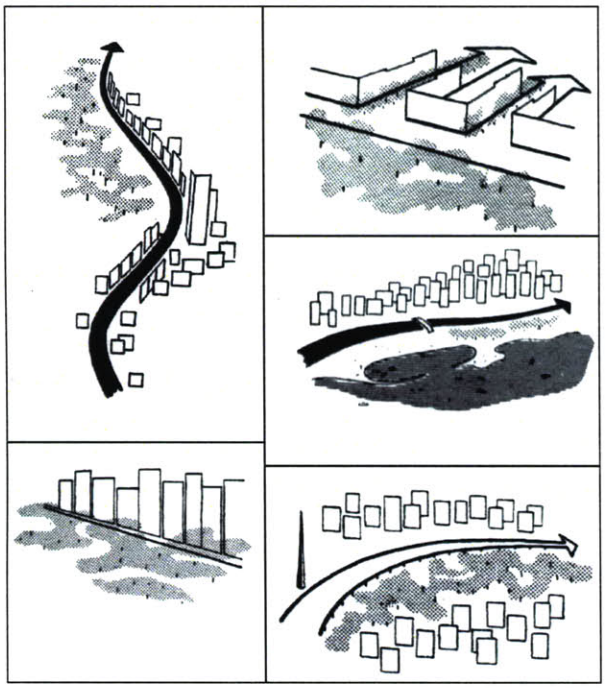

Figure 7. The image of the city, Kevin Lynch

Also, Lynch explored the design for the sequence of high speed movement[11]. He related to sequential design as providing the city "...with a rich, coherent sequential form, a form which has continuity and rhythm and development, which provides contrasts, well-joined transitions, and a moving balance".[12]

At the same time, Gordon Cullen's research revealed similar characteristics in traditional townscape. He credited the aesthetic quality of British townscape with the serial vision and the relationships among places[13]. Yet Cullen's conclusion could not be applied directly to my conclusion about sequential urban design, for his studies were based on primarily self-grown sequences, and he spared little concerns over whether the

[10] Lynch, Kevin. The Image of the City. The MIT Press, 1960, p.99
[11] Lynch, Kevin, The view from the road, the MIT Press, 1964, p.55
[12] Lynch, Kevin. What Time is This Place, The MIT Press, 1972, p.18
[13] Cullen, Gordon, Townscape, Reinhold Publishing Corporation, New York, The Architectural Press, London, 1961

sequences were results of conscious intervention or organic growth.

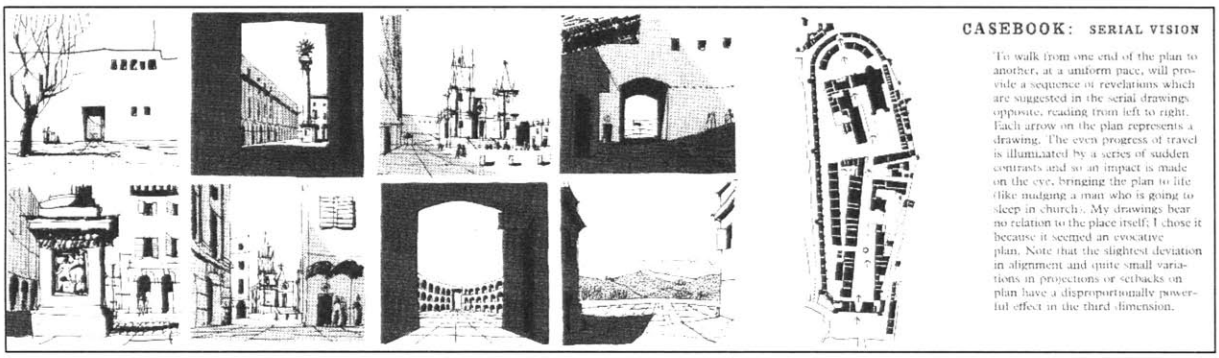

Figure 8, The design of spatial sequence, Gordon Cullen[14]

[14] Ibid.

II. Order and Sequence in Pre-modern Chinese Cities: Vocabularies and Applications

The pre-modern Chinese cities and towns existed as regional centers of political governance, military defense, and trade. These cities were originally planned by the ruling classes, and they were implemented by technocrats and craftsmen in the official architectural tradition. The first written document of capital plans appeared in Zhou Dynasty around 500 BC. The *Kaogongji*, which was the encyclopedia on technology and craftsmanship of that time, recorded the plan of capital city as the *Wangcheng* (Figure 9). In this plan, the palace for the rulers occupied the sacred center. Other urban components such as houses, altars, temples, and markets were placed in order. For millenniums, the plan of *Wangsheng* had not only shaped Chinese cities and towns, but also the urban traditions in Japan, Korean, Vietnam, and other East Asian countries. Chang'an[15] in Tang dynasty, Beijing in Yuan, Ming and Qing dynasty[16], Heiankyō in eighth century Japan, and Hue in Nguyễn Dynasty Vietnam were noted examples of cities modeled after the Kaogongji model. Central axis, symmetric plans, rectangular grids and blocks were common features shared by these pre-modern cities above. The plan of *Wangcheng* has been labeled by Wright and other scholars[17] as the cosmic-magical model in ancient Chinese city planning. Also, Michael Loewe described Chinese capital city as" symbolizing the ideal regularity of the imperial order and the view of society as a series of interrelated groups, each placed in its own rightful position in the universe"[18].

[15] Chang'an was the capital city for Sui and Tang dynasty, from 581 AD to 907 AD
[16] Beijing was referred to Dadu in Yuan Dynasty from 1271 AD to 1368 AD
[17] Wright, A. F. "The Cosmology of the Chinese City." In The City in Late Imperial China. Edited by G. W. Skinner. Stanford, CA: Stanford University Press, 1977.
[18] Loewe, Michael. Everyday life in Early Imperial China during the Han Period, 202 BC-220AD. London, B.T. Batsford, 1968.

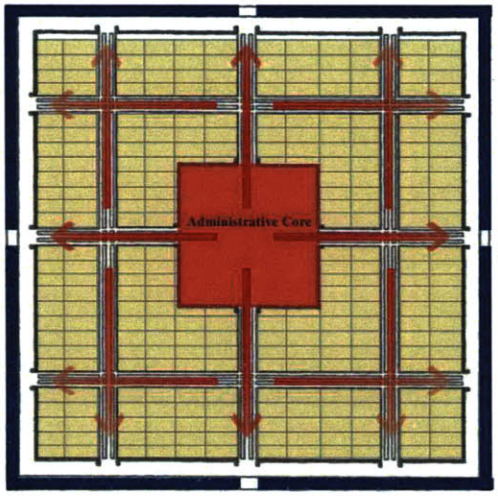

Figure 9. The Plan of Wangcheng, from Kaogongji

Meanwhile, the political and social sequences were important components which shaped the Chinese city form. A typical Chinese sequence was characterized by a serious of territories ranked in a crescendo pattern: houses, courtyards, or the entire city were placed by the rank of occupiers. The further away the constituent part was from the entrance, the higher its status was. In daily experience, the observer entered from the bottom of the hierarchy. As the person proceeded further, the territory of higher hierarchy will unfold accordingly, and the order of the whole will be unveiled in the process. From the smallest courtyard to the biggest capital city, the principles of Chinese of sequence existed on various scales. This ubiquity of self-similar sequence at all scales is differs from western sequences which were embedded within competing ideas of city form. Thus, the medieval church, the center of a community, was often not approached by a crescendo sequence, but discovered in the city, marked only by a small square. Likewise, palaces, beyond that of the king, in many cases were situated along streets within the fabric of the city, with rather modest entries but magnificent interiors. Perhaps this reflected the multi-centered sources of power – king, church, nobles, guilds, city governments, universities -- in ancient western cities.

By contrast, the Chinese urban sequence was planned to consolidate the administrative power and feudal rules. The passing and unfolding of scenes was not the natural derivative of the cosmic model, rather, it was the physical embodiment of the paternalistic politics and social governance. In feudal states where political power overrode the others, including religious and civic forces, the capital-city-town system

together with the dominant axes were faithful indications of the hierarchical governance. For instance, in pre-modern Beijing, aristocrats and officials lived close to the administrative core, whereas businessmen, craftsmen and others lived around the remote corners of the city. The movements through the city were manipulated, and the access to certain routes was not granted to lower social classes. The social sequence observed the hierarchies prescribed in Confucianism, a Chinese moral system founded upon respect for hierarchy, acceptance for the physical environment as well as of the social order.[19] In official and folk architecture traditions, palaces, temples, courtyard houses and administrative compounds exhibited a preconceived spatial sequence to differentiate social ranks, promote proprieties, and accommodate ritualistic needs.

In this chapter, I will look into the basic vocabularies of the Chinese urban sequence. Critical components which comprised the urban sequence will be examined, such as the walls, gates, Paifang archways, and landmarks. Further, the application of the sequence will be analyzed on various scales, from the smallest courtyard house to the grant capital city. Finally, the basic features of the order and sequence will be summarized.

II.A. Experience in motion: The Vocabulary of Urban Sequence

Unlike the European concept of monuments, the Chinese notion of monumentality was to be experienced in motion, much similar to music or literature pieces. Similar with a piece of music composition, a pre-modern Chinese city was compiled in elaborate sequences. A tour in the city consisted of articulated rhythm and variation, in which the introductions, expositions, transitions, and the climax unfolded in time. The urban choreography was apprehended from the preconceived tour on the correct direction: after passing through a gate, one would encounter a wide avenue crowed with people and traffic; shops and tea houses were lined up on both sides of the street. Going through a Paifang archway, the street façades became more sober and monumental, with courtyards and alleyways unfolded in a regular distance. After the royal gate, the aristocratic territory gave another scene of luxury mansions and royal temples; the observer passed through the A-thousand-step corridor and the matrix of ministry compounds. Finally, the magnificent Forbidden City appeared in the end, and the urban sequence started all over again.

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[19] Marie-Claire Bergere, In the Golden Age of the Chinese Bourgeoisie, 1911-1937, p.14

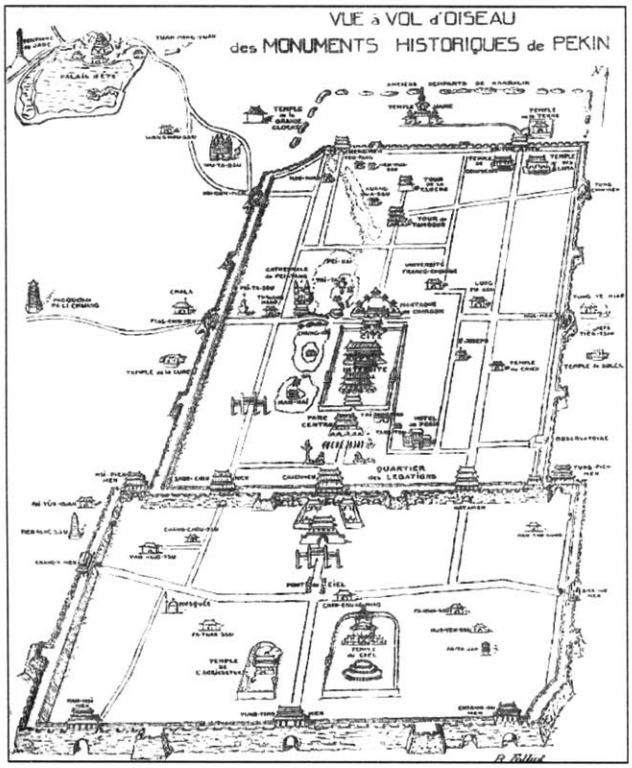


Figure 10. A map of Beijing, by R.Folliod, 1900-1930[20]

In an aerial map of Beijing, R. Folliod protracted the basic urban vocabularies in a diagram, including the city walls, routes, Paifang archways, palaces, temples, and landmarks. My examination will starts from these basic vocabularies of the urban sequence.

II.A.1. The Walls and Gates

> *Walls, walls and yet walls, form the framework of every Chinese city. They surround it, they divide it into lots and compounds; they mark more than any other structures the basic features of the Chinese communities.*[21]

Being the most visible elements in pre-modern Chinese city, the walls were regarded by many as the icon of Chinese urbanism. The character "国", meaning the capital city, graphically referred to a solider defending a walled square with a dagger. Also, the

[20] Feng Xiaosi, *Lao Ditu, Lao Beijing* (Old map. Old Beijing) Beijing Yanshang Publishing House. P.69
[21] Needham, Joseph, with Wang Ling and Lu Gwei-Djen. 1971. Civil Engineering and Nautics. Vol. 4,Part 3 of Sience and Civilization in China, ed. Joseph Needham. Cambridge University Press. 1971, p.42-p.43

character "城", meaning the city, literally meant "the wall" in the first place. A typical ancient Chinese city relied on walls as a tool to divide, segregate, and control. The outer city walls were built as a shield against enemy attack. Also, outlaws would be easily trapped inside of walled cities. The inner city walls were used to divide population enclaves, enclose markets, or to protect administrative branches[22]. Often, partition walls were built to separate the ruling class from plain citizens. Different social classes were also isolated from each other by walls to minimize mutual contacts. In the case of pre-modern Beijing, the royal city allowed access for emperors and aristocrats only; the inner-city was divided into eight districts, each occupied by one of the eight Manchurian banners; the outer-city was used to accommodate the Han ethnic group[23]. The concept of wall was even extended to the Great Wall, a gigantic defense work built to separate the Hans with the northern minorities. The walled space, however, was often associated with inward-looking mentality and passive defensive strategy. Yet, the walls did play a positive role in providing added security and privacy, and they were not always superimposed from above. For instance, the courtyard walls in pre-modern Beijing were built spontaneously by its owners. Also, the walled structure in ancient Chinese cities anteceded some modern counterparts, such as the walled Danwei space and residential community in contemporary Chinese cities.

If the walls were used to separate, then the gates were built to connect. The City gates allowed for civic access, which was synchronized in a unified schedule—for the gates were to be closed at night. For other gates, including the front gate for royal city, government agencies, and public compounds, the access was granted to selective groups. For instance the Dong'anlimen Gate of ancient Beijing (Figure 11) connected the inner city and royal city, and it was only accessible for aristocrats.

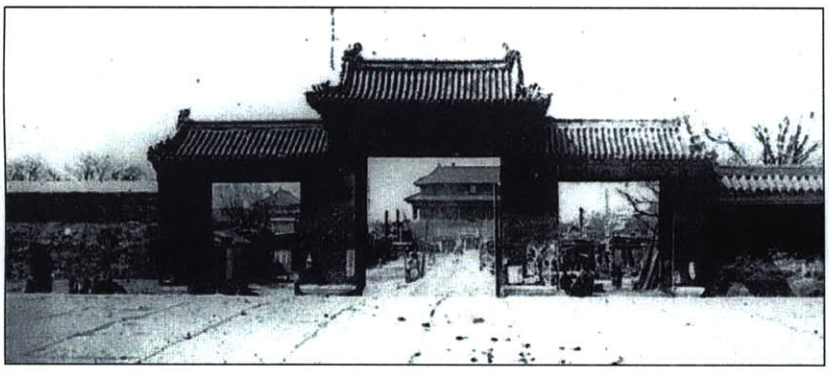
Gates served as the transition point to link spaces with contrasting features, and the inside and the outside were treated as different territories. An individual gate imposed a stop in the sequence, and its alignment creates rhythmical pauses in a continuous procession. The movement was slowed down underneath the gates, and observers were

[22] Chang, Sen-dou, Some Observations on the Morphology of Chinese Walled Cities, ekistics 31 (182) 1972

[23] The eighteen century map, Cheng huan shi lv, showed the pattern of segregation in Qing Beijing, whereas the inner city was mapped out in eight parts according to the division of eight banners.

reminded of the upfront view framed out by the door case. (Figure 11) In this situation, passing through gates were given higher significance in the urban sequence. Moreover, multiple gates were aligned along certain axes to form monuments by themselves, in which the previous gate served as a view frame for the sceneries upfront.

The spatial sequence of approaching a city gate would be like this: the silhouette of walls and gates tower firstly loomed on the horizon, and they opaqueness aroused one's curiosity to proceed and discover; When one passed across the city boundary via a suppressed gate entrance, the person would be pleasantly surprised to find that the wild suburban was replaced by urban fabric unfolded all at a sudden.



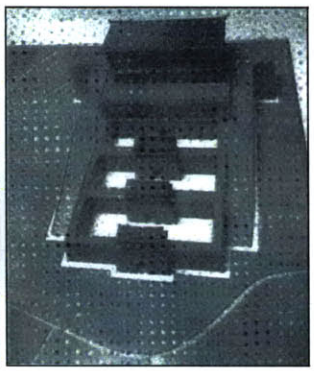


Figure 11. Donganli Gate of Anceint Beijing.
Figure 12. Ming Dynasty Zhonghua Gate in Nanjing[24].

In addition, the passing of specific gates had developed detailed meaning in narrations. For instance, each city gate in Beijing had its own stories which were tied to the nature of circulation it allowed through: The Xuanwu Gate in Beijing was named the gate of death because it stood on the way to the execution ground; The Anding Gate led to the Alter of Earth, which granted it the meaning of life and opulence; The Desheng Gate served as the triumphal entrance for victorious generals and soldiers, etc.

The development of city gate architecture started from the form of fortification. Watch towers were added on the brick platform, extra enclosures were provided to strengthen the security (Figure 12). Eventually, gates architecture had transcended the function of military defense, and it was incorporated into hierarchical urban design model: the size

[24] Kiang, Heng Chye, Cities of Aristocrats and Bureaucrats: The Development of Medieval Chinese Cityscapes, University of Hawaii's Press, Honolulu, 1999, p.148

and style of the gates were matched with the ranks of the space they connected to. Further, some gate architecture had been worshiped as the regional or national icon. The Tiananmen gate in Beijing, for instance, is a famous example of this kind. Built as the southern gate of the royal city, the gate was used for magnificent royal celebrations. Today, the Tiananmen Gate became the political icon and appeared in the Chinese national emblem (Figure 13).

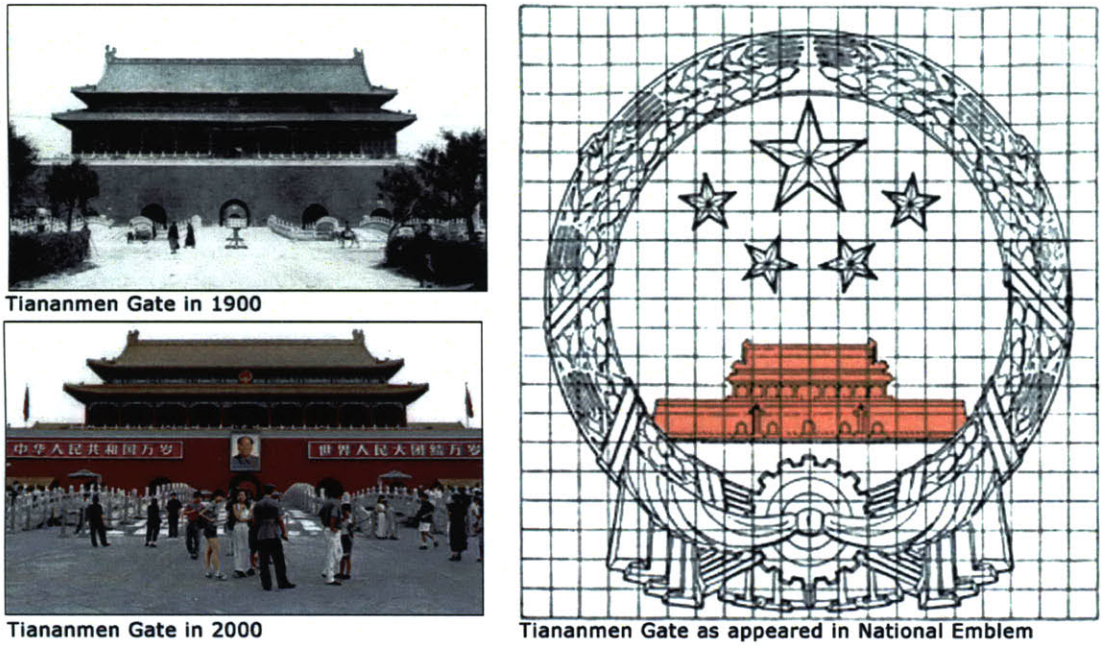


Figure 13. The Tiananmen gate in the national emblem of P.R.C.

II.A.2. The Routes: Regulation of Movement

The urban routes served as the physical channel in which the musical rhythm of sequence took place. Augustin Berque's remarks described similar relationships in Japanese cities: "the development of urban forms proceeds at various rhythms. We may, for example, distinguish, in order of increasing inertia, between activities, buildings, spaces, and access routes."[25] In fact, the rhythmic sequence of routes was realized through various regulations of individual movements, which was inherited from the core concept of urban control--the regulated road grids channeled the circulation, walls were erected as to block uncontrolled access, and the building forms were orchestrated to produce meaningful street facades.

