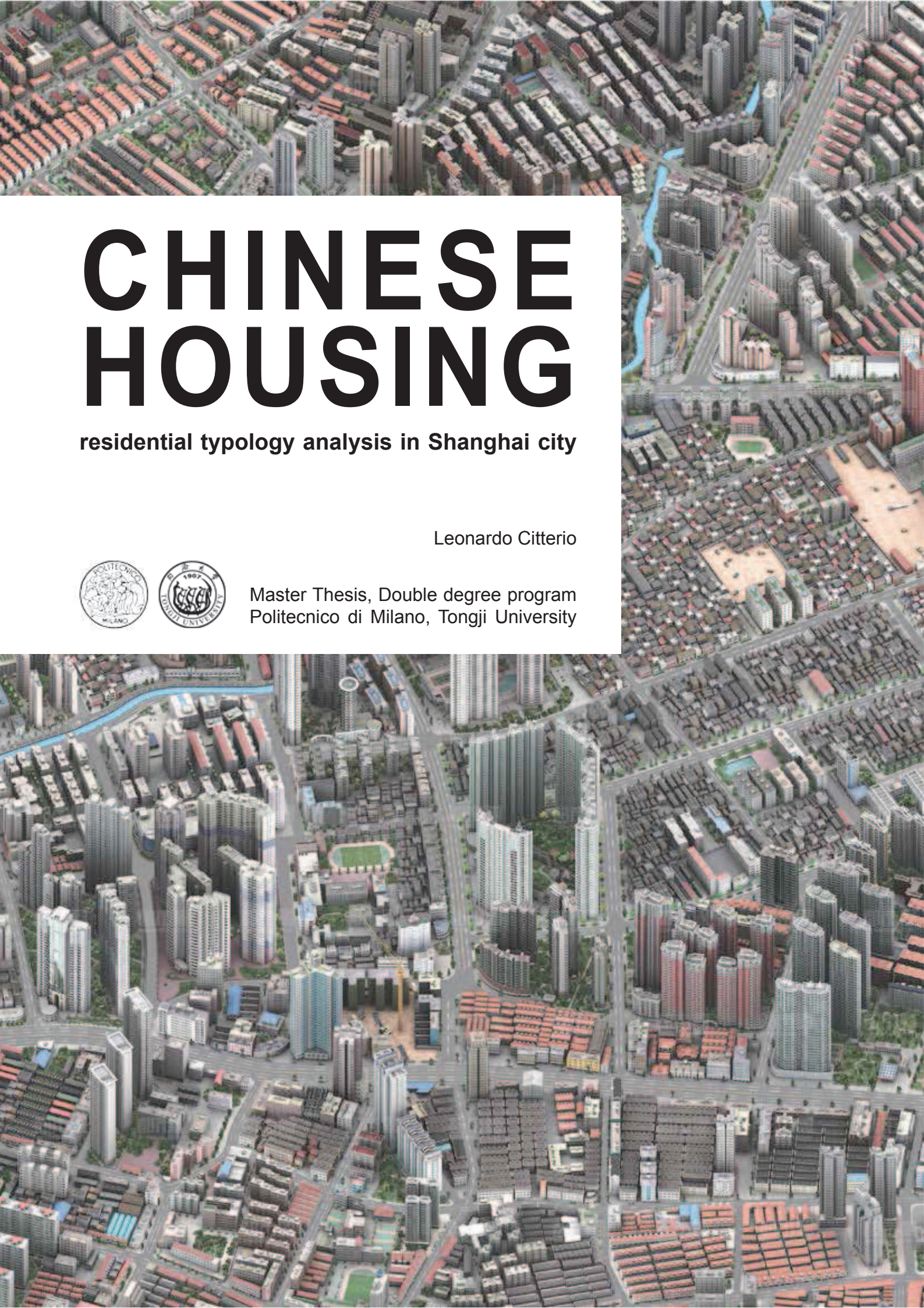

CHINESE HOUSING

residential typology analysis in Shanghai city

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Master Thesis, Double degree program
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ABSTRACT


The numbers of Chinese urban development are unprecedented: in the Eighties, China has reached more urban people than the whole Europe did (including Russia) in the IXX century; the construction of half a billion square meters of residential area is planned in the near future. Government's target is to have an urbanization rate of the population over 70% by 2030, which is now estimated at 52%. Chinese urban development presents many similarities compared to the large European urbanization notwithstanding the great difference in scale. Several Western urban models are imported and reused in South-East Asia. With the rapid growth of the Chinese housing market for more than a century substantial and different typologies have been produced. These residential construction types best express the evolution of the Chinese lifestyle over the years and the major problems generated by the new Chinese urbanization. Given its extensive development, the residential sector and in particular its predominant typologies create the main patterns of the city. The contrast in morphology between the different prototypes seem to be a sudden mutation, but actually suggest a gradual housing typological evolution lasting over a century. The thesis aims to historically and critically delimit these dominant or prevailing types in Chinese modern cities, with a particular focus on Shanghai. After the analysis and the comparison of previous architectural models and the study of new trends, the research aims to define which were the past Chinese strategies and the evolution of the housing research in recent years.

Key Words: Shanghai, Chinese residential types, High-density, Lilong housing, Work-Unit, High-rise compound, Urban Village, Chinese modern urbanization

I numeri dello sviluppo urbano Cinese non hanno precedenti: negli anni Ottanta la Cina ha raggiunto più abitanti-cittadini di quanto abbia fatto l'intera Europa (Russia compresa) nel IXX secolo; nel prossimo futuro è prevista l'edificazione di mezzo miliardo di metri quadrati di sola superficie residenziale. Obiettivo del governo per il 2030 è il raggiungimento di un tasso di urbanizzazione della popolazione maggiore del 70% rispetto agli odierni 52%. Nonostante le enormi differenze di scala, lo sviluppo urbano Cinese presenta numerose analogie a quello del grande inurbamento Europeo. I vari modelli urbanistici occidentali vengono quindi importati e reinterpretati nel Sud-Est Asiatico. Grazie alla rapida crescita del mercato residenziale Cinese in poco più di un secolo si sono quindi significativamente plasmate differenti tipologie. Questi vari modelli residenziali riflettono le diverse problematiche generate dalla nuova urbanizzazione Cinese e l'evoluzione negli anni dello stile di vita dei propri residenti. Dato il suo massivo sviluppo il settore residenziale ed in particolare le sue tipologie predominanti formano le textures predominanti della città. Il contrasto morfologico tra questi differenti modelli abitativi, anche se sembra riflettere un'improvviso mutamento, rispecchia in realtà una graduale evoluzione della tipologia residenziale per oltre un secolo. La tesi si propone quindi di definire i diversi tipi edilizi considerati storicamente e criticamente, dominanti o prevalenti nell'evoluzione della città moderna Cinese, con un particolare focus su Shanghai. Con l'analisi e il confronto dei modelli precedenti e dei nuovi trend la ricerca punta a definire quali siano state le strategie utilizzate nell'edilizia residenziale Cinese e l'evoluzione della ricerca sul tema dell'housing negli ultimi anni.

中国城市的发展规模是前所未有的：上世纪80年代，中国城市人口数量已经超过了21世纪欧洲（包括俄罗斯）的人口数量。中国政府计划在不久的将来全国住宅小区建设面积达到5亿平方米。政府的目标是到2030年为止城市化人口超过70％，如今估计已经达到52％。相比欧洲大型城市化，尽管在规模上有很大的差别，中国的城市发展呈现出很多相似之处。一些西方城市模型是从东南亚引进并重新使用。随着中国房地产市场的一个多世纪的快速发展，大量的不同的住房类型产生了。这些住宅建筑类型最好地表达了多年来中国生活方式的演变以及新的中国城市化所产生的主要问题。鉴于其广泛的发展，住宅领域，尤其是它的主要类型学打造了城市的主要模式。在不同的原型之间形态的对比似乎是一个突变，但实际上暗示了一个持续了一个多世纪的渐进的住宅类型学演变。本文旨在从历史性和批判性的角度界定这些中国现代城市主导的和流行的类型，尤其侧重于上海。在对以前的建筑模型进行分析和比较以及对新的趋势研究后，本研究旨在定义哪些是过去的中国策略以及近年来住房研究的演变。

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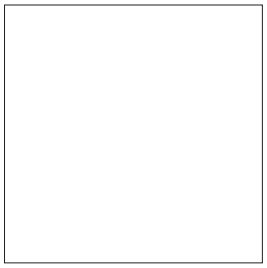
-  .....

1

PREFACE

The thesis aims to delimit those types considered historically and critically, dominant or prevailing in the modern Chinese city, with a particular focus on Shanghai. The research carried is proposed as a possible reference for those who are going to deal with the new typologies design or a development and interest to the background of the previous examples. The different types are then analyzed according to different methodological approach: a socio-cultural approach, which leads to the prototypes examination developed and framed in a particular political, cultural and economic context; a theoretical nature approach of the architecture, researching and highlighting the pure theoretical foundation that led to the birth of a new type in a purely physical and architectural way; a practical approach, the influence of a typological transformations on the different inhabitants everyday lives and its practical impact on the society.

In summary, it's believed that the building typologies study, which have characterized the Chinese cities evolution, is a useful and necessary tool in the design practice. Therefore the architectural design must be based on the previous experiences knowledge, in order to be conscious of the question that a particular building type have to response. Basically, the knowledge of at least part of the wide architectural production available allows to not copy solutions that have already been answered in the past, but inventing and developing each time the more suitable architectural type.

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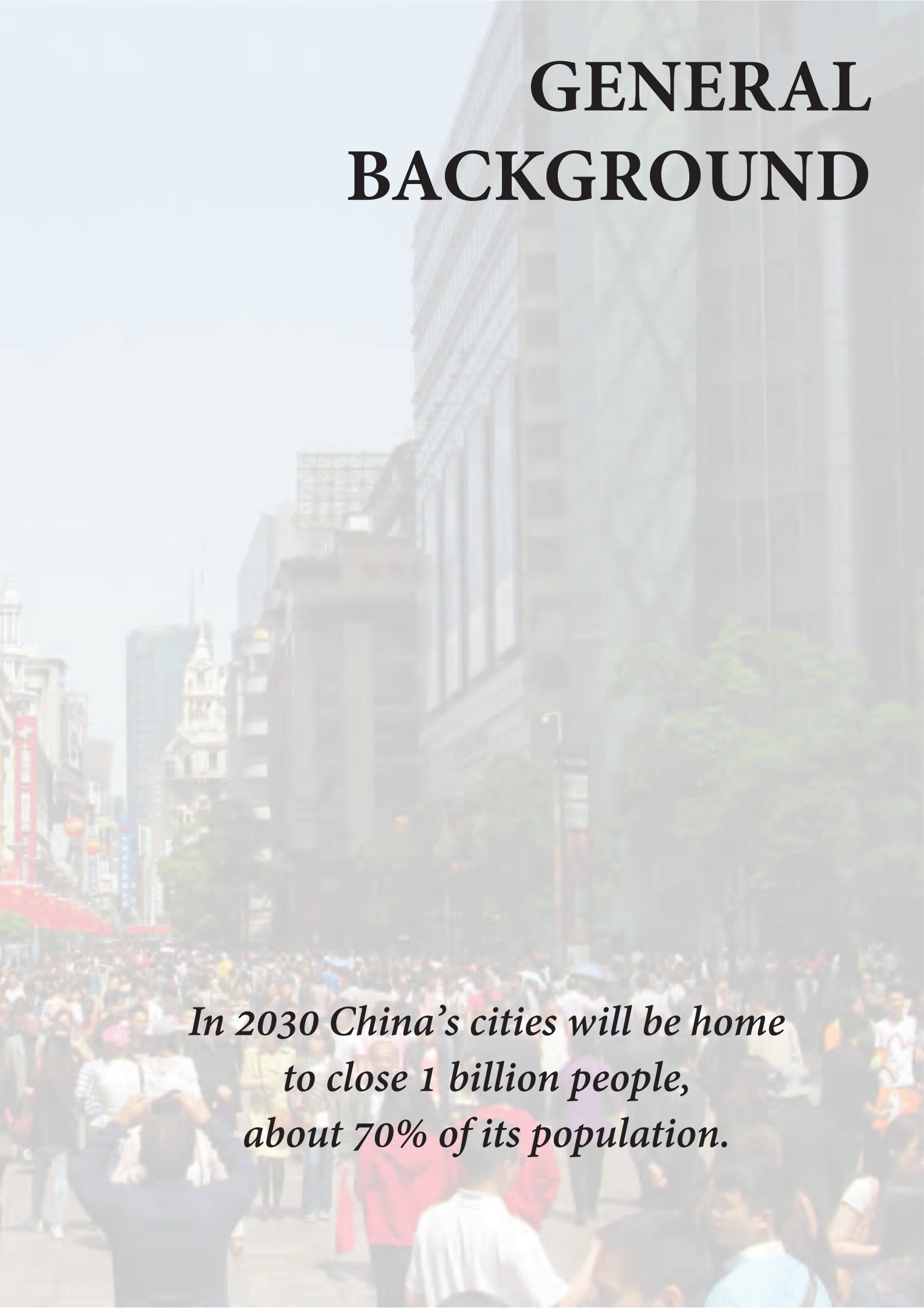
(2. 1) SHANGHAI, Nanjing road

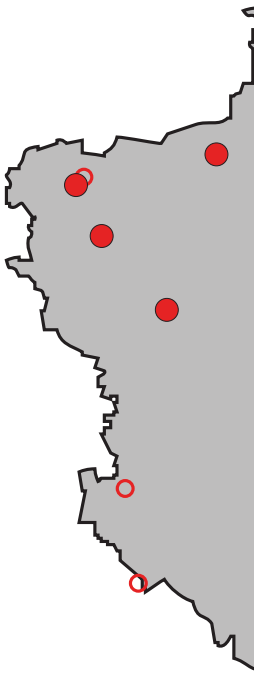
GENERAL BACKGROUND



In 2030 China's cities will be home to close 1 billion people, about 70% of its population.

China has 656 cities,
170 over 1 million million inhabitants,
17 exceed the 5 million,
6 the 10 million inhabitants.

Europe counts
18 cities over 1 million inhabitants,
only London over the 5 million.

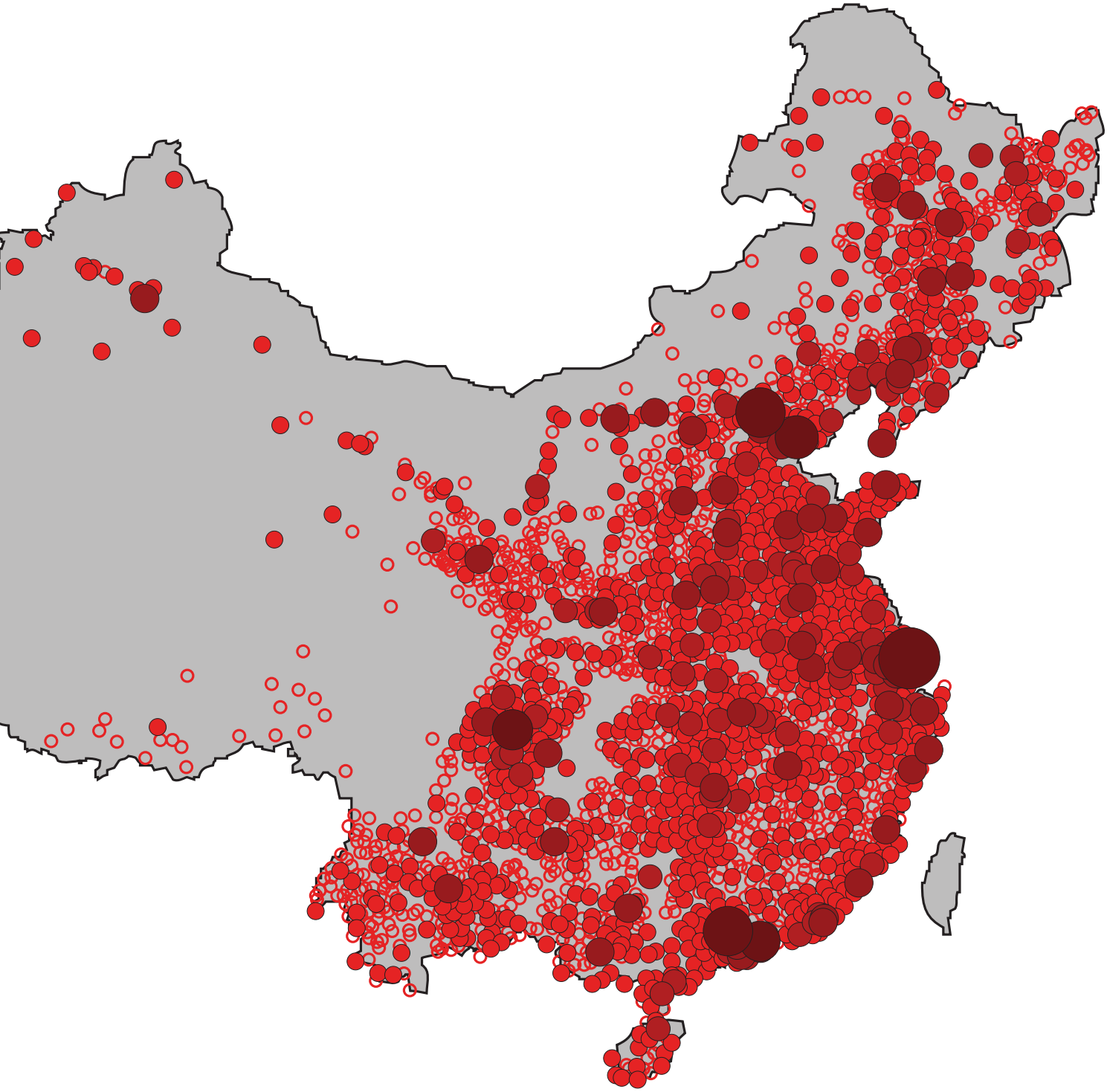


(2. 2) Settlement points

- < 50K
- 50K - 500K
- 500K - 1 Million
- 1 Million - 5 Million
- < 10 Million

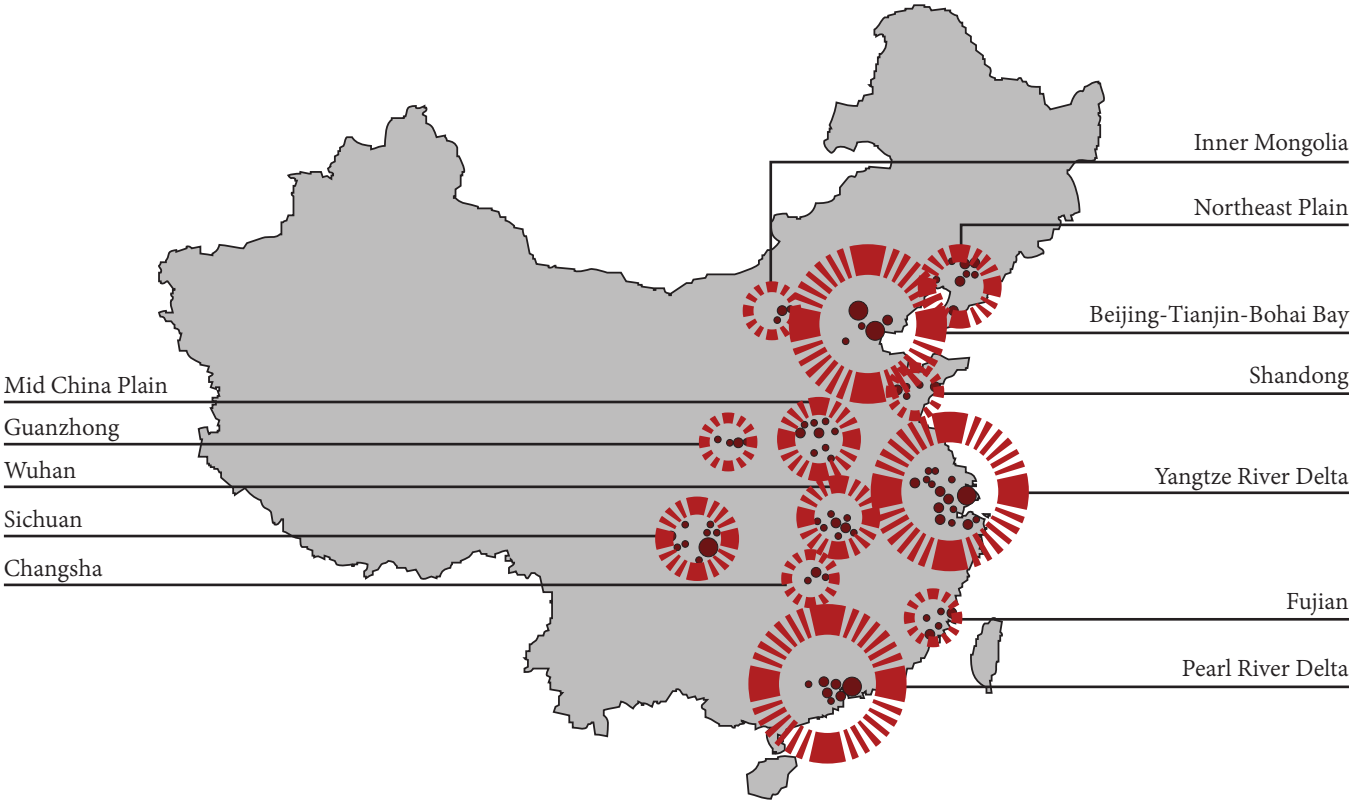
2. 1 A new transformation

At the end of 2011 China officially stop to be a rural country, the urban citizen exceeded the rural population. In 2030 China's cities will be home to close to 1 billion people, or about 70% of the population. Since the beginning of the new millennium urbanization has become the main strategy of the government to promote economic development. After years in which the country's development was supported by an economy based on exports, given the low labor cost, China now focuses on the growth of the internal market. The term urbanization refers to the process of cities growing by the countryside migration resulting an increasing urban concentration. This choice leads to the creation of a cities network hierarchically ordered in which you can distribute widely the various services and minimize the population movements. The cities growth and spread is always exist, but today it's assumed different sizes and proportions. Today's urbanization is the center of lively discussions in the developing countries, where China, for its numbers, undoubtedly stands out.
In the Country there are 656 cities classified into three different levels: 6 provincial-level cities (municipalities and Special Administrative Regions); 286 prefectural-level cities; 364 county-level cities. Of these cities, according to the 2010 census, 170 have more than one million inhabitants in the urban area, 17 of which exceed the 5 mil-



lion and 6 the 10 million inhabitants. In order to understand the dimension of this development in the European Union, with about two-thirds of the population of China, there are only 18 cities over a million inhabitants and only London just over the 5 million. This great urban migration leads to the birth of the new metropolis. The high population concentration carries with it various problems such as environmental degradation, increased pressure on natural resources, loss of agricultural land, pressure on housing and employment, social alienation and urban sprawl. Obviously, the growth of cities also brings several benefits that trades off these problems, it forces driving economic development by increasing the demand for labor, utilizes efficiently services and infrastructures, and creates potential innovation and experimentation centers.

The faster urban growth and the increase economic activity, focused in close and preset areas, also feed a growing inequality between rural and urban zones. By the last policies, the government is trying to solve these inequalities. They are focused on the future development of the minor cities and a the stabilization of the major ones. The government also intends to phase out the Hukou system, literally a residence registration, the main cause of this disparity. However this registration led a rapid urbanization without a great creation of slums into the cities.



(2. 3) China's Main City Clusters

2. 2 Chinese urbanization

A well-structured urban system, consisting of a capital and a network of provincial capitals and commercial cities had already structured more than 2000 years ago. The transformations accelerated with the development of commercial activities, particularly in port cities. But China's massive urban transformation did not begin until the founding of the People's Republic of China in 1949. Initially, through a massive industrialization urbanization steadily increased to 1.25% every years. With the beginning of the 1960s until the 1977 this process greatly diminished. Opposed by the Great Leap Forward, natural disasters, as the great Chinese famine, the Cultural Revolution, the urbanization process had a decline. Between 1966 and 1977 urbanization rate decreased of 0.16 percentage points. With the end of the Maoist period and the beginning of the second revolution China had a new renaissance and a second urbanization era. Between 1978 and 1995 the percentage of the urban population grew from 18% to 29%. This growth was driven by the open-door policies, the trade opening and the foreign investment. The coastal towns were the favorite, better positioned for international trade and an abundance of resources, the development of the east coast of the country was favored. Several special economic zones were established, including Shanghai in 1984. The third urbanization period, although still in place, can be considered the most productive. Since 1996 the reforms progress and the industrialization led to a rapid urbanization process, at the end of 2011 the urban population exceeding 50%. This new emphasis led to the loss of the control of the large cities growth. In order to face the problem the government released the first national urbanization planning, urban clusters become the foundation of the new urbanization. Among the largest of these urban agglomerations, consisting of a set of cities and towns around megacities, there are the Beijing-Tianjin-Bohai Bay, the Yangtze River Delta, and the Pearl River Delta regions. Besides confirming the importance of the international city in east China's new plan also aims to reduce the gap between the various cities thanks to the new clusters development in the center and west of the Country. Perhaps it will serve generations before China can complete its urbanization process, but after long debates and hesitations, policymakers now seem ready to move on to the next urbanization phase and to start new approaches. The next can be the Chinese century, as the XX century was influenced and dominated by the United States.

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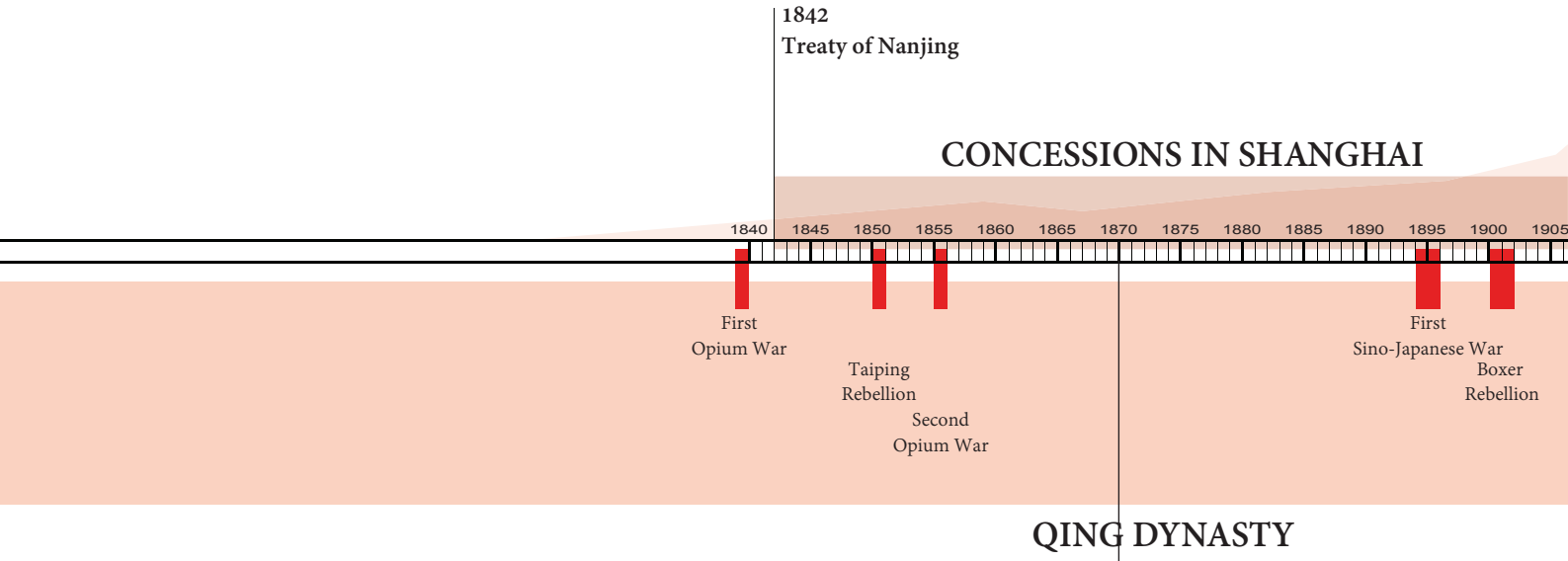
and dominated by the United States.