[25] Augustin Berque, Japan : cities and social bonds ; translated by Chris Turner, Pilkington press, 2005, p.27

Were it not for typographical constraints, an ideal Chinese city would adopt the perfect grid pattern in the plan following the Kaogongji model. Unlike homogenous modern grids with four dimensional freedoms in every road crossing, the Chinese grid differentiated artery roads and subsidiary ones ever since the Kaogongji model. According to Deng Yi and Mao Qizhi who studied the plan for Beijing from Yuan Dynasty, the main streets in Beijing were set to be 24 steps or 37m in width; the width of secondary streets were reduced in half, to be 12 steps or 18.6m. The Hutong lanes which ran in east-west direction were the narrowest of all, with an average width of 6 steps or 9.3m.[26] In this situation, the freedom of route choice was quite limited, and different traffic types were separated.

The artery roads were wide and well-paved in order to accommodate major urban traffic, including pedestrians, animals and carriages. Also, the roads were reserved for ritualistic events to allow armies or official escorts to pass through. However, the subsidiary roads to the residential wards were narrow and restrictive. Figure 14 shows the comparison of the circulation pattern around Fuxingmen Gate area in Beijing between 1300 AD and 2000. Excluding roundabouts, the alternative routes in 1300 from A to B in the Hutong grid is 3, yet the modern grid system has 35 options. Obviously, the ancient pattern enforces a hierarchical sequence of movement that is dramatically diluted in the contemporary city.

David Bray found that the gates leading to the Li-fang, or the walled residential wards were officially guarded in Tang Dynasty.[27] Also, Deng Yi and Mao Qizhi's revealed similar situation in Beijing in Qing Dynasty --the access to Hutong lanes were controlled by removable banisters at both ends.[28] (Figure 14) One might think that the regulation of movement being anti-democratic and detested by all. However, the reality was far away from that. The installation of banister in Hutong lanes in Beijing, for instance, emerged as a spontaneous act by inhabitants to strengthen security. The installment later became

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[26] Deng, Yi and Mao, Qizhi, quoted from *Xijinzhi, Study on the formation and scale of block of Beijing inner city based on Qianlong map.* Historical Studies, 2003, volumn 27, issue 10, p.60

[27] Bray, David, Social Space and Governance in Urban China, The Danwei System from Origins to Reform, Stanford University Press, Stanford, California, 2005, p.24

[28] Deng, Yi and Mao, Qizhi, quoted from *Xijinzhi, Study on the formation and scale of block of Beijing inner city based on Qianlong map.* Historical Studies, 2003, volumn 27, issue 10, 2003 p.63

mandatory and implemented by the government.[29]

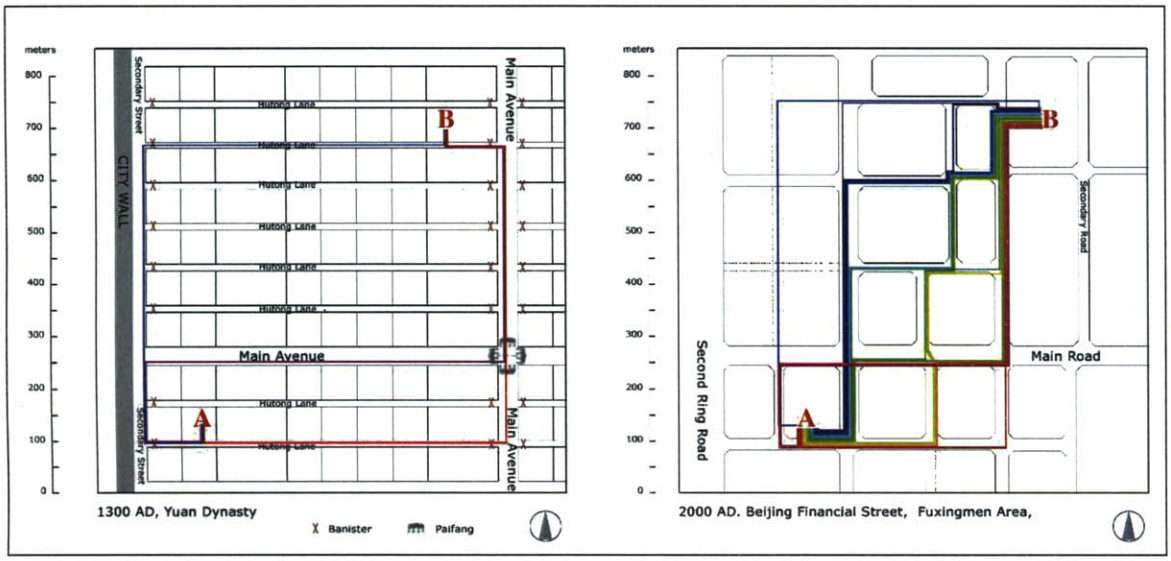
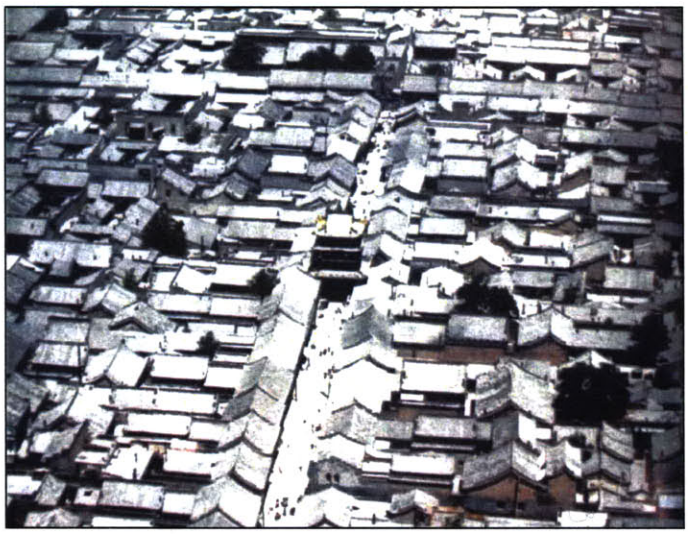


Figure 14. The Fuxingmen Gate area in 1300 AD (left) and 2000AD (right) , Beijing

The street facades, including building heights, orientations, and programs were subject to regulation. Figure 15 shows the streets in Pingyao, a well-preserved history town in Shanxi province[30]. Street buildings produced a continuous interface along the major south-north artery street, on which most of the urban activities took place. The bell tower straddled across the street as the dominant element of the whole city. Figure 16. *The Streetscape in*shows the unified street front at eye level with regulated setback and uniformed architectural details.



[29] Ibid. p.65

[30] The current city of Pingyao was physically built in Ming and Qing dynasty. The main body of city wall was built 600 years ago. The city prospered in the late 19th century and early 20th century because of booming trade and finance.

Figure 15. Bird's eye view: the historic city of Pingyao

Figure 16. The Streetscape in Pingyao

The regulation of movements in pre-modern Chinese cities, although being largely prohibitive in its nature, had achieved effective outcomes: 1) by eliminating through traffic across residential zone, public roads were more efficiently used; 2) the controlled access to the communities enhanced the neighborhood security and reduced disturbance; 3) the limited number of li-fang entrances increased the chance of informal encounters, which strengthened neighborhood communication and public surveillance.

II.A.3. Paifang: The Carrier of Memories

The *paifang* archway (牌坊), also named *Pailou* (牌楼), or the Chinese arch, is a free standing monument. It is an archway architecture usually made of wood or stone, and it is painted or ornamented with glazed tiles, carving and calligraphy. In Chinese language, *Pai* (牌) means planar surface, and *fang* (坊)[31] refers to urban blocks. The genesis of Paifang remains debatable. The prevalent opinion believes that the *paifang* originated from the gateway of the *fang*, which is a basic Chinese neighborhood unit similar to today's block. Chang'an in Tang dynasty for example, consisted of a hundred and ten *fangs*[32], each of them was gated and guarded by solders. (Figure 17) From Song Dynasty, the enclosed *fang* systems were gradually replaced by open blocks. Paifangs therefore lost their original roles and further became components of the urban sequence.

[31] Fang is also named *li* in Sui dynasty. The word *Lifang* is the counterpart in modern Chinese language
[32] Wikipedia http://zh.wikipedia.org/w/index.php?titlezh-cn 2006.1.13

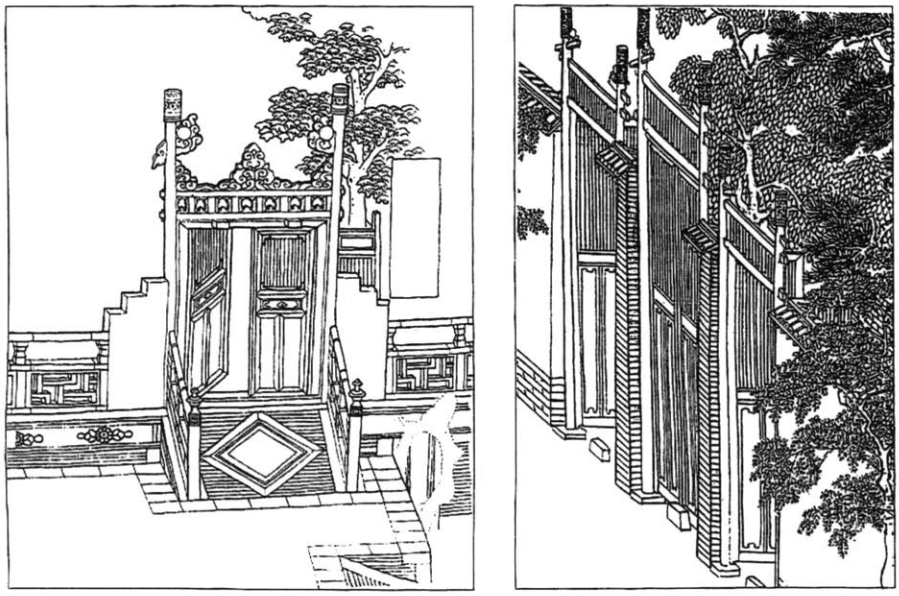


Figure 17. Examples of the Raven's Head Gate, one possible origins of Paifang[33]

Paifangs were not installed, as many think, as specific tool to regulate the sense of sequence at the first place. They were crystallized urban memories. Comparable with the triumphal arches from the West, a Paifang in China was used to preserve not only military triumphs, but also other events as well: some were to celebrate merits and chastity, some meant to honor benevolent governance or the passing of civil service exams, and some were monuments for ancestor worship. The role of Paifang in spatial sequence as a place marker was later realized. Its decorations and inscriptions served educating functions, and their various form and styles delivered the sense of belongings and place. Inhabitants used paifangs to identify places and navigate themselves within the city. In ancient Beijing, Paifangs were strategically located at the conjuncture point of major roads from the city gates, underneath which tens of thousands would have to pass through each day. For them, paifangs were artistic installations which framed out the street vista. Figure 18 shows how certain neighborhoods were named after the number of paifangs in the crossroad, such as Xisi(the west four), Dongsi(the east four), Xidan(the west single), Dongdan(the east single). Besides, the place of Dashila was named after the banisters used to divide neighborhood blocks.

[33] Kiang, Heng Chye, Cities of Aristocrats and Bureaucrats: The Development of Medieval Chinese Cityscapes, University of Hawaii's Press, Honolulu, 1999, p.124

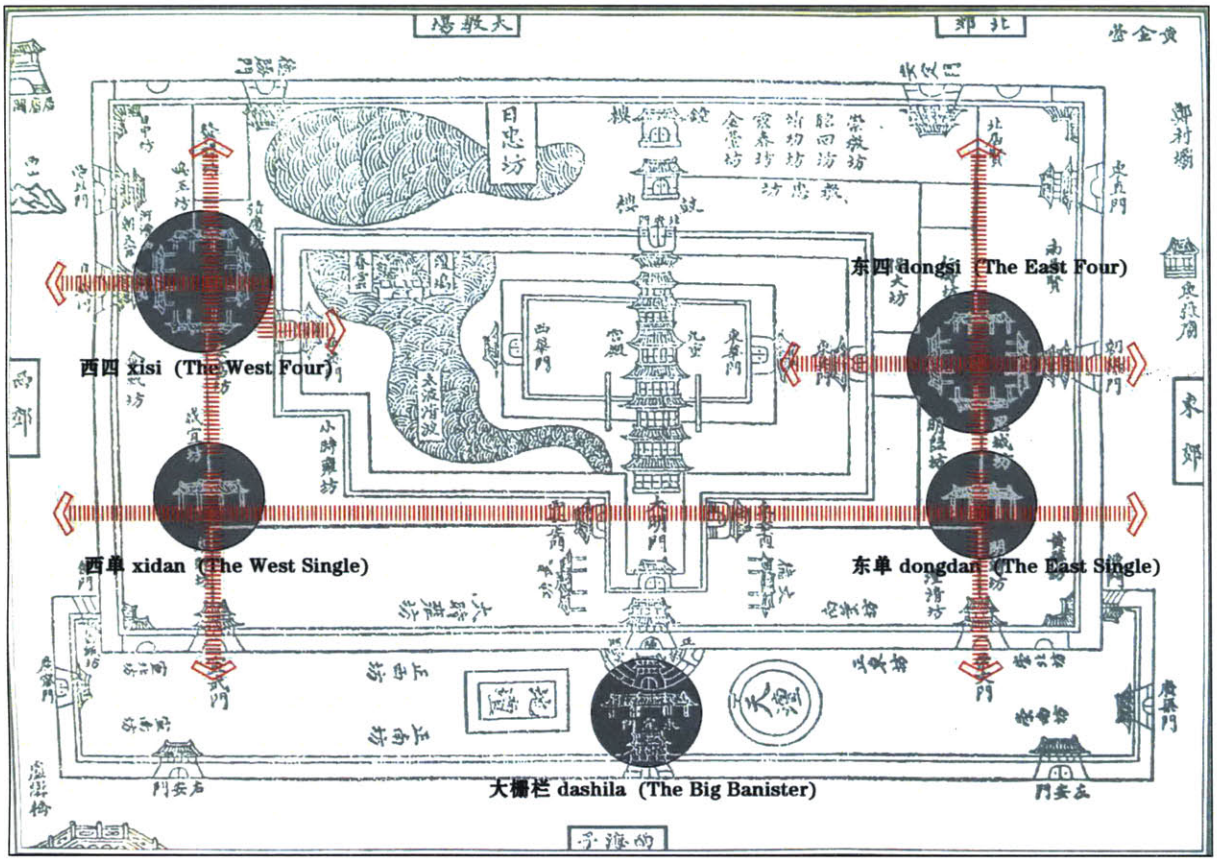


Figure 18. Diagram based on a map of Beijing from Ming dynasty[34].

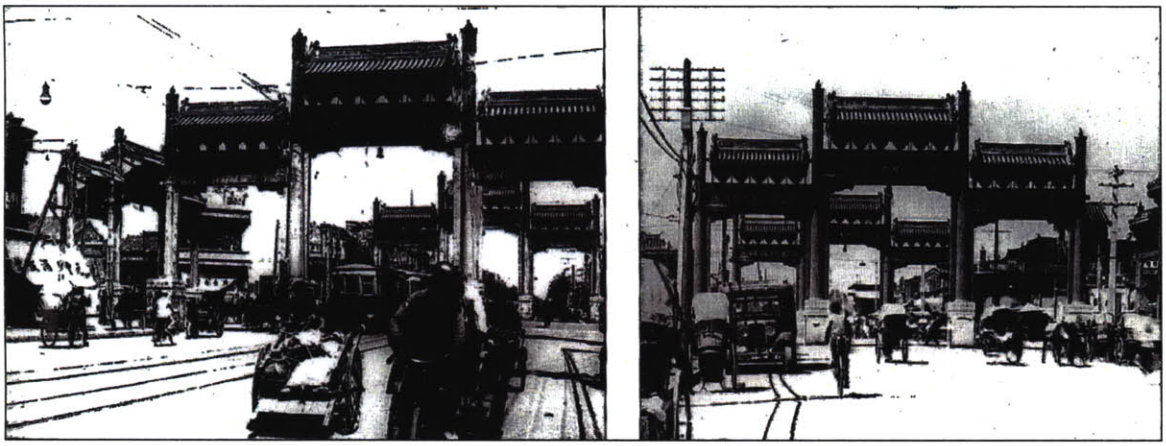


Figure 19&20. Dongsi paifang, 1934

[34] Base map from jinshi wu chengxiang hutong ji (Beijing five city alley hutong map). Image source: Feng Menghua and others, *Beijing zhi, chengxiang guihua jun, cehui z*hi (Beijing Gazetteer, volume of city and rural planning, topography) Beijing publishing house, 2001

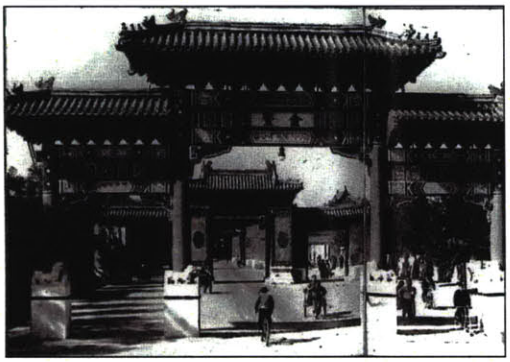
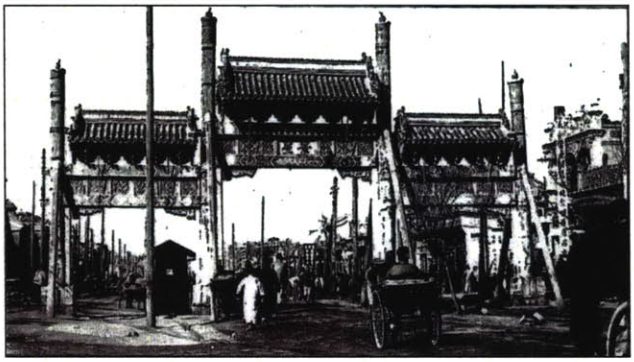



Figure 21&22. Paifangs near Tuancheng(left) Xidan paifang,(right) 1924

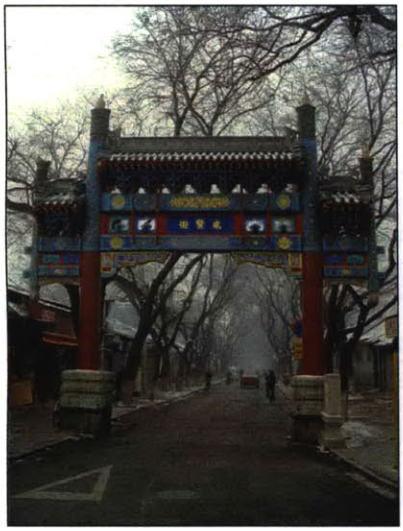



Figure 23. Recently photos of Paifangs in Chengxianjie Street[35], Beijing

II.A.4. The Fabric of Module

The dominant fabric of an ancient Chinese city was made of a simple typology – the courtyards. From the smallest courtyard houses to the biggest palace, this basic typology was organized by the rule of module, an early concept recorded by *Kaogongji*. The book advocated measuring and standardization in the realms of craftsmanship, architecture, and city planning. Later, the classic architecture book *Yinzao fashi*[36] (construction norms and standards) in Song dynasty was issued as the state standards for official buildings, It prescribed an elaborate modular system for official architecture

35 Chengxianjie, also named Guozijian, is the only street in Beijing where paifangs were kept in their original places. Image source: left: http://www.travelbbs.com/bbs/post_26_88759_0.html right: http://www.youbj.com/dongchen/guozijian/3.jpg 2006.1.13.

[36] The book was written by Li Jie around the year 1100 A.D in North Song dynasty. The book covered architecture design, construction, and project management, and it was credited as the encyclopedia of traditional Chinese architecture at that time.

and craftsmanship in which Cai, the dimension of timber material, was applied as the basic unit of construction. The *Gongbu gongcheng zuofa zeli*[37] (Engineering Manuel for the Board of Works) in Qing dynasty was a more recent extension of this concept.

Many scholarly researches have also covered the modules in ancient Chinese cities. For instance, Zhang Jie and Huo Xiaowei have recognized that a basic module of 600 meters was applied in the urban framework, such as the city gates, walls, and axis. A 300-meter module was used for street intervals and nodes, while 120 meters was the basic distance between Hutong lanes.[38] Based on Deng Yi and Mao Qizhi's studies on the plan of Dadu, the capital of Yuan, the modular framework of Beijing was installed in Yuan Dynasty eight centuries ago. The land was divided into the basic unit of 67.76m by 67.76m. Each individual lot was allocated to one family. Larger compounds, including as houses for royal families, temples, and other public compounds also followed this module by merging several basic units together.[39] In addition, Yahong Shen and other China scholars had noticed the self-similarity from a single courtyard to the city[40], in which the DNA of module replicated themselves on various scales.

The purpose of applying module is rooted in two aspects: On the one hand, this was a way to expedite construction. The historic Chinese capitals were often implemented in a short period of time. For example, the capital of Daxing in Sui Dynasty was built from 582 to 583 AD; Dadu in Yuan Dynasty was built from 1268 to 1277 AD. These intensive constructions preferred the solutions of modules and standardization. One the other hand, the module was installed to facilitate urban control and governance. A courtyard, which accommodated one extended family, served as the basic unit of traditional Chinese society in terms of taxation and military service. The governing structure in Ming Beijing, which followed the hierarchy of family – Hutong – Pu – Pai – Fang – Cheng, was a reflection of the modular structure.

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[37] The book was issue for enforcement in 1734, which served as the architectural standards for official construction in Qing dynasty.
[38] Zhang Jie and Huo Xiaowei, Human Scales in the Plannign and Design of Ancient Beijing, World Architecture, Issue 2, 2002, p.69
[39] Deng yi, Mao Qizhi, study on the formation and scale of bolck of Beijing inner city based on Qianlong map, Historical Studies, 2003, volumn 27, issue 10.
[40] Shen, Yahong, The Ordering of the Chinese City, Doctoral Dissertation, Graduate School of Design, Harvard University, 1994, p.77

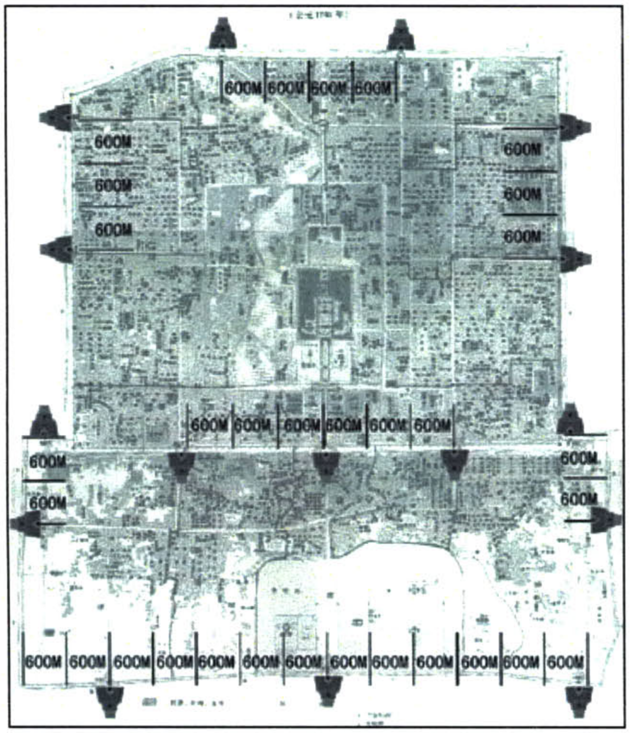

Figure 24. The basic module of pre-modern Beijing

II.A.5. Landmarks: The Apex of Sequence

Aside from the dominant fabric of courtyards, the ancient Chinese city had a few landmarks of non-courtyard typology, including the tower and pagoda. Compared with European landmarks, the architectural forms of these landmarks were largely modest and contextual. Yet they occupied the most visible locations, and they were the apexes of the Chinese urban sequence.

The bell and drum towers stood as both the landmarks and soundmarks in Beijing (Figure 25 & 26). These two towers sited next to each other in a conspicuous location – at the north end of the central axis (Figure 39). They were both among the tallest structures in Beijing by then -- the former was 47m in height, and the later over 33m. Surrounded by the flat fabric of single-storey courtyard houses, the two towers were the most visible figures in the entire city. In Ming and Qing dynasty, their primary roles were set to regulate schedule: the bell rang in day times while the drum was heard during the night. In the evening after the bell announcing the "*dinggeng*" (rest hour), the city gates were closed, curfew was enacted, and the whole city was shut down. At dawn when the bell announced "*lianggeng*" (light hour), the city returned to its normal schedule again.

Figure 25&26. The Bell Tower in Beijing(left) the Drum Tower in Beijing(right)[41]

II.B. From the Courtyard to the Capital: The Application of Urban Sequence

The Chinese urban sequence had a variety of applications, and it was distinguishable at multiple scales, from the smallest courtyard house to biggest capital city. In this section, I examine the sequences as well as they relationship among courtyard houses, compounds, axes, and the plan of capital city.

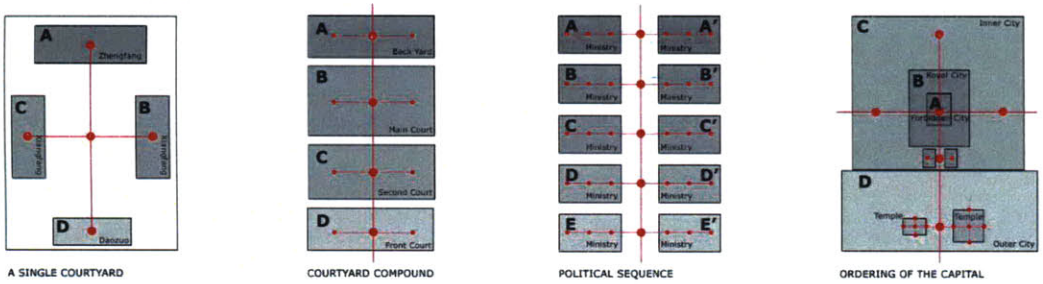

Figure 27. Application of Sequence in Pre-modern Chinese Cities

II.B.1. The Sequence of the Courtyard House

A courtyard is the simplest unit which composed the urban fabric in pre-modern time. Enclosed by walls and buildings, the space in the middle was occupied by a court, a garden, or smaller courtyards. The S*iheyuan* (the four-sided courtyard) in Beijing, for instance, is a thoroughly studied housing type of this kind. As a tradition, the *Siheyuan* typology was formed in Yuan Dynasty, when the government divided the city into basic lots of eight *Mu (*4550m²). Later these lots were assigned to financially capable families

[41] Image Source: http://upload.wikimedia.org/wikipedia/en/f/fa/Drum-tower.jpg 2007.1.14

for house building. According to the Yuan standard, each lot was planned for a courtyard compound to accommodate a large extended family. [42]

A *Siheyuan* courtyard was surrounded by walls, in which individual houses were detached from each other. The yard in the middle became the shared space or gardens for the family. Storage rooms and kitchens normally occupied the corners. Figure 28 shows a typical courtyard for a family of eight. The individual houses adopted symmetric plans along the north-south axis, although the main entrance for the courtyard was often shifted away from the axis for Fengshui reasons. The Zhengfang sited in the north side, while the Xiangfang occupied the east and west sides. The *Daozuo* was located in the south and faced north.

The order of a single courtyard reflected the cosmic model and rules of orientation in northern hemisphere. Moreover, the courtyard sequence depicted the family hierarchy: The south facing Zhengfang occupied the premium location with the best privacy and quietness, it was reserved for the patriarch only – in Chinese case the eldest male who dictated the family affairs. On the contrary, the north facing Daozuo sited near the entrance. The Daozuo room, being noisy and would be easily disturbed by visitors, was provided for person of the lowest position. The status of Xiangfang was between Zhengfang and Daozuo. Situated on the east and west side of the courtyards, Xiangfangs were usually occupied by family members of the second and third tier, such as the patriarch's younger brothers or sons.

[42] Deng, Yi and Mao, Qizhi, Study on the formation and scale of block of Beijing inner city based on Qianlong map. Historical Studies, Volume 27, issue 10, 2003, p.60

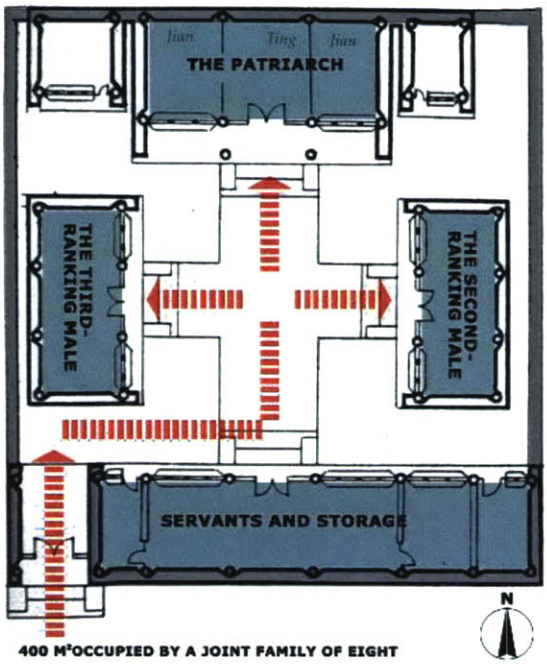

Figure 28. A typical single layered Sihuyuan house[43]

As was shown in Figure 29, a multi-layered *Sihuyuan* courtyard appeared in a "目" shaped configuration. The individual yards from were ordered with ascending order from south to north. The front yard served as the lobby, and it was the most accessible venue for all guests; the middle yard was the main court for meeting and family lives, which was open to only distinguished guess upon initiation; the back yard was the most private of all, which was usually reserved for under aged daughters or concubines. The multiple walls and houses not only blocked the eyesight, but also reduced noises as well. It is worth noting that the number of courtyards on the sequence stands for the social and economic status of the family. And the extensions would take place only when the financial circumstances and property size allow. Every time a S*ihuyuan* courtyard compound grows in size, the expansion would preferably be courtyards added on south-north axial directions. Therefore, the complexity of sequence increased over time.

Figure 29 shows the sequence of wandering through a triple layered courtyard. ***Figure 10***The gate A, B, and C connected three courtyards together along the axis. The rank of privacy followed the sequence of III > II > I. Starting with the main entrance of gate A, a

[43] Image Source: Redrawn from Bray, David, Social Space and Governance in Urban China, The Danwei System from Origins to Reform, Stanford University Press, Stanford, California, 2005, p.31

visitor would firstly reach Yard I. In this small and plainly decorated space, the visitor would be attended by the doormen. Then the visitor would be led into Yard II through gate B, which was a large courtyard with pleasing landscaping and architecture details. Here the person would meet with the house master in the Zhengfang room on axis C, which sited at the spatial apex of the compound sequence. Lastly, a small gate on axis C leads to yard III which is home to under aged girls and never granted access to outsiders.

The order and sequence of the courtyard compounds represented a radical idea of applying physical form to the goal of social transformation. The status of each family member was spatially defined in the Confucius hierarchy, and their daily behaviors, etiquettes, and contacts were shaped to the goal of ethical and moral order. *Guanzi*, the philosopher from the Warring States Period addressed the formation of the courtyard compounds as a way to "reduce the opportunities for crime and for illicit contact between men and women."[44] Also, David Bray believed that the ordering was enacted to promote *Li* – the rites, or rules of propriety.[45]

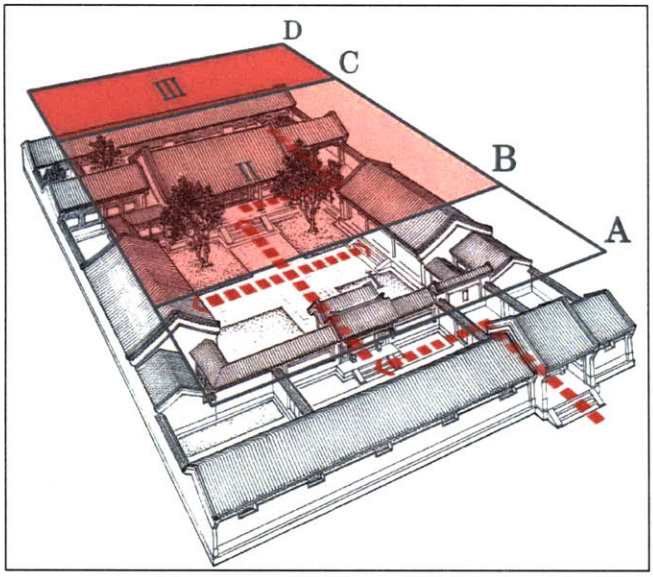

Figure 29. A typical triple layered Siheyuan house in Beijing

[44] Yang, Kuan, quoted Guanzi "Baguan" 1993. p. 212
[45] Bray, David, Social Space and Governance in Urban China, The Danwei System from Origins to Reform, Stanford University Press, Stanford, California, 2005, p.25

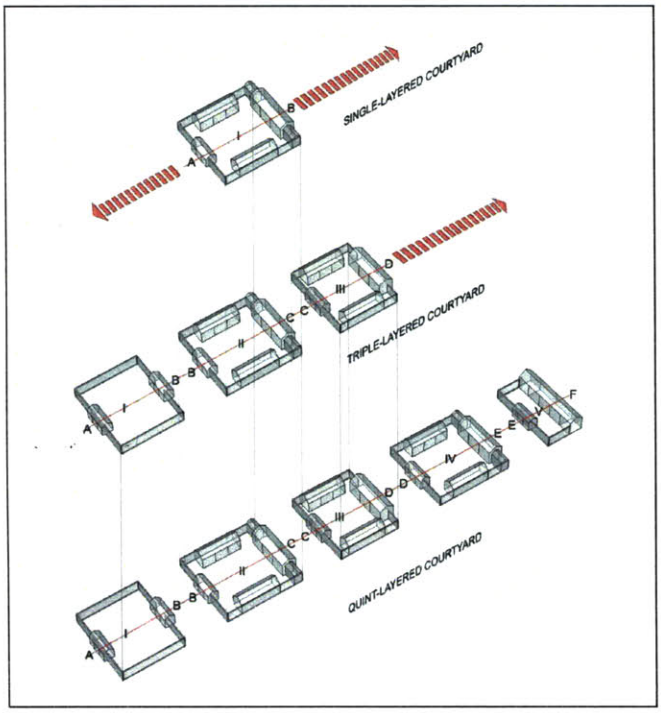

Figure 30. The growth pattern of a Siheyuan house

II.B.2. The Sequence of the Courtyard Compounds

Ancient Chinese cities did not rely on new typologies to accommodate different uses. Rather, the courtyards were used as a one-fit-all solution. The courtyard compound, which was made of multiple courtyards, became the most commonly seen typology in ancient Chinese cities. A courtyard compound could be a temple, a government bureau, a market, a bank, a military post, or a palace. And its size, proportion and architecture details might vary accordingly. Yet the internal sequence in the courtyard compound remained consistent. In this way, the texture of an ancient Chinese city was constructed by the courtyard patterns of "口", "日", and "目". These patterns were imitated, transformed and compiled in a highly contextual manner. In this section I will look at temple and palace compounds through cases in Beijing and Shanxi.

The temples, which enshrined mostly Buddhism, and Taoism, were typical examples of courtyard typology. The Buddhist temple, which married the Indian-born religion with local architecture form, was the most familiar one. In its form, a Buddhist temple resembled a courtyard house. Its top-down governance hierarchy paralleled that of the patriarchic family in which the abbot, much like a patriarch, exercised power. In fact,

temples and courtyard houses were able to be converted into each other with only minor changes. The Yonghegong temple in the northeastern corner of Beijing was such an example. The compound was firstly built as the mansion for Prince Yuzhen[46]. It was later expanded and turned into a Buddhist temple after Prince Yuzhen was crowned as the emperor. Seen from Figure 31, the Yonghegong temple took on the sequence of a typical courtyard compound: a continuous axis linked three components together. Each component, although built in different phases, followed consistent rules.

Figure 32 shows the spatial sequence in the Foguangsi Temple, Shanxi Province. Initially built in Tang dynasty (857 AD), the temple was repeated renovated and restored. However, the sequence was preserved and enriched overtime. A pilgrimage tour to the temple exhibits a repression-openness pattern: visitors enter the compound via the narrow side gate on the right. In a capacious courtyard they gain an oblique view of the East Hall hidden behind trees. The route along the central axis is accompanied by symmetric buildings along both sides. Once near, visitors will temporarily lose the sight of destination. As they pass through the second gate and climb up the sharp steps in a repressive tunnel, the Grand East Hall, as the apex of sequence, will finally appears in the end. The spatial rhythm of repression and openness added to its appeal.

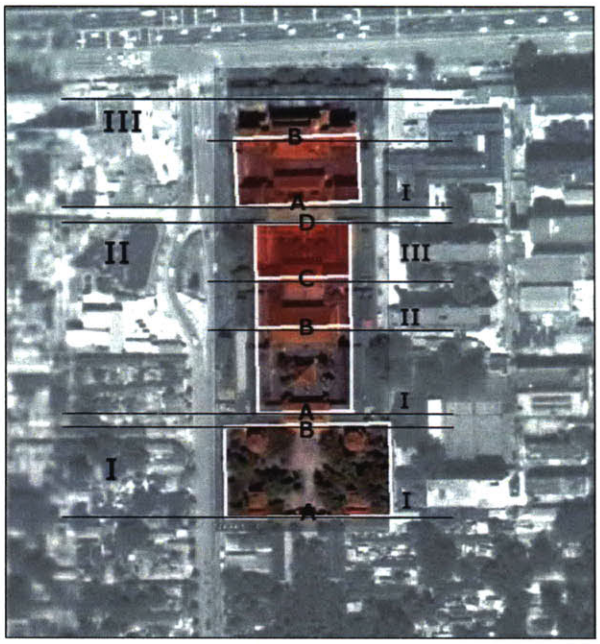

Figure 31. Lama temple, the five-layered courtyard compound, Beijing

[46] Yuzhen (1678—1735), was later crowned as the Emperor Yongzheng of Qing Dynasty

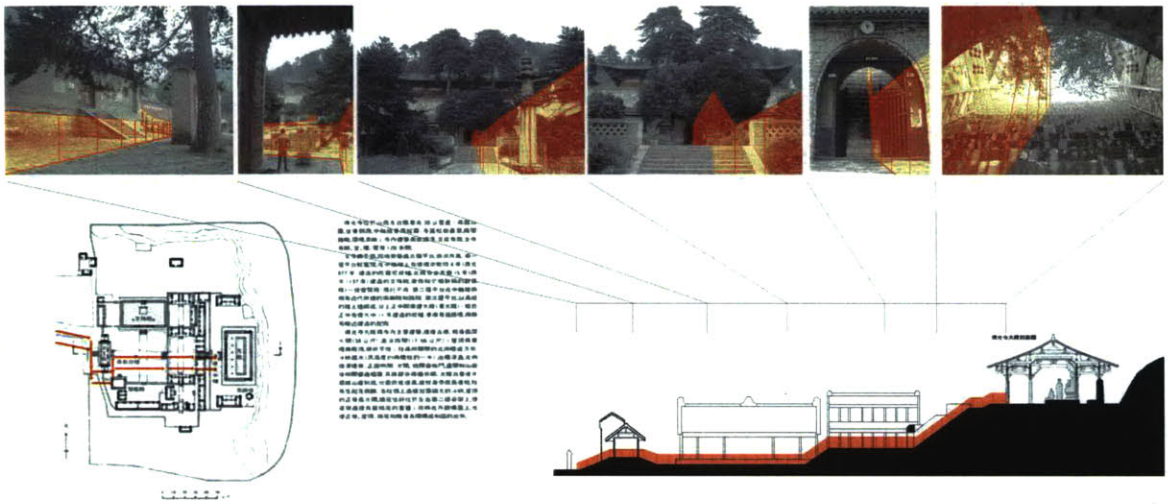

Figure 32. Foguangsi Temple, Shanxi Province.

The Chinese palaces were the premium version of the courtyard typology. Being the largest and most complicated forms of compounds, they normally situated at the sacred center and occupied the supreme positions. Unlike many European palaces and castles which were monolithic in their forms, a Chinese palace normally took the form of a flat yet gigantic building complex ordered to the highest complexity. The ordering of such a palace was to set up an ideal city form for others to follow -- the city form which promoted the Confucius hierarchy and harmonious conducts.

The Forbidden City was the largest Chinese palace being preserved today. Being the royal palace of the Ming and Qing Dynasty, the Forbidden City used to be the live-work place for the royal family. The ordering of the Forbidden City was built on the functional division of live and work zones. Figure 33 shows that the northern half of the Forbidden City was occupied by the *Neiting*, the living and recreational court. The southern half was taken by the *Waichao*, meaning the administrative and ceremonial court. Again, the living zones were planned away from the main entrance in the south.

The largest compound in the Forbidden City sited on the main axis. Its magnificent sequence started with the Wumen gates, the Taihe gate, then passes the Taihe Palace, the Zhonghe Palace, and ended in the Baohe Palace. However, most other compounds comprised of smaller counterparts and appeared in fractural geometrics. For instance, the Neiting residential courtyards were orderly aligned in matrixes, and they were

enclosed in larger compound structures much like the walled Li-fang system from Tang dynasty. These compounds were further incorporated into the walled structure of the Forbidden City, in which the rules of sequence remained.