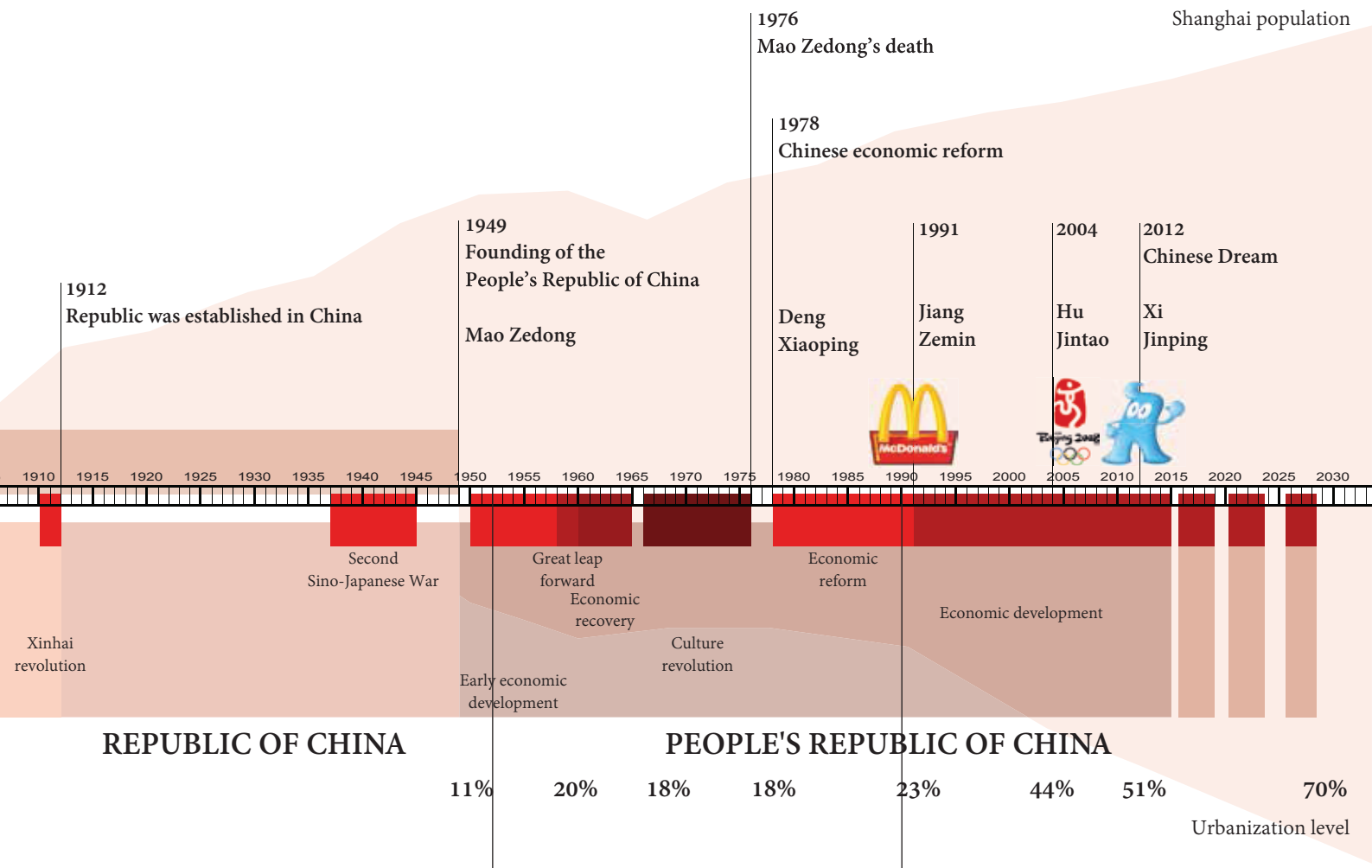
(2. 4) SHANGHAI, construction site

Housing reflect historical changes. Buildings become part of the City memory.



Shanghai Walled City - Ming Dinasty (a)

Shanghai Lilong Housing (b)



Shanghai Work-Unit compounds (c)

Shanghai High-Rise community (d)

2. 3 Shanghai

Shanghai has always been, and still is one of the main actor of this transformation. One of the major cities in China, it has always attracted foreign and Chinese investors. The city has always been subject to major urban transformations that also favored the emergence of Western models. In particular, since the early nineties, conforming to the trend of the country, the growth becomes exponential. The hectic urban development made an overlap of the various urban models, still visible in several city blocks. The traditional geographic representations do not seem able to give proper representation of the spatial processes complexity under development. Gated communities, skyscrapers, city blocks unchanged over the years, great heritage interest buildings, authentic rural villages absorbed in the urban growth, and finally the most advanced eco-friendly experiments are direct results of the various transformations that have characterized the Chinese city evolution. Shanghai, especially, has rebuilt itself and its new iconic buildings becoming model and leader of these transformations. Then explain the current urban transformation of Shanghai can be useful to understand the history and the future development of Chinese cities. It's therefore necessary to assimilate the city spatial structure, its physical characteristics and the different social, political and economic factors that have characterized the various transformations in the modern history of the city.

(2. 1) SHANGHAI, Nanjing road: photo by Michael Tyler.

(2. 2) Settlement points: draw by the author based on data by: Socioeconomic Data and Applications Center (sedac).

(2. 3) China's Main City Clusters: draw by the author based on data by: UKTI, McKinsey Insights China, Li & Fung Research Centre.

(2. 4) SHANGHAI, construction site: photo by the author.

(2. 5) Chinese Modern History: draw by the author based on data by: China Human Development Report. 2013, *"Sustainable and Liveable Cities: Toward Ecological Urbanisation"*. Beijing: China Translation and Publishing Corporation, 2013. http://en.wikipedia.org/wiki/Timeline_of_Chinese_history

(a) photo by http://virtualshanghai.ish-lyon.cnrs.fr/

(b) photo by http://shanghaistreetstories.com/

(c) photo by unknown

(d) photo by the author

(2. 6) SHANGHAI: photo by Geza Radics.

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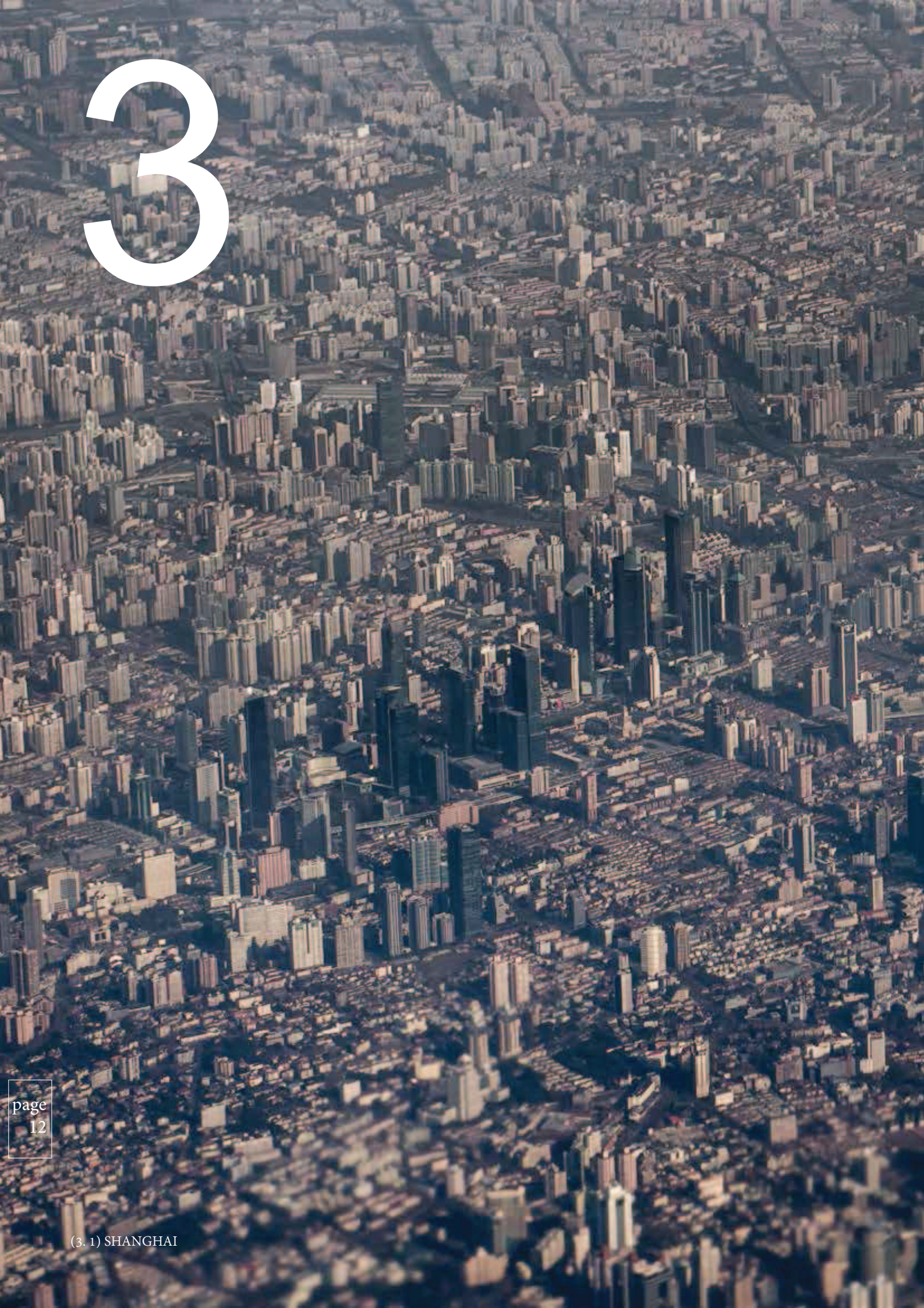


(3. 1) SHANGHAI

SHANGHAI EXAMPLES

3. 1 Social and Spatial Transformation

Shanghai best represents the troubled modern Chinese history that led to the contemporary economic boom. The city had dramatic changes during its modern history of the last century. Can be defined as fundamental steps of this transformation three significant dates. 29 August 1842 and the sign of the Treaty of Nanking, formally called the "Treaty of Peace, Friendship and Commerce between Her Majesty the Queen of Great Britain and Ireland and the Emperor of China", it set the beginning of the Shanghai colonial period and the subsequent end of the imperial Qing Dynasty era. 1 October 1949 and the proclamation of the People's Republic of China establishment by the Communist Party Chairman Mao Zedong, bringing the Country under its socialist regime. December 1978, two years after the death of Mao Zedong, and the start of the period of the Chinese economic reform and the Opening Up policy by reformists within the Communist Party of China led by Deng Xiaoping, who led China to rise as a new world power.

These important dates led off several significant political, social and economic transformations for the city history, through the Qing Dynasty period, the Republican era, the Maoist socialism construction and Deng Xiaoping's economic reform. These changes dramatically shaped the city morphology and the shape and organization of the buildings. The spatial structure change reflects the pattern and character of social transformation.

The Shanghai symbol, the Oriental Pearl Radio & TV Tower, was built as a icon for the new country's economic development. Another good example can be the People's Square evolution.

After the establishment of the British settlement in the city, with the sign of the Treaty of Nanking, foreigners exported Western customs and usages in China. From 1862 the Shanghai Race Club was based at the race track it owned in the center of Shanghai, the same lot of the contemporary People's Square and Park. It was the main race track in the East Asia and popular place for gambling on horse racing for Chinese and English. When the People's Republic of China was established in 1949, the new Communist government banned horse racing and gambling. In 1952, the racecourse, symbol of the English settlement and his lifestyle, was converted into People's Park, in the northern half, and People's Square, in the southern half. Respectively, these became a leisure park for workers and the main place for political and military parades and assembly for the masses mobilization. As a result of the several reforms started in 1978, Shanghai started to erect several new buildings in order to rise itself as a new metropolis. In the 1990s many changes were made in the area. The Shanghai Municipal Government was moved to just south of the park from the former HSBC Building on The Bund and other buildings were add, include the Shanghai Museum, the Shanghai Opera House and the Shanghai Urban Planning Exhibition Hall. In addition, as a symbol of the capitalist lifestyle on the edge of the area were built several shopping mall, hotel and office.

(3. 2) Oriental Pearl Radio & TV Tower 1993

1934

(3. 3) Bird's-eye view of the Public Recreation Ground and surroundings

1949

(3. 4) People's Park and Nanjing Road looking East

2010

(3. 5) People's Park and Square

(3. 6) SHANGHAI

Shanghai can be defined as a collage city made by textures and patters, society and lifestyles reflection.

Certainly the city cannot be formed only by monuments and architectural exceptions. The different era's symbols and reflexes are all the predominant urban texture that characterize the city. Housing, in particular, occupies almost the 50% of land use in the inner city. Value that is slowly decreasing in favor of services and commercial buildings. However, the analysis of the residential construction types is not only due to its extension on the terrutory. It best expresses the evolution of the Chinese lifestyle over the years and is one of the major problems generated by the new Chinese urbanization. Given its extensive development, the residential sector and in particular its predominant typologies create the main pattern of the city. These different layers, that built the physical environment of Shanghai, are very obtrusive. The social transformations shaped these typological and physical differences. From the top the city structure is easily recognizable. A large sprawl of buildings almost placed without a hierarchical disposition. In the various lots are easily identifiable several patterns. Shanghai can be defined as a collage city made by different textures and patters. With the typologies study is so possible understand the relationship between the various political events, the lifestyles and the form. For example, the morphological contrast between high-rise housing and Lilong housing seems to be caused by a sudden change. Instead it is due by a gradual evolution of the housing type over a century. In order to tell this evolution are selected four different architectural prototypes. These were chosen because the predominant typologies in the principal Chinese eras. They represent a clear evolution of the architectural prototype during the time. Lilong housing, Work-Unit, High-rise compound and Urban Village reflect significantly the major changes that have characterized the Chinese modern history. It is divided into specific periods, characterized by architectural quality and social, political aspects of which the various prototypes have clear expression: the end of the empire and the beginning of the republic of China characterized by foreign colonies, the birth of a cultures hybridization, east and west (Lilong housing). The foundation of the new People's republic of China, the Maoist period, the Soviet model use in all spheres of life, political, economic, social and planning, characterized by the abolition of the free market and the idea of housing as a public good (Work- Unit). The great opening and the new reforms period, the economic boom, the creation of a Western-style market based on trading (High-rise compound), the city uncontrolled expansion, the welfare housing elimination and the weakening of the hukou system controls characterized in the floating population trend (urban village). Finally, the contemporary period, a new era of transformation characterized by the creation of different possible scenarios for the Chinese cities future.

(3. 7) Shanghai's city center patters

(3. 1) SHANGHAI: photo by Geza Radics.
(3. 2) Oriental Pearl Radio & TV Tower 1993: photo by t.sina.com.cn/1805489442
(3. 3) Bird's-eye view of the Public Recreation Ground and surroundings: Repository Institut d'Asie Orientale (virtualshanghai.net).
(3. 4) People's Park and Nanjing Road looking East Virtual Shanghai: Repository Shanghai Municipal Archives (virtualshanghai.net).
(3. 5) People's Park and Square: photo by taringa.net
(3. 6) SHANGHAI: photo by Ettore Santi.
(3. 7) Shanghai's city center patters: draw by the author based on bing.com/maps/

4

(4. 1) SHANGHAI, RuiQing Li (瑞庆里) Liaoning road

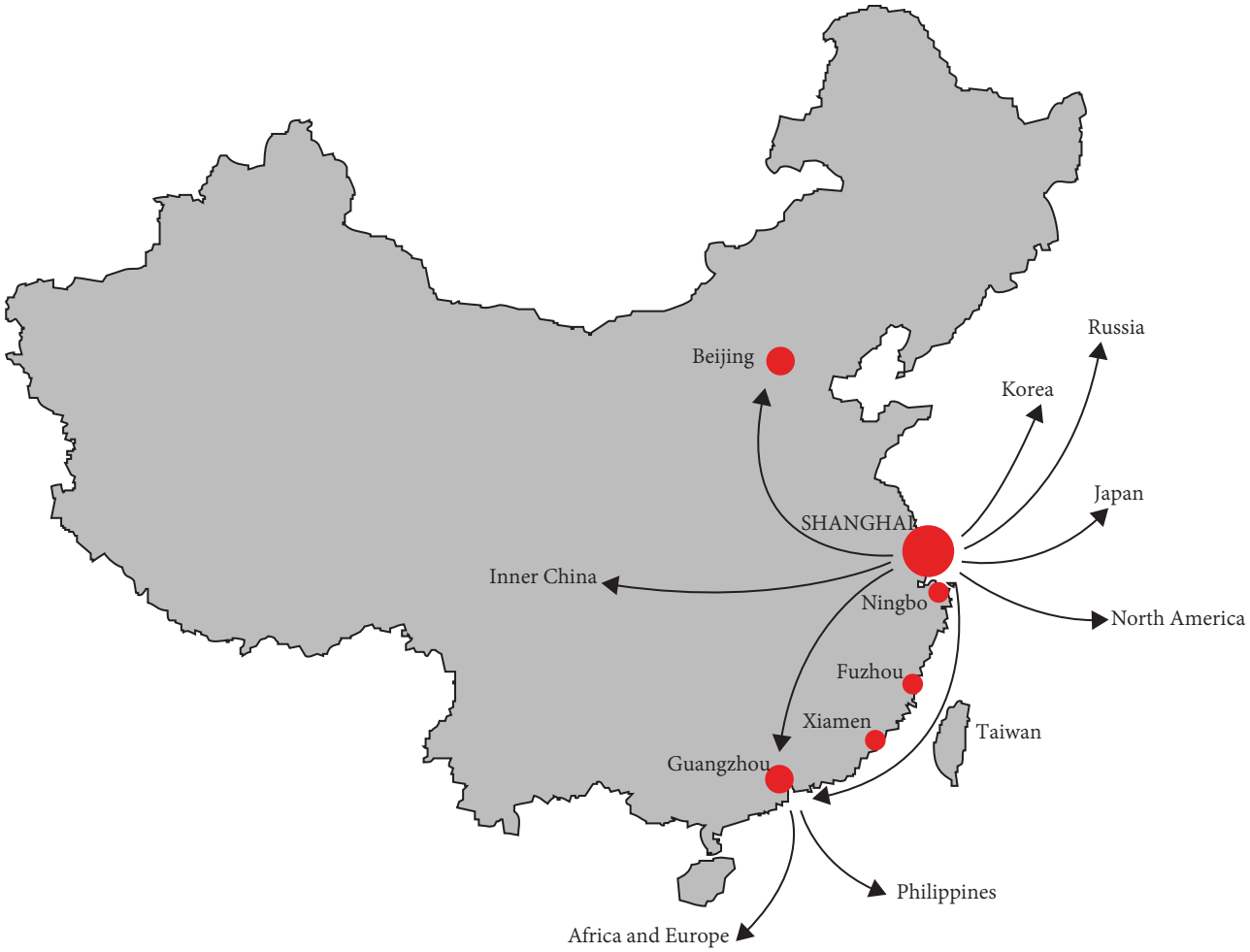
LILONG HOUSING
里弄住宅

4. 1 Introduction

Urban housing is one of the most significant elements in the Shanghai's modernization, industrialization and urbanization. This new development of the Chinese city, which will lead to the birth of a new world economic power, partly began in the late 19th century with the opening of the Treaty Port. The foreign concessions and settlements led to the foundation of a new housing typology, the earliest mass commodity housing in Chinese history. The Lilong typology has a systematic structure, in conformity with the functionality and economy which the modern city needed, born from the union between Western culture, rationality and economy of row-house, and the Chinese tradition, of a communal lifestyle centered on the court house. The term Lilong refers to a specific low-rise high-density housing neighborhood born in the late 19th century and who became one of the most significant city urban pattern. Literally "Li" (里) means block, neighborhood, "Long" (弄) means small lanes. As the name implies, this texture is formed by several solid blocks, cut and connected by a series of linear voids. Shanghai's Lilong provide, through the economy and the hierarchy of land use, to connect the urban environment of the public sphere with the family of the private and still get a sense of security and community in the block. These characteristics change over the years. Given the unique and complexity Shanghai's history, the original Lilong environment of the 19th century of foreign colonies is very different from the contemporary one. Not only the physical, architectural, influenced by the West, but especially the social and economic characteristics that continue to have an important influence on the texture of the different blocks.

4. 2 The colonial city

Before 1842, when Shanghai there was not under a foreign occupation, the city already had a population of 550,000 inhabitants. The strategic location developed important trade routes, that making the city very popular. At the center of the Chinese coastline and beside the bayou of the Yangtze river was a great connection between inner China and the rest of Asia.
After the Opium War (1839-1841) in 1842, the British and the Qing Dynasty signed the "Treaty of Nanjing" which guaranteed privileges to foreigners to live and trade in China and the opening of five commercial ports on Chinese land (Guangzhou, Xiamen, Fuzhou, Ningbo and Shanghai). These included the privilege to live and work in the treaty ports and could own property. The foreign capitalists could then start a new economy, establishing new industries, banks and financial institutions. Unlike the other four port cities where the foreign concessions occupied a small part of the city, far from the downtown, the concessions in Shanghai were larger in size and formed the center of the urban area of the city. A significant difference was also the total autonomy from the administrative point of view, the Chinese government could not affect on the various decisions and foreigners affairs. During the colonial period four countries dominated the control of Shanghai: French concession, English and American concessions (later unified under the name of International settlements) and Japanese concession later. Other nationalities such as Indians, Russians, Portuguese, Italians and Spanish reached Shanghai to seek fortune. In a short time the city became a melting pot of different cultures, a modern cosmopolitan city. This opening of the city to the foreign market leads to the creation of various factors for the future development of Lilong typology. Settlements and concessions had to develop as much as possible in a limited area. These territories were autonomous, exclusively under the foreign countries jurisdiction. A testimony of the different realities in this period in Shanghai are the four different police corps, different according to the different jurisdictions: Russian policemen, Chinese, Vietnamese (for the French concession) and Indian (for Inglese settlements). Urban textures and life styles differ in the different settlements. The quality of housing and the European way of life was thus imported to China. The first land Regulations was establishment in 1854, based on European laws, promoted the future densification of foreign confined areas.



(4. 2) Location and Trade routes of Shanghai

(4. 3) Vietnamese and (4. 4) Indian Police Force

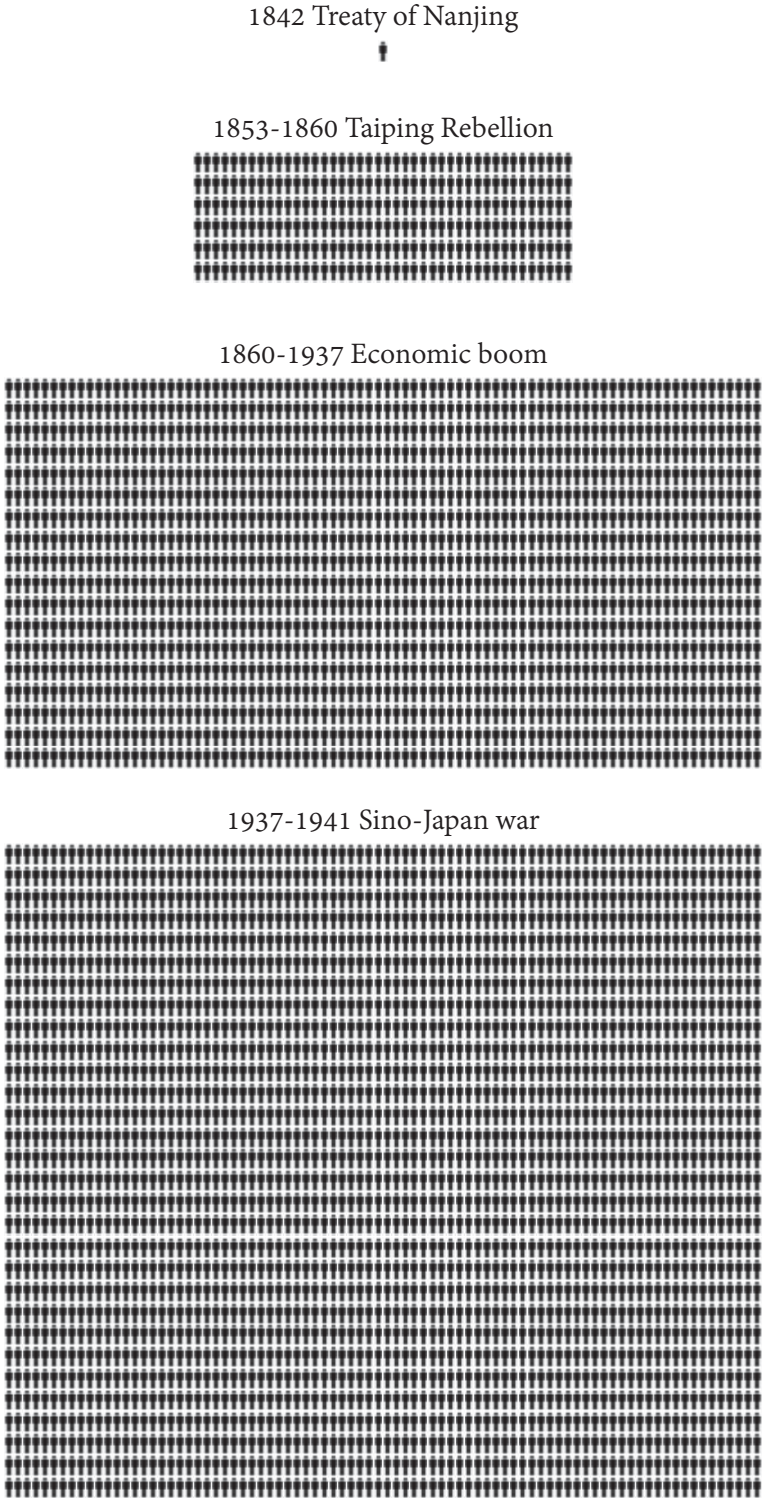
During the colonial period Shanghai became a melting pot of different cultures, a modern cosmopolitan city.

(4. 5) Plan of foreign concession in Shanghai, 1930

Shanghai's complexity derived not only from the presence of foreigners. It was mainly due to the strong Chinese migrations to the concessions. The first wave was between 1853 and 1860, during the Taiping Rebellion and the subsequent occupation of the walled city of Shanghai (Chinese settlement) by the Small Swords Society, at that time many Chinese from different cities sought refuge in the different concessions. Not only people in search of protection migrate into the foreign lands. After the development of industries and commercial activities, a second and different migration wave from the countryside was favored. Thousands of poor villagers from different provinces in search of better job opportunities and richness moved into the foreign concessions. Lastly between 1937 and 1941, during the Sino-Japan war and the occupation of the coastline by the Japanese troops, it has the third wave of migrants. The foreign concession, as lone islets in a sea of Japanese invading forces, Became refuge camps for Chinese people, no matter rich or poor.

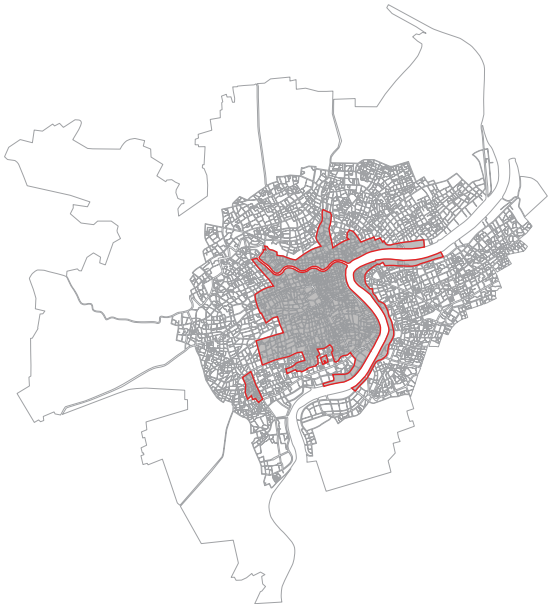
In the century after the Opium War, between 1842 and 1949, the population of the foreign concessions went from less than a thousand of people, including foreigners and Chinese, to 2430000. If at first less than one per cent of the population lived outside the walled Chinese city in the middle of 20th century more than 65 percent of the population lived and worked in Shanghai foreign settlements, occupying less than 6 percent of the entire territory of the city.