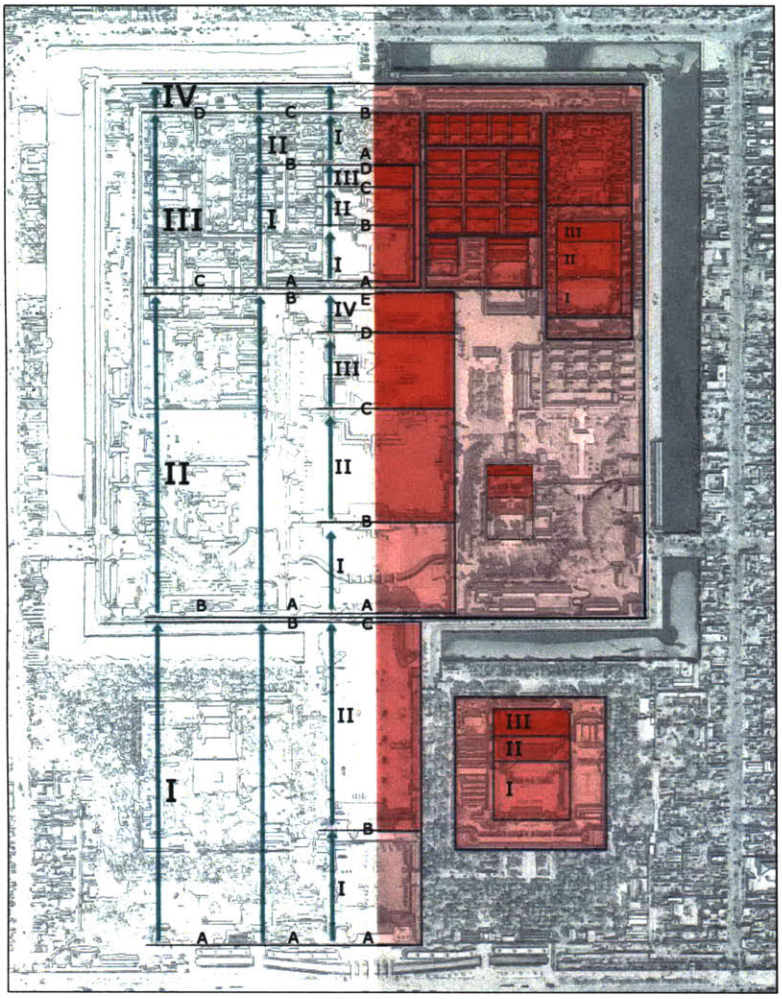

Figure 33. The Sequence of the Forbidden City.

II.B.3. The Sequence of the Axes

The pre-modern Chinese cities, especially the capitals, had strong preferences for urban axes. A Chinese urban axis consisted of elements like gates, walls, Paifang archways, and courtyard compounds. These constituent parts along the axis followed an ascending order, by which all spaces and scales of the form are organized into hierarchical sequences. In this section I will look at the Tiananmen Square in Qing dynasty as a typical example of political axis.

Located at the heart of Beijing, the Tiananmen Square in Qing dynasty differed greatly from its modern day predecessor. Instead of being a large public plaza as it appears today, the Tiananmen Square a century ago used to be a T-shaped space enclosed by "a thousand steps corridor". However, both the old and new Tiananmen Squares were the highlight of the north-south axis, and they served as the political center in their own time.

From the plan (Figure 35), the layout of Tiananmen Square reflected the centralized political power. The ministries of the Wu (Military) and Wen (civic service) were located on west and east side accordingly. Their distance from the Forbidden City was determined by the importance of the ministries: A>B>C>D>E>F>G>H>I. As one approaches northwards towards the Forbidden City, the alignment of ministries appeared in an ascending order.

However, the sequence of the axis was not conceived for all. Much to the opposite, the ritualistic sequence on the square was used exclusively for royal activities, including the coronation and the Keju test announcement. The access to the square was banned for local inhabitants, and the sequence of the axis displayed itself only during parades in front of the emperor's convoy and distinguished guests upon invitation.
Figure *37*)

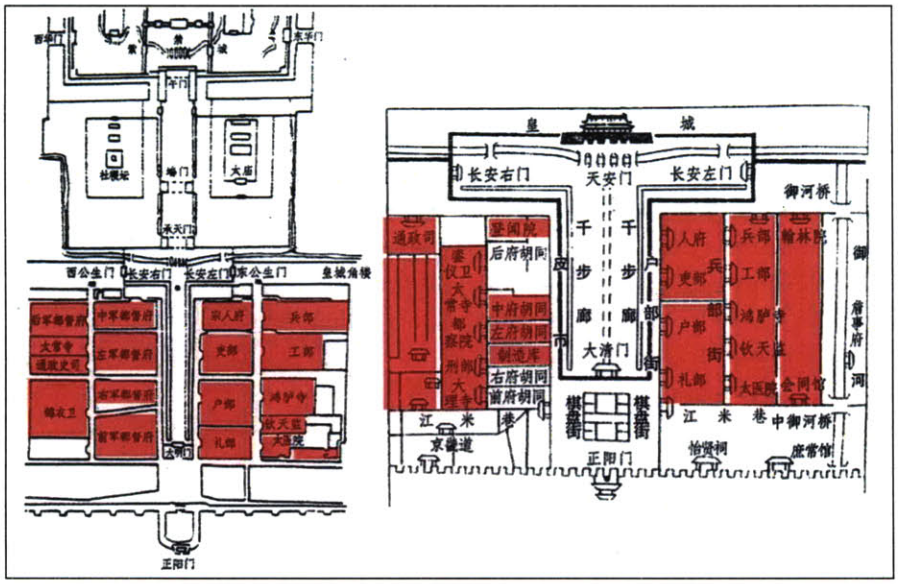

Figure 34. The plan of Tiananmen in Ming(left) and Qing(right) dynasty[47]

Figure 35. The Political Sequence of Tiananmen Square, the east wing.[48]

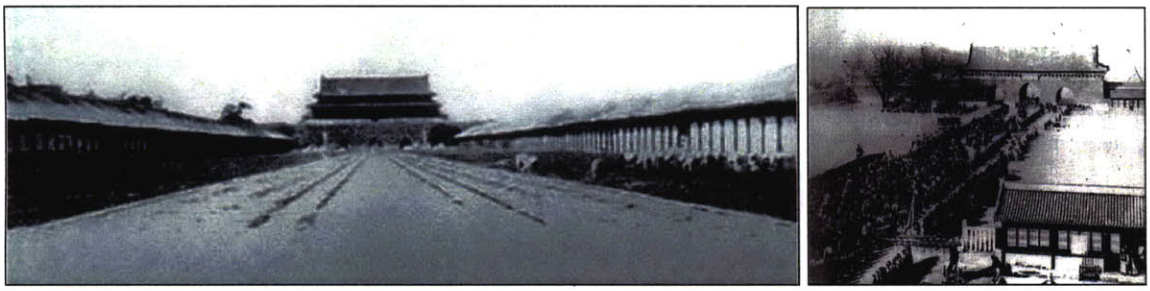

Figure 36. The A-thousand-Step-Corridor on Tiananmen Square from Qing Dynsty

Figure 37. A royal procession from the Zhonghuamen Gate, Beijing.

II.B.4. The Sequence of the Capital

A capital city was the crown in the pre-modern Chinese city-town administrative system. The plan for the capital stayed as a top priority for the ruling class. The forms of the capital were the paradigms for others to be modeled after. This section will look into the

[47] Map source: Jun, Shu, Tiananmen guangchang beiwanglun (memorandum for the Tiananmen square) Xiyuan (west garden) Press, Beijing, 2005, p. 12

[48] Draw from Qian long Jingshi Quantu, an official survey map of Beijing in 1745. Image source: Zhang Mingyi and others, Beijing zhi, Chengxiang guihua juan, Cehui zhi (Beijing Gazetteer, volume of city and town planning, measuring) Beijing Publishing house, 2001

political and social sequence of the Chinese capital cities. Two cases will be drawn from two capital cities: the Zhuquedajie Avenue in Chang'an (7th Century AD) and the Tiananmen Square in Beijing (18th Century).

The full-fledged sequence of the Chinese capital emerged after the founding of Sui dynasty(6th century AD). Daxing was the capital city of this vast empire, on which the Tang capital of Chang'an was built. The plan of the capital sequence in Chang'an was elaborate and mature. The city was vast and flat with predominantly one to two storey buildings. Looking from above, (Figure 38) the city took a square shape with rectangular grids.

The gigantic central spine, named as the Zhuquedajie Avenue, or the avenue of the red bird, ran north-south with the width of 120 meters[49]. It connected the royal palace and Ministries from the north with the Mingdemen Gate from the south. Along both sides of the avenue there were noble mansions, royal temples, and government agencies. One good reason for its horizontal expensiveness was for ritualistic parades. In its heydays, the Zhuquedajie Avenue was measured with the ability to accommodate "a crowd of two hundred thousand guards and soldiers"[50] from the emperor's escort. Meanwhile, it was also common for Kings and high ranking officials to have a full complement of military pomp at that time.[51] The street front was carefully maintained to facility massive movement, and encroachment of these avenues was strictly banned[52].

Another reason for the plan of Zhuquedajie Avenue was to create an extravagant urban sequence in order to impress out-comers. Tang was an influential Empire at that time, and Chang'an was the largest city in the world. With over one million residents, Chang'an was both a domestic and international destination, and it became a home for thousands of foreigners. Similar to the idea in city beautiful movement, the avenue in Chang'an was planned as a poseur of royal ostentation and extravagance in front of visitors. The outcome of such a plan was supported by the narration of Ebn Wahab, an Arabian traveler who visited Chang'an in later ninth Century and recorded his trip in

[49] Kiang, Heng Chye, Cities of Aristocrats and Bureaucrats: The Development of Medieval Chinese Cityscapes, University of Hawaii's Press, Honolulu, 1999, P.10
[50] Ibid, p.9
[51] Ibid, p.11
[52] In Song dynasty the banned on encroachment was loosened up, whereas the encroachment of road by shop were regulated by taxes.

writing. Ebn entered Chang'an from the Mingdemen Gate and proceeded northwards on the central axis. He was immediately shocked by the prosperity and magnificence of the capital – the avenue was vast and crowded with people[53]. Bridges, mansions, shrines and temples unfolded in the street front as he approached further. (Figure 38)

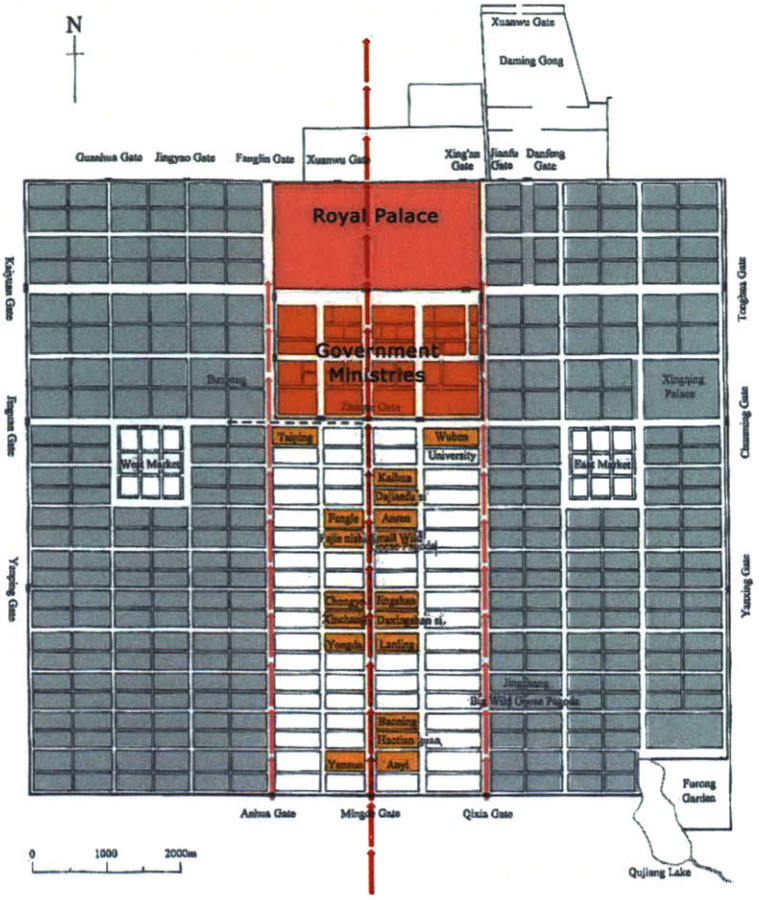

Figure 38. The Sequence of Chang'an, 7th Century[54]

The ancient city of Beijing was another example laid out following the Kaogongji model. As Figure ***34***Figure 39 shows, The Forbidden City at the center stood for the supreme royal power. The north-south axis stretched 7.7 kilometers from Zhengyangmen Gate to the Bell and Drum Towers. The temples and alters, such as the temple of Heaven and Earth, were laid out in pairs and they adopted the south facing principles as a connector

[53] Kiang, 1999, quoted Abu Zeid al Hasan, Ancient Accounts of India and China by two Mohammedan Travellers Who went to those Parts in the 9th Century, trans. from Arabic by Eusebius Renandot (London:S. Harding, 1733), p.59

[54] Redrawn from the Heng Chye Kiang, Cities or Aristocrats and Bureaucrats, the Development of Medieval Chinese Cityscapes, University of Hawai'i Press, Honolulu, 1999, p.5

between human and the nature. The religious and administrative organs arrayed a symmetric way along the central axis. On both sides of the Tiananmen Square there were government ministries ordered in ascending order. Each ministry took the form of a compound, which faced the central axis of the entire city.

In Beijing, the multiple city walls had defined the concentric structure, in which the Outer City, the Inner city, the royal City, and the Forbidden City were all located in nesting relationship. The plan of Beijing strictly observed the Kaogongji model, which worshiped the secular authority at the center. The classic literature of Chinese philosophy, *Zhouyi* emphasizes the "centrality and correctitude", while *Zhongyong* regard "centrality as the fundamentals of the world". The idea of placing the administration at the center of the city was in its core of keeping manageable distances from the center to any corners. The entering sequences of Beijing therefore could be constantly experience in various directions.

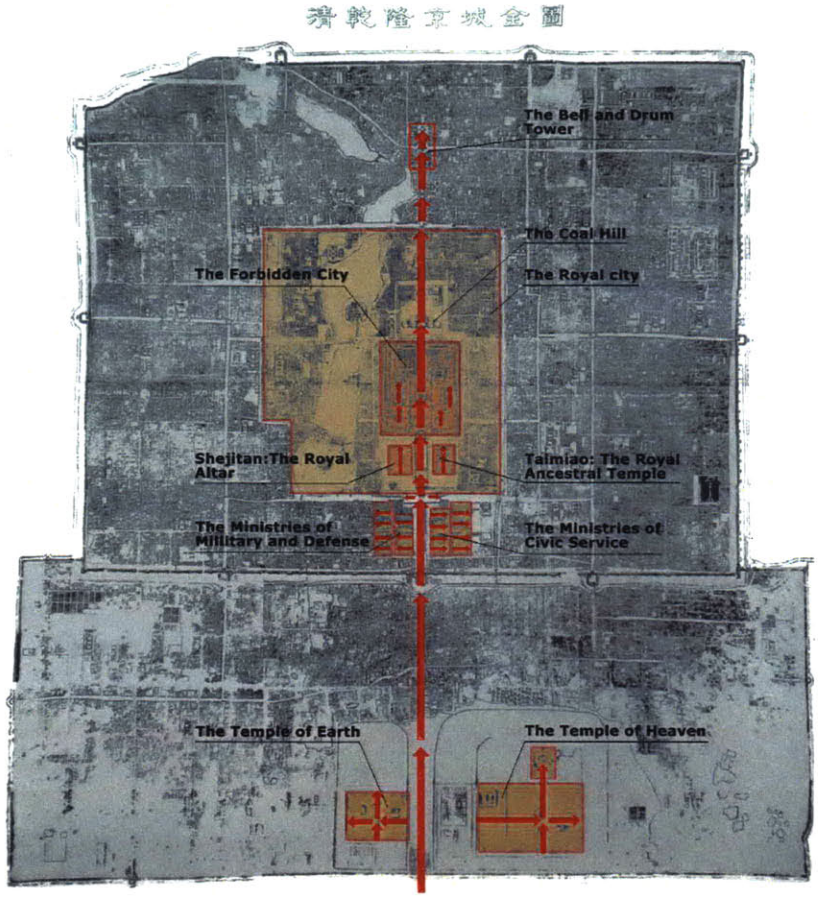

Figure 39. The Sequence of Beijing, 18th century[55].

II.C. Summary: Basic features of the Chinese Urban Order and Sequence.

Having observed the vocabularies and applications of the Chinese urban order, we are then able to reveal some basic features of pre-modern Chinese city form.

1. The Axes of Sequence:

The axes existed as not only the central spines of either urban space or building forms, they were also the channels of movement where sequence experience took place.

2. The Self-Similarity of Basic Patterns:

The urban space and building forms were laid out in modular patterns following consistent principles. These principles were observed at various scales, from the smallest courtyard houses to the biggest capital city.

3. Hierarchy of Territories and Forms:

The positioning of territories and forms were highly hierarchical. These elements sited to the north in a single enclosure or located near the end of an axis were marked with higher statues, and vice versa.

4. Enclosure and Control

The urban territories, whether to be a courtyard or a city, were enclosed with partitions and were implemented as means of control. These features were conceived to meet the needs of paternalistic rule, religious worship, security and military defense.[56]

These basic features emerged from a mutual reactive mechanism among urban control, city form, social behavior and cultural ethics: the pre-modern Chinese cites were conceived to meet with the pragmatic needs at first, including the demands for housing, work place, circulation space, and markets, etc. Moreover, the Chinese urban order was installed to consolidate political centrality and to promote the Confucius hierarchy. The city form was conceived as a tool of urban control and behavior regulation. At its philological core, the idea of locating every component at the right place was prioritized

[55] Drawn by the author over the Qianlong map of Beijing.

[56] It is worth noting that the feature of enclosure and control was also shared by other pre-modern cultural spheres. For instance, the forms of ancient Arabic, Hindu, and Native American settlements showed similar patterns.

in order to achieve the harmony between human beings and the nature. Eventually, the sequential pattern of Chinese cities, namely the repetition of boundaries and territories, was recognized and developed. The sequence was preserved over time in collective memories and became merged into the traditional Chinese urbanism. Having existed long enough, some vocabularies of the urban sequence have lost their original functions and further became icons of Chinese urban culture. These relationships are shown in Figure 40 below.

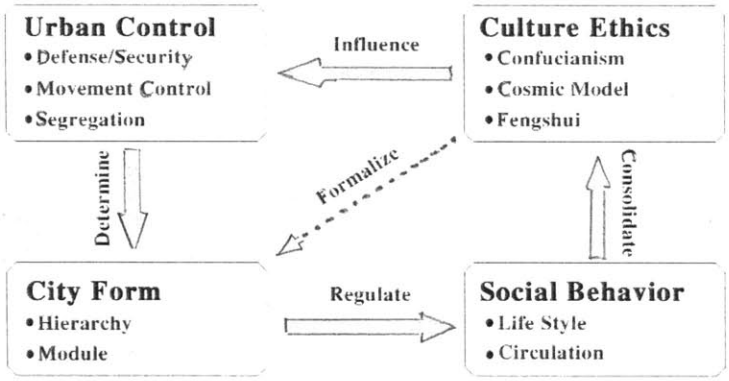

Figure 40. The relationships among form, behavior, ethics, and control

Yet why would the Chinese city form be ordered in such a way, and the sequence of space be highlighted? This was determined by the subjects and nature of the urban design. The ancient city was conceived to prioritize the needs of the rulers, not the inhabitants at large. The urban design was carried out by the dictator with little inputs from other social groups The goals of the Chinese urban sequence were not only for aesthetics and attractiveness, yet it was rooted in the governance of urban space. For example, the sequence along the central spine of the Forbidden City was not an abstract display of space like symphony pieces. Instead, it was conceived as a manifesto of power, hierarchy and behavior control. Today, a tourist could easily wander through the Forbidden City in a few hours, whereas no one other than the emperor by then was able to do so in a lifetime. Similar phenomenon was also evident in some European cases, whereas the perceptual value of sequence has outgrown their original goals. For instance, Haussman's plan for Paris has created grandeur sequences along urban boulevards; yet they were in fact planned with functional purpose, such as accommodating modern infrastructure and facilitating the movement of troops.

III. The Transformation of Order and Sequence in Modern Era

The Chinese city form has experienced drastic changes ever since the fall of Manchu Regime in 1911. After prolonged civil wars and political turmoil, the resuscitation began after 1978, when Chinese cities incurred accelerated modernization and globalization. China has been quickly transformed from an isolated state into a contradiction where tradition, foreign influence, and modernity converge. The Chinese city planning and urban design had finally abandoned the feudal prototype. Today, no contemporary Chinese cities were modeled after the *Kaogongji*. Manufactory and service industry boomed, modern transportation tools prevailed, foreign architecture and urban design were brought in, and massive urbanization followed suite, which ultimately triggered the changes in life style, and the physical form of order and sequence in Chinese cities had been transformed as well. The changes in city form have worried many, and people believed that the traditional Chinese sequence is disappearing as the international style of urban design prevailed: Streets were widened and straightened, Paifangs were obliterated to allow modern traffic; city walls gave ways to infrastructure and greenbelts; and courtyard houses were razed for new development.

This chapter will discuss following questions: Is urban sequence disappearing in contemporary Chinese cities? If not, how does this tradition evolve along with the process of modernization and globalization? My arguments support the continuous change of urban sequence based on two types of studies: On the one hand, the political sequence is inherited and redeveloped in major boulevards of the capital city. This is because the communist government, although being different from the Manchu monarchy, still exercises centralized power in city planning efforts. On the other hand, the order of the compound courtyard, although being transformed and reinterpreted via modern architecture, persists in most of the *Danwei* compounds in modern era. By focusing on these scenarios one might therefore be able to understand the change of city form from the most monumental to the most ordinary.