During the colonial era people in search of protection and richness migrated into the foreign lands.

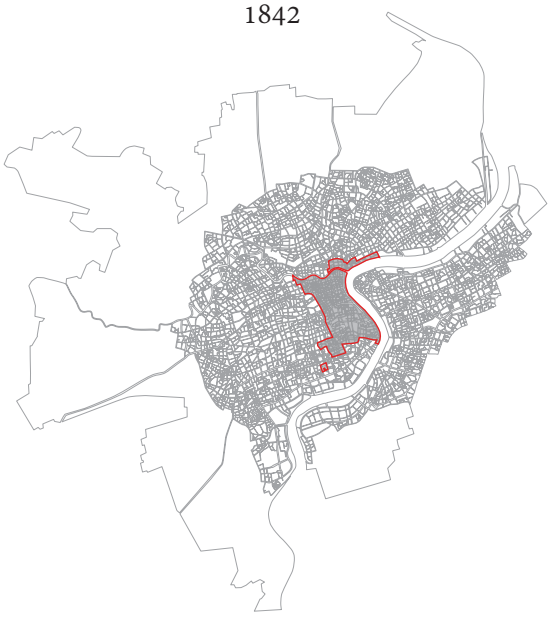


(4. 6) foreign concessions population

1842

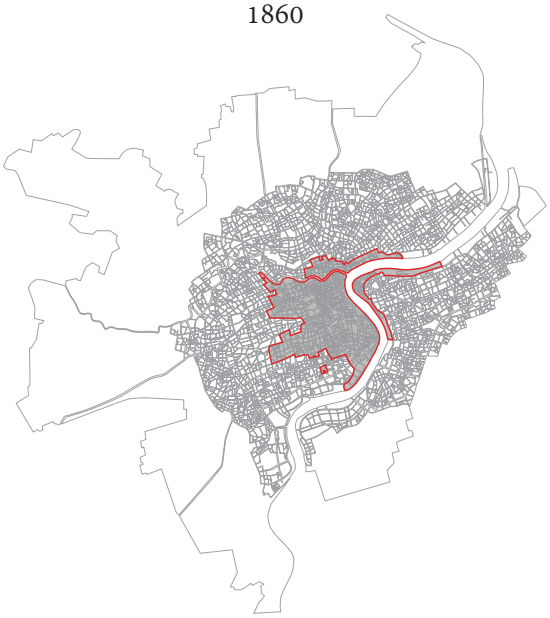


1918

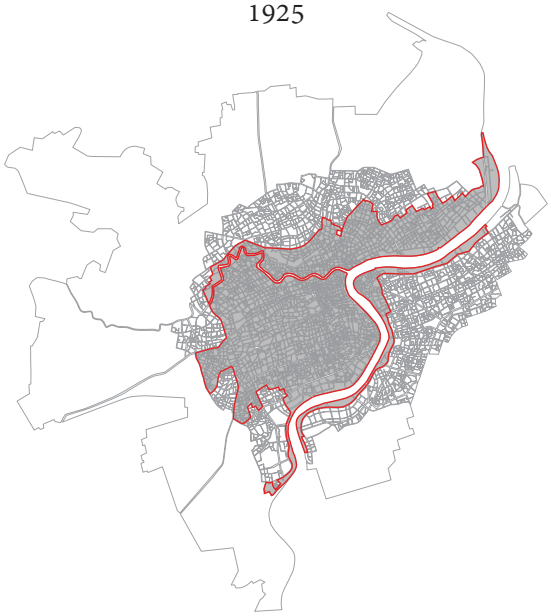


1860

1925



1870



1949

(4. 7) evolution of Shanghai during the Lilong century

4. 3 Lilong housing development

Initially worried about the strong Chinese migration, foreign investors decide to take this emergency as an opportunity to make money. They began to sell and rent low cost residence to the Chinese population and beyond. Built in blocks in order to optimize costs, new buildings were designed with a wood frame and arranged on an orthogonal grid on example of military camps, units positioned in a row and accessible through secondary routes connected by a primary route and connected to the public streets. Starting from 1869, with the enactment of stricter laws regarding the safety of the buildings, the wooden structure was abandoned in favor of a more durable brickwork, 1870 is the date of the first Lilong. Continuous flow of people led to a large and growing demand for housing. Many foreign investors had big profits in the construction and sale this housing typologies to the Chinese population. This new real estate market cause a dizzying rise of building land prices. From an original cost of 46/47 pounds per acre, during the building boom prices, the cost reach up to 8000/12000 pounds per acre. In order to maximize profits, the result was an increasing densification of the lots. Having to respond to a such high demand of housing the typology choice was the most efficient and economical as possible, with minimal maintenance and maximum land use. The British were the first investors and based on the experience of the recent industrial revolution adopted the worker terraced houses typology. The repetitive self contained layout of the terraced house, the compact plant well suited for a lifestyle urban high population density. This simple form was easily adapted to different needs. Having to respond to a large demand of housing for the Chinese population, the old layout was adapted according to the traditional courtyard house call Siheyuan. This type was composed of a group of family units, organized around an interior patio where most of the rooms overlook. A need to be assimilated was also the different Chinese life style that included a strong sense of community served by a semi-public space protected by high walls, where the different activities focus. The two typologies, Terraced house and Siheyuan, the English (Western) tradition and the Chinese are so going to form the Lilong housing. This typology incorporates the element of the courtyard and the semi-public spaces within the lines layout of terraced houses. The first stage of Lilong development is call Old Shikumen. It is started when the investors decided to leave the wooden structure. The shikumen word literally means “Stone Gate Warehouse”.

TERRACED HOUSE

+

SANHEYUAN

=

LILIONG HOUSE

(4. 8) Lilong House influenced

(4. 9) SHANGHAI, Stone gate

(4. 10) SHANGHAI, International Settlement 1937

This first evolution, large in size, was adopted for traditional extended rich families who mostly came from neighboring provinces. With the progress industrialization, the strong immigration, the demand for low-income homes and the shortage of land changed the Lilong typology. The second step is a decrease of living spaces size, expanding the target to a poorer population. Realizing the importance of this new market many new foreign investors went to develop the so called new shikumen typology. The wealth and prosperity of Shanghai, given by the increasing industrial and commercial activities, gave rise to new and different social classes. A new Shanghainese elite was looking for housing. The new type Lilongs generated a more compact lifestyle but with higher standards, due by the various Westerners technological improvements as electricity and running water. The Lilong housing was one of the first building typologies to bring this kind of Western standards in traditional Chinese culture. With the continued and growing economy of Shanghai, the construction boom and the value of land and buildings and the formation of more and different social classes different types Lilong were built. The Garden Lilongs became part of the market types, as a luxurious type of living to cater for an extremely rich class, and the Apartment Lilongs, that optimize more and more the land use and began a new strategy of residence for the contemporary city. In 1949, the Lilong housing was the most common housing type in Shanghai. It is estimated that more than 69% of the total floor space of residential buildings in Shanghai, namely 20000000 sqm were constituted by Lilong. With the Sino-Japan war and the Japanese occupation, the economy of Shanghai had a block and with it the construction industry. After the liberation of 1949, the Lilong typology now considered dated was abandoned in favor of more efficient and profitable types such as the slab block and the high-rise tower. The changes of the People' republic of China had a significant impact on the future development. With the Socialization of housing policy in the major cities like Shanghai, owned houses with a more than 150 square meters surface were immediately confiscated, divided and redistributed at no cost to the poorest people, this led to a redistribution and an overcrowding of part of the lilongs previously built. With 1949 and the new communist government ends the era of this lilong housing. With the choice of the government to redistribute this typology as low-cost housing the efficient houses are further subdivided. Originally designed for a single family are divided in order to accommodate 5 or 7 different families. Single-family homes were converted to cram as many people as possible through the use of cloth curtains, framed walls, furnitures and paper. Bedrooms were converted to multi-functional room, complete with dining, sitting, sleeping and personal space for an entire family. The kitchens were converted in communal cooking facilities for all the new residents of the building. Measures that on one side made free housing to the whole poor population of Shanghai, on the other decreased significantly the standard units with problems related to ventilation, lighting, noise and lack of privacy. Originally designed, in the first stage, with an average of 50/60 sqm per person, over the time and the evolution of the type, it reach 8/10 sqm per person that after the socialist redistribution decreased to 3 sqm per person in 1957.

(4. 11) example of Lilong plan fragmentation

(4. 12) Lilong unit fragmentation

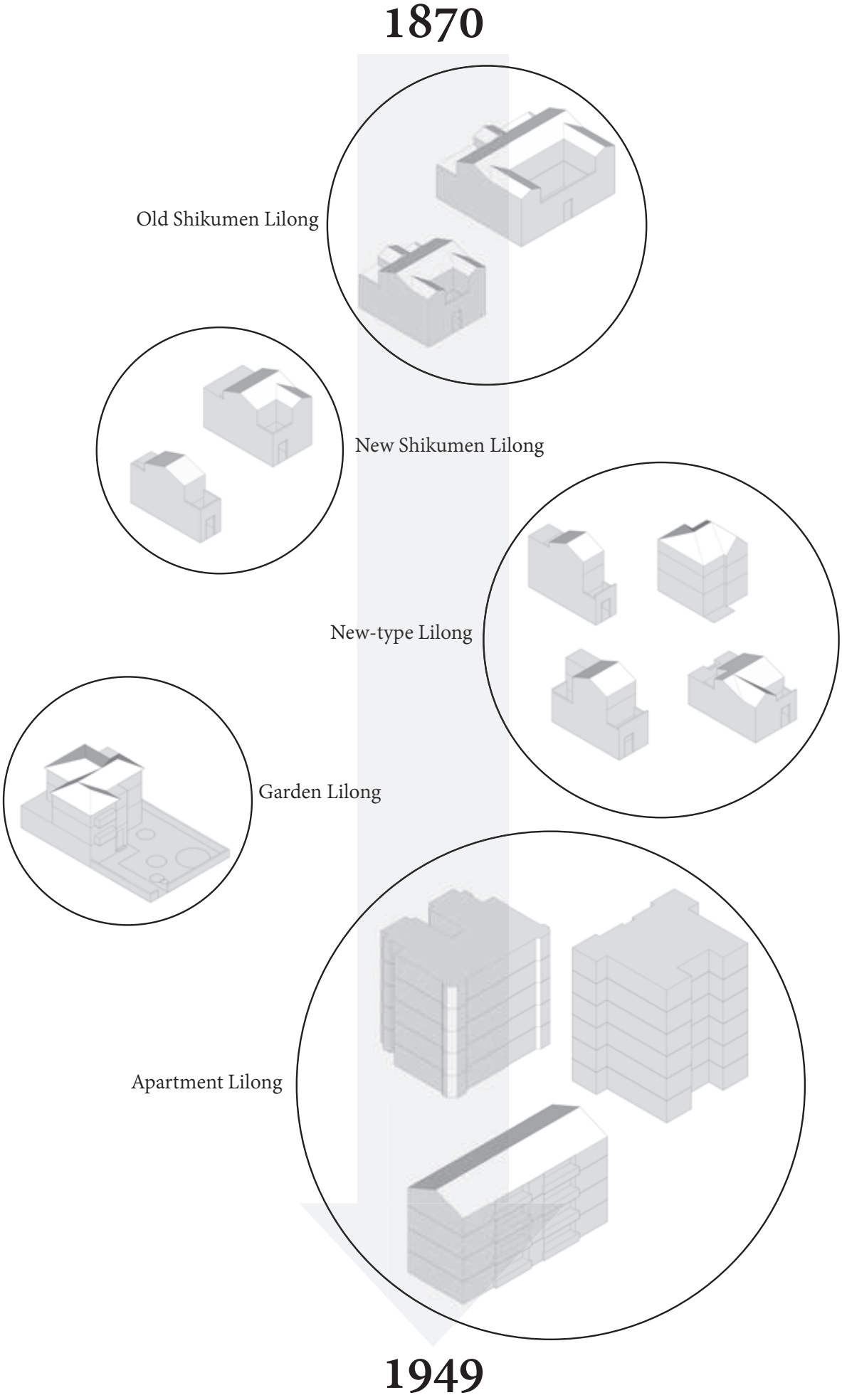
“Today, when we walk in those small streets, we can often see the sign «拆» (chai) written on the wall, which means «destruction».

(4. 14) SHANGHAI, Jianyeli

The long period of overcrowding accelerates the deterioration of the buildings and the lowest social class residents led the absence of a continuous updating of technological systems during the time. These different factors make that today this traditional type suffers of a high deterioration, high congestion and the lack of appropriate services, such as the lack of bathrooms, thus leading to the consequent demolition and redevelopment of the lot. One of the biggest problems in Shanghai is the loss of this culture, recently re-evaluated. To avoid this loss only recently laws and measures are adopted in order to preserve the lilong type, in the physically, socially and architecturally sphere. In the preservation approach of the typology the developers have often neglected the opportunity to continue a residential development and the consequent lifestyle of the district, except for some special cases as Lane 252, Futian terrace and JianYeLi. Several examples demonstrate that the success of the investment is also higher after a complete conversion to commercial activity of the areas as the Xintiandi and Tianzifang example. Although often aimed by the sole purpose of financial gain, these interventions make that the traditional lilong structure will be preserved.

«Table of hundred chai», work of the artist Wang Jinsong, is a proof of this reality by showing photos of hundred «chai» characters." (4. 13)

(4. 15) SHANGHAI, Xintiandi



(4. 16) Lilong typologies evolution

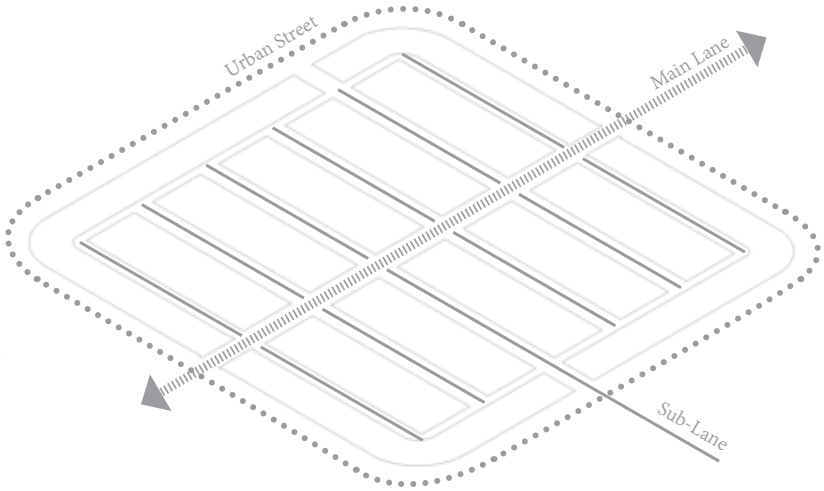
4. 4 Lilong Housing pattern and organization

The Shanghai road network, even if it tries to formed on a grid system, it is very irregular. The organic shape of the system is given by the different natural elements, as canals and rivers, and by the different foreign settlements formed on different grids. Lilong housing was the first mass commodity housing in Chinese history. Generally a Lilong settlement can greatly vary in size in a range that goes from 0.3 to 5 acres for suite the best organic grid city.

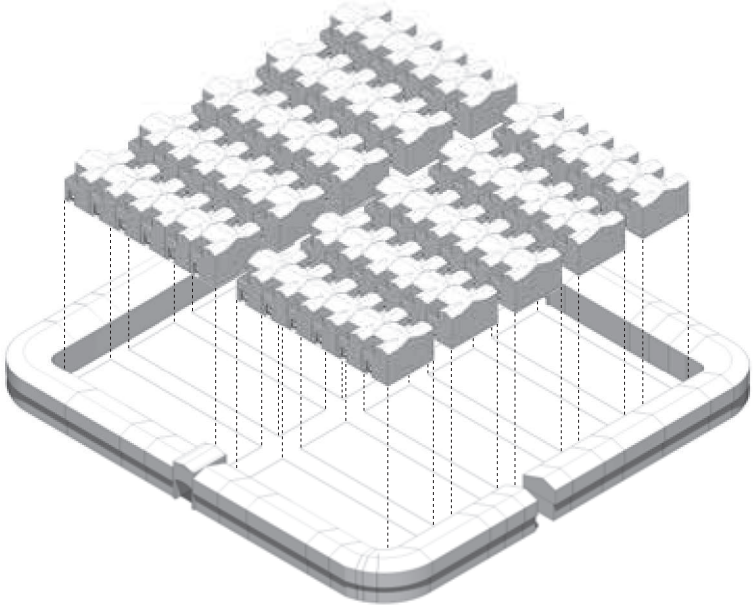
(4. 17) Shanghai road network

Units are usually two or three storeys, placed side by side to form long lines served by different lanes. The whole area is served by several alleys that usually converge in a copy of main axes, which usually connect the block with the streets outside, forming the gate that divided the public life to the community. The rational structure of the settlement gives a great sense of security and tranquility to the inner neighborhood opposed to the outside streets life. If inside the units are mainly residential, except for small businesses for the residents exclusive use, along the district boundaries the units facing to the public streets are converted into small shops, in order to maintaining the commercial side road continuity. From the urban design point of view Lilong block is formed by two distinct urban spaces. The first, the outer one, is a belt-shaped space, consisting of streets and shops. This space keeps the noisy commercial activity and circulation along the external roads, leaving at the city its outwards apperance, open and dynamic. The second space, the inner one, is separated from the first, as a more rigid grid of lines is closed to the outside by a series of gates, well controllable by neighborhood organizations or nearby residents, has a more quiet and safe feeling. The entrances are easily recognizable from the outside by their unique arch-way form that bridges the main lane.

Lilong is formed by two distinct urban spaces: an outer belt chaotic, open and dynamic and an inner area rigid, closed and private.

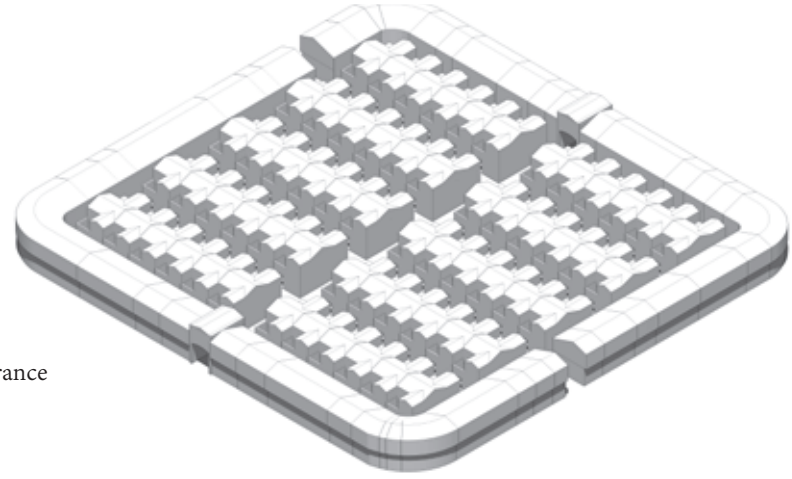


Lilong Lanes Network



Lilong Residential Area

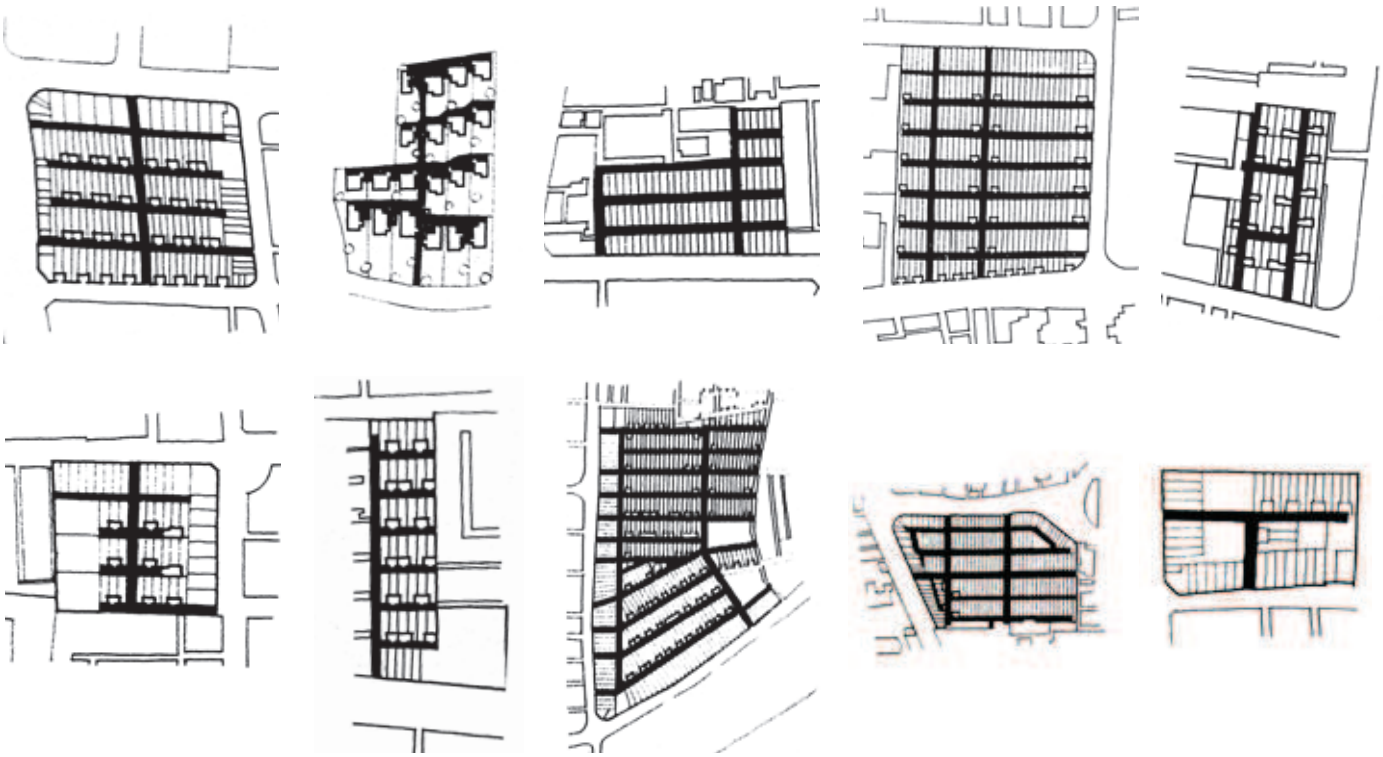
Lilong Commercial Belt

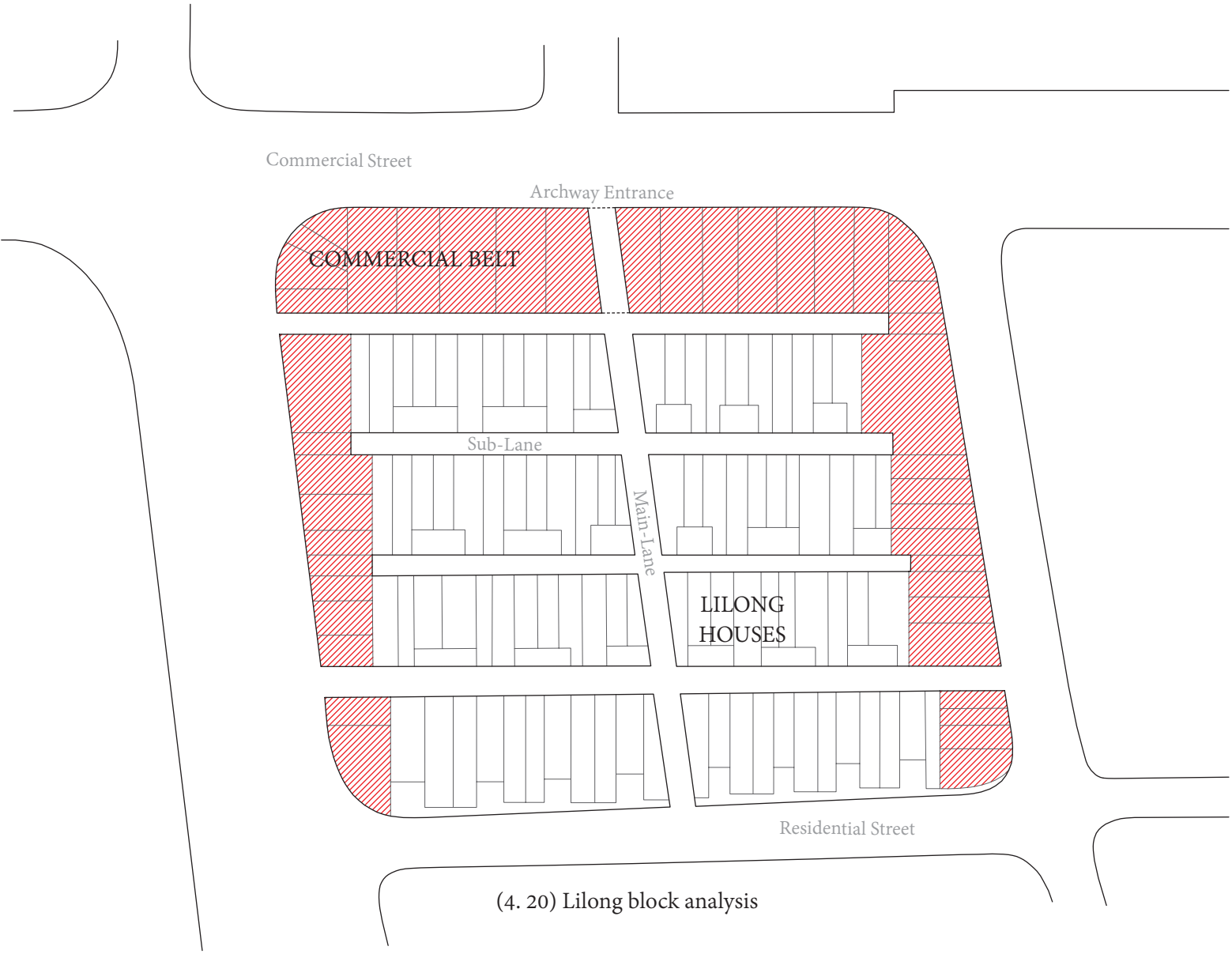


Lilong Overall Appearance

(4. 18) Lilong block

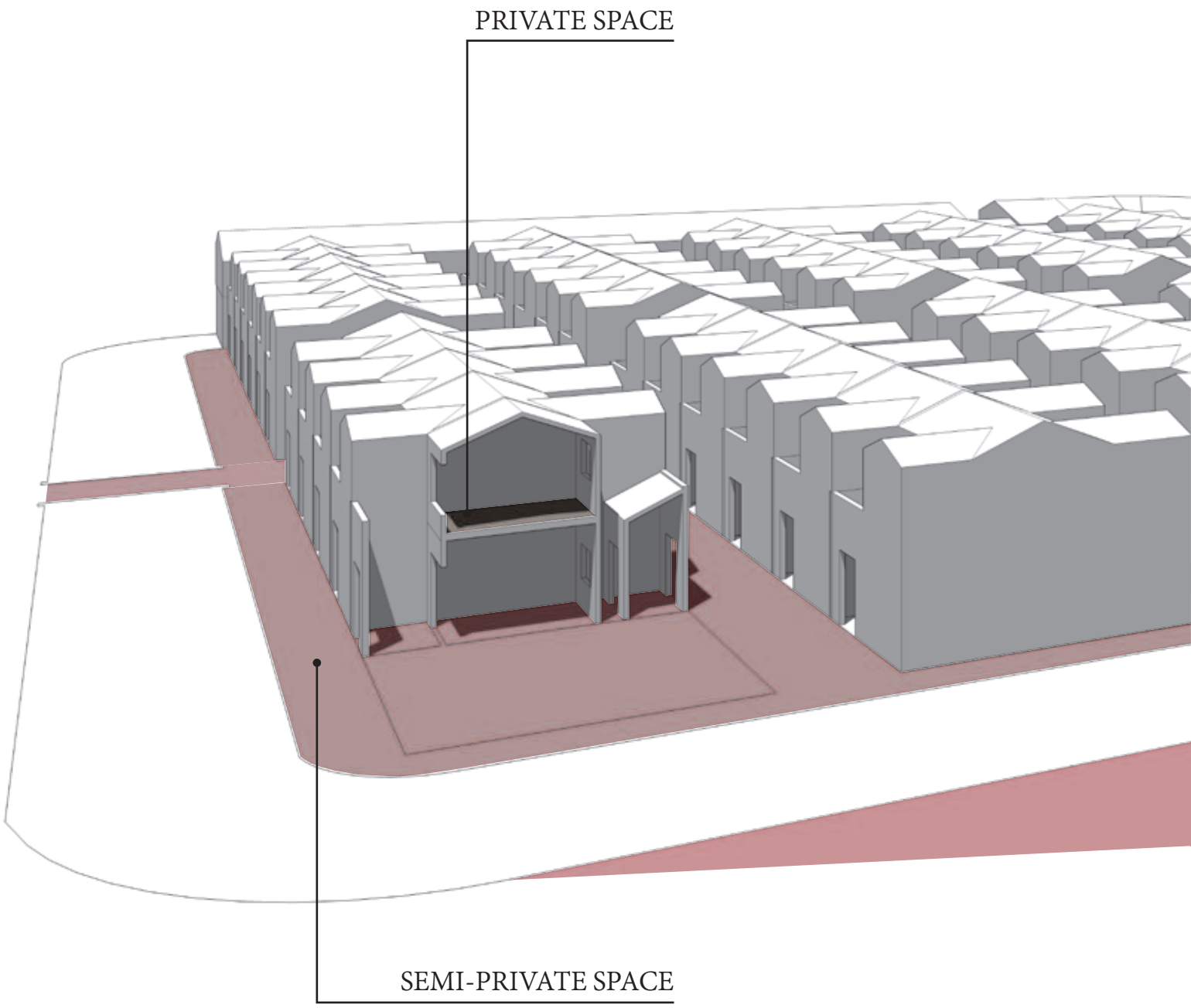
(4. 19) Lilong settlements site plans



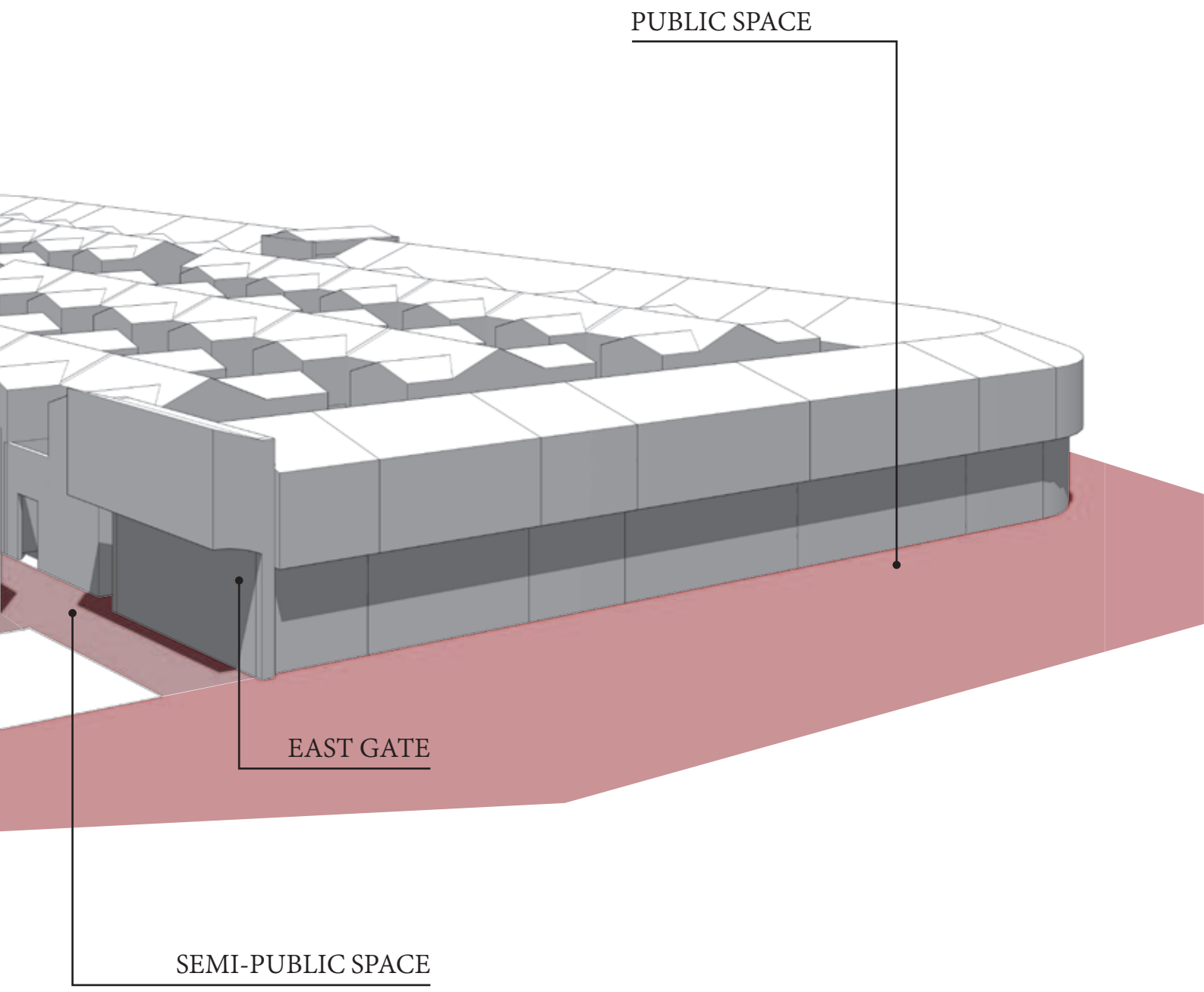


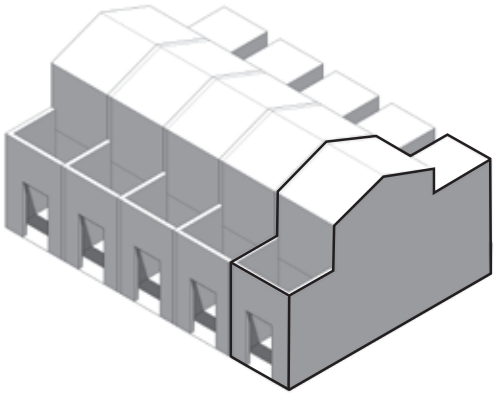
(4. 20) Lilong block analysis

(4. 21) Lilong space



Li-Long literally means “neighborhood-lanes.” In Chinese culture a “Li” (neighborhood) to be considered as such it must be composed of at least five families, for this reason the lines that form the inside block pattern usually have at least five units. One of the main features of Asian-Chinese tradition is the neighborhood life, as is well evidenced by the various traditional types of housing such as the Cho in Tokyo, the Hanok in Seoul, the Soi in Bangkok and the Hutong in Beijing. This feature as mentioned above is taken by foreign investors in the new Lilong design. This idea benefits both: the individual who promotes its safety and amenity as a group and the local government for the formation of the district and its culture as a collective force. The different lanes which connect the different units are used as semi-private areas for common and outdoor activities and the principal axes as semi-public areas for the mayor circulation. It made a succession of spaces from the public city street to a private dwelling, without a strong distinction between them but with a spatial continuity. The groudfloor of a unit is composed of several spaces associated with the neighborhood community life, the residents are often open their homes to the community, interiorizing the exterior lanes and by exteriorizing the interior house, the private space and the community area is less and less distinguish.





5 UNITS

=

“LI”
(NEIGHBORHOOD)

The human scale and the units layout, side by side, promote social interaction among people, residents exchange news, discuss and create small forum and neighborhood organizations. The houses and shops wall around the block strengthens the sense of security and provides for a neighborhood watch. The various entrances are monitored by close traders and residents. In the block everybody knows each other, so it is difficult access to the community life without being noticed. However the Lilong block can not be defined a gated community, because its big porosity, at least visual, due to the linear arrangement of lanes and units. Porosity that makes clearly visible from outside the sense of community of the inner life.

(4. 22) SHANGHAI, Li AnyOng 里安永 Nord Sichuan road Gate

(4. 23) SHANGHAI, Haila'er road

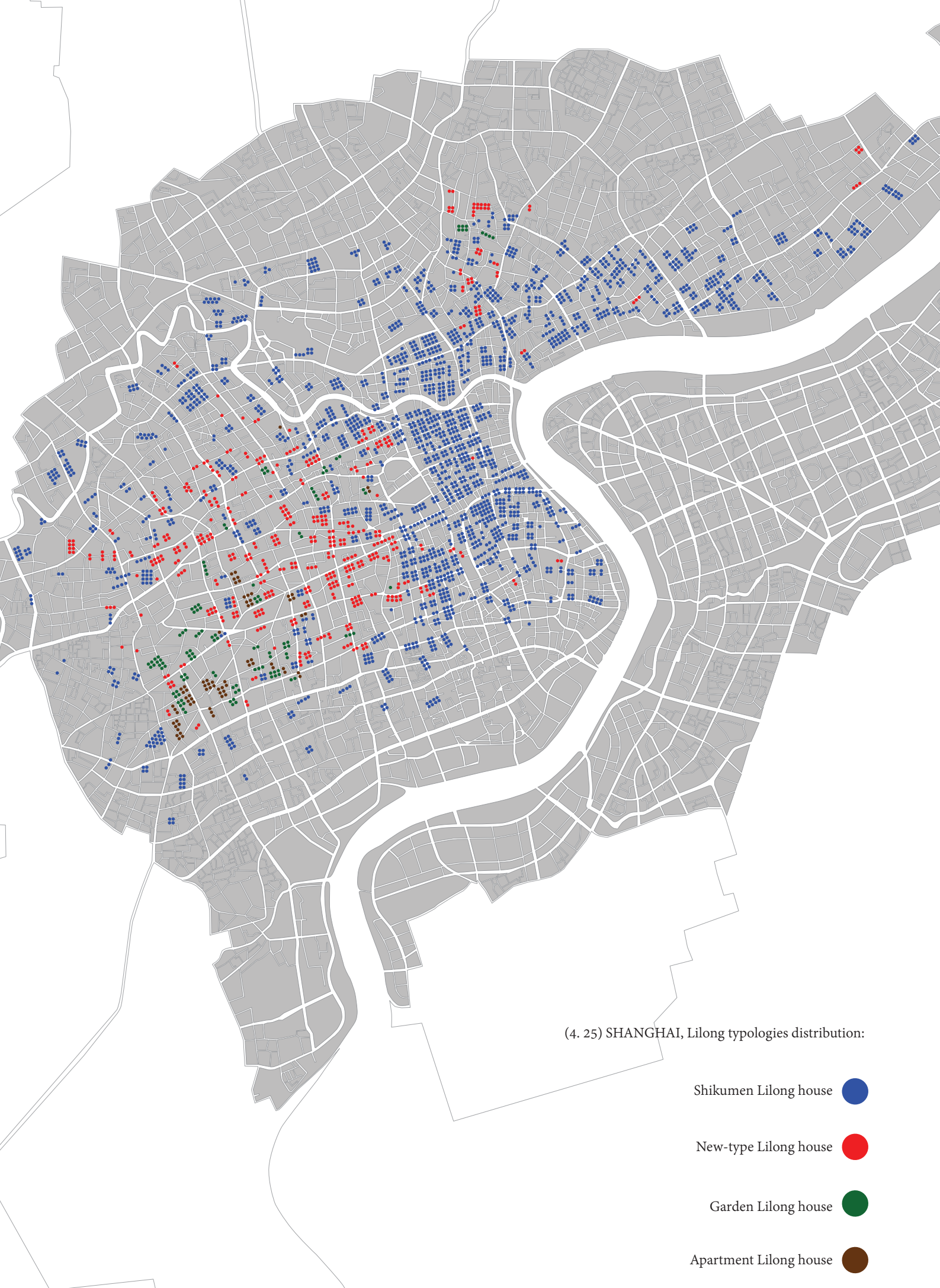
(4. 24) SHANGHAI, Li AnyOng 里安永 second street

The Lilong evolution leads to a type variation. However its principles remained unchanged:

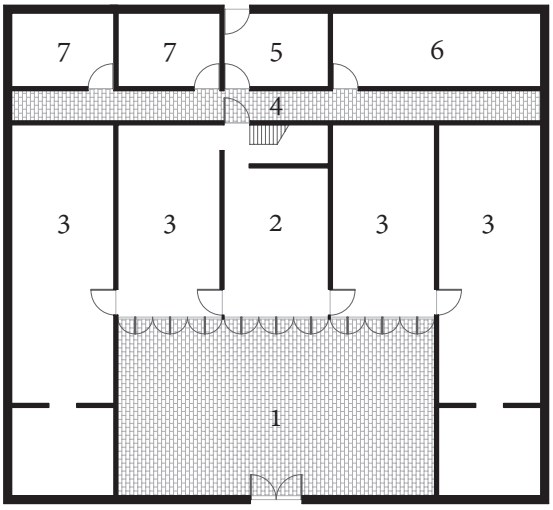
The block still have a hierarchical distribution of open space from the most private to the most pubblic areas distributed by internal lanes.
The biggest change is an increasing verticality and a proportional land waste reduction.

4. 5 Buildings typologies

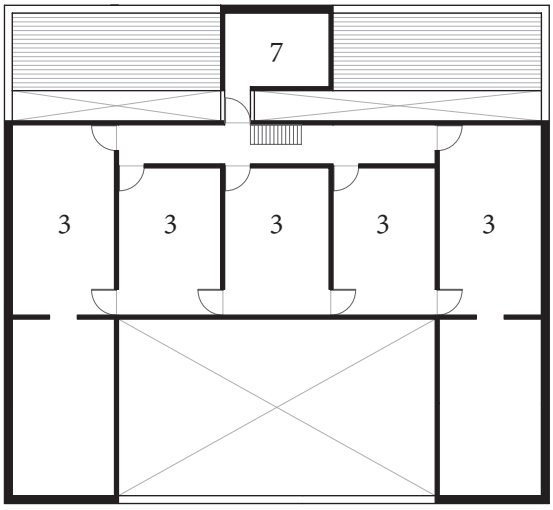
The Lilong style is distinct in different types, depending on the layout of the various units, resulting in time by several circumstances and from the different housing demand. They can be categorized as: the Old Lilong shikumen house; the New Lilong shikumen house; the New-type Lilong house; the Garden Lilong house; Apartment Lilong house. All of these variations are, however, resulted from the same planning principles. The individual units are placed in a block. Almost all of the units is usually oriented on a north-south axis, an important design feature in the traditional Chinese philosophy, and connected through hierarchical linear paths. Each unit can measure from 1 to 5 bays, each measuring approximately 10 chi (traditional Chinese unit of measure, it is approximately 3.3 meters). The entire block takes different shapes and sizes, depending on the site, but it is commonly formed by a whole network of residential blocks arranged hierarchically on a spines and ribs pattern system.



(4. 25) SHANGHAI, Lilong typologies distribution:

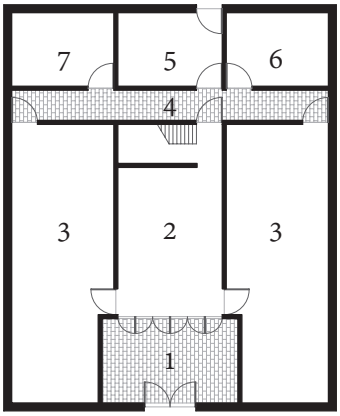


Ground floor

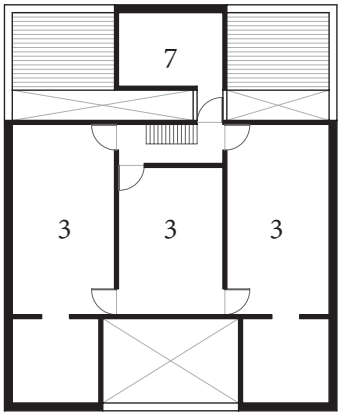


Second floor

(4. 26) 5 bays Old Shikumen Lilong house



Ground floor



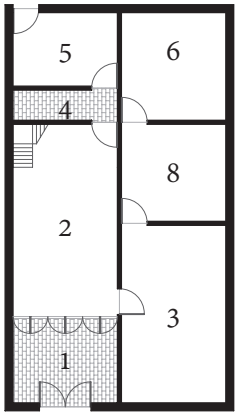
Second floor

1. courtyard
2. jian
3. shang/bedroom
4. service patio
5. kitchen
6. storage
7. service room

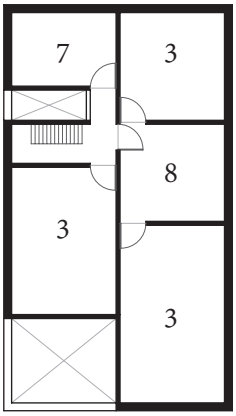
(4. 26) 3 bays Old Shikumen Lilong house

The Old Shikumen Lilong house adopts the general pattern of the London Row-house and the internal layout of the traditional Sanheyuan or Siheyuan from the southeastern China. The main structure consists of two-storied buiding closed on the front by a courtyard and connected to a rear one-storied building through a light well. The layout of the first Shikumen consist of 3 or 5 bays according to the family wealth. On the ground floor there is a courtyard centrally placed on the front connected with the main hall or jian, used as a living room or ancestral room, and laterally connected two secondary symmetric rooms or shang, used as a library or bedroom. The central area is usually divided from the patio by French windows which allow the maximum opening to the outside in terms of ventilation and lighting, The stairs is placed on the back of the jian. In the one-storied building on the back are placed service rooms such as the kitchen and storage. It is detached from the main building by a service patio of about 1.2/1.5 meters width. The various units were not equipped with an individual bathroom, each family used a chamber pot usually placed in the service court and emptied every morning. Upstairs are arranged the more private areas of the house like bedrooms and studio. The structure was composed of load-bearing brick walls placed the east and west sides of the unit, they are shared with the neighboring units. Instead the wood is used in the traditional manner for floors and roof. The typical stone door from which the style hangs the name is placed in main patio. Finely decorated it makes the rhythm of the several units in the gray brick wall. A second smaller entrance is located on the back of the house.

(4. 27) Shanghai House of Gao

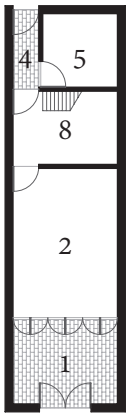


Ground floor

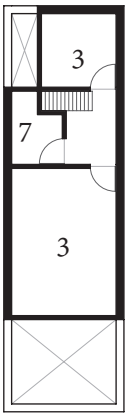


Second floor

(4. 26) 2 bays New Shikumen Lilong house



Ground floor



Second floor

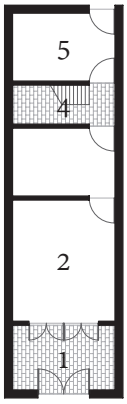
(4. 26) 1 bays New Shikumen Lilong house

1. courtyard
2. jian
3. shang/bedroom
4. service patio
5. kitchen
6. storage
7. service room
8. auxiliary room

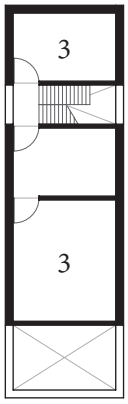
After the collapse of the Chinese empire in 1911, the extended family began to split up. Many migrants and refugees find home in the Shanghai foreign concessions. The new demand for small families with a low income changed the type. The Old Shikumen Lilong house adapting to the new demands and the growing land speculation, that grew considerably in value, was modified under a scheme of high space efficiency. The New Shikumen Lilong house left the traditional symmetric layout composed of a central jian and two lateral shangs around a courtyard. The compressed unit is formed by a single jian that overlooked a smaller in size patio. The layout of 3 to 5 bays was reduced to 1 or 2, while maintaining the distinction between the two different bodies, living areas at the front and service areas at the back. New Shikumen Lilong house occupied only one-forth to one-third of the lot size compared to its predecessor, reaching a higher population density. Overall the layout organization isn't change. The distinctive stone entrance was not left.

(4. 28) SHANGHAI, Yu Hang road

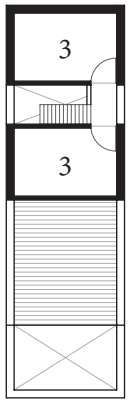
(4. 29) SHANGHAI, Chang Garden 张园



Ground floor

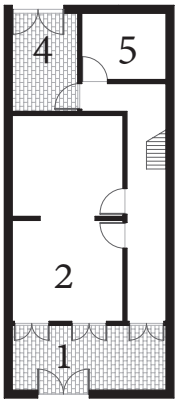


Second floor

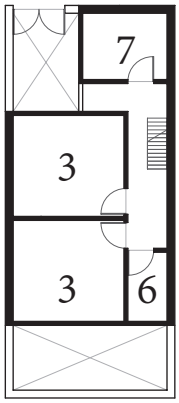


Third floor

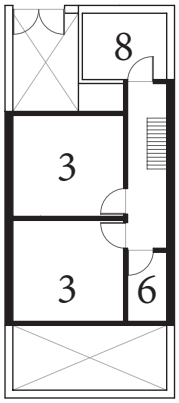
(4. 26) 1 bays New-type Lilong house



Ground floor



Second floor



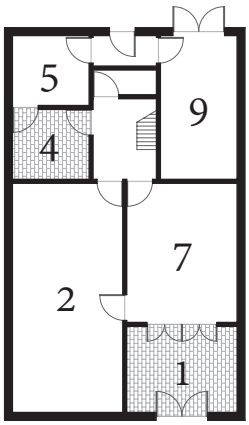
Third floor

(4. 26) 1 $^{1}/_{2}$ bays New-type Lilong house

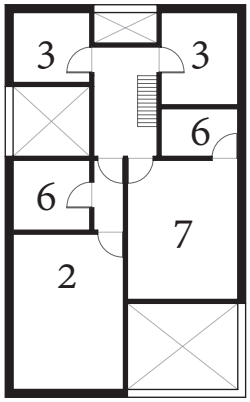
1. courtyard
2. living room
3. bedroom
4. service patio
5. kitchen
6. bathroom
7. servant room
8. terrace
9. garage

With the development of a local economy, the different homes had a profound change. The further division of social classes led to a distinction of various styles that could suit different requirements. The new layouts could be composed in One-jian, One-and-half-or Two-jian jian and developed on a height of three stores. The different rooms are defined more by their use. The waste of space is decreased notably. The three different layouts provide different range of housing, in different sizes, layouts and standards. The New-type Lilong house was the most favored style. It was then developed in a large scale, becoming the most common style in Shanghai. In the One-jian layout the jian is used as a living room that also contains the dining area on the court side of the room. Bathroom and kitchen at the back are connected by a service corridor which also include the stairwell. The distinction in two bodies building was abandoned. On the second floor there are the master bedroom, bathroom and a library. The third floor is used as bedrooms for children and guest rooms. The issues that can arise in this version are mostly related with ventilation and lighting. They are resulting from the limited exterior walls surface. Some of these problems find their solution in the One-and-half-jian layout. Based on the previous layout it increase the exterior surfaces and improve the internal circulation.

(4. 30) SHANGHAI, Liyang road

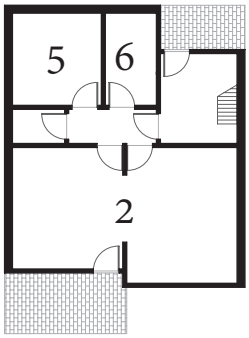


Ground floor

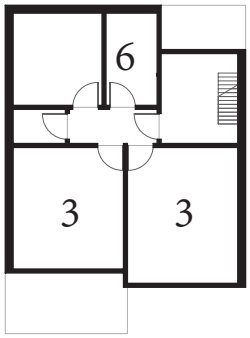


Second floor

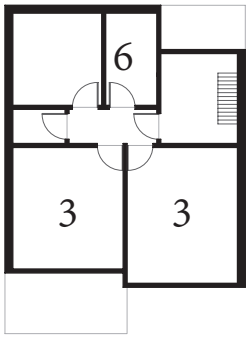
(4. 26) 2 bays New-type Lilong house



Ground floor



Second floor



Third floor

(4. 26) 2 bays New-type Lilong house

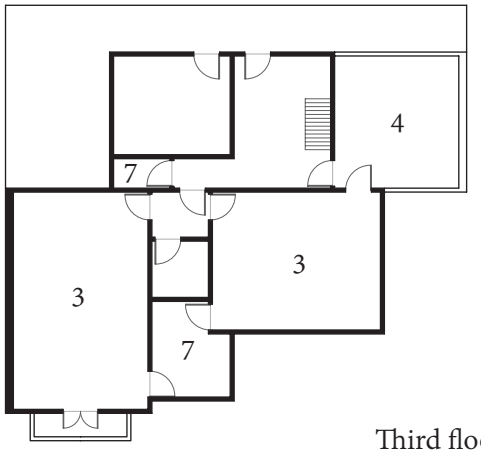
1. courtyard
2. living room
3. bedroom
4. service patio
5. kitchen
6. bathroom
7. drawing room
8. terrace
9. garage

The Two-jian layout is composed of a drawing room and a living room in the front in the ground floor. At the back the services area linking to the front building by an internal corridor. The second and the third floors don't differ too much from the other two types, except for the number of rooms. A garage in the rear of the unit can be integrated into the house layout for higher income families. The New-type Lilong houses abandoned the traditional Shikumen outdoor decorations in favor of simpler Western style ornamentations. With economic and technological development, the modern bathrooms and kitchens in gas-stoves are the two main features that distinguish this new type from the previous.

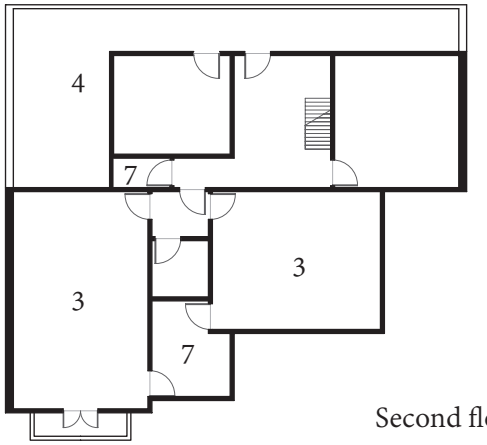
(4. 31) SHANGHAI, JingAn village

(4. 32) SHANGHAI, ChangLe village

1. garden
2. living room
3. bedroom
4. terrace
5. kitchen
6. servant room
7. bathroom
8. garage
9. mud room
10. dining room



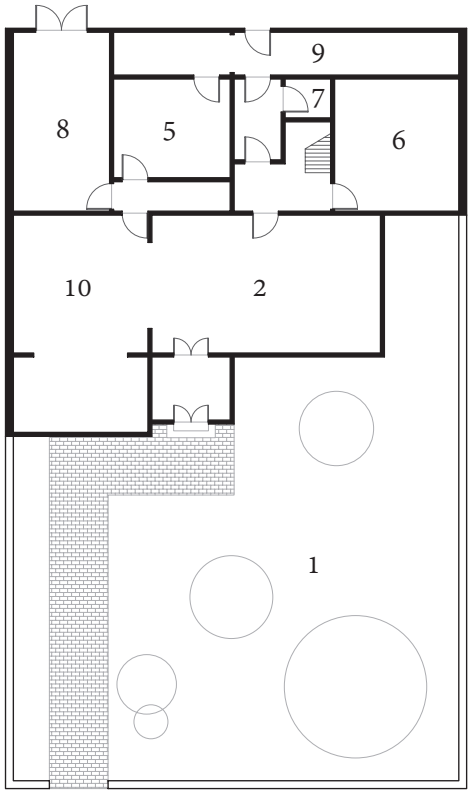
Third floor



Second floor

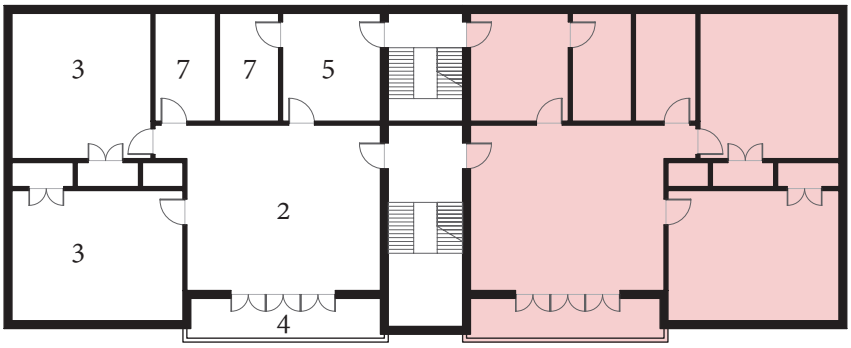
The last two layouts differ with the previous ones. The Garden Lilong houses went against the demand for housing by the rich community. Its sophisticated layout, vivid elevaion, various international styles, and high quality of finish and furnishings characterized the typology. The Apartment Lilong houses are divided into three different categories depending on the layout: the row-patterned building model (two to six units per floor); the dot patterned building model (two units per floor); the butterfly building model (four units per floor). This typology is usually composed by four to six stories buildings. It's recalling the modern apartment buildings.