The Political and social sequences will be examined through case studies. Firstly, the Chang'an Street in Beijing will be studied. I will refer back to the Tiananmen Square in Qing dynasty to make comparisons. Secondly, the order of contemporary Chinese

Danwei compounds will be examined in comparison with the ancient courtyards. Last, major driven forces behind the transformation of city form will be dissected.

III.A. The Political Sequence: From Tiananmen To Chang'an Street:

The Chinese central government remained powerful in decision making and resource since the middle kingdom. And the ancient principals of centrality, axiality, and orientation were continued in the plan of the modern capital. The ancient political order is equally, if not more, distinct in the plan of Chang'an Street as the symbol of communist regime.

The planning process of Chang'an Street in Beijing witnessed the transformation of Chinese political sequence. Initiated in 1950, the plan was a radical effort of urban renewal in Beijing. The Chang'an Street, original referred to as the segment between Xidan and Dongdan, were to be expanded as the new political axis in juxtaposition with the north-south central axis of ancient Beijing. The planners have envisioned the new urban order associated with modernity -- tall buildings, wide driveways, unified setback, and expensive greenbelts. The broadness and length of Chang'an Street has exceeded that of its predecessors – the ancient axes; the width of the roads was set to be 120 meters according to a proposal in 1953.[57] The continuous street façade consisted of courtyard fabric was bulldozed; In replacement, bulky concrete buildings in Beaux Arts, soviet, and indigenous style were erected at stringent solar intervals. The land use in the segment from Fuxinmen to Jianguomen was dominated by administrative agents, office buildings, and public facilities. Housing, restaurant, bars, shopping malls, or other recreational programs were almost absent. (Figure 43) Consequently, the scale of Chang'an Street were completely changed. Its wide driven ways were constantly congested with an increasing fleet of vehicles, yet the side walks, although being wide and attractive, are underused.

[57] Zhao, Liang, Modernizing Beijing: Moments of Political and Spatial Centurality, Doctor's dissertation, Harvard University, 2005, p.162

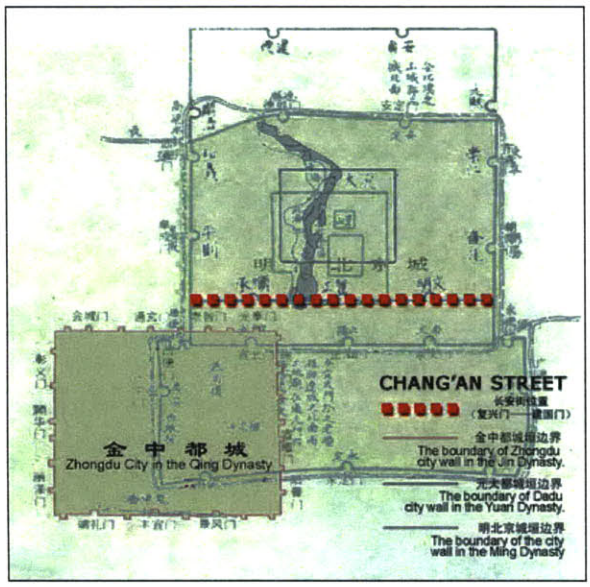

Figure 41. The location of Chang'an Street in Beijing

Chang'an Street has reshaped the spatial centrality of the new regime. In the "two axes, two strips, and multiple center" [58] configuration from the latest official master plan for Beijing, Chang'an Street was reassured as the east-west axis of Beijing. Yet, the traditional axis was also preserved. On the crossing point sited the new Tiananmen Square, which is now the center of the Chang'an street sequence and, even the center of Chinese political space. The Square is the world largest city plaza for public gathering and parade. It has also witness numerous critical moments in Chinese contemporary history. On the site of the Old Tiananmen Square, the a-thousand-step corridor had been dismantle, government ministry compounds from Manchu dynasty had been replaced by giant monumental buildings stood around the vast Square.

Figure 42. The New Tiananmen Square, Beijing[59]

The new political sequences along Chang'an Street, which extend symmetrically towards both the east and west directions, were now aimed at the center. The premeditated sequence starts on both sides from the peripheries to the center: the tourist will firstly

[58] The People's Government of Beijing, Master Plan for the City of Beijing 2004-2020, Approved by the State Council in 2005.
[59] Photo taken by Non Arkaraprasertkul.

encounter the number of Danweis or Shequ compounds. The street facades appeared in the rhythmic pattern of walls and gates. Afterwards, the tourist will enter the CBD or CFD area[60] which is of dense array of bulky skyscrapers. As one goes further, the street front will evolve into two rows of prestigious edifices; most of them are symmetric, axial, and occupied by banks or agencies. Finally, the vast new Tiananmen Square appears at the center of the symmetric plan which marks the climax of the trip.

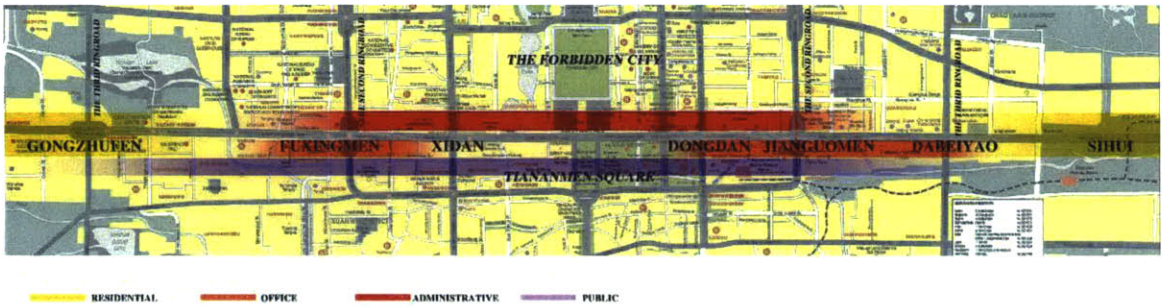

Figure 43. The Sequence of Land use Pattern in the Plan for Chang'an Street

Along both sides of Chang'an Street there is monumental architecture lined up in order – the more important the building is, the closer it is to the center. These buildings were of formidable footprints -- each occupies an entire city block, and most buildings appear to be bulky because of the unified height control. The clients of these buildings, mostly being state owned banks, hotels, museums, are competing against each other to become the most influential landmark of the street. Therefore, architects commissioned with a project on Chang'an Street are competing against each other for an ever more magnificent and unique design.

The architecture styles along Chang'an Street are highly varied, and the street facade exhibits a pastiche of adaptive, Beaux Arts, modern, and postmodern styles (Figure 45) The reason lies two-folded: on the one hand, the central government has stopped dictating the building forms for danwei agencies along Chang'an Street, which has set greater freedom for individual design decisions; on the other hand, the influx of western influence over time had provided wider choices in architecture styles and technique.

[60] The CBD refers to the Central Business District which sits on the east Chang'an Street. The CFD stands for the Central Financial District which sits symmetrically on the opposite side.

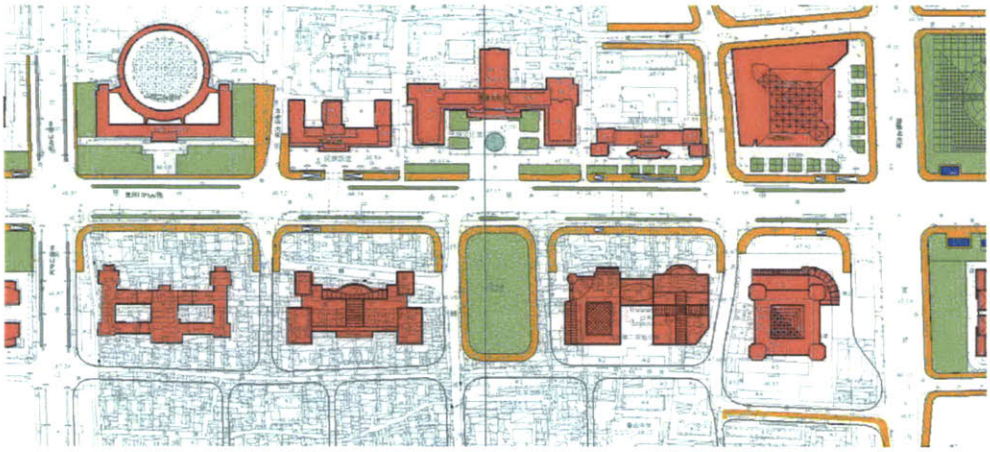

Figure 44. The plan for Chang'an Street -- the Segment near Xidan

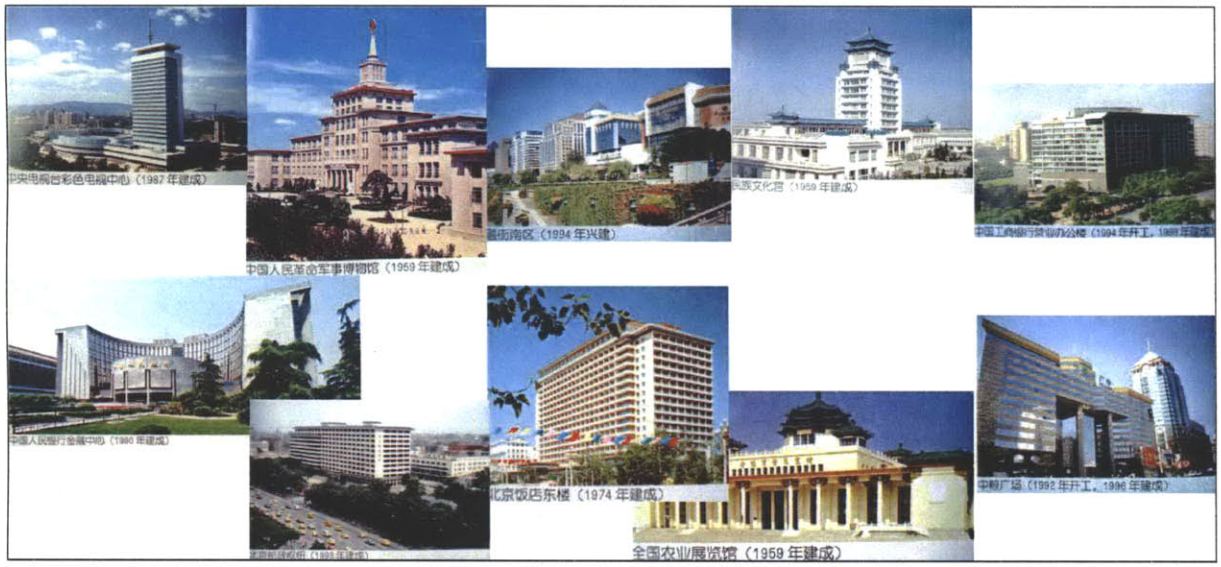

Figure 45. Architecture along the Chang'an Street[61]

The plan for Chang'an Street has created a transitory type between the ancient political sequence and a modernized one. In its concept, the plan was an attempt to establish a new political order of the socialist regime in replacement of the feudal one, yet it had inherited the Chinese urban tradition in many aspects: Although the language of architecture has changed, the principles of symmetry, axiality, and more uniquely, the ascending order are kept. Strict planning controls are installed to regulation street width,

[61] Wang Guohua and others, Beijing zhi, jianzhu juan, jianzhu zhi (Beijing Gazetteer, volume of architecture, architecture) Beijing publishing house, 2003

building height, and setbacks. Similar to the ordering of ancient capital, Chang'an Street is set as an example for the new development in the rest of the country.

However, the new political sequence of Chang'an Street does differ from the ancient tradition in a fundamental way: Unlike the old Tiananmen Square which was a prohibited space of pedestrian scale, the new sequence along Chang'an Street was more inclined to the automobile scale. Being a modern thoroughfare, the street also accommodates parades, celebrations and gatherings, and the access is granted to all. As the government eventually handed over the development rights to individual *Danwei* and most recently, the market, the Confucius hierarchy in architectural language is loosened, buildings adopt more varied appearance. The new sequence no longer resorts to means of urban control; rather, its political and cultural meanings are more symbolic and abstract.

The transformation of the political sequence reflected the changes in China's political system. The centralized control has been eventually loosened, yet the new city form continued the traditional momentum in cultural and monumental aspects. The future of Chang'an Street relies largely on the political structure in professional realms, especially the institutional settings of Chinese urban design and planning. The plan for Chang'an Street was initiated at a time when the decision making was highly centralized, and the government exercised powers in city planning and urban governance. If the Chinese urban governance keeps shifting towards the market economy and more individual freedom, it city form will exhibit further decentralization of administrative agencies, commercial programs, and public facilities throughout the city. In this situation, the Chinese political sequence, which relies on the concentration and ordering of administrative programs, will eventually fade out. The transformation of political sequence has provided a valuable lesson to examine not only the shift in urban governance, but also the future trend of Chinese urban design as well.

III.B. The Social Sequence: From Courtyard Houses to Danwei Space.

Aside from the transformation in political sequence, the social order is being reshaped in the basic units of contemporary Chinese cities. In this section I will look at the Danwei space in relation to the courtyard compounds of past. Cases will be selected among

these Chinese Danwei spaces, including government agencies, campus, and other building complexes.

After 1949, the *Danwei*, or the work unit emerged as the dominant pattern in urban space and social organization as well. A *Danwei* is a collective concept for state-owned institutes, including government agencies, factories, institutions, schools, hospitals, etc. Each *Danwei* is a functional cell which operated in an independent and isolated manner. "Every Chinese has a unit, it provides him with the necessitates of life- housing and ration cards – gets his children into school and offers welfare in his old age"[62]

The Danwei space has its socialist origin -- David Bray recognized that the Danwei firstly emerged as a basic unit of grassroots socialist organization in the early 1940s[63]. However, the physical space of socialist Danwei was indeed inherited from the historic tradition. By the time PRC was founded, government agencies took over these old compounds as their own. Zhongnanhai, for instance, a royal compound left by Manchu Dynasty, was reoccupied in 1949 by the Party Central Committee and the State Council. Once established, these adapted compounds would set up examples for the newly constructed *Danwei* to be modeled after, and the Danwei space became the basic theme of Chinese urban order.

As the modern live-work institution, the walled *Danwei* compound is a transitional typology rooted in the Chinese social order. Although the spatial governance of *Danwei* differs greatly from that of imperial agencies, it inherits many elements found in ancient courtyard compounds, including the rules for walls, gates, axis, hierarchy, and orientation.[64] Consequently, the sequence and order in Danwei compounds, although being modernized and fragmented in many aspects, exhibits some of the common features shared by ancient courtyard compounds. Figure 46 and Figure 47 show the comparison between a typical Danwei compounds in Beijing with a courtyard compound from Qing Dynasty.

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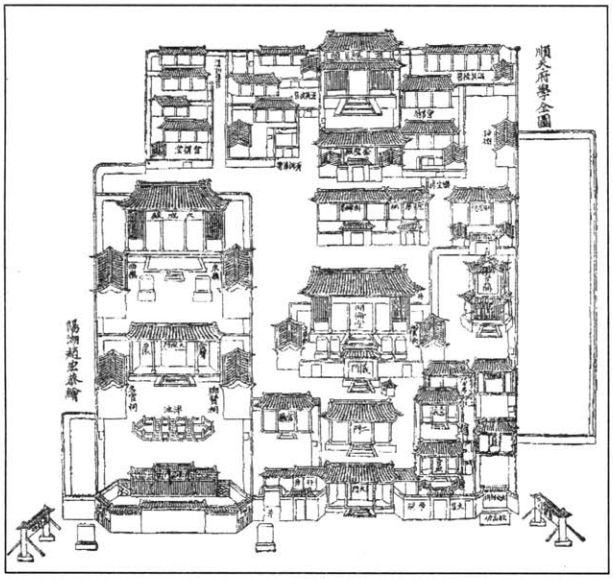
[62] Lu, Duanfang, Remaking Chinese Urban Form: Modernity, Scarcity and Space, 1949-2005, Routledge, London/New York, October 2006, p47

[63] Bray, David, Social Space and Governance in Urban China, The Danwei System from Origins to Reform, Stanford University Press, Stanford, California, 2005, p37-p65

[64] Bray, David, Social Space and Governance in Urban China, The Danwei System from Origins to Reform, Stanford University Press, Stanford, California, 2005, p37-p65

Inheriting the walled courtyards, the danwei compounds apply walls, banisters and other partitions to separate its inside from the outside. The Danwei space, therefore, became an isolated venue in which its amenities were not open to public. The gates are regarded as the icon of Danwei, and the main gates of these Danweis are highlighted with central axis and noticeable design and its function as the checkpoint remains the same as in the past. The gate architecture, as is shown in Figure 49, could be highly varied in terms of style, ranging from modern, postmodern, adaptive and Beaux-Arts. In a typical *danwei* layout, the major administrative office occupied the center, while the service facilities are located in the peripheries, with residential components distributed in the back. The commute between Work and live was reduced to the minimum.

The entry space of these danwei compounds are normally displayed in axes and symmetric layout. As one proceeds further along the axis, the hierarchy alignment of buildings appears on the way. Further, the multiple layering of spaces begins to unfold, each are planned with different functions. Figure 48 is the latest plan for the Main Building Plaza in Tsinghua University, one of the largest danwei compounds in Beijing. The traditional entering sequence was reinstalled along the east gate which is the main entrance to the campus. The architecture language of this sequence is a mixture of Soviet and modernist styles.



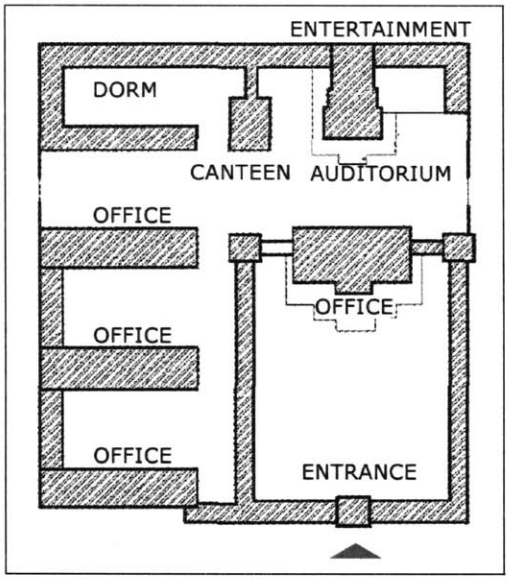


Figure 46. The Shuitianfuxue compound (the official academy) in Qing Dynasty[65]

Figure 47. The map of a modern Danwei compound[66]

[65] Image Source: Zhang Mingyi and others, Beijing zhi, Wenwu juan, Wenwu zhi(Beijing Gazetteer, volume of antiquity, antiquity) Beijing publishing hose, 2003 p149

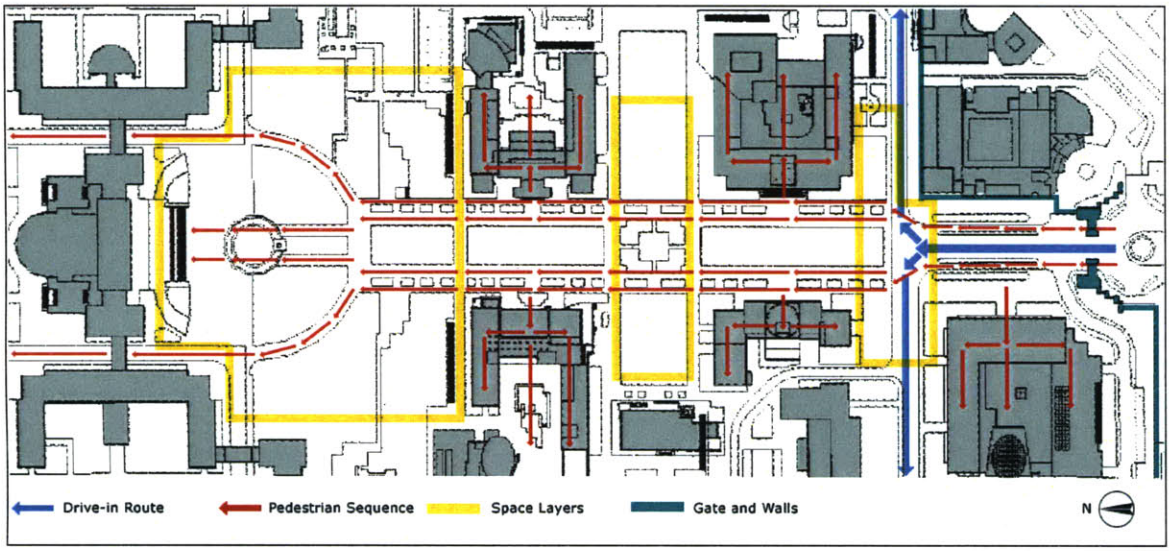


Figure 48. The Sequence of the East Gate, Tsinghua University, Beijing, 2004

Then why should the Danwei space, which is already a modern compound and bears modern functions, resembles the courtyard order of the past? The reason lies in1) the land allocation, 2) the hierarchical governance, and 3) the cultural continuity for the traditional sequence. Firstly, the ancient compounds were products of standardized land allocation and spontaneous building activities. Likewise, in communist era the land was distributed to allocate to state-owned institutes via administrative means. Each danwei makes plan for its own territory and probably the first thing it does is to build a wall around the property. Secondly, the Danwei space is planned with functional rationality, and it is governed with centralized power and hierarchy, which is comparable to the Confucius hierarchy in a *Siheyuan* courtyard. Lastly, the resemblance of Danwei space to the courtyard compound well explains the cultural inertia towards the traditional urban order.