The evolution in time of the Lilong type had not a profound effect on the general pattern. The organization remained unchanged, distributed by internal lanes, it has common entry on the urban streets and a hierarchical distribution of open space from the most private to the most pubblic areas. The biggest change during the Lilong evolution is an increasing verticality and a proportional reducing of the land use.

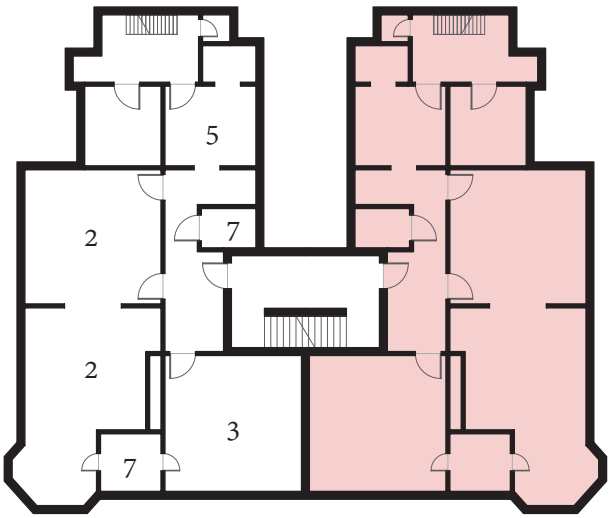


Ground floor

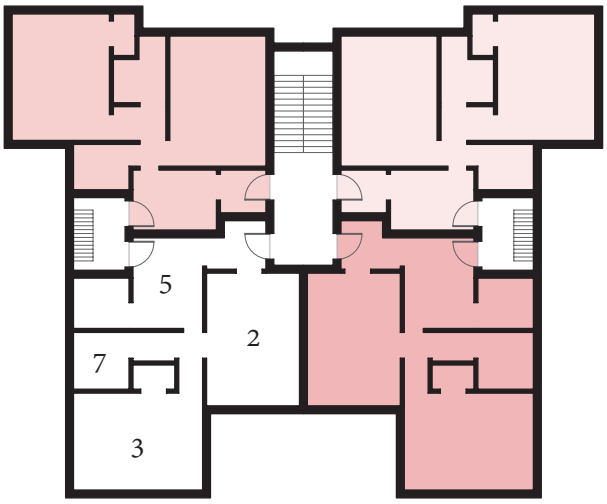
(4. 26) Garden Lilong



(4. 26) row-patterned Apartment Lilong



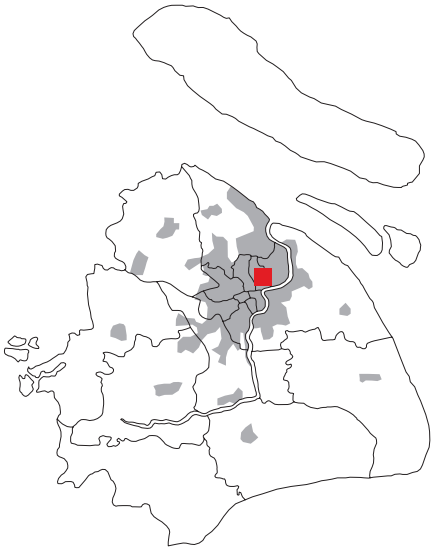
(4. 26) dot-patterned Apartment Lilong



(4. 26) butterfly Apartment Lilong

4. 6 Example

(4. 33) Hailun area, Shanghai:

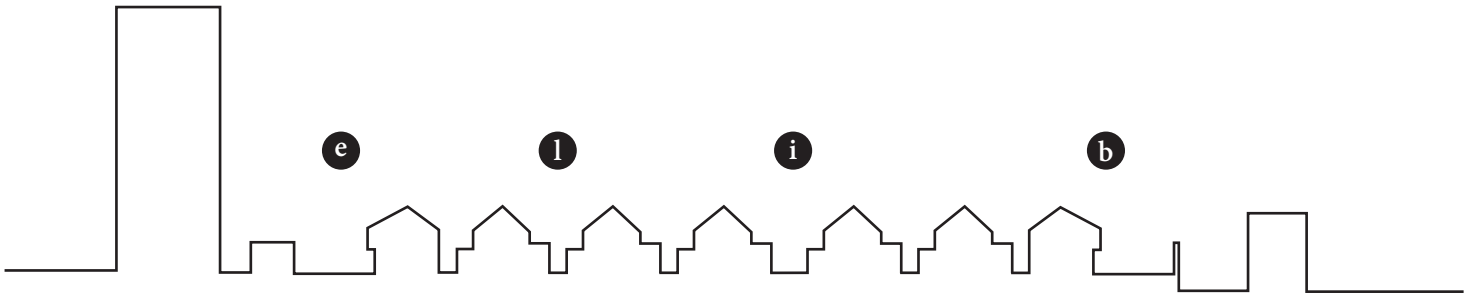


(b) RuiKang Li (瑞康里) North Gate

(c) RuiKang Li (瑞康里) Hailun road

(d) RuiKang Li (瑞康里) inner lane

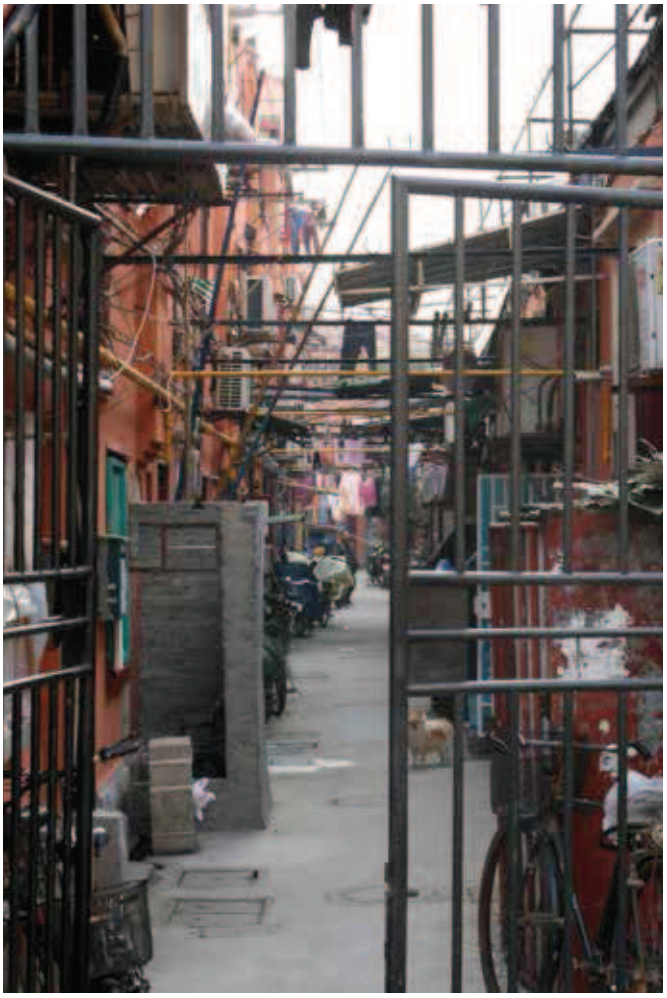
(e) RuiQing Li (瑞庆里) Jiaxing road



typological section

In Hongkou District two Lilong districts are showed. They are located on the south side of Hailun Metro Station, interchange between line 4 and line 10. They are respectively the neighborhood called RuiKang Li (瑞康里), the major, and RuiQing Li (瑞庆里). In the first is clearly visible a traditional Lilong structure composed by a commercial belt and a inner residential area. Its belt is made by a hectic commercial activity, especially along Hailun Road and Siping Road, of small family shops. RuiQing Li instead offers a special feature. The neighborhood is situated on the bend of Shajing Port, on the opposite bank of the famous 1933 (an ex-slaughterhouse reused as new commercial complex). The block is cut off along the side of the river. Not being a strong commercial street the side along the river is not closed by the usual belt, allowing them to show a typical Lilong housing inner section. Visible in the other city blocks is the degeneration of the various Lilong districts. The clear structure is to be lost through the impurities inclusion that widen in the interior area.

(f) RuiQing Li (瑞庆里) South Gate



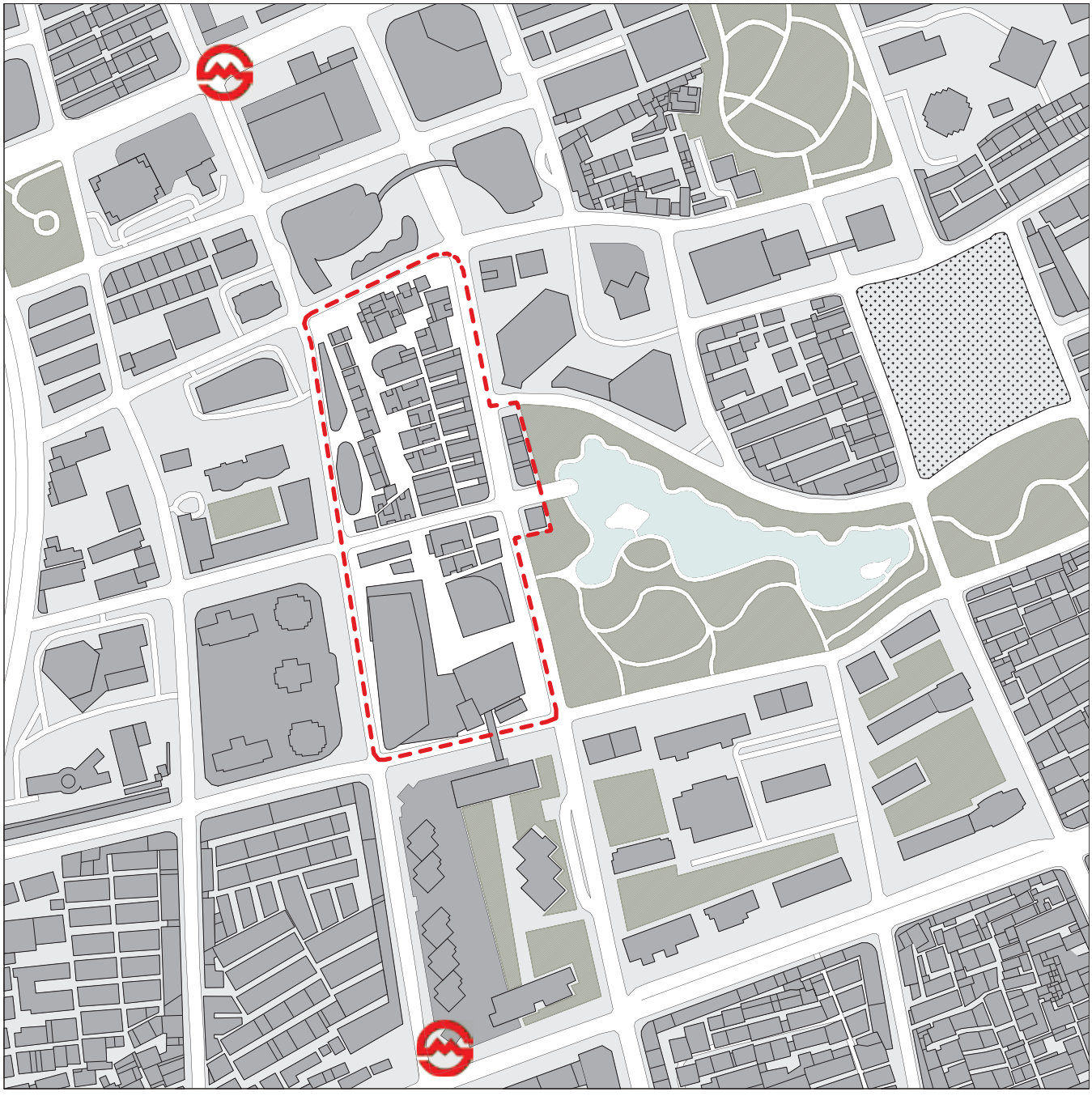
(g) RuiQing Li (瑞庆里) Inner Lane

(h) RuiQing Li (瑞庆里)

(i) RuiQing Li (瑞庆里) Inner Lane

(l) RuiQing Li (瑞庆里) Inner Lane

(4. 34) Xintiandi, Shanghai:

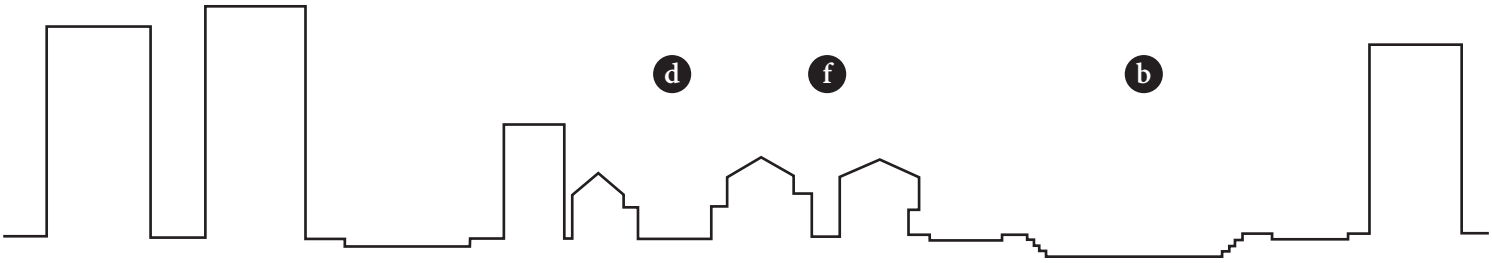


(a)

(b) Xintiandi (新天地)

The area is located in the city center, on the elevated road south-east quarter, is served metro station on the Line 10. Xintiandi (新天地) literally "New Heaven and Earth" is a luxury shopping, eating and entertainment district of Shanghai completed in 2001. It's a great example that shows how the typology evolved during the year. Originally the area, mostly residential, was made entirely of Lilong neighborhoods. The area was developed by Shui On Land during the re-development of the surrounding area. Xintiandi is in fact only a small part of the entire Taipingqiao Area redevelopment project led by SOM since 1995. Xintiandi is divided into two parts: the South Block and the North Block. The South Block mainly consists of modern architecture, shopping mall, entertainment and leisure spaces. The North Block kept the old Shikumen architecture style, forming a contrast to the modern South Block.

(c) Shanghai Luwan Taipingqiao Area Specific Plan



typological section

The project had several praise and criticism from public, developers and academics. Xintiandi is a fashionable pedestrian street composed of Shikumen and modern architecture style. It was one of the first answers to the great demolition of the city historic areas in the nineties. It is appreciated for its traditional Shanghainese architecture style preservation and for its big economic success. The area attracts visitors, tourists and locals from all over the world. Xintiandi has achieved more success in one decade than the Bund, Yu Garden, Qibao water town and Nanxiang have endeavored to achieve for half a century. Although Shanghai's Xintiandi has been so successful that Shui On Land has transplanted the "Tiandi" retail model to eight other Chinese cities. Otherwise this small area redevelopment hides the demolition of all historic areas surrounding it. The artificial lake and all the surrounding high-rise were built by demolishing old lilong neighborhoods. It has led to the relocation of many people and the loss of the traditional way of life. "A walk in the area would grant glimpses of classic Shanghainese lane life: the aroma of deep-fried shrimps wafting out from kitchen windows; a young girl discussing with her neighbor the prices and the skills of the new hairdresser; children gathering and playing traditional alley games; shirtless men drinking beer outdoors with their best mates. But now if you take the same stroll, you are more likely to see Southeast Asian women buying expensive dresses or Western men eating pasta." (Wang Fangqing). Anyway Xintiandi, as other Lilong redevelopment projects in the city, has set an economic succesfull example for the city future development and a way to preserve at least the architectural part and the memory of the Lilong type.

(d) Xintiandi (新天地) South Block

(e) Xintiandi (新天地) North Block

(f) Xintiandi (新天地) North Block

(g) Xintiandi (新天地) North Bloc

(4. 35) SHANGHAI, Lilong Courtyard

4. 7 Summary

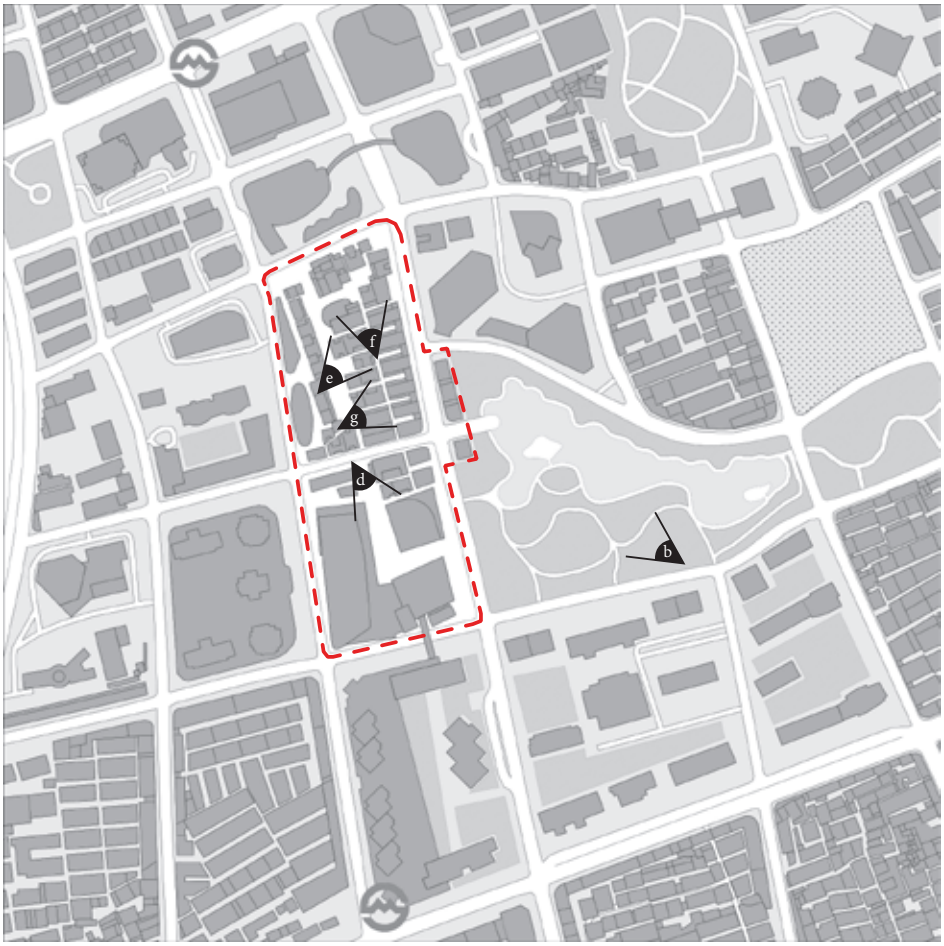
Lilong housing is one of the main urban pattern in Shanghai, the low-rise neighborhood housing crisscrossing large urban blocks. It reflects the overarching housing and the land use economy. It takes care to continuously connect the urban environment and the public sphere to the more private, promoting a sense of security in the block, the internal opening and a “lanes “lifestyle.

The different variations in this typology, arising from the principles just mentioned, can have different physical characteristics. Old and New shikumen Lilongs were the most ground-related, pattern of traditional courtyard dwelling. The New-type Lilongs break away from the traditional model and integrate the above features in a new compact format for the new life style in the modern city. The Garden Lilongs were implemented for a special social class, a modern elite born in those years. The Apartment Lilongs, as last stage, recognize the increasing land value. It establish the basis for the subsequent development of modern multi-stored housing construction. The Lilong aspects remain valid for the contemporary residence in the city. More than 100 years of evolution and settlement of this type have made Lilong part of the modern and contemporary culture of Shanghai.

(4. 36) SHANGHAI, Tianzifang

- Hailun area, Shanghai:

- Xintiandi, Shanghai:



Notes

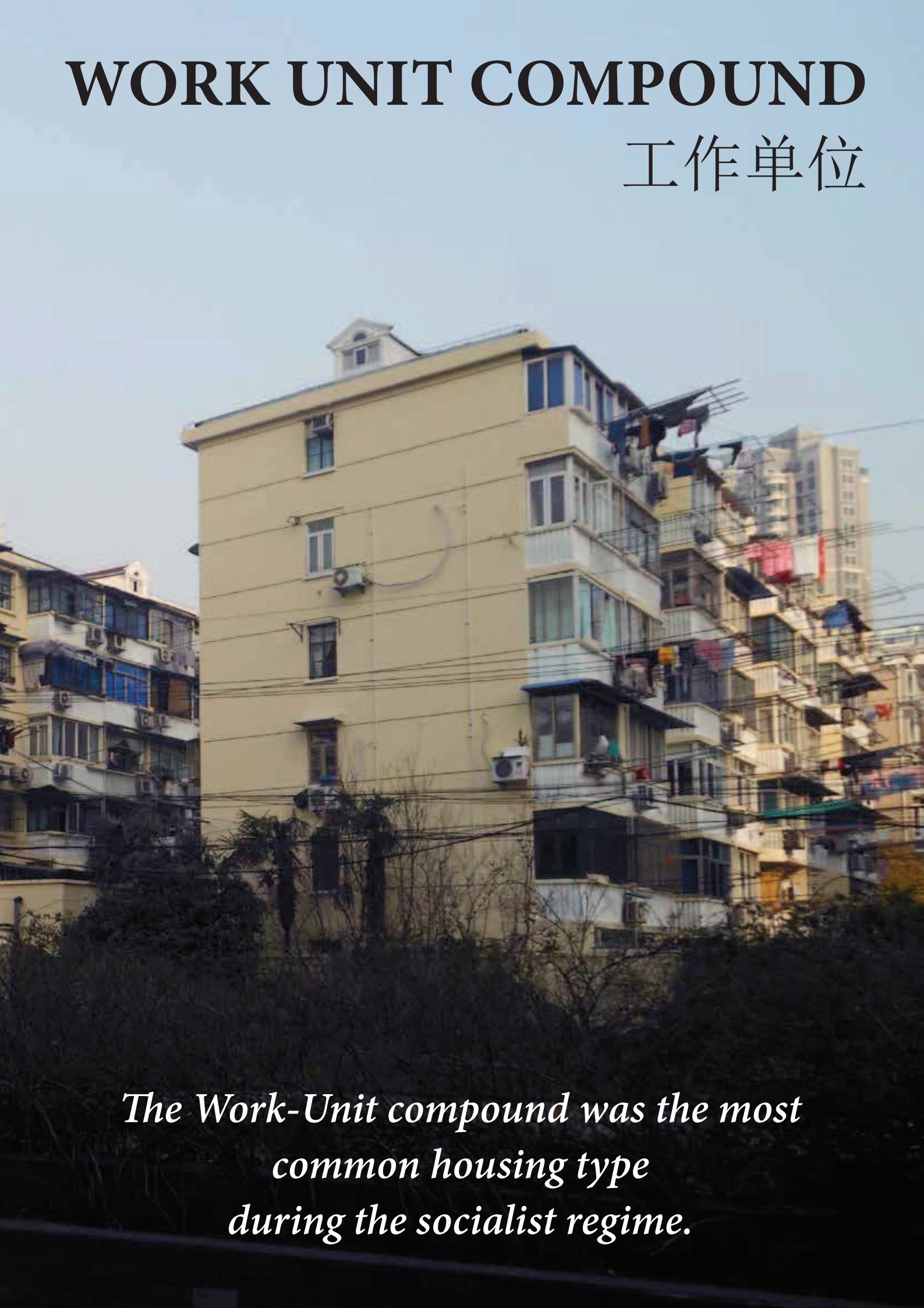
(4. 1) SHANGHAI, RuiQing Li (瑞庆里) **Liaoning road:** photo by the author.
(4. 2) Location and Trade routes of Shanghai: draw by the author based on Shanghai Xintiandi, p. 2.
(4. 3) Vietnamese Police Force: photo by leminhkhai.wordpress.com.
(4. 4) Indian Police Force: photo by chinesemartialstudies.com.
(4. 5) Plan of foreign concession in Shanghai, 1930: draw by the author based on Clifford, Nicolas R., Spoilt Children of Empire, p. 4, 1991.
(4. 6) foreign concessions population: draw by the author, data: Qian Guan, *"Lilong housing, a traditional settlement form"*. Master thesis, McGill University, Montreal, 1996.
(4. 7) evolution of Shanghai during the Lilong century: draw by the author based on Song Zhang, An Approach to Integrated Urban Historic Conservation. p. 13, 1992.
(4. 8) Lilong House influenced: draw by the author. pictures: (a) (reddit.com).
(b) (haichaolu.exblog.jp).
(c) (kulturrejser.dk).
(4. 9) SHANGHAI, Stone gate: photo by shanghaistreetstories.com.
(4. 10) SHANGHAI, International Settlement 1937: photo by Wu Liang, Lao Shanghai, Jiangsu meishu chubanshe (1998).
(4. 11) example of Lilong plan fragmentation: Louise Morris, *"Commuity or Commodity? A study of lilong housing in Shanghai"*. Master thesis, The University of British Columbia, 1994.
(4. 12) Lilong fragmentation: photos by Shanghaimage.com.
(4. 13) One Hundred Signs of Demolition: Wang Jinsong, 1999.
(4. 14) SHANGHAI, Jianyeli: photo by evan.chakroff.
(4. 15) SHANGHAI, Xintiandi: photo by the author.
(4. 16) Lilong typologies evolution: draw by the author.
(4. 17) Shanghai road network: draw by the author.
(4. 18) Lilong block: draw by the author.
(4. 19) Lilong settlements site plans: plans by Shen, Hua, "Shanghai lilong minju (Lilong dwelling in Shanghai)". Beijing: China Architecture & Building Industry Press, 1993.
(4. 20) Lilong block analysis: draw by the author, based on Lilong Block by Meggen Skilling (shanghai2030.blogspot.it).
(4. 21) Lilong space: draw by the author.
(4. 22) SHANGHAI, Li AnyOng里安永**Nord Sichuan road Gate:** photo by the author.
(4. 23) SHANGHAI, Haila'er road: photo by the author.
(4. 24) SHANGHAI, Li AnyOng里安永**second street:** photo by the author.
(4. 25) SHANGHAI, Lilong typologies distribution: draw by the author, based on hen, Hua, "Shanghai lilong minju (Lilong dwelling in Shanghai)". Beijing: China Architecture & Building Industry Press, 1993.
(4. 26) Lilong Plans: draw by the author , based on Shen, Hua, "Shanghai lilong minju (Lilong dwelling in Shanghai)". Beijing: China Architecture & Building Industry Press, 1993.
(4. 27) Shanghai House of Gao: photo by shanghaistreetstories.com.
(4. 28) SHANGHAI, Yu Hang road: photo by the author.
(4. 29) SHANGHAI, Chang Garden 张园**:** photo by wikipedia.com.
(4. 30) SHANGHAI, Liyang road: photo by the author.
(4. 31) SHANGHAI, JingAn village: photo by the author.
(4. 32) SHANGHAI, ChangLe village: photo by the author.
(4. 33) Hailun area, Shanghai: (a) draw by the author, photo by Bing map.
(b) photo by Baidu street view.
(c) photo by the author.
(d) photo by the author.
(e) photo by the author.
(f) photo by the author.
(g) photo by the author.
(h) photo by Wong Owen.
(i) photo by hxrtass BLOG.
(l) photo by hxrtass BLOG.
(4. 34) Xintiandi, Shanghai: (a) draw by the author, photo by Bing map.
(b) photo by G Ken.
(c) photo by Geraldo Ratto (som.com).
(d) photo by the author.
(e) photo by the author.
(f) photo by the author.
(g) photo by the author.
(4. 35) SHANGHAI, Lilong Courtyard: photo by Eric Firley.
(4. 36) SHANGHAI, Tianzifang: photo by the author.