As China is evolving in every major aspects of its society, the *Danwei* space is merely a step ahead from the ancient urban order of the past toward the modern city form. It is never a faithful copy of their ancient kin. Firstly, It is important to recognize the revolutionary nature of Danwei as a modern institute of production and collective life. Firstly, the physical form of each Danwei was a reflection of modern work style under the early communist theme of "production over consumption". From the perspective of self-

[66] Image from the 1950 Beijing plan, by Liang Sicheng and Chen zhanxiang

sufficiency and independence of the Chinese danwei structure, one could perceive the influence from the socialist planning introduced from Soviet Union, which dates further back to the European Utopian tradition. Secondly, the danwei is a place of a collective life style, in which privacy life is reduced to the minimum. As David terms it: "the Danwei space was designed to represent the centrality of collective labor and egalitarian social relationships that exemplified the socialist ideal." [67] This is also reflected in the Maoist slogan "mass line"[68] of grass root mobilization. Thirdly, the inside configuration of *danwei* space is more inclined towards the functional needs. The Confucius order always gave ways to practical needs when there is a conflict. And the *Danwei* space has exhibited higher degrees of flexibility when compared with ancient courtyard compound.

Also, it is crucial to recognize external influences in the *danwei* space, especially on its architecture. At first glance, the architecture language of *Danwei* space exhibits a hybrid pattern in which the Chinese adaptive or classic style mixed with Beaux-Arts plots. In many cases, it is difficult to differentiate these two. However, the architecture Danwei space does reflect some common features shared by both Chinese and Beaux-Arts styles: the axial, symmetrical composition and hierarchical treatment from plans to facades. And some characteristics, such as the rules of orientation and the multi-layered enclosure, are uniquely Chinese.

The Beaux-Arts style, together with its architecture training, had cast deep influence in China. At the beginning of the twentieth century, Beaux-Arts architecture was introduced to China via foreigners and the first generations of western educated Chinese architects. Many of them incorporated the Beaux-Arts principals into the reinvented Chinese classic styles. Many a project were built by then in an adaptive solution between the two. The plan for Nanjing by Henry Murphey, and Hussey's plan for Beijing Union Medical School were renowned examples.

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[67] Bray, David, Social Space and Governance in Urban China, The Danwei System from Origins to Reform, Stanford University Press, Stanford, California, 2005, p.125

[68] The "mass line" is a political propaganda in Maoist period, meaning Grass root mobilization.

Figure 49. The Gate Architecture in front of Danwei compounds

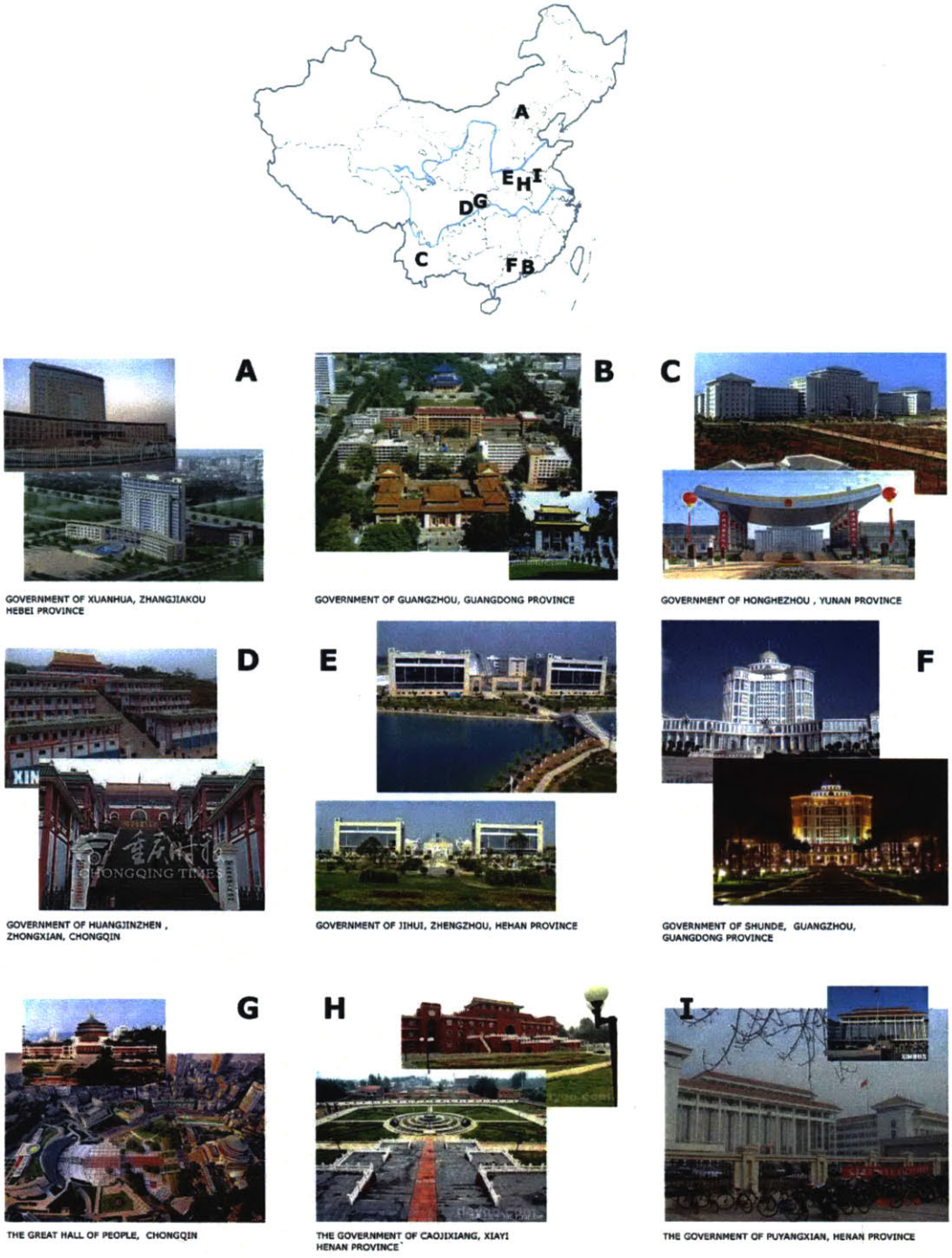


Figure 50. Danwei compounds occupied by government agencies

Similar to the evolving political sequence on Chang'an Street, the social order in danwei space is an intermediate status in the middle of the urban transformation. The reform of danwei compounds after 1978 begins to suggest the future of Chinese social order -- The danwei space only existed at a moment of urban transformation from an ancient city of control to the modern city of socialist governance. In the transition toward the market economy, the self-reliant and independent compounds of the communist era were considered redundant and inefficient when faced with market competition. The walled space no longer matches the demands for greater mobility of labors and goods. Therefore, the collective live-work patterns are being disintegrated. Correspondent changes took place in the physical form of Danwei space. The collective canteen, schools and other amenities within Danwei space are opened up to the city. The solid walls are being replaced by decorated iron banisters, turned into shops, or are simply torn down.

It is interesting to mention that the transformation of Chinese social order is preceded by the change of li-fang system in early Song Dynasty. As Song cities flourished on economic growth and trade, the enclosed urban blocks were replaced by open block with retail and service program on the streets. Curfew and other rigid regulations were loosened to give ways to commercial prosperity. As along as the socialist danwei keeps reforming toward the market economy, its physical form of the Chinese social order will be further weakened.

III.C. Socio-Economic Causes of the Transformation

In this section, forces which have led the transformation of Chinese urban sequence. Especially, I will focus on three of the most important forces which had direct impacts on the Chinese urban order: the changes in economic sectors, transportation technology and family structure.

III.C.1. Change of Family Structure.

The Chinese courtyard houses, once as the dominant typology in its cities, were being replaced by new housing types. The transformation of Chinese residential fabric is closely associated with the changes of family structure.

The traditional courtyard houses were tailored to the dominant extended families of the past. The Qing government, for instance, encouraged the forms of large multi-generation family. However, the contemporary Chinese society has exhibited a different family structure. Based on Tang Can's studies, the downsizing of Chinese families in both urban and rural area has lasted for thirty years. The nuclear families of the three emerged as the dominant type among others; smaller families, such as the one person and two person families are also growing fast in numbers especially in large cities like Shanghai and Beijing.[69] In a larger historic background, the average size of Chinese families had dropped from approximately 5 in the 18th century to 3.39 in 2002. [70] The reasons for the family structure change are improved educational level, urbanization, higher social mobility, and the one-child policy.

Nuclear Family	68.15	One Person	8.57
Stem family	21.73	Defective Family	0.73
extended Family	0.56	Others	0.26
Total	100.00		

Figure 51. Average Chinese Family Structure in 2000 (N=336735) (%)[71]

In order to accommodate increasing number of smaller families, the new building typology flourished, including multi-storey apartments, high-rise slabs or towers, and recently town houses or villas. Meanwhile, the traditional courtyard houses are deteriorating fast. The parallel slabs and towers had emerged as the dominant housing typologies. Built as real estate development, the spatial configuration of these houses has rejected the traditional principles in orientation, hierarchy, and sequence. Units are layout in an equal and homogeneous manner. (Figure 52)

[69] Quote from Tang, Can's study on Chinese family size, published in Beijing Daily – Weekly Theory, source http://www.nark.gov.cn/najsj/news/onews.asp?id=1677

[70] Quote from Wang Yuesheng, *Analysis of the Dynamics of Cotemporary Chinese Family Structure*, Social Sciences in China, Issue 1, 2006

[71] Ibid.

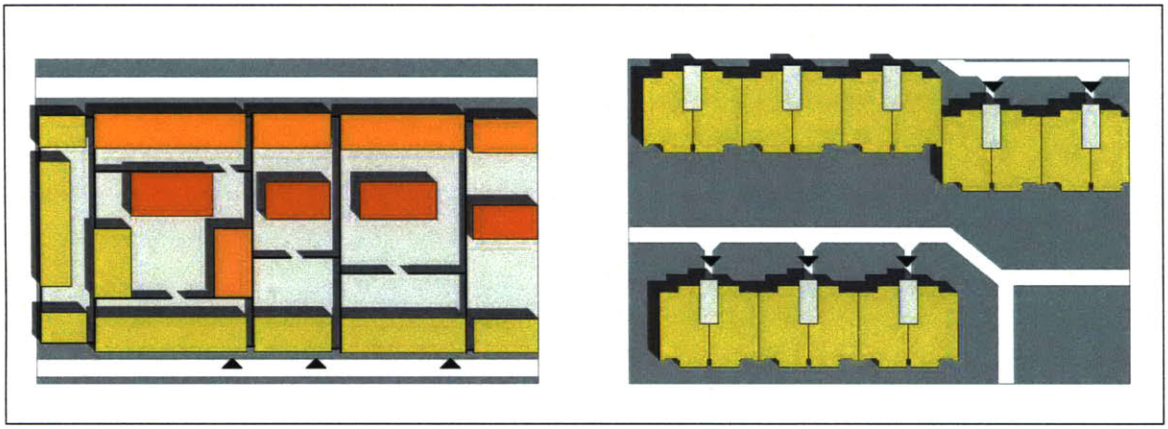


Figure 52. The Juxtaposition of Courtyards (left) and Modern multi-storey Slab Housing (right)

III.C.2. Change of Economic Structure:

The economic structure in Chinese cities has been changed ever since the beginning of its modernization process. In contemporary Chinese cities, the booming service industry and high-tech enterprises have the most visible impacts on the urban landscape – modern skyscrapers occupied by small businesses and corporate head quarters sprung up at city center in replacement of the ancient courtyards. The Plan for Zhongguancun West District in Beijing is a typical example of this kind: the fabric of *Haidian*, a suburban town west of Beijing, was replaced by high-tech industry and office space. The cellular patterns of Danwei are diminished; geometric grids are laid out to facilitate real estate development. (Figure 53)

In contemporary Chinese cities, the booming service industry and high-tech enterprises are tied up to modernist urban design. These modernist practices have little connections with the Chinese context and historic past. Driven by fanatic beliefs in modernity and growth, the traditional fabrics of courtyard compounds are being quickly eradicated. In replacement, the new city form exhibits a reverse figure-ground relationship, in which the hollow courtyards give ways to monolithic buildings.

On the architectural level, the principles of centrality, axiality, and enclosure from the traditional urban order waned. The modernist architecture has forgotten the principles of Chinese urban order and sequence. Figure 54 shows the plan for Jianwai sohu, a seven million square feet mixed-use development in Beijing. The open block structure had challenged the Chinese typology of walled xiaoqu, danwei, and li-fang system. Individual

towers were laid out in matrixes, units and square meters are as standard real estate products.

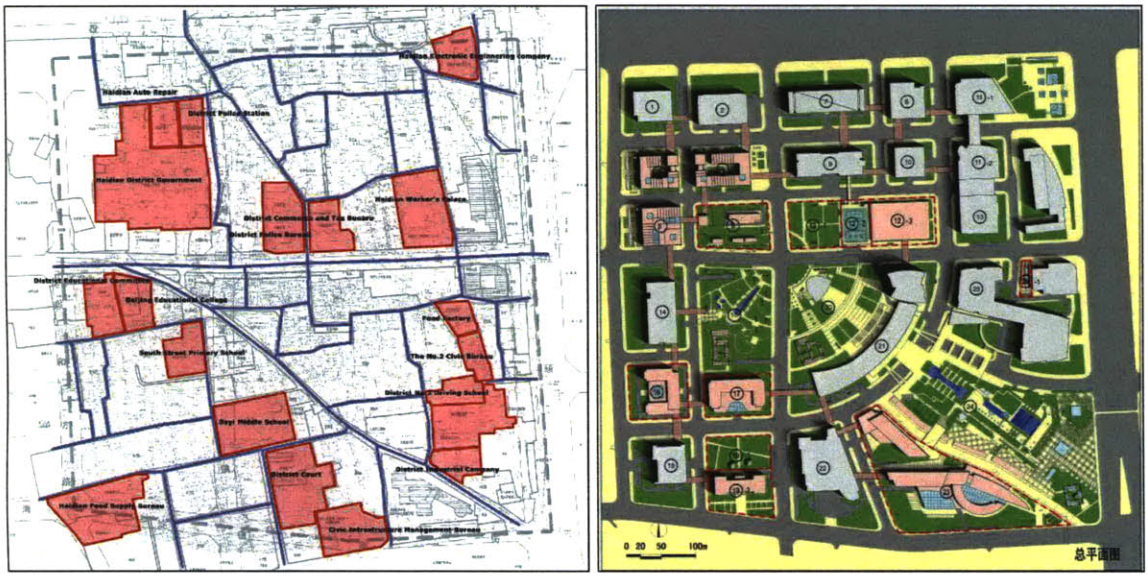


Figure 53. The fabric change in the Plan of Zhongguancun West District, Beijing

Figure 54. Jianwai SOHO, a mixed use development in Beijing, 2003

III.C.3. Impact of Modern Transportation

Puyi, the last Manchu emperor, issued an order in 1922 to remove doorsills (menkan) in the Forbidden City, because these wooden thresholds prevented him from getting around on a bicycle. [72] The removal of doorsill reflected not only the subtle changes in the emperor's life style, but also preceded the adaptation of political sequence by western transportation technologies at large. The order and sequence along traditional

[72] Aixinjueluo, Puyi, Wode qianbansheng (The first half of my life), Qunzhong Polishing House, 2007

axes, which were conceived for low speed and pedestrian scale, were being transformed. The means of modern traffic had not only affected the streets width and façade, yet it had also changed the scale of the urban sequence outside of the historic urban core. The newly developed area in Beijing not longer showed the intimate scale of streetscape design of the ancient model. Rather, the scale of buildings and road along major tracks were laid out in automobile logics. The sequential feature of the ancient capital has waned.

Again, Beijing will be looked into as the example. Before the twentieth century, major avenues in Beijing were planned as faithful components prescribed in the classic Kaogongji model. The road space, although being wide enough for pedestrians, animals, rickshaws[73], and carts, was only conceived for low speed traffic. Modern transportation system, such as automobiles and rail tracks, have invaded the back lashed capital.

Automobiles emerged in Beijng in 1910s. The first auto-rental company was set up in 1913[74]. Although the automobile fleet consisted only a few number of buses and taxis at the beginning, its impact on the physical transformation of streetscape was tremendous. Initiated by the Guomingdang government and followed by the ruling communist party, Beijing was under continuous adaptation to suit automobile movement. There were a number of significant street widening and straightening projects starting from 1950s. The Chang'an and Ping'an were examples of massive road expansion at the cost of historic blocks. Other streets adopted more moderate approaches such as driven-lane installing, tree planting and encroachment clearance. (Figure 56) Most of the Paifangs in Beijing, such as the famous Xidan and Dongsi Paifang, were erased at that time to keep the right-of-way for vehicular traffic. However, the recent plan for Xidan Plaza will restore the Xidan Paifang as a reminder of the old landmark,

The railway system appeared in Beijing at the same time. In1896, the first functioning railway station for Beijing was built in Majiabao, two kilometers outside of the Yongding Gate. Despite strong resistances among Beijingers to this western invention for fear of ruining the *Fengshui*, Emperor Guangxu built the first passenger station near the Inner

[73] Rickshaws are a mode of human-powered transport. A runner draws a two-wheeled cart which seats one or two persons. Rickshaws were popular in China during republic times.
[74] Yun, Junke, The ancient transportation in Beijing. http://www.oldbeijing.net/Article/200501/5871.shtml, 2007.4.10

Qianmen gate. Other railroad transportation such as the streetcar appeared in 1924. As a result, city walls were cut through in order to make ways for street car traffic, and utility poles were installed along the route where the train goes. For passengers arriving by trains, the entry of Beijing was no longer symbolized by magnificent gates and axial streets. For the ancient Chinese capital, the introduction of railway system had already disrupted the urban order and sequence more than the pseudoscience of Fengshui.

Figure 55. Main Street in Beijing in the 1930s

Figure 56. Jingshanhou Street in 2000 (left) and in 1930 (right)

IV. Three Active Models of Contemporary Chinese Urban Interventions:

Contemporary Chinese cities are under drastic change in both lifestyle and physical forms. Cities and town are experiencing exponential population immigration and growth; the rising living standards have resulted in frequent demolition and redevelopment; the rapid modernization embraces the new city form which has yet to be tested. In this section, I will look at the past efforts which significantly influenced the contemporary Chinese urban identity. Three distinctive models of interventions are identified as: 1) the stylistic architecture, 2) urban conservation, and 3) the international style of urban design.

IV.A. Stylistic Architecture

A hundred years of foreign invasion, civil war, and internal decline has thrown China into severe crisis. As result, a defensive mentality has been established among patriotic officials and intellectuals aiming at preserving national identity. As advanced metropolis such as London, Paris, New York and Chicago are celebrating urban diversity by hosting exotic culture elements in events like the World Expo, Chinese cities, joined by other colonial, semi-colonial, or post colonial counterparts are defending their unique architectural identities against the European cultural dominance.

The mentality of crisis had triggered generations of efforts to explore the Chinese-ness in architecture. The stylistic architecture, therefore, emerged as the most visible and well explored interventions in Chinese identity seeking. Ever since this nation began to adopt modern building materials and technique from the West, the debate on proper architecture styles has never ceased. Unlike the Japanese cases, the Chinese has rejected a thorough westernization of architecture at the first place. The Chinese stylistic architecture, like many other colonial architecture case, was initiated by commissioners by mixing Western and Chinese styles together. Foreign architects such as Henry Murphy and Harry Hussey had carried out successful practice in early twentieth century China bearing the name of adaptive architecture. Moreover, earliest generations of foreign-trained Chinese architects had inherited and developed this trend in both practice and academic research. Liang Sicheng, a returning Chinese architect who studied at the University of Pennsylvania, was a prominent figure in this stylistic architecture movement. Liang's reading of the Chinese architecture, however, was heavily influenced by the Beaux-Arts training received from abroad. Throughout his

teaching and practice, Liang advocated the proportion, scale, and the roof as the key elements in Chinese-ness seeking. Liang's contemporary architects, including Yang Tingbao, Lv Yanzhi, and Zhang Bo, were also active practitioners of Classic Chinese revival. Afterwards, the stylistic architecture and relevant debates occurred periodically, such as the cultural fever and the "big roof" movements, often supported by the government who attached political significance to the creation of national architecture styles.

Although the stylistic architecture remained controversial over a hundred year, it is a plausible reflection on the architecture model which matches better with Chinese cultural aesthetics and collective memories. Compared with the blind copy of the western styles, the stylistic approach is certainly more sensitive and contextual towards the local climate, culture, and social conditions. The Fragrant Hill Hotel in 1982 (Figure 57) is one of the few well-received projects following this ethos. The project located in Xiangshan (the fragrant hill), a famous resort in northwest suburb of Beijing. Pei's intent, in his own words, was to guide native architects to reinvent Chinese architectural heritage from a tectonic angle. The footprints of the hotel resembled courtyard layout surrounded by a garden. Pei emphasized the importance of human proportion, nature and geometry, which he regarded as the key in traditional Chinese architecture. Also Pei painted the building white and gray similar to the traditional Suzhou villages. Abstract symbols were used, such as the sign "◊" (Figure 57); traditional materials such as bricks and wood were used in new tectonic ways.

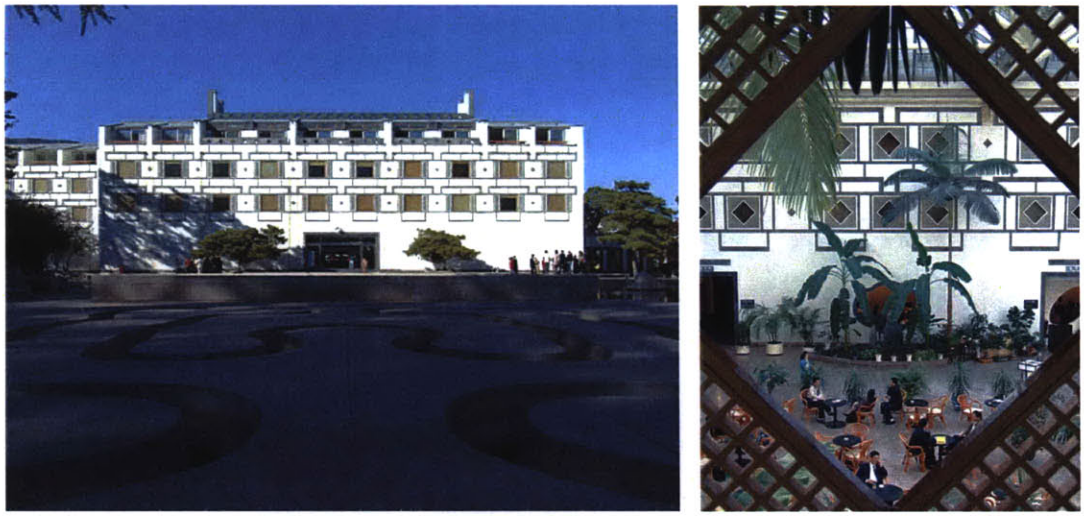


Figure 57& 58. The façade(left) and atrium(right)of the Fragrant hill hotel, Beijing

The Fragrant Hill Hotel was an excellent architectural piece in itself, for which Pei received the AIA National Honor Award in 1984. However, its impacts on the Chinese identity were largely limited; and Pei's model is difficult to be adopted in other scenarios: Firstly, the building was chosen to locate in remote suburbs and isolated from the urban context. Secondly, Pei's stylistic exploration was costly, and his design had hastened Chinese postmodernism which was pretentious and superficial. Thirdly, The "new tectonics based on memory" that Pei related to was neither about the site nor about the city. It was Pei's personal recollection of the Suzhou gardens where he spent his childhood.

In conclusion, the efforts stylistic architecture failed to create a city as an identifiable and recognizable whole. Firstly, the approach of stylistic architecture failed to recognize the diversity of traditional architecture. In China, the geological difference and historic evolvement gave birth to a variety of architecture and urban types, and the urban identities were closely associated with the local inhabitants, history, context, and urban lifestyle. Being affected by technological advancement, social-political discourse, and shifting aesthetic tastes, the architecture style in one place was closely tied to location and time. However, the complexity of architecture styles is often ignored by the stylistic architectural approach. For instance, the Fragrant Hill Hotel in Beijing followed the historic style of Suzhou houses thousands of kilometers always from the site; the Ju'er Hutong project adopted the Huizhou style originated in southern China. In this situation, the stylistic architecture was no longer attached to the local style. It was not related to local inhabitants, and its details communicate stories which are inauthentic to the site.

Secondly, the partial emphasis of stylistic architecture has committed a see-the-forest-for-the-trees mistake at the very beginning. It represented the narrow definition of urban identity which is largely based on the Bueax-Arts reading of Chinese architecture --the merit of which could only be examined in the proportional, material, and scale excellence. As a result, the wooden framework, lavish colors, and the distinct roof were established by many as the Chinese icons. Although the details and aesthetics of stylistic architecture were modeled after the ancient typologies, yet the periodical identity fanaticism has erected only simulacrum architecture pieces built in a costly and artificial way.

Lastly, the stylistic architecture failed to address the ordering of urban elements by which the ancient Chinese city was weaved together. The lack of coordination among architects and clients has produced an urban collage of characterless buildings – some decorated with fake roofs, some modeled after high modernism. In the case of Changan Street, individual buildings were erected by their owners to show off the political strength and wealth, yet the continuity and consistency of traditional Chinese streetscape were lost. Thus, the stylist approach has only produced fragmented architectural pieces, but not the authentic Chinese urban identity.

IV.B. Urban Conservation

Urban conservation, a concept of extending, adapting, and finding new uses for existing buildings, was only made familiar with the Chinese a few decades ago. Before the European influence reached this already isolated empire, feudal Chinese rulers showed little sympathy over the palaces, altars, and even cities left by their rivals and predecessors. For instance, *Qin shi huang*, the conqueror of Qin dynasty, destroyed all the other six rival regimes and dismantled their capitals. The *Epanggong*, the conqueror's grand palace was also burnt during later riots; *Zhu li*, the Ming emperor built his Forbidden City over the ruins of Yuan Palace. To the ruling class, the destruction of the past was the forerunner of consolidated new establishments[75]. The form and spirit of the old regime, including their cities and buildings, should be eliminated to make way for the replacement. Moreover, this line of mentality was carried further in recent periods. The old cities were once deemed by early Maoist as the *Zhaopo*[76] and the symbols of feudal oppression which were to be exterminated. The nationwide destruction of cultural relics during the Cultural Revolution and the blind renewal of many traditional cities also embodied the inherent apathy towards physical heritages.

The practice of urban conservation, however, is now being pushed by the public sectors in contemporary Chinese cities. It has gained popularity among mayors and local officials since the values of patrimonies in terms of bringing tourist income become widely known. Driven by mainly economic forces, thousands of Chinese cities and towns began refurbishing architectural pieces and relics as tourist spots. Moreover, the

[75] There were also a few exceptions. One came from Qing dynasty, whose emperor rehabilitated the Forbidden City and settled down there. The decision was made in light of continuous wars and riots.
[76] In Chinese language *Zhaopo* means leftovers and scum.

traditional urban fabric left from ancient times, once regarded as dilapidated shanty town to be cleared, is being preserved in more recent examples: local government establishes historic protection zones, which are accompanied with elaborate zoning and ordinance to prevent undesirable urban renewal. For instance, the city of Beijing has designated several Conservation Zones, *Fengmao* (Style and Appearance) Protection Zone, and Height Limit Zones; each imposes different regulations on both the preservation of old buildings and the control of adaptation and new developments. For China's growing private sector, the concept of conservation is highlighted in a few recent real estate projects. Different from the public sector approach, private development favors positive strategies including rehabilitation of the façade, the renovation of the interior space, and the re-programming of the original uses. Xintiandi is the most renowned case which is widely known as a commercial success story.

Xintiandi situated in the historic *Shikumen* area in Shanghai, the booming Chinese city under rapid growth and urban renewal. Guided by the principle of "reshape as before + adding new program", the architects and clients adopted positive strategies to renovation existing *Shikumen* houses into commercial uses, including cafés, restaurants, clubs, boutique shops, bars, and Museums. Moreover, new buildings with modern functions were inserted in the historic block serving as commercial functions targeting the booming high-end market. In fact, Xintiandi was the first project in China as a multi-use commercial center involving the reuse and reconstruction of historic structures. The project turned out to be costly -- ten times above the current standard at the time. However, Xintiandi turned out to be successful as a real estate project. Not only has it generated considerable profits, the project has become a well-known destination and branding tool for the developer and the city as well.

Figure 59& 60. The Xintiandi project, Shanghai, 2001[77]

Admittedly, the Chinese urban conservation has positive impacts in preserving traditional urban identities and promoting the real estate value. It did conserve the buildings in a district context, rather than isolated monuments, which can be seen as a step forward. However, the Chinese urban conservationists, whose theories were introduced from Europe, were challenged by the architectural difference between the eastern and western traditions. Its defects lie in two aspects: 1) the simplistic emphasis on architectural pieces, and 2) the ignorance of urban context, especially the urban order and sequence.

On the one hand, the Chinese urban conservation was troubled with the actual costs of preserving its wooden cities. Budgetary concern limited the practice of conservation in large districts, which has further limited its effort in making coherent impacts on holistic urban identities. Unlike ancient European cities where building materials were more enduring, the Chinese counterparts were built with timber as the major construction material. They were "perishable" for material reasons, and they were more costly to refurbish than European ones. For Chinese conservationists who placed their emphasis on authenticity, the prohibitive cost of refurbishing these wooden structures became the main obstacle. For even renowned projects such as Xintiandi, the ten-fold increase of conservation cost above new construction has alerted following practitioners to take extra care in carrying out similar projects. Being fragmented in nature, these efforts therefore are unable to make a coherent impact on the urban identity as a whole.

[77] Image Source: www.uli.org

On the other hand, the Chinese urban conservationists failed to recognize the rules and principles from their urban design tradition. Since the holistic preservation of ancient cities became unfeasible, individual architectural pieces were selectively preserved, restored, or rebuilt, and the context and the urban order had been ignored. The piecemeal approach of conservation is problematic when faced with Chinese urban traditions, whereas the urban order and sequence were persistent while its architecture pieces retain mortal. Unlike European cities where large monuments and landmarks were being erected, the ordered urban fabric stood as the Chinese monumentality as a whole. In most of the cases, the historic relics were preserved in enclaves surrounded by modern buildings, yet the chaos between the old and new was left unresolved. In the renowned case of Xintiandi, the majority of the *Shikumen* houses around the site were bulldozed for high rise development, leaving only the north block to be preserved as the branding tool. The refurbished north block, posing in front of upscale shoppers and tourists, became a fashionable cover. But the ordering of the old Shanghai fabric, along with the original life style, was completely gone.

IV.C. International style of urban design

While the stylistic architecture and urban conservation have raised intensive debate over modernity and the Chinese identity, the international style of urban design is quietly being accepted in contemporary Chinese cities without hesitation. It is originated from the modernist tradition of architecture and urban design. Similar with the international style in architecture[78], the international model of urban design is indifferent to location, site, and climate; the model made little reference to local history or national vernacular. It uses same vocabulary regardless of the site, such as the grid, public plaza, landmarks, and boulevards.

The contemporary Chinese cities have embraced the international style of urban design thoroughly. Following this model, China's fast developing cities have undergone drastic changes in physical form. Guided by modernistic thinking and technocracy, large infrastructures and bulky buildings are replacing the traditional urban fabric. Figure 61 shows the cityscape model of future Beijing, where undifferentiated grids spread along

[78] Henry Russell Hitchcock, Philip Johnson, The International Style, W. W. Norton & Company; Reissue edition, 1997

the frontier of urbanization and carve through old neighborhoods; the roads are widened and straightened in order to accommodate the ever expanding automobile fleet; Iconic skyscrapers, occupied by fastest growing urban sectors, sprung up in replacement of the traditional courtyard houses.

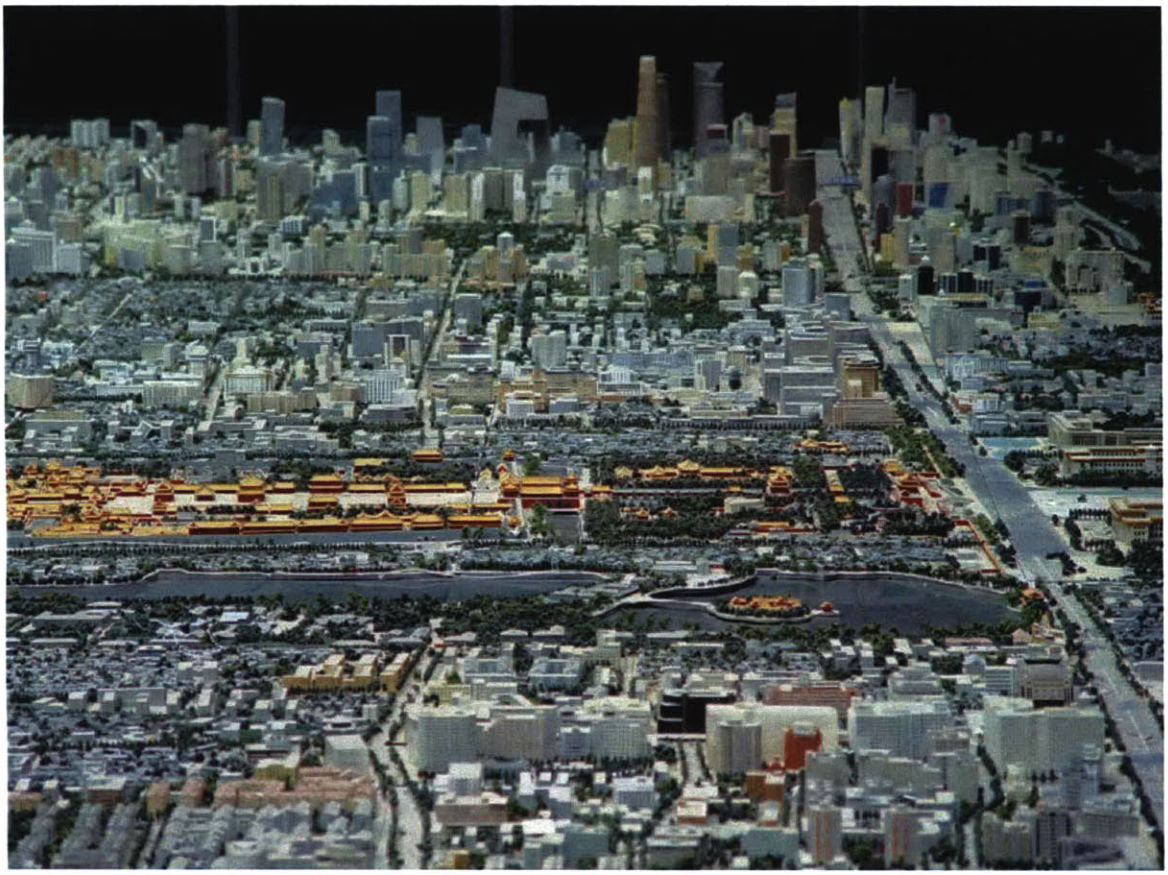


Figure 61. The future vision of Beijing

For modernizing Chinese cities, the international style of urban design is great leap forward to the application of advanced technologies. It is a radical reconstruction of the past urban order. However, the modernist thinking, being function rational at its core, failed to reconcile with the traditional city form and the way of life which persisted in contemporary Chinese cities. The major criticism toward the international style of urban design focused on its negligence of the Chinese urban context. The transformed Chinese urban landscape, although decorated with stylistic architecture, has abandoned the patrimony of spatial sequence appeared in traditional streetscape. Urban components, such as building blocks, roads, and public spaces are given legibility from above, yet the contextual connections among these components are weakened. In most

cases, modern Chinese urban designers ignore the factor of time and movements, leaving only formal and even worse, graphic compositions. Nicknamed "plan from the helicopter", this model failed to create attractive and identifiable urban environment. For a society under rapid transformation, the remnant of functioning socio-economic forces requires corresponding continuity in city forms and urban lives. The revolutionary changes of city form, directed by the international style of urban design, often break that continuity.

V. Sequential Design: A New Model for the Future?

Faced with those three urban intervention models above, Chinese architects and planners are puzzled with the question of choosing the relevant one for contemporary Chinese cities. With rich traditions at hands, the choice of urban design models is a difficult one. Rapid modernization, of not westernization, has brought in ever more options. On the one hand there is the copying of the western model which has cut off the historic continuity and urban identities; on the other hand there is the direct imitation of the past city form which contradicts with the development of a modern city.

In this section I will discuss the possibility of re-applying the principles of traditional Chinese urban sequence to contemporary practice. Compared with other approaches in architecture and urban design, could the model of sequential design prove to be desirable to contemporary Chinese cities? If yes, what are those valuable parts in the past urban order and sequence which could be extracted and reapplied in booming contemporary Chinese cities? Especially, how will the design of urban sequence be useful in present days where the life style, political system, and economic structure are changing? The basic features of Chinese urban order, such as the axis of sequence, self-similarity, hierarchy, enclosure and control will be examined towards contemporary urban needs. As the authentic reflection of the past, the ends of the past urban order, such as segregation, hierarchy, and control will be evaluated in details. Their desirability in contemporary scenarios will be discussed.

V.A. Axes of Sequence

The central axes of pre-modern Chinese capital cities were immediate reflections of the political structure. The evolvement of Chinese capitals have shown the increase of axiality when the centralized political power rose. This phenomenon was made possible only when the regime, upon the needs for authoritarian manifestation, happened to possess abundant resources and implementation power. The axes in Chinese capitals, most of them planned by and for the ruling class only, were conceived for the emperor and aristocrats. Take the central axis in ancient Beijing for instance, the middle arches of the Zhengyang gates were used for royal processions only, ordinary traffic must come through the side arches; further along the axis the a-thousand-step-corridors were walled as sacred places where civic access was banned; in the Forbidden City the pave axis was reserved exclusively for the emperor in ritual practices.

The principles of symmetry and axis were still alive today in various modern *Danwei* compounds at a smaller scale. Most of the newly planned compounds share the feature of grand axes and statuesque configuration, although the architecture language may vary from Chinese style, Beaux-Arts, and new classical. The compounds are occupied by mostly government bureaus and state-owned enterprises which are powerful in decision making and resource allocation, and they have expressed the needs for authoritarian posture through the reinvented Chinese sequence. The axes in these compounds are no longer planned for the emperors or dictators. Instead, they become conscious expression of national identity at republic time, symbols of socialist collectivism during communist era and the cover images for modern corporatism in recent period of the market economy.

In the future, the centralized political power may or may not exist. Public participation may make a difference in the planning process in the future, or stay weak for a considerably long period. However, it is possible that the physical from of axes breaks away from its origin of authoritarian power. The axes of sequence should, following the trend of social and economic reform, allow for thorough public access and promote the value of equality and democracy. In that sense, the reinvented axis of sequence will take a big leap forward from their ancient precedents, and it has the potential to symbolize Chinese urbanism in the future.

V.B. Self-Similarity of Patterns

The self-similar pattern of ancient Chinese city form provides valuable experience for modern cities. On the one hand, the application of module and standardization has proved to be effective for rapid development. The adherence to similar patterns facilitates architecture design and construction, which will further reduce the costs. On the other hand, the coherent patterns will given clarity and order to modern urban components. Similar to the role of courtyard compounds of the past, a reinvented urban pattern will be capable of providing consistent images, identifiable features, and senses of wholeness to future Chinese cities.

However, the new pattern of future Chinese cities should be compatible with multiple urban functions. Aside from residential and administrative programs, it should be able to

serve commercial, entertainment, service, sports, and even industrial functions. Therefore, the predominant single storey courtyard pattern from the ancient Chinese city form needs at least to be adapted in modern phases.

V.C. Hierarchy of Space

As a reflection of Confucius beliefs, the hierarchical positioning of territories and buildings is not obsolete in contemporary Chinese cities. The Danwei space and major urban boulevards still followed this ancient order. The principles of spatial hierarchy have advantages in coordinating large scale development project. In many recent real estate developments the spatial hierarchy has become an effective pricing strategy – properties of higher status by traditional standards, either located to the north or far away from the entrance, are being attached with higher commercial values. In this situation, the hierarchy of space is detached from authoritarian politics and social hierarchy, and it could be well integrated into the market economy and address contemporary urban needs.

The Rockefeller Center in New York, for instance, has provided a successful example in which the symmetry, axes, and the spatial hierarchy exist as the symbol of capitalism, not authoritarian politics and oppression. This giant building complex reached from the Sixth to the Seventh Avenue, and it consisted of multiple program components, including office space, theatres, a music hall, and an opera house. Instead of being an exclusive super block, the Rockefeller Center complex was designed with a sequence of public space which was listed among the most popular ones in America. It adopts the language of international style of urban design, and the architectural components were all coordinated in forms and details. The project succeeded in achieving program mix, accessibility and finally profitability. As the largest commercial developments financed by a single investor, Rockefeller Center has offered valuable experience to large scale projects all over the world.