5

(5. 1) SHANGHAI, Kenye Unit (恳业小区)

WORK UNIT COMPOUND

工作单位

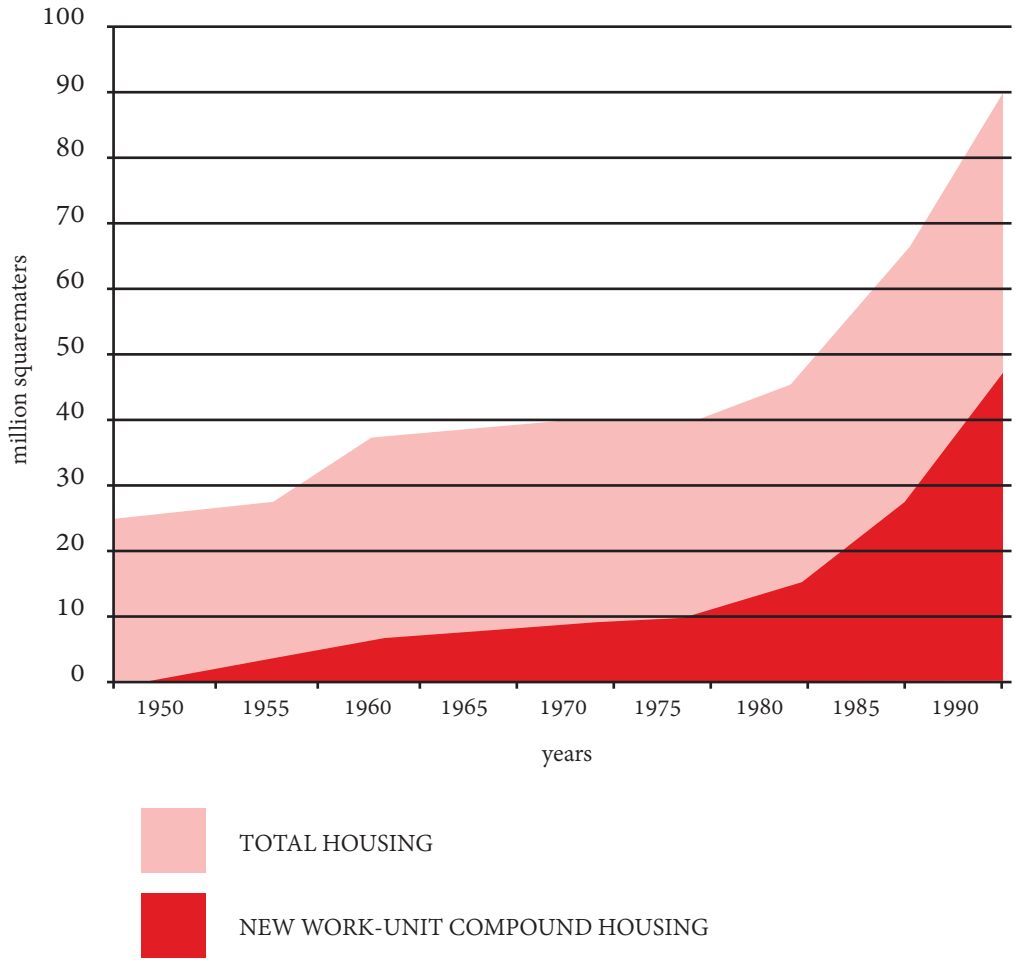


The Work-Unit compound was the most common housing type during the socialist regime.

5. 1 Introduction

The years between 1950 to 1990 is often overlooked in the debates regarding the architecture of Shanghai. During this time, however, Shanghai greatly expanded into the peripheral areas and opened the way to become a new global metropolis. During the socialist regime the Work-Unit compound housing or more commonly called Works' village were the most common, if not the only, type of housing in that time. The Work-Unit compound were walled self-sufficient settlements, including productive enterprises, residence and social facilities. This design typology strongly influenced by the government policy is characterized by a repetitive pattern which has made the built urban environment very generic, but has managed to bring in a new urbanization the city after the Second Sino-Japanese war and the Chinese Civil War. Forming almost all of the new developments in most Chinese cities during the socialist era, Work-Unit, with its simplicity of construction, is considered mundane and lacking of any architectural feature. Furthermore, these years, that are characterized by a decadent socialist urban life, is emotionally unloved by the citizens who compare it with the two more glorious periods in the Shanghai history. The golden years as an international treaty port and the foreign concessions with the nostalgic Lilong housing and the new post-reform economic boom of the skyscrapers city. The underestimation of the Work-Unit compounds, such as typology characterizing the architectural history of Shanghai, and the socialist era make that is projected the wrong impression, often considered true, that the city of high-rise is directly erected from the Lilongs.

(5. 2) Shanghai housing stock



(5. 3) From Jin Mao tower

5. 2 The socialist era

Reached its greatest glory as an international port, Shanghai was one of the major economic centers in the 30s. This glorious period terminated unexpectedly when the second Sino-Japanese war and the Chinese Civil War start. Subsequently, in the period from 1949 to the 1980s, Shanghai is facing a kind of stasis from an international point of view. Which ends in terms of urban planning with the economic boom and resulting development of Pudong New Area in the early 1990s.

After the establishment of the new People's Republic of China, the new Communist Party faced several challenges. The predominantly rural country, had a very poor urban network. Citizens occupied only 11% of the total population, with a total of 69 cities in all the Country. During the socialist era the city had their first significant transformation. Under the leadership of Mao Zedong the previous semi-feudal and semi-colonial system evolved into a socialist industrial based system. Immediately after the announcement of the birth of the People's Republic of China, the new central government confiscated land and buildings, which belonged to the Kuomintang government or bureaucratic capitalists. This laid the foundation of the state-owned real estates.

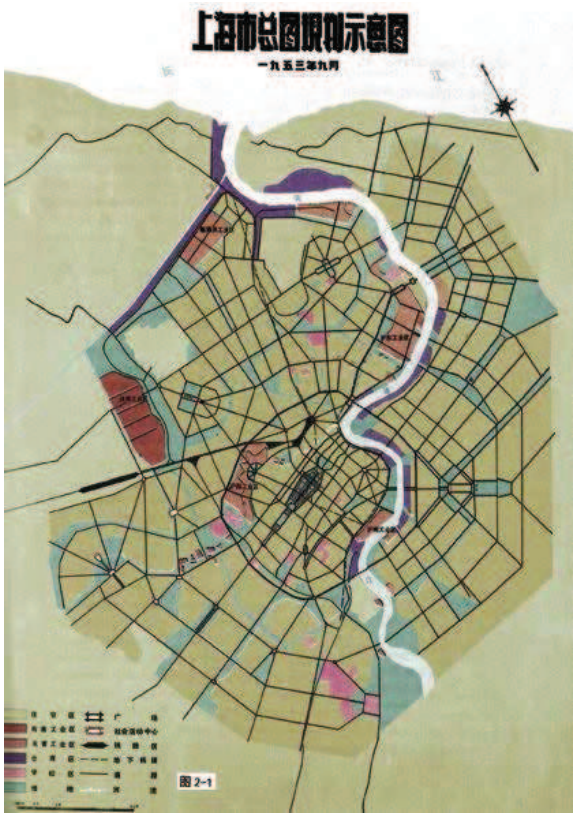
During the socialist era cities had a first significant transformation.

Under the leadership of Mao Zedong the previous semi-feudal system evolved into a socialist industrial based system.

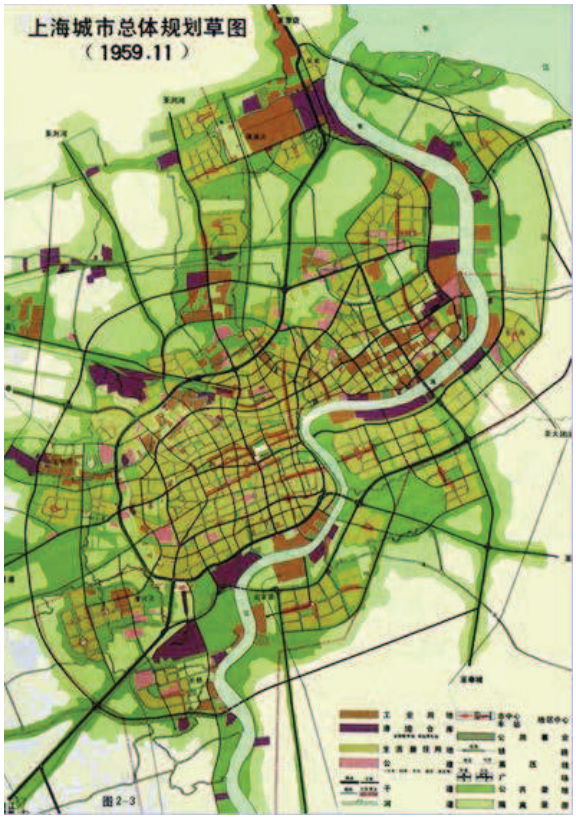
(5. 4)
The 1 October 1949 Ceremony and Parade (1950)

The central people's government constitutes the only legitimate government of all the people of the People's Republic of China

中央人民政府为代表中华人民共
和国全国人民的唯一合法政府



(5. 5) Shanghai Soviet Urban Masterplan 1953



(5. 6) Shanghai Urban Masterplan 1959

At the end of the second Sino-Japanese war, and the establishment of the communist government, the Shanghai's municipal government decided to invite two Russian experts, Simakov and Benenikov, in order to investigate the possible future development of the city. In 1953, with the help of the Russian Moshin, the new master plan of the city was planned. Based on the socialist city idea, it completely redesigned the inner city. Because of the high population density in the old concessions the plan was feasible just in small parts, as People's square. In 1959, in agreement with the Danwei system, comparable to the Soviets Microdistricts, Shanghai began to plan and build the new industrial districts and the satellite towns in the suburbs of the city. Microdistrict is the primary structural element of the residential area construction. A typical Microdistrict comprised residential dwellings, usually multi-story apartment buildings, and public service buildings. Usually a green belt and an infrastructure ring was used as boundaries between different Microdistricts. The number and type of the various buildings is depending by the population, the size and standards per capita. The socialist city were planned through the division of the space into functional zones, the integration of work and everyday life, the use of public transport and the employments distribution. The territory was considerably transformed with the construction of factories, schools, residences and other different public facilities. This deep change in the peripheral areas meant that, during the Maoist period, the city was made of two distinct areas: the Work-Unit zone established by the new regime in the suburban area and the inner city made of traditional houses of the previous era.As the largest economic center of china, shanghai had to bear unjust burden for decades, putting the majority of its revenue to the central government. Between 1949 and 1985, 87% of total revenues of the city were remitted to the central government, leaving Shanghai with the 13% for their own use, in contrast to Beijing or Tianjin with the 30%. This causes that during the socialist period there were no major changes in the inner city, more costly and difficult to developed than periphery. Therefore the city center became more and more crowded. Even the confiscation and redistribution of foreign ownership did not improve the situation. After the 1978, the new government started a gradual approach to housing reform and the introduction of a market model that had been suppressed during the Maoist era. During the 1980s several experiments were made in selected areas. These experiments tested the feasibility of various reforms such as the privatization of existing batch and the adaptation of the rents, which previously were free or very low. In 1988, the Chinese central government releases an important document, Implementation Plan for a Gradual Housing System Reform in Cities and Towns, by which the housing reform was extended to the whole Country.

(5. 7)
Building the People's Republic (1950)

Smash the imperialist war conspiracy,
forge ahead courageously to build our peaceful and happy life!

粉碎帝国主义的战争阴谋，
为建设我们和平幸福的生活而奋勇前进！

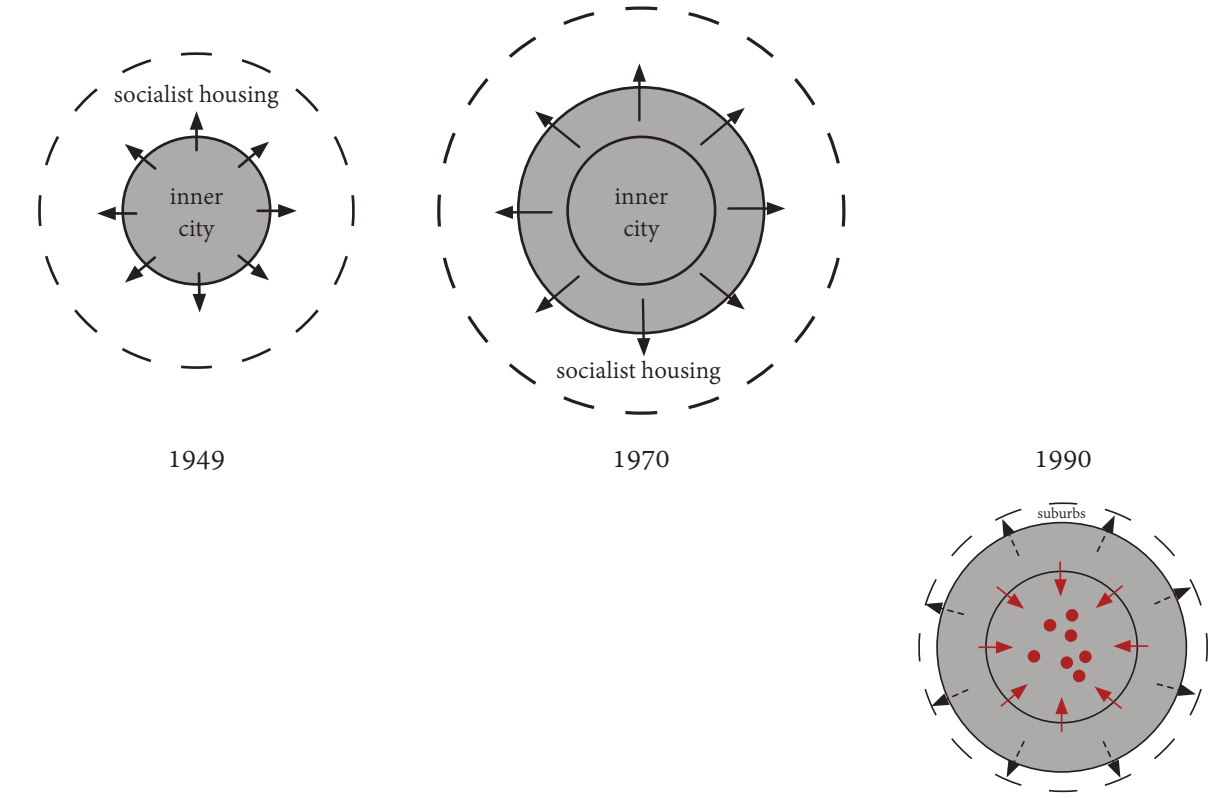
(5. 8)
Building the People's Republic (1953)

Study the Soviet Union's advanced economy to build up our nation

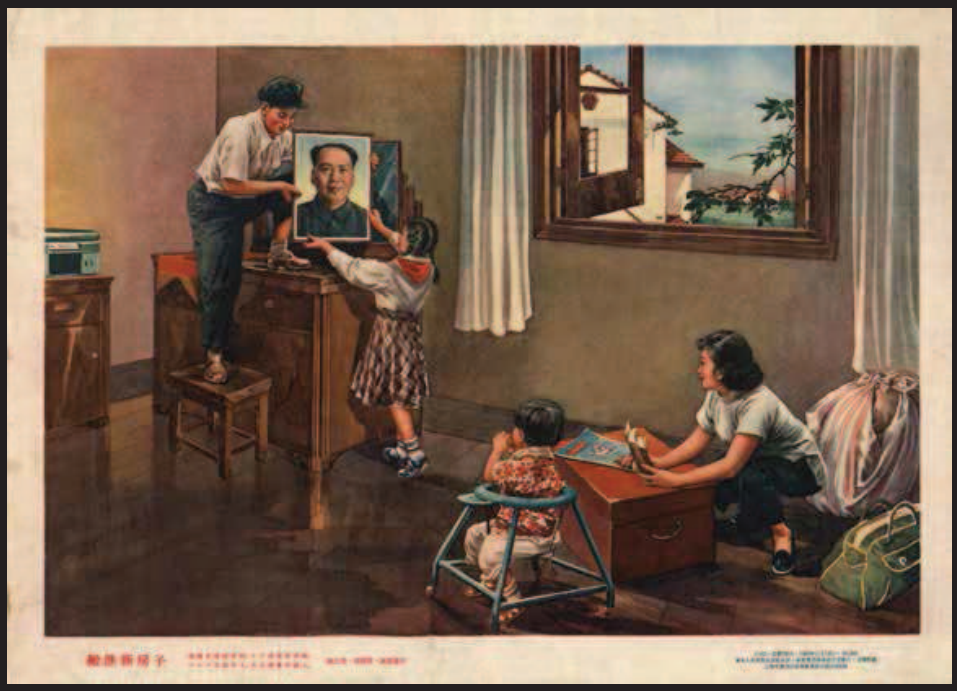
学习苏联现今经济建设我们的国家

5. 3 The compound city

The architectural structure of the buildings and the city urban planning dramatically changed after the 1949 and the rise to power of the Communist regime. The new development was redesigned in accordance with the new Maoist version of a communist ideology, characterized by anti-urbanism, heavy industrialization, firm state control and the elimination of the previous bourgeoisie. From consumer city shanghai switch to socialist and producer city. As symbol of this change, the Bund, famous for the major financial companies and banks headquarters in China, during the 1950s, it was occupied by various government organizations. The displacement of the various institutions was definitely a political and symbolic reason more than for a functional cause. In order to implement this new ideology the Soviet model was taken as an example. An explicit architectural expression characterizes the various socialist cities in Eastern Europe. This similarity is due to the development of new urban housing estates mainly controlled by investment, construction and state allocations. This model usually focuses new plans in large projects. The new development areas, for problems related to their size and the high deterioration of the downtown, are placed into the immediate outskirts of the city. It's so formed an outer circle of new housing that absorbs most of the middle class population in search of higher living standards. Shanghai also has a similar structure, an inner center of pre-existing buildings and an outer circle of large urban housing development.
A Work-Unit is basically a state enterprise or an educational or governmental institution, where most of the residents live and work. In addition to a life job it also provide for almost all the daily life necessities of their employees, from housing, to health care and education. The work-unit housing, often planned and designed by the government in a compound form, became the majority type of building development in the socialist era Chinese city. In 1982 in urban China there were three broad types of housing, private housing 17,7%, work-unit housing 53,6% and municipal public housing 28,7%. In Shanghai, this new development begins in the 1950 with city renewal issue and its future development. Based on these question the subsequent proposal was to incorporate small and inefficient industries of old industrial areas and the planning of new residential areas for workers.



(5. 9) Cities spatial restructuring by urban development under socialism and after



(5. 10)
Building the People's Republic (1953)

Moving into a new house

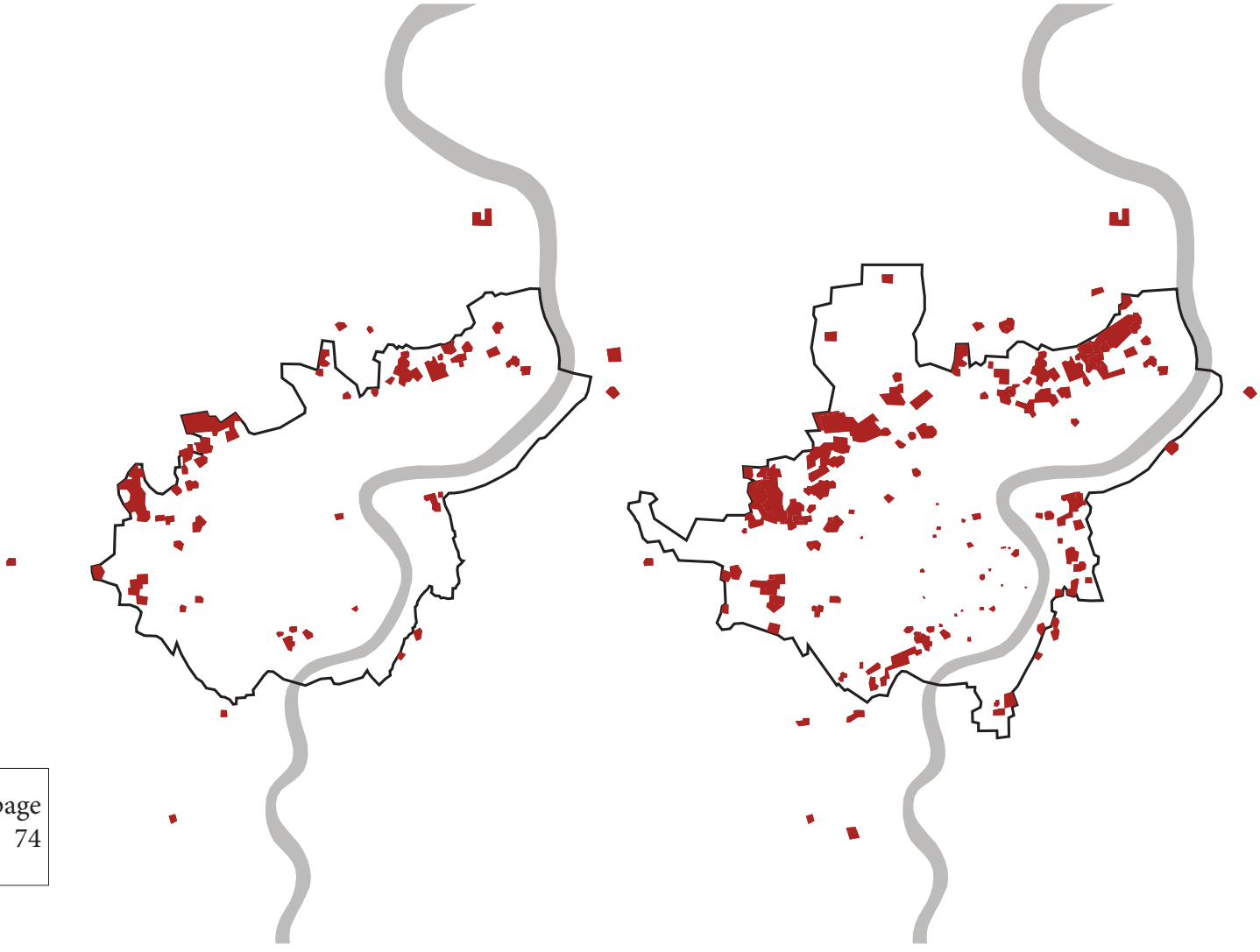
搬进新房子

(5. 11)
Building the People's Republic (1961)

Anti-American wave of rage next to the Huangpu river

黄浦江边的反美怒潮

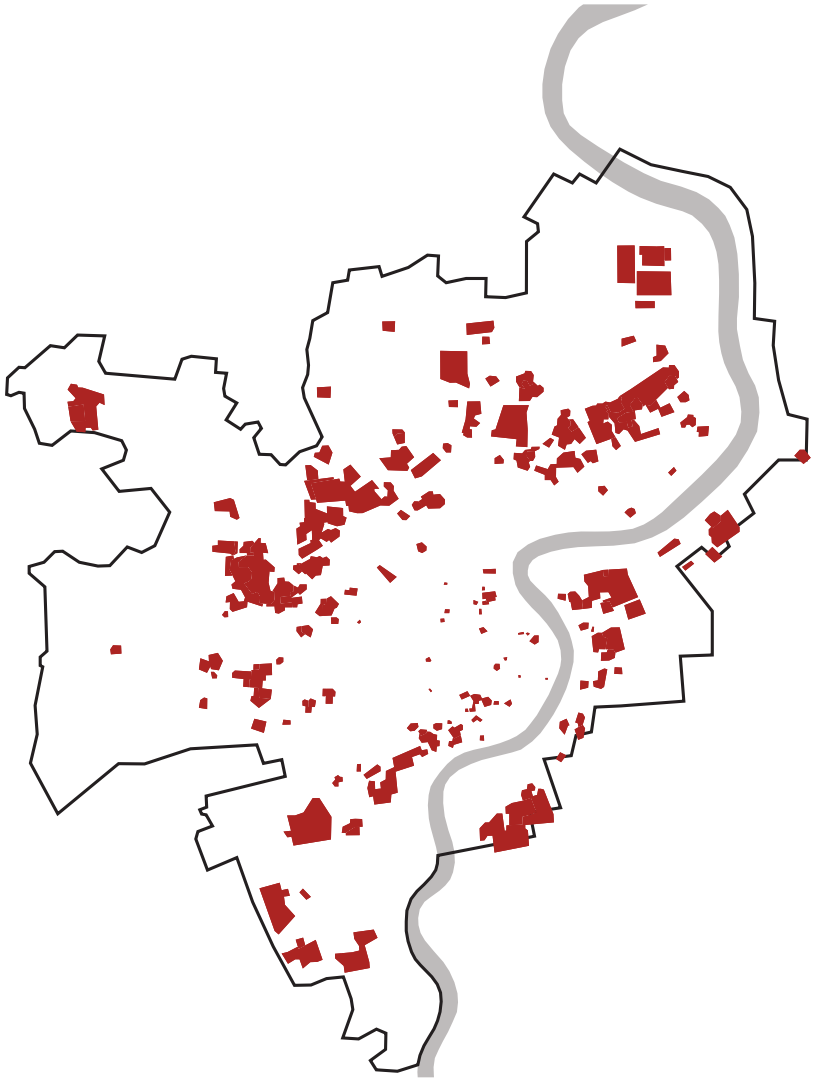
The first Work-Unit development started during the 1952 in the previously established areas, Caoyang new village was the first example placed in the middle part of Putuo District. Nine new satellite districts were built on the outskirts of the city. They had to provide housing for the nearby industries workers. Given the proximity to the inner city center the public service continued to depend on the existing facilities in the area. Anyway masterplans of many of these compounds provided for the construction of public buildings such as hospitals, schools and shopping centers that were going to increase the poor existing structures. Each new district was composed by concrete buildings of four or five stories, with a total of 22,000 accommodations, 30 square meters each, able to accommodate 40,000 new residents. These compounds were relatively small in size if compared to European examples. In the subsequent development years, the original industrial areas were no longer able to meet the growing demand. In 1958 it was decided to move the old industries from the city center to the Shanghai periphery through the planning of eight new industrial districts. Previous Work-Unit compounds originally designed as workers' housing started to fragment and to expand autonomously. Gradually they became a form of urban housing, the visible contemporary form in Shanghai. The new districts situated in the outer areas of the city, better suited the work and housing integration. Different in size and services than their predecessors, they were being developed on a larger area and offer to their residents more and better public services. With the increasing population, the Shanghai administration, in order to increase the control on migration fluxes, moved all the new residential developments, in planning, investment, design, construction, distribution and management phases, under the direct control of the government. This measure led to a boom in the construction of Work-Unit housing compound, which state favorite typology. After solving the industrial areas question, the government proposed to solve the problem of increasing migration and the consequent development of slums in the urban area, born in the pre Sino-Japanese War. A large amount of people was then moved from the center to the suburban areas of the city in the new workers' housing. After the 1978 reform that



1956

1978

brought back Shanghai city as a major international port and the new economy, technology and culture center of China, another plan was presented by local and general government. In the last years of the socialist era, there was a strong development of the city suburb and the satellite towns. Along the borders several projects for public housing were developed, with the progressive shift of the factories to the outside area in new industrial districts. The several projects built during this period, with different shapes and sizes depending on the location, were considerably larger than the first compounds. The thirteen new residential plans had an average dimension of 600,000 square meters, compared to the initial 40000. The largest of which covered an area of over one million square meters. Thanks to these new projects, which reduced the load of people to allocate and almost completely eliminated the slums of the city, the degradation of Lilong housing in the city center were diminish. There was an uncommon trend in the rapid urbanization process, a gradual decrease of informal buildings in favor of new planned housing. The Work-Unit compound housing since 1949 until the post-reform era have significantly changed the city built environment and the urban structure of Shanghai. A residential ring around the inner city was created. The development of the compound housing was very important for the urban environment of the contemporary Shanghai, it defined the boundaries of the city. This type was widely used and supported by the government until the late 1980s when gradually the construction of commodity housing and the new investment replaced the welfare-oriented public housing system. Before the end of the eighties the development of the Shanghai built environment reached a new level, that with the next economic boom will lead to the new building typologies development such as high-rise building and the rise of a new metropolis. The Work-Unit during the socialist period guaranteed lifetime employment and other social welfare advantages. Because of the communist regime changes the workers' village replaced Lilong housing as new symbol of Shanghai, and all the Chinese cities during the socialist era. The Work-Unit compounds accommodated and moved a large amount of people in the city periphery and significantly expanded the Shanghai urban boundaries.