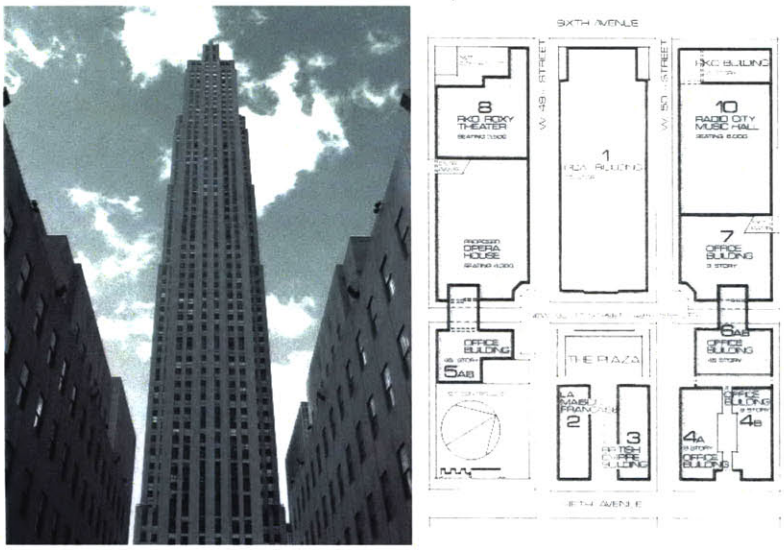


Figure 62. Rockefeller center[79]

V.D. Enclosure and Control

The physical enclosures in Chinese city form had existed as a tool of urban control. The walled courtyards, li-fang blocks, and compounds prevailed in the ancient cityscapes. Barriers were installed to regulate individual behaviors and access. However, the walled *Daiwei* and *Shequ* compounds had provided convincing examples that the traditional form of enclosure could be adapted into modern programs. This section will discuss the desirability of physical enclosure for future Chinese cities.

The pattern of enclosure appeared in many contemporary urban design cases, whereas buildings, greeneries, or other installations were formalistically lined up to evoke the memory of solid walls. Rob Krier the new urbanist proposed the enclosed urban patterns based on European context. He recognized the symbolic value of enclosed squares as market places, parade grounds, and ceremonial sites. Also, Krier argued that the enclosures provided undisputed advantages and were admirably suited to residential uses.[80]

r by encouraging

In his practice, Krier proposed courtyard organization of districts and compounds by

[79] Image Source: Carol Herselle Krinsky, Rockefeller Center, Oxford University Press, New York, 1978, p.69

[80] Krier, Rob, Typological and Morphological eEements of the Concept of Urban Space, from Designing Cities, critical readings in Urban Design, edited by Cuthbert, Alexander R. Blackwell Publishing, 2003. p.327

aligning multi-storied apartments around blocks. He also encouraged buildings across streets at key points to create urban rooms. The sequence of axes was also addressed in his design to mitigate wide roads and prosaic streetscape. (Figure 63)

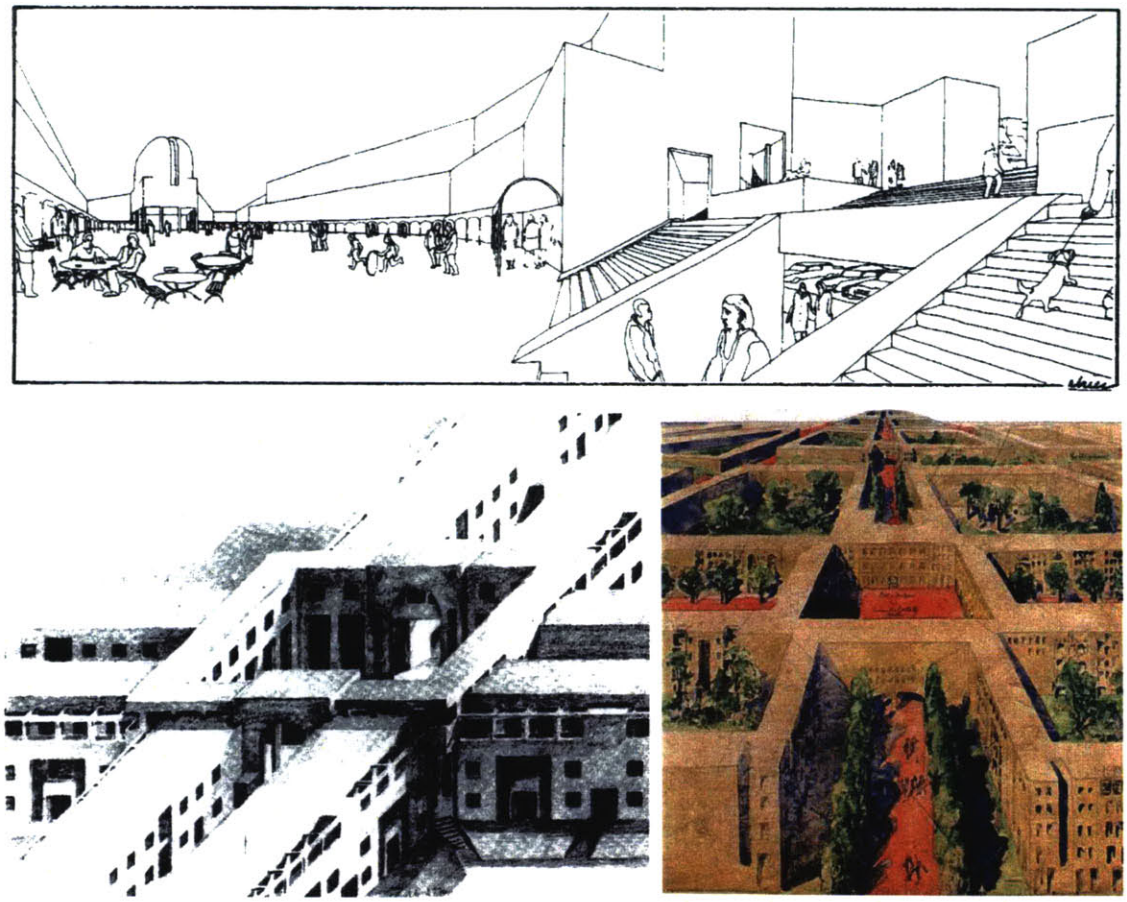


Figure 63. The concept of urban rooms, by Robert Krier[81]

Figure 64 shows Alison and Smithson's rebuilt plan for Berlin after the bombardment of World War II. It was a radical modernist proposal to install the form of enclosure in a modern city, Nicknamed as "the Chinese Wall", solid residential slabs were conceived to define and consolidate Berlin's new center, yet penetration were allowed between the outside and the inside. Unlike the ancient Chinese wall, these bulky slabs were porous and were not conceived as a tool of control.

[81] Krier Rob, Town Space, Contemporary Interpretations in Traditional Urbanism. Birkhauser – Publishers for Architecture, 2003, p.110

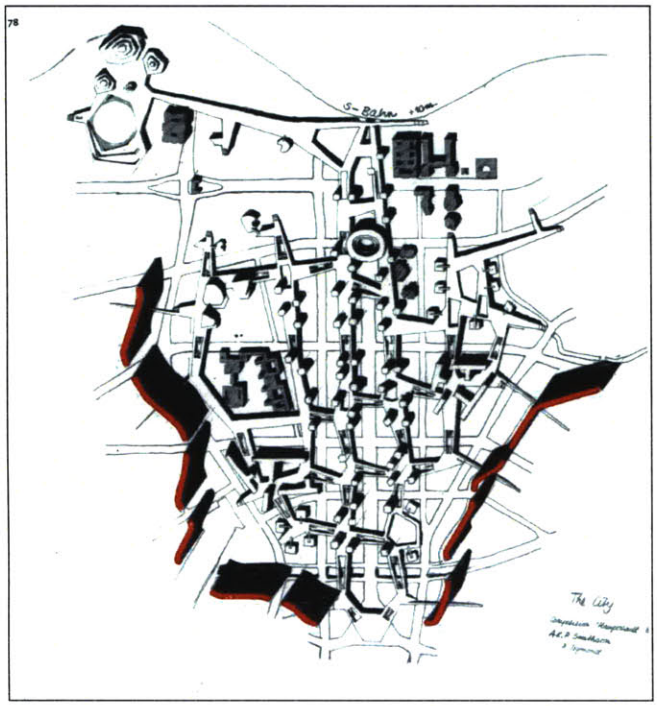
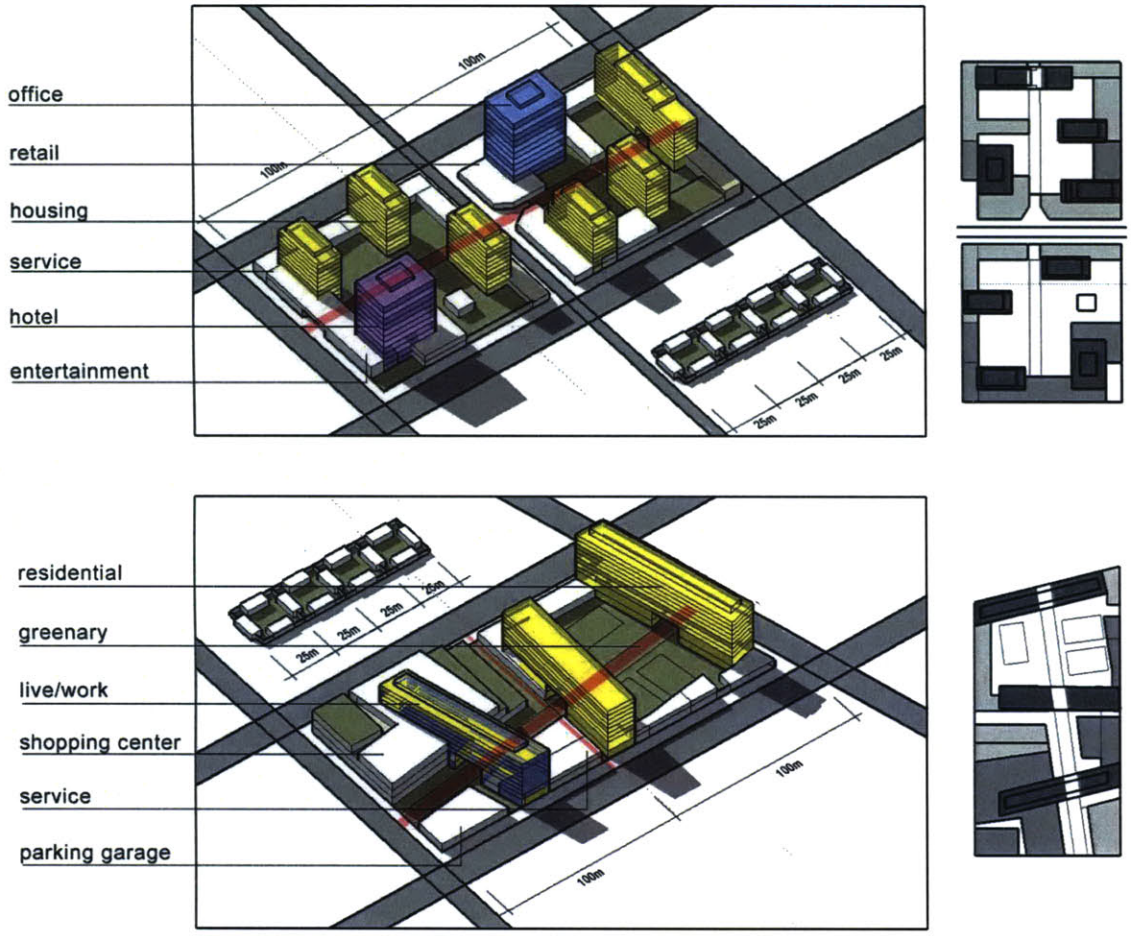


Figure 64. Alison and Smithson's entry of Hauptstadt Berlin Competition, 1957

In fact, the forms of enclosure at the compound scale were kept alive in contemporary Chinese cities in both *Danwei* compounds and *shequ* residential communities. The effect of physical enclosure in present-day Chinese cities was mostly positive: the danwei compounds served as live-work complex which strengthened the sense of community, added extra security, and shortened the live-work commute. The walled *Shequ* communities were even more successful. Although the courtyard housing typology will fade out due to the change in family structure, *Shequ* communities as the modern day successors have provides popular and lively neighborhoods space. The gates and wall continued to define the entering sequence to these destination spaces.

In a modern democratic city, urban enclosure should provide good accessibility and freedom of movement, rather than becoming the tool of segregation and isolation. The enclosing structure could be remained in symbolic standing. However, it is necessary for these enclosures to be modernized, and the accessibility and openness of the enclosed space to be improved to meet the needs of market economy and political reform. The gates could retain the physical form as a narrow point in the spatial sequence, yet it should not fall into the tool of social segregation. The walls, as an ancient form of partition, have the potential to become integral parts of urban lives, occupied by retail

program, public uses, or even recreational space. While modern technology offers better options in access control and security surveillance, the management of the urban space should no longer resort to prohibitive methods as in the pre-modern era. The synchronization of time, for instance, which took of form of curfew in ancient Chinese settings, was observed by Kevin Lynch as a "peculiar interesting and rather dangerous idea" [82], This is certainly not desirable for future Chinese cities.



[82] Lynch, Kevin. What Time is This Place, The MIT Press, 1972, p.75

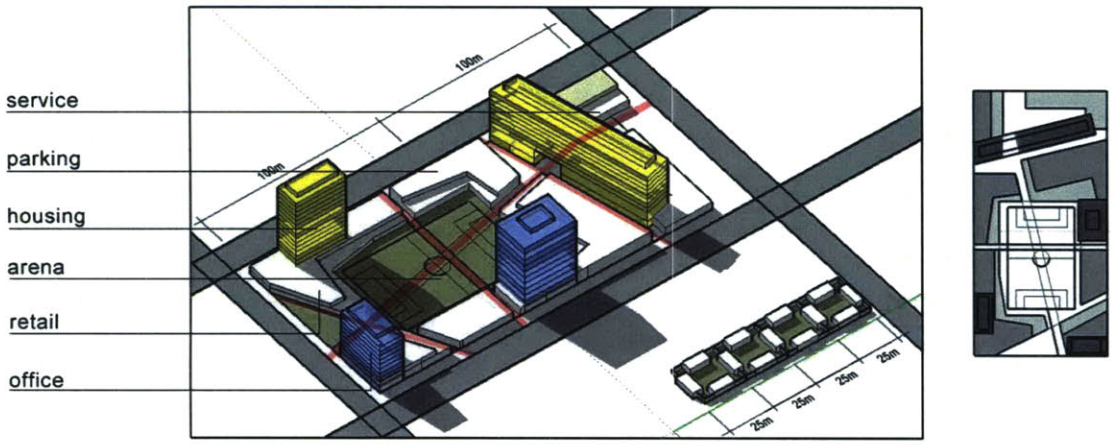


Figure 65,66,67. Sequence reinvented: urban blocks with multiple programs

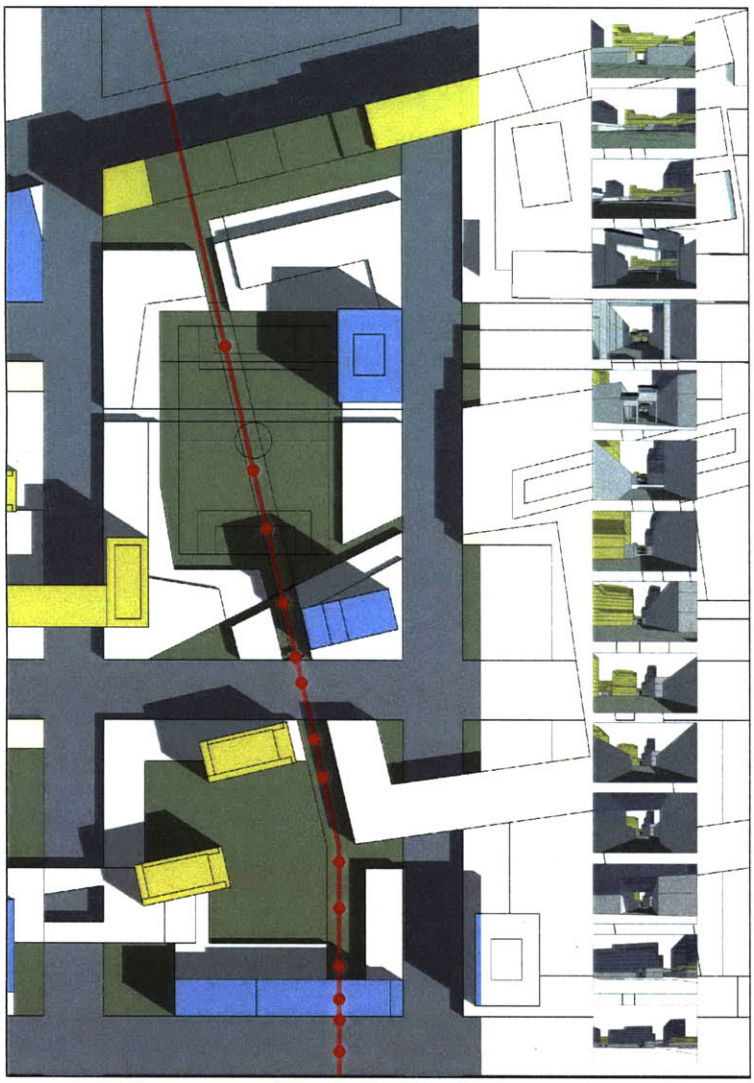


Figure 68. Sequence reinvented: the views from the pedestrian trail

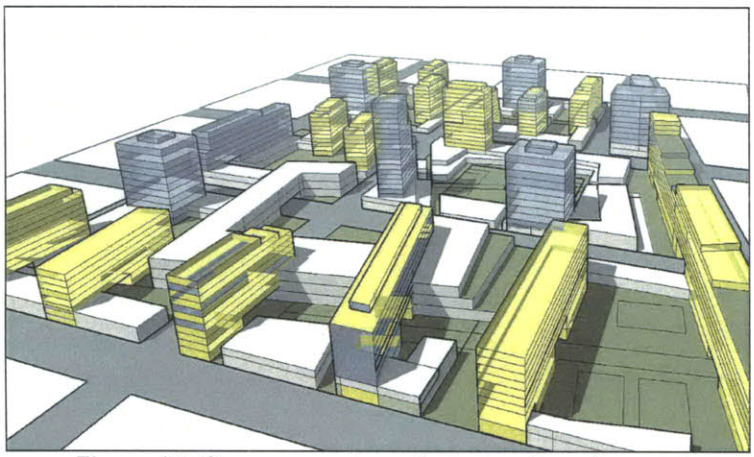


Figure 69. Sequence reinvented: view from the east

Figure 70. The installation of media in the urban sequence

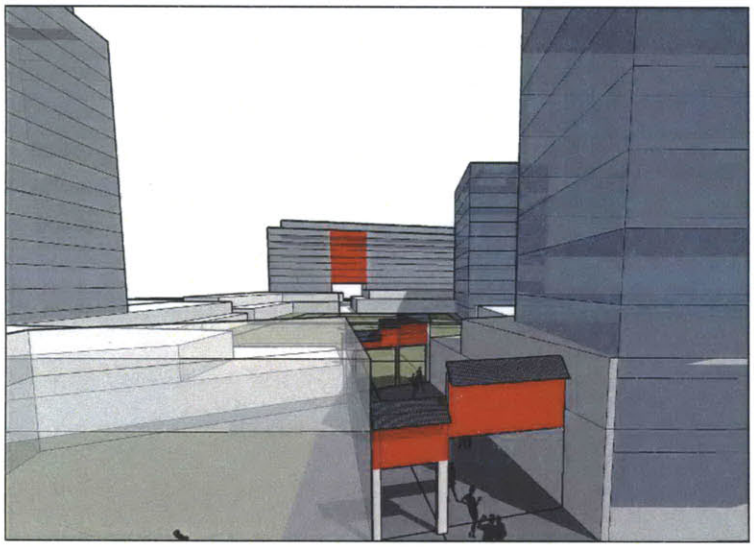


Figure 71. The Installation of Paifangs in the urban sequence

VI. Conclusion

"The best urban form is the one which captures the authenticity of urban lives." Walter Benjamin's remark provides criteria in judging urban design models for contemporary Chinese cities. The choices have becoming increasingly important as China is searching for an identity in the global context. However, massive urban renewal and redevelopment including the facilities for Olympic Games have been implement in western terms. The modernity and diversity are gained, while the consistency and order waned. In this situation, the best forms for contemporary Chinese cities need not to be copied directly from abroad without adaptation. By contrast, a more effective and efficient way must be a close matched with the urban life style and socio-economic conditions. The more livable and humane approach may lie in some of the principles within China's own tradition of urban design and living. We should not be afraid of re-examining the value of traditions.

I believe that it is possible to rekindle the traditional sequence on a large scale by creating a few distinctly Chinese approaches to city design. In fact, some sequential principles that are derived in the ancient form can solve some of the obvious problems with the modern city. This supersedes the prevalent approach of stylistic architecture and the international style of urban design. The past urban tradition could be mined for a new, but distinctly Chinese approach to city design that is in fact a better model of urban design in the 21st century than the 20th century modern movement. Due to time limits, my study will end with many questions unaddressed, including the feasibility and implementation of sequential design in contemporary Chinese scenarios. I will explore towards these directions in the future.

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