1990

(5. 12)

Work-unit compound evolution
and urban center periphery

NANQUAN

GUANLONG

CHANGBAI

CAOYANG

GANQUAN

SHANGHAI IRON & STEEL WORKS

HUTAI

KANGJIAN

JINYUAN

QUYANG WORK-UNIT

1. Main vehicular road
2. Secondary vehicular road
3. Pedestrian path

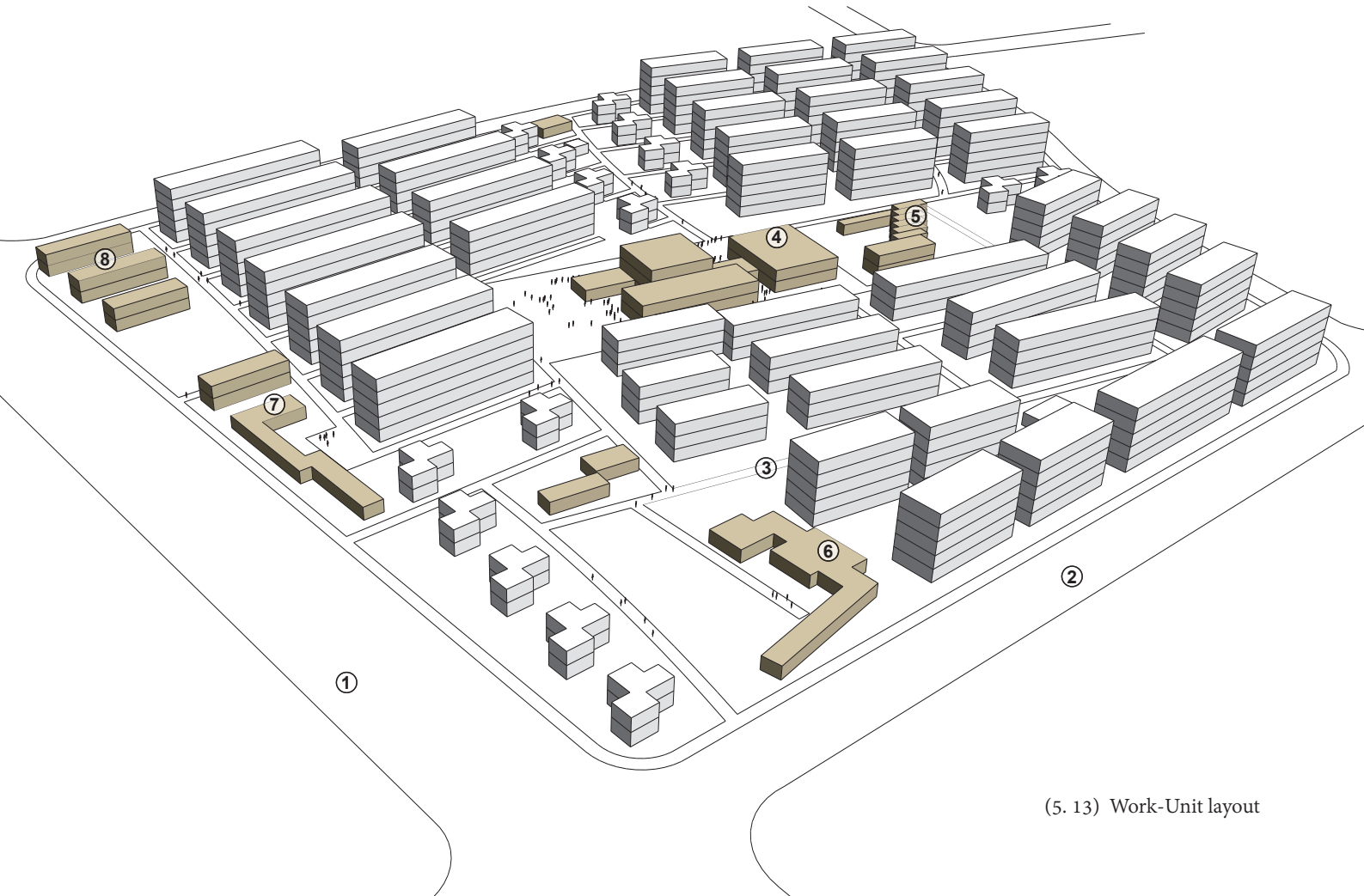
PUBBLIC FACILITIES

4. Residential quarter level center
5. Kindergarten and nursery
6. Primary school
7. Housing estate level center
8. Administrative center

RESIDENTIAL BUILDINGS

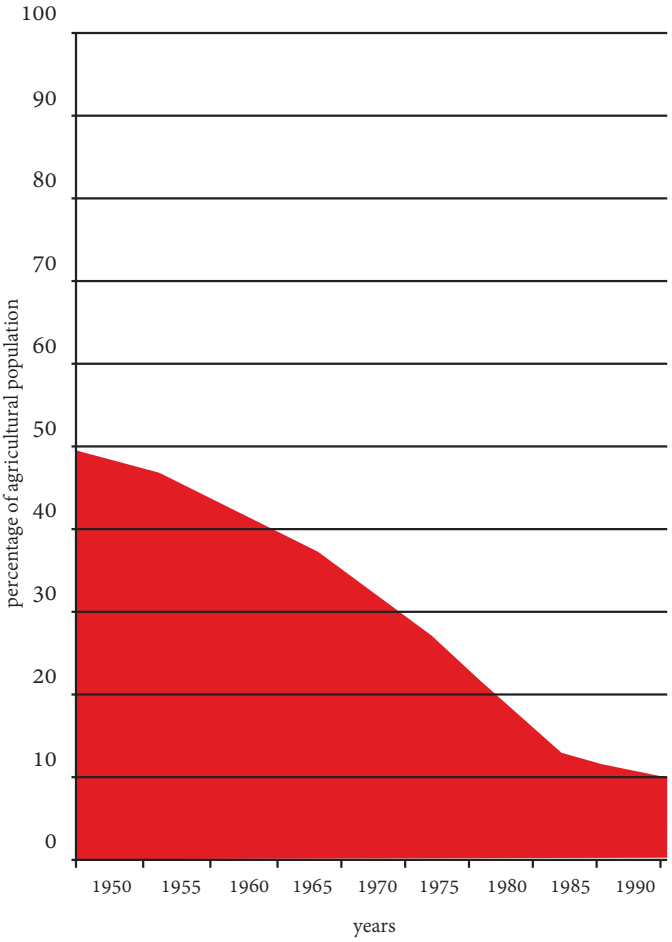
The Work-Unit compound usually focuses new plans in large projects.

It comprised residential dwellings and public service buildings. A green belt and an infrastructure ring were used as boundaries.

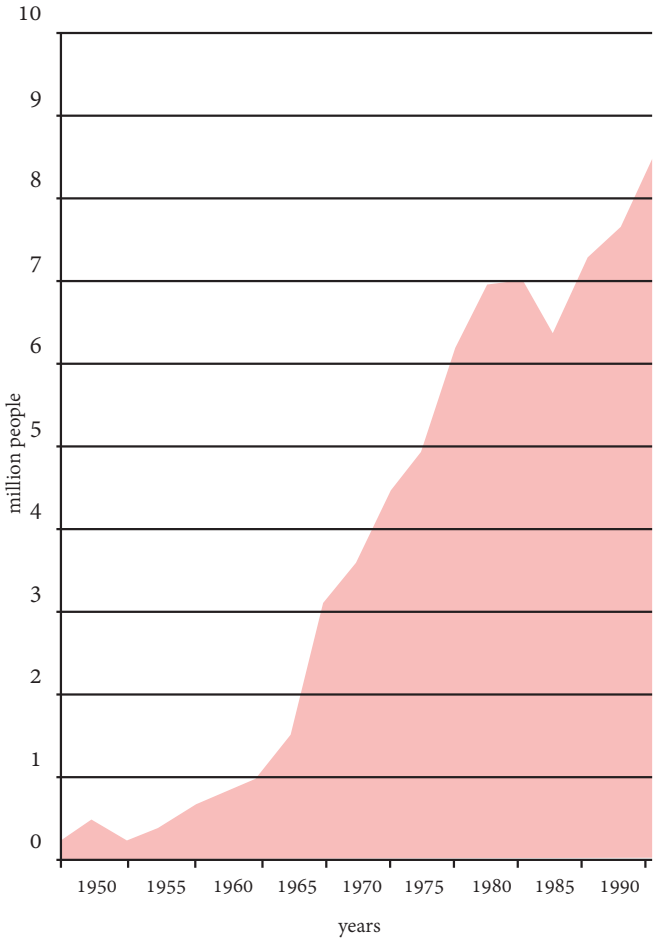


(5. 13) Work-Unit layout

(5. 14) Shanghai population working in agricultural sector



(5. 15) Shanghai urban population



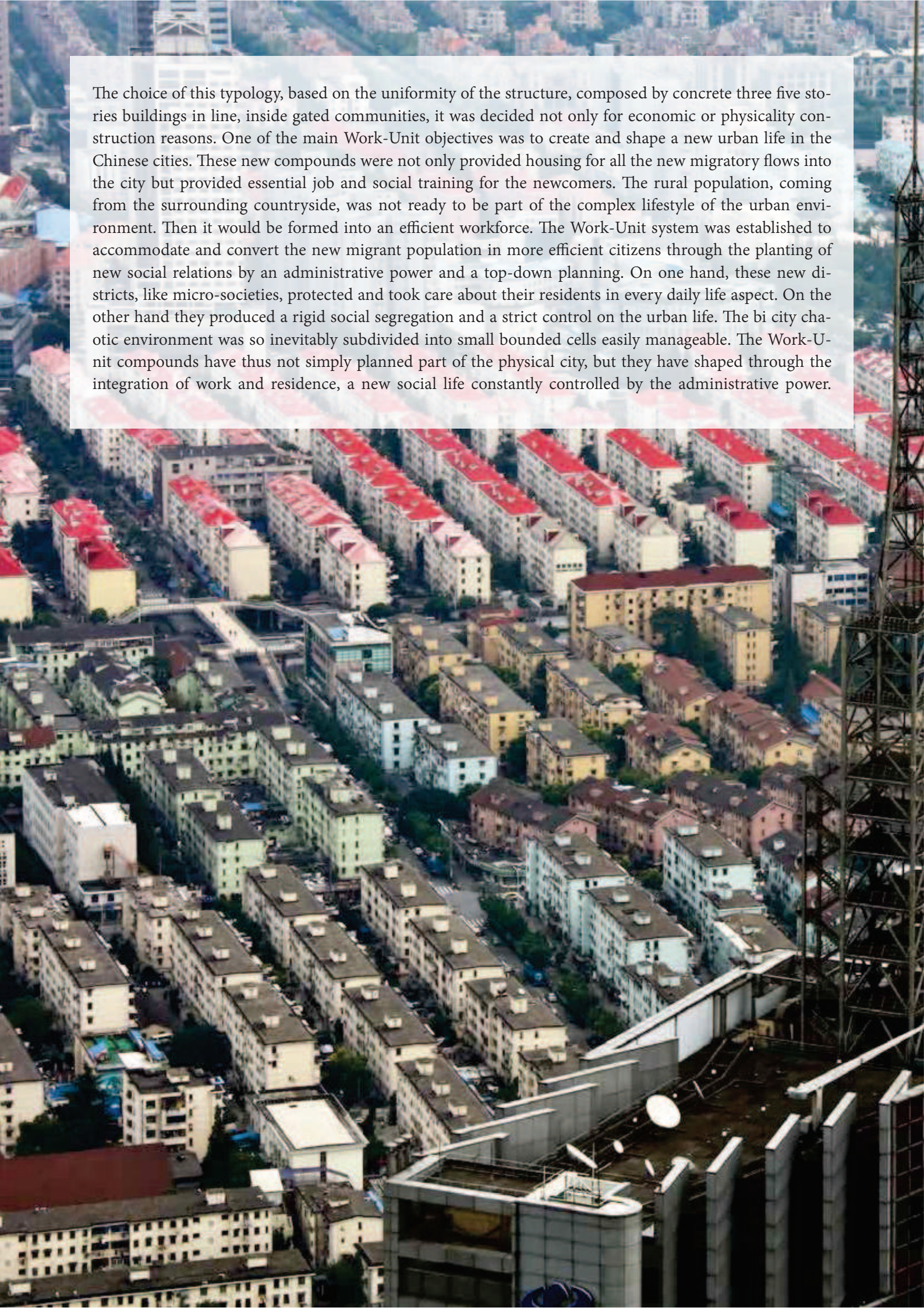
5. 4 Danwei system

Between 1950 and the 1990s Shanghai had a population growth, also if lesser extent compared to the other two glorious periods in its history. In particular, this trend became almost zero between the 1960s and 1970s. A series of policies, including the one-child policy, the hukou system and strict migration controls were aimed at strict control of population growth and migration. This had a significant impact on the agricultural sector. There was an exponential conversion of rural population to citizen, into the city suburban areas of the city, because of the continuous expansion of the city borders after the population waves after the 1949 and in a bigger way after the 1978 reforms. By almost 50% of the farming population in the 1950s Shanghai reaches 10% at the end of the 1980s.

The Work-Unit system included new architectural standards and composition. The new architecture had a facade without decoration. It had to be seen from great distances. The individual building became part of an elaborate space system, such as a column in an ancient temple. The building became a rhythmic element taking place in an anonymous network of urban structures. Light and landscape should penetrate the area. Sunshine and green surrounded on all sides the building. A significant less spatial concentration characterized the urbanization under the socialist planned economy. This new building typology became a kind omnipresent type in the People's Republic of China. It characterized many Chinese city suburbs making the different areas almost indistinguishable from each other. Work-Unit is not only a simple physical form consisting of gated communities, but especially a new model of urban development and a preset new lifestyle imposed by the socialist regime. Investment, design and construction of these compounds were at various levels under the control of the state, from the central to the municipal government. After the state-owned work-units the whole urban development and then the whole city were subject to severe restrictions by the government's policies. The work-unit compound can not be considered only in its architectural point of view but also into the social one. It must be considered as part of the urban planning composition subject to a national hierarchical system.

(5. 16) Shanghai Pudong area

The new individual building had no decoration
It became part of a larger rhythmic system.
It became element in an urban system network.



The choice of this typology, based on the uniformity of the structure, composed by concrete three five stories buildings in line, inside gated communities, it was decided not only for economic or physicality construction reasons. One of the main Work-Unit objectives was to create and shape a new urban life in the Chinese cities. These new compounds were not only provided housing for all the new migratory flows into the city but provided essential job and social training for the newcomers. The rural population, coming from the surrounding countryside, was not ready to be part of the complex lifestyle of the urban environment. Then it would be formed into an efficient workforce. The Work-Unit system was established to accommodate and convert the new migrant population in more efficient citizens through the planting of new social relations by an administrative power and a top-down planning. On one hand, these new districts, like micro-societies, protected and took care about their residents in every daily life aspect. On the other hand they produced a rigid social segregation and a strict control on the urban life. The bi city chaotic environment was so inevitably subdivided into small bounded cells easily manageable. The Work-Unit compounds have thus not simply planned part of the physical city, but they have shaped through the integration of work and residence, a new social life constantly controlled by the administrative power.

(5. 17) Shanghai, view from WFC

This point is well illustrated by American reporter Fox Butterfield in his description of a Chinese informant's Danwei compound:

"She lived in an apartment in a vast compound of five-story gray-brick buildings managed by her ministry. All her neighbors were also employed by the ministry. To go in or out of the one entrance, she had to walk past an army guard in uniform, and if she brought any visitors into the compound, they had to register in the sentry box. The woman's nine-year-old son went to school in another building inside the compound; she shopped for groceries in the compound store; when the family was sick there was a clinic in the compound. In summary, it would be no great exaggeration to contend that the Danwei is the foundation of urban China. It is the source of employment and material support for the majority of urban residents; it organizes, regulates, polices, trains, educates, and protects them; it provides them with identity and face; and, within distinct spatial units, it forms integrated communities through which urban residents derive their sense of place and social belonging. The importance of the Danwei is further highlighted by the fact that any person who does not have a Danwei is considered to be suspicious or even dangerous".

The Work-Unit compound or Danwei system goes beyond mere physical planning of residential buildings, middle-rise housing in modern suburbia planning and architectural design. It is an idea to redefine the urban life of Chinese cities after 1949. From the 1950s to the mid 1990s Shanghai was revived and urbanized in a remarkably efficient way from the previous war period. The Work-Unit compounds development leads to a significant trend of decentralization and the born of a new type of citizen. The Work-Unit compounds are, more than any other type of building, closely linked to the growth and the distribution of the Shanghai population.

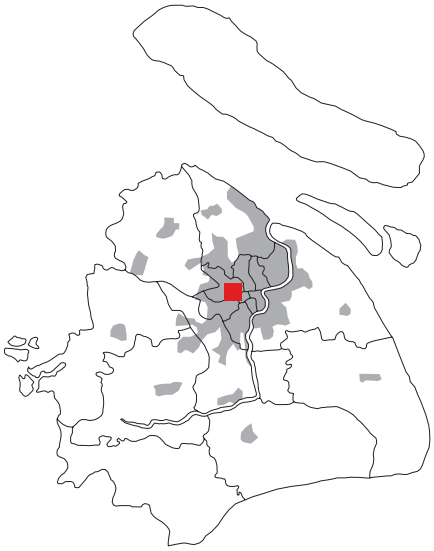
Work-Unit is not only a simple physical form. The new machine was built to convert migrant population in a efficient labour force, thanks to the planting of new social relations by a top-down planning.

(5. 18) Shanghai, Mid-rise housing

(5. 19) Shanghai old photos (1952: Caoyang Village)

5. 5 Example

(5. 20) Caoyang new village (block n.1), Shanghai:



(a)

(b) South gate

(c) inner neighborhood

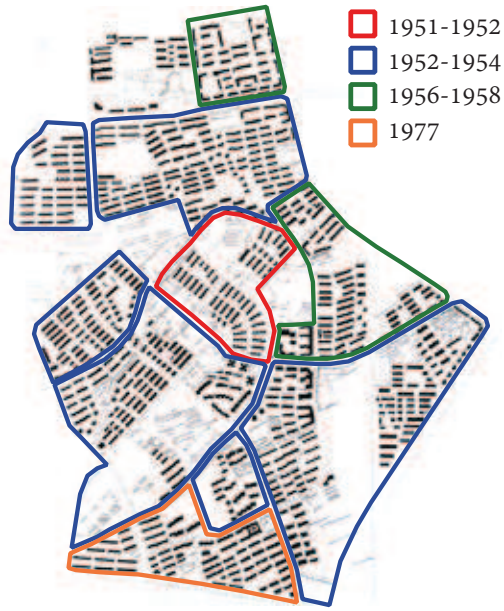
(d) inner neighborhood

(e) Unit entrance

(f) common space

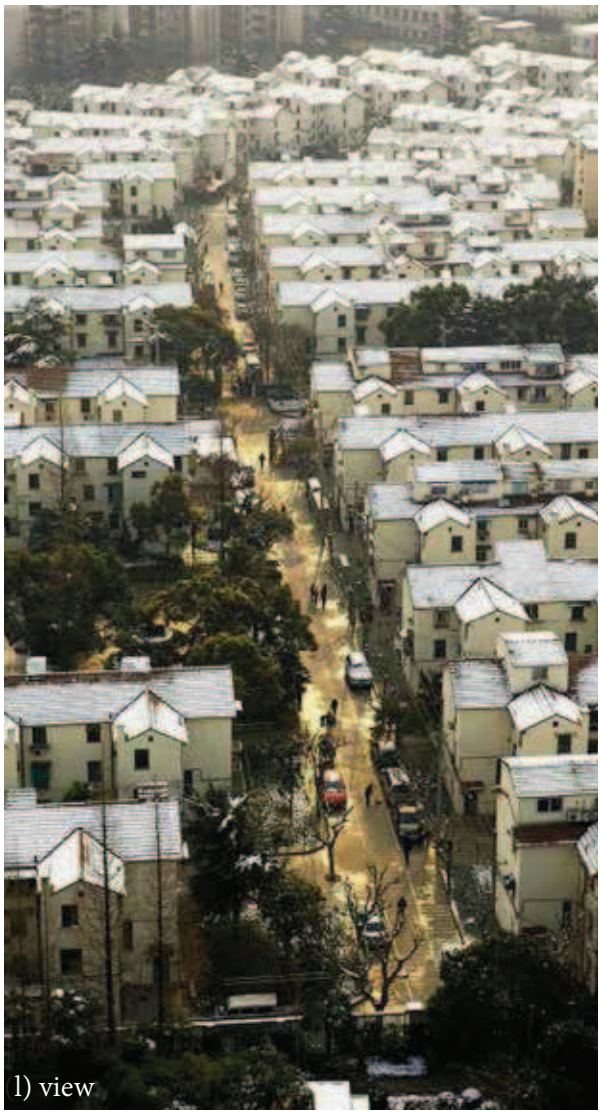
(g) common space

(h) Caoyang first settlement

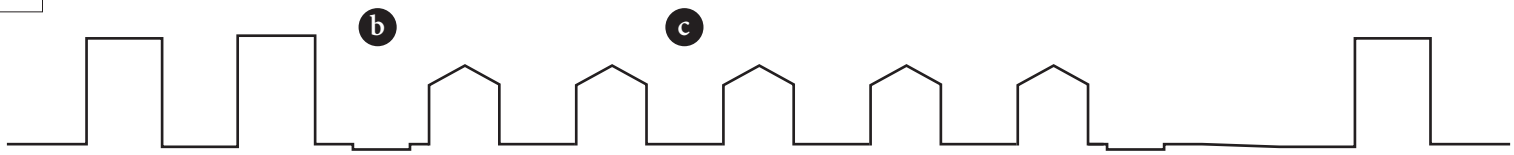


(i) Unit evolution

located in the middle of Putuo District, the new village of Caoyang is the first Work-Unit in Shanghai. It is composed by 9 living quarters on an area of about 180 ha. and a population of about 110000 residents. The whole plan was built in several stages. The first, the highlighted area, was begun in 1951 and completed in 1952, it was made up of 48 buildings with a total of 167 units and 1002 households. Most of the buildings in this first phase were 2-3 stores, but in 1960 all the buildings in the block n.1 were added two more floors. Between the period 1981 to 1988 the area was also improved by bringing the area of each household to 9.5 square meters. The houses are arrange from step-shape to fan-shape along the river and roads shape. The first block is mainly a residential area. The buildings have a wooden floors and stairs. Each block is divided into several segments, served by one staircase. Each segment has living units divided over three foor, with a communal kitchen and bathroom area serving three units on each floor. The public service facilities have been developing year after year with the blocks evolution. Initially public facilities were relatively simple, now they form a multi-level network. A community level made by kindergarten, nursery and small shops situated on the front of the different gates. A district level consisting of department stores, restaurants and house maintenance service along the main roads of the block. A work-unit level with cultural center, theater, hospital, bank, post office concentrated in the center of the total area. In 2005, the Shanghai Municipal Government has recognized the first settlement of Caoyang new village as heritage architecture, in order to preserve the memory of the socialist period of the city.



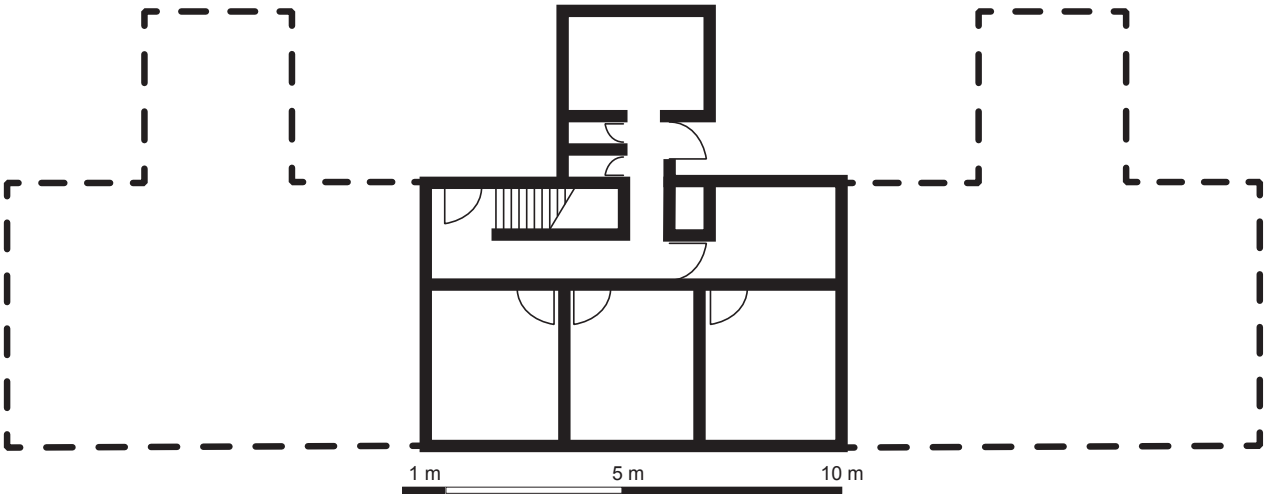
l) view



typological section

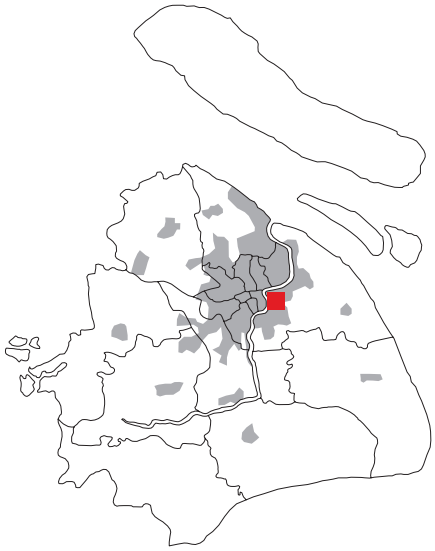
(m) historical view

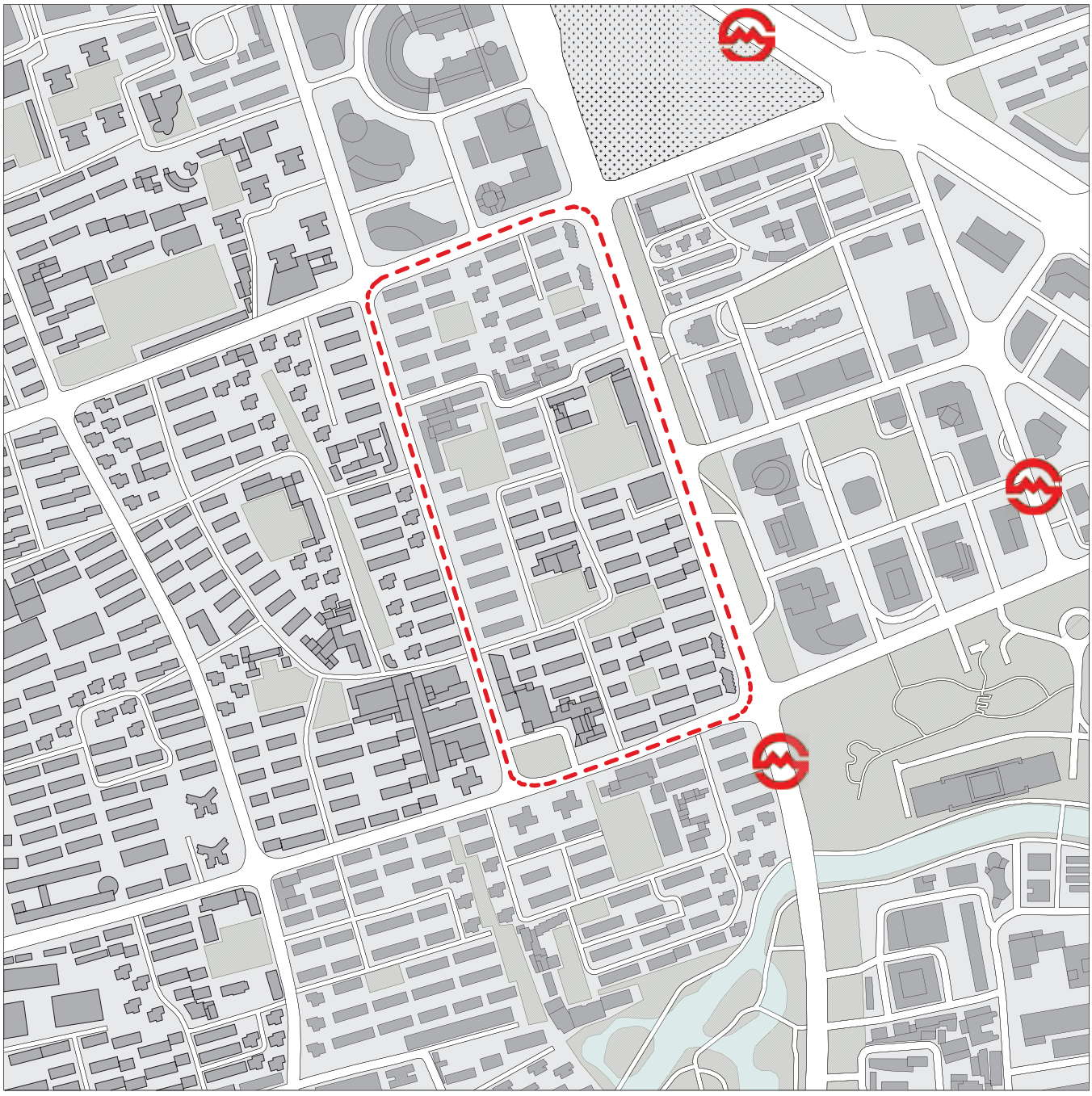
(n) detail

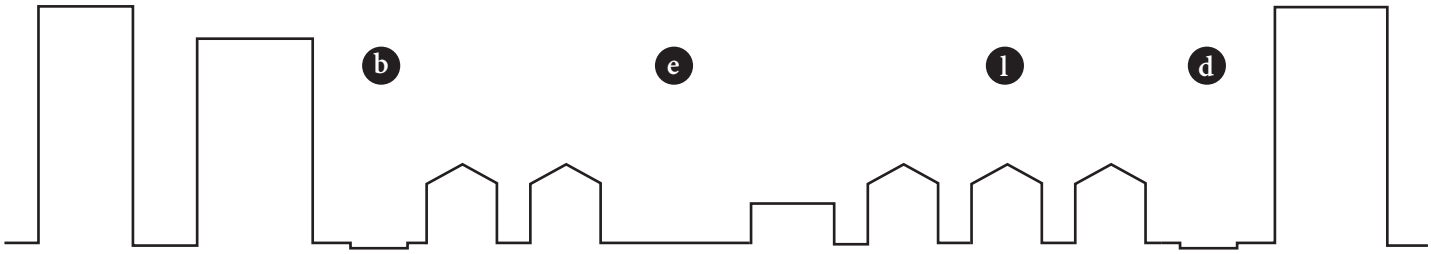


(o) unit plan

(5. 21) Weifang Unit (block n.7), Shanghai:







typological section

(b) dongfang road

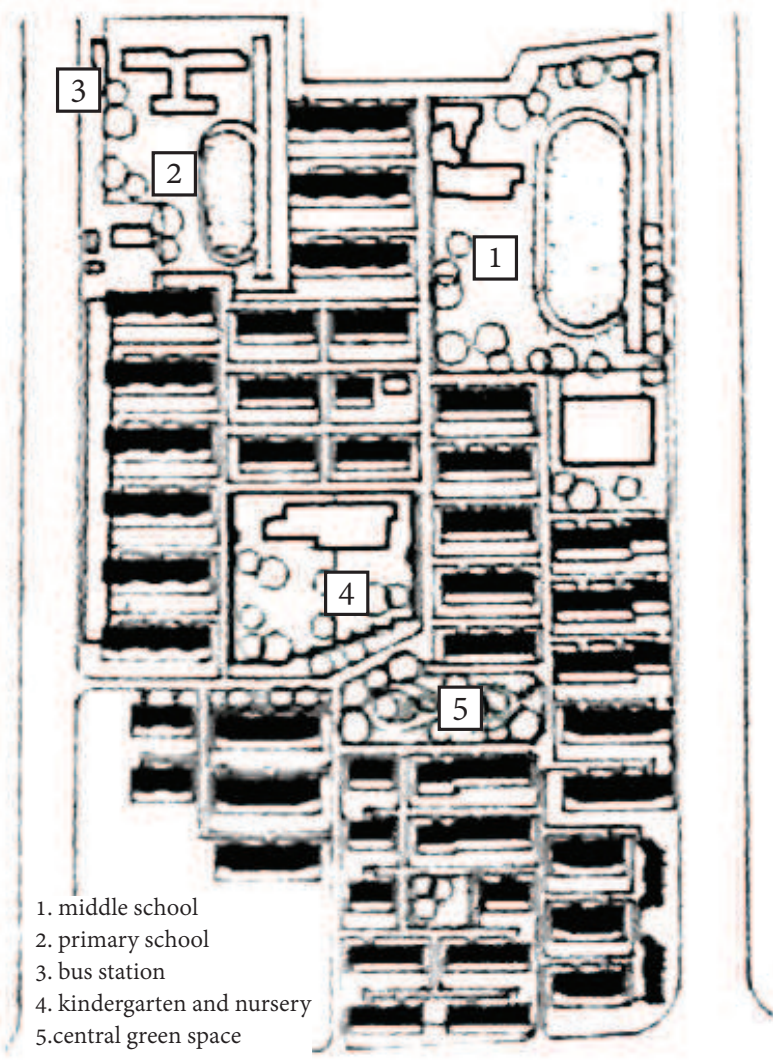
(c) pudian road

(d) laoshan road

(e) inner garden

(f) Weifang Unit

Weifang Work-Unit is located in the Pudong New Area. Built in the eighties it is a relatively late period Work-Unit. The project is made on an area of 58.7 ha. with a building area of 759,000 square meters, mainly composed by residential slats of an average of 6 stores. The area is divided into nine blocks, of which the highlighted area is the eastern sector of the district. The area is equipped with all kinds of facilities, including three middle schools, three primary schools, four kindergartens and four nurseries, a local district hospital, a cultural club house and a public library. There are also subdistrict office, police substation and each district has its own convenient shops. According to the principles of Soviet planning of the early 50s in order to ensure the residents a better living environment, the green area in Weifang Work-Unit occupies 37.1% of the total area. It consists of a central green area and a community gardens that surround all buildings. Now the neighborhoods distinctive for its blue roofs, even if subsequent construction, clearly visible from the high surrounding buildings.



(g) Weifang Unit (block n.7)

(h) Weifang Unit

(i) Weifang Unit

(l) Weifang Unit

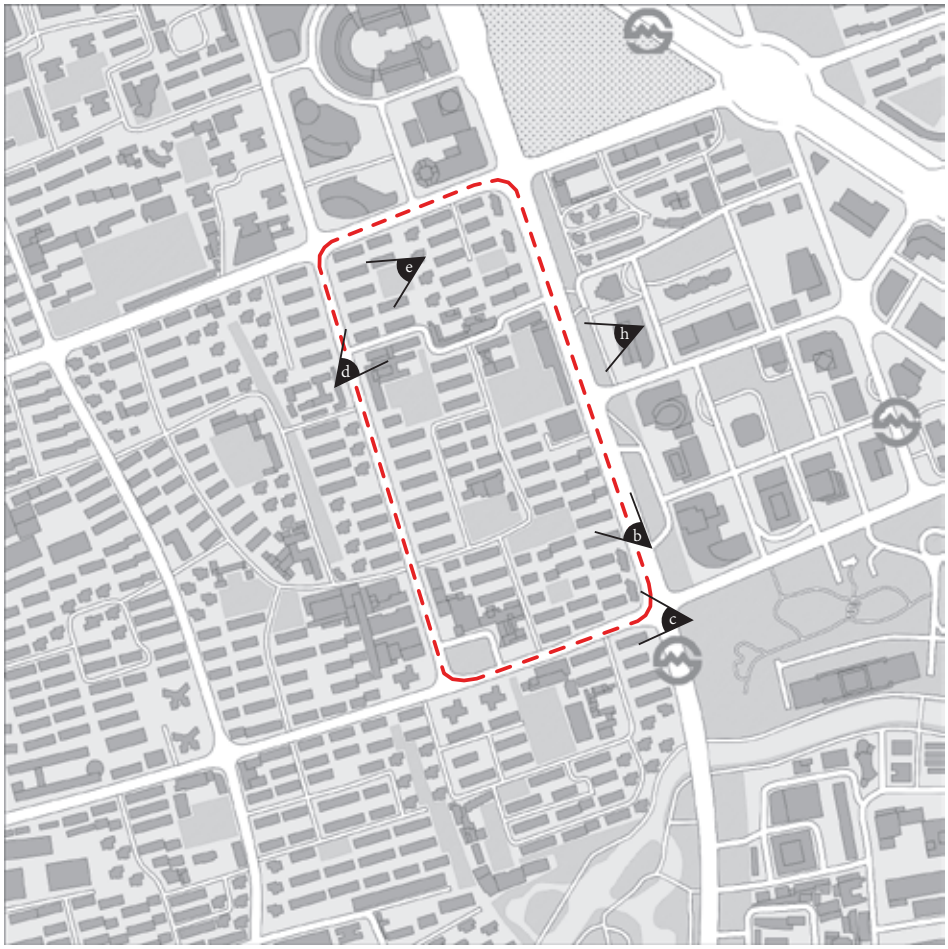
(5. 22) Shanghai, Quyang road

5. 6 Summary

Although underestimated from the purely architectural point of view or as a nostalgic image of the city, the Work-Unit compound has characterized the Shanghai urbanization process, in particular in the period between the 1950s and mid 1990s. Through their construction the urban environment and the city spatial structure is largely changed. The compounds housing development has defined the boundary of the urban area by forming a large residential projects ring around the city center. Furthermore under the administrative power they have managed to eliminate slums within the urban area. The Work-Unit system is not just a building typology made by a physical planning of the urban housing development, but it took cares and controlled all the daily life aspects of its residents. The Work-Unit is an efficient development model modeled in response to a socialist planning. Although often perceived as a simple rigid housing pattern and a sober urbanization, and then eclipsed by a more flashy high-rise tower and Lilong environment, it is responsible, more than any other building type, of the modern Chinese city rise.

- Caoyang new village, Shanghai:

- ???????????, Shanghai:



Notes

(5. 1) SHANGHAI, Kenye Unit (恳业小区)**:** photo by the author.
(5. 2) Shanghai housing stock: draw by the author, data: Shanghai Municipal Statistics Bureau.
(5. 3) From Jin Mao tower: photo by J. Albertos.
(5. 4) The 1 October 1949 Ceremony and Parade (1950): photo by chineseposters.net.
(5. 5) Shanghai Soviet Urban Masterplan 1953: photo by supdri.com.
(5. 6) Shanghai Urban Masterplan 1959: photo by supdri.com.
(5. 7) Building the People's Republic (1950): photo by chineseposters.net.
(5. 8) Building the People's Republic (1953): photo by chineseposters.net.
(5. 9) Cities spatial restructuring by urban development under socialism and after: draw by the author.
(5. 10) Building the People's Republic (1953): photo by chineseposters.net.
(5. 11) Building the People's Republic (1961): photo by chineseposters.net.
(5. 12) Work-unit compound evolution and urban center periphery: draw by the author, based on Liang Zhiyong, "Work-unit urbanism: work-unit compound housing and urban development in pre-resurgence Shanghai 1950-1992". China Academic Journal Electronic Publishing House, 2013.
(5. 13) Work-Unit layout: draw by the author, photo by Shanghai Shi jian she wei yuan hui, "Shanghai Shi ju zhu qu jian she tu ji (1951-1996) (Housing in Shanghai)". Shanghai: Shanghai ke xue ji zhu wen xian chu ban she, 1998.
(5. 14) Shanghai population working in agricultural sector: draw by the author, based on Liang Zhiyong, "Work-unit urbanism: work-unit compound housing and urban development in pre-resurgence Shanghai 1950-1992". China Academic Journal Electronic Publishing House, 2013.
(5. 15) Shanghai urban population: photo by the author, data by wikipedia.org/wiki/Shanghai.
(5. 16) Shanghai Pudong area: photo by formulapuff.
(5. 17) Shanghai, view from WFC: photo by fabrizio giordano.
(5. 18) Shanghai, Mid-rise housing: photo by bricoleurbanism.
(5. 19) Shanghai old photos (1952: Cao Yang Village): photo by chuansongme.com.
(5. 20) Caoyang new village, Shanghai: (a) draw by the author, photo by Bing map.
(b) photo by baidu street view.
(c) photo by hhhmds.blog.163.com.
(d) photo by hhhmds.blog.163.com.
(e) photo by hhhmds.blog.163.com.
(f) photo by hhhmds.blog.163.com.
(g) photo by hhhmds.blog.163.com.
(h) photo by "Shanghai Shi ju zhu qu jian she tu ji (1951-1996) (Housing in Shanghai)".
(i) draw by the author, based on hhhmds.blog.163.com.
(l) photo by hhhmds.blog.163.com.
(m) photo by hhhmds.blog.163.com.
(n) photo by hhhmds.blog.163.com.
(o) draw by the author.
(5. 21) Weifang village, Shanghai: (a) draw by the author, photo by Bing map.
(b) photo by baidu street view.
(c) photo by baidu street view.
(d) photo by baidu street view.
(e) photo by anjuke.com.
(f) photo by "Shanghai Shi ju zhu qu jian she tu ji (1951-1996) (Housing in Shanghai)".
(g) draw by the author, based on "Shanghai Shi ju zhu qu jian she tu ji (1951-1996) (Housing in Shanghai)".
(h) photo by Bühlertäler.
(i) photo by Pat_and_Sharon.
(l) photo by Danlin Wang.
(5. 22) Shanghai, Quyang road: photo by harald groven.

6

(6. 1) SHANGHAI, Ruijiayuan（瑞嘉苑）

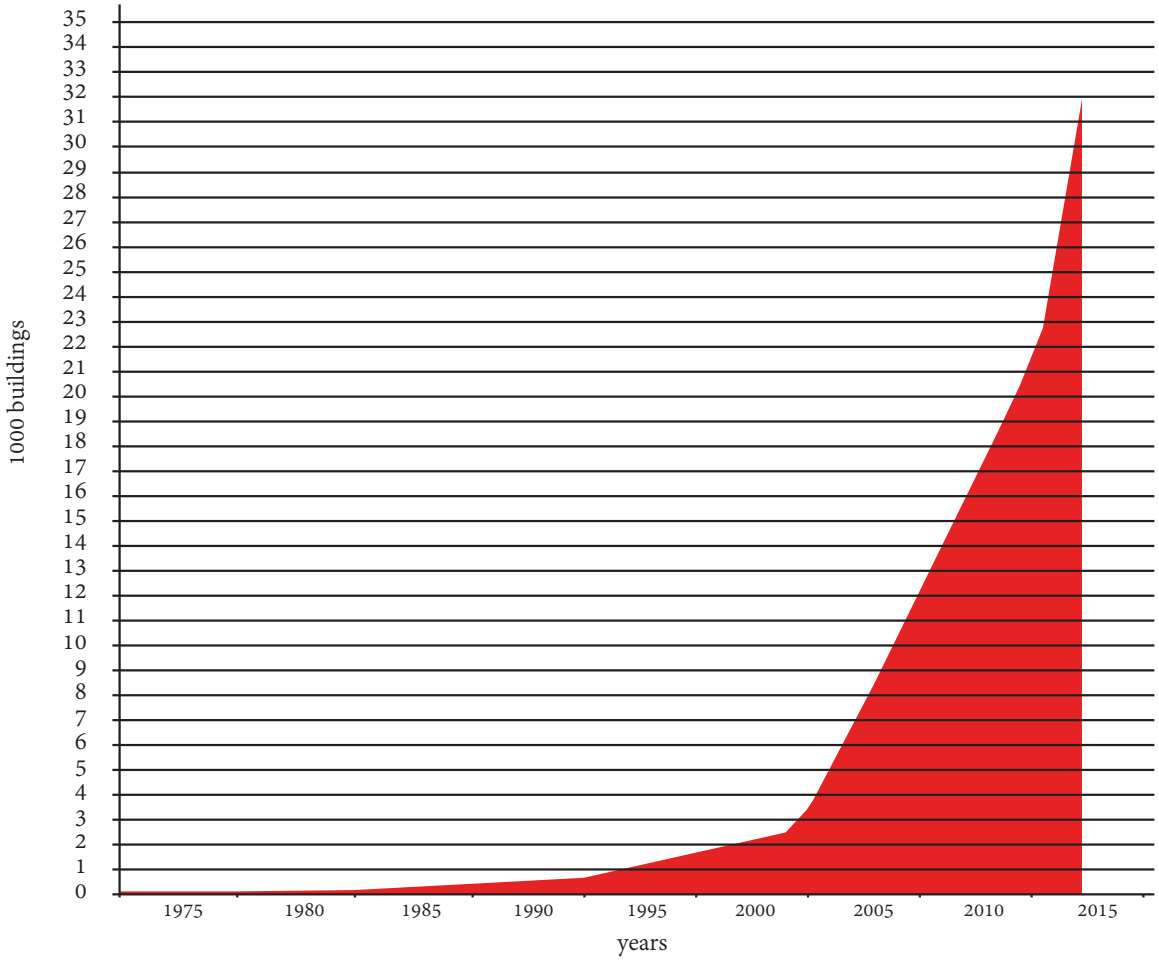
HIGH-RISE HOUSING
高层住宅

6. 1 Introduction

In recent decades, the metropolitan population of Shanghai increased considerably. Not being able to bear a growing housing demand, the central government decided to embark on a series of reforms that led to the transformation from planned socialist housing market to a free housing market. The new investors pushed by the desire for new profit opportunities came to compete in the new market. Shanghai, defined as the "Dragon Head" by Deng Xiaoping, was one of the first cities to benefit of the great development brought by the new reforms years. This new capitalist production completely transformed the look of the city in just two decades. The new developments, because limited availability and high cost of the construction land, were characterized by high population density, unlike the previous era characterized by large areas during the socialist regime. High-rise housing became the favorite residential typology of the Inner city area development. The old trend which characterized the colonial era that pushed towards increasing density and verticality was resumed. The Lilong housing typologies, in particular Lilong Apartment housing, were taken as an example and bring on an extreme level.

6. 2 The second revolution

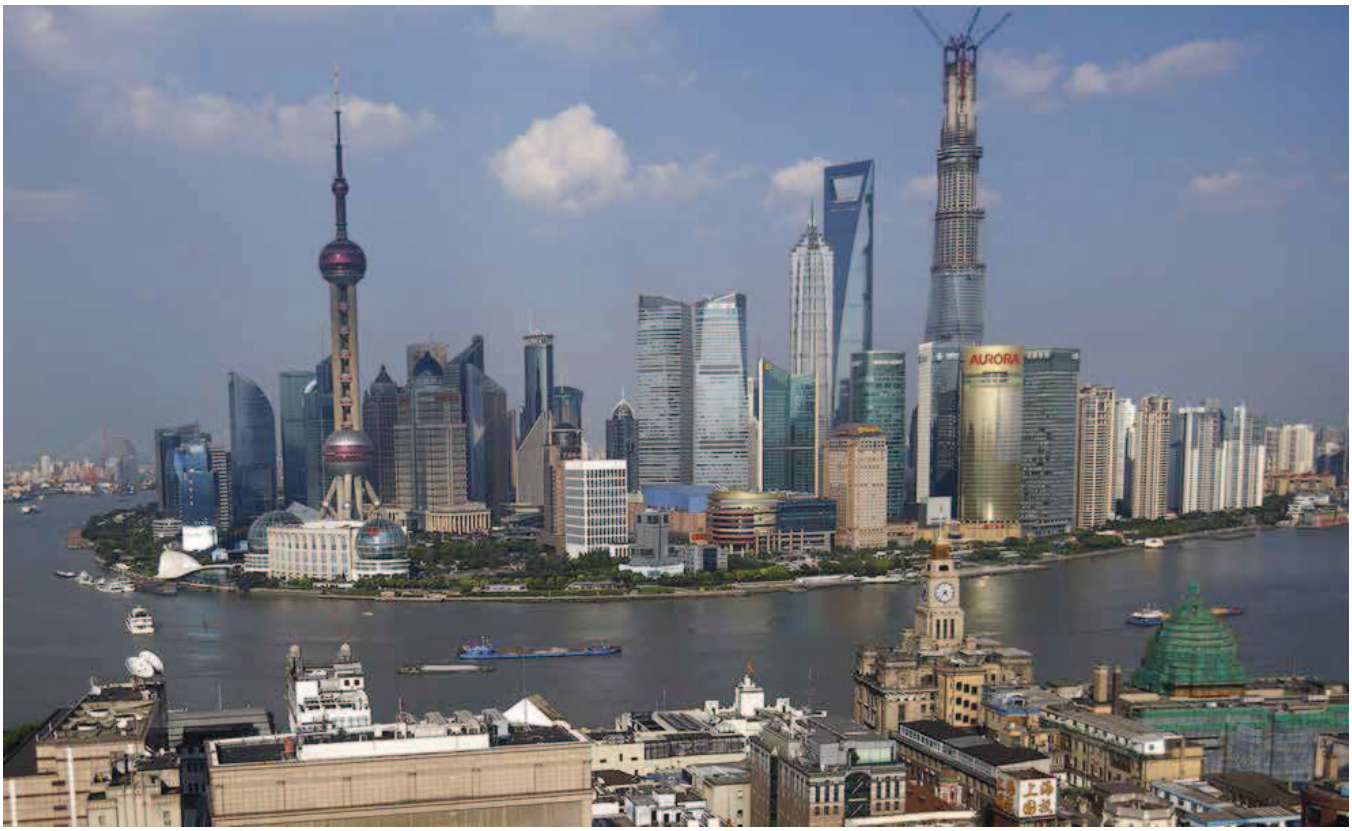
In 1978, two years after the death of chairman Mao Zedong, Deng Xiaoping started the, as he defined, "second revolution". The set purpose was that by 2000 the People's Republic of China had to rebuild itself in a great modern nation. The planning during the 1980s was rational, scientific and mechanistic. Shanghai was taken as an example. The first target was to develop the infrastructure system, but the two main changes that demonstrate this new ambition were the transformation of People's Square and the new financial district of Lujiazui Financial and Trade Zone. As an icon of this second revolution in the 1990s was the construction of the Oriental Pearl TV Tower, that still dominate the Shanghai skyline, and the subsequent skyscrapers in the Lujiazui area. The model of Manhattan was taken as an example for the new renaissance of the city. At the end of the 1980 there were only 149 high-rise buildings in Shanghai and in 1990 the amount was 799. In 2000 there were at least 3,000 high-rise towers built or nearing completion, 1350 of these over 20 floors, most of which are located in the city center. In 2010 there were already 20500 high-rise apartment towers. In 2012 the number was over 30,000 and many more were planned the construction. These towers are spread all over the city and they have a variable destination of commercial or residential use. Although they look bizarre and different, in particular in their details on the top, they are essentially the same in type.



	1978	1980	1990	1998	2000	2005	2010	2011	2012
total	135	149	799	2743	3529	10045	20579	22998	32022
8-10 storeys	89	102	228	413	536	1394	2744	2966	4367
11-15 storeys	35	36	252	504	684	3889	9672	11307	15125
16-19 storeys	6	6	159	681	831	2020	4247	4594	7484
20-29 storeys	5	5	145	1010	1266	2090	2936	3065	3839
over 30 storeys	-	-	15	135	212	652	980	1066	1207

(6. 2) Buildings over eight storeys

1987

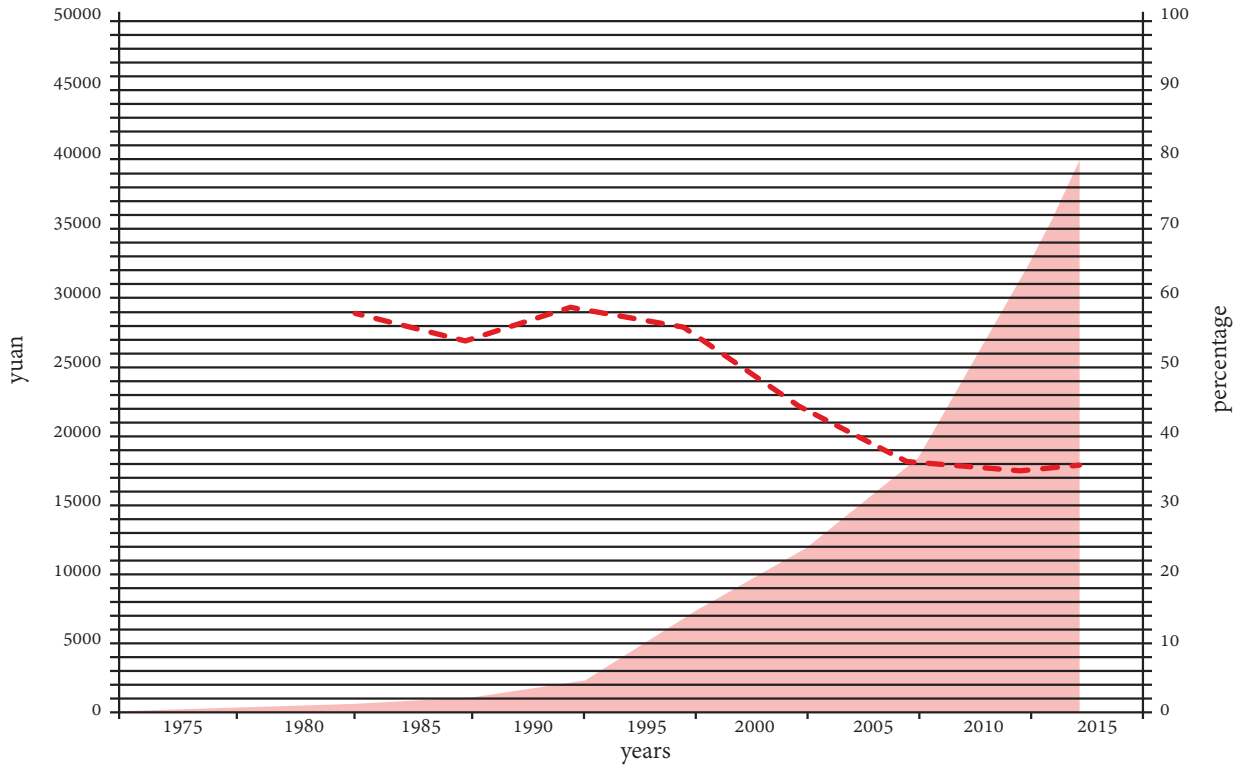


2013

(6. 3) Shanghai Lujiazui Financial and Trade Zone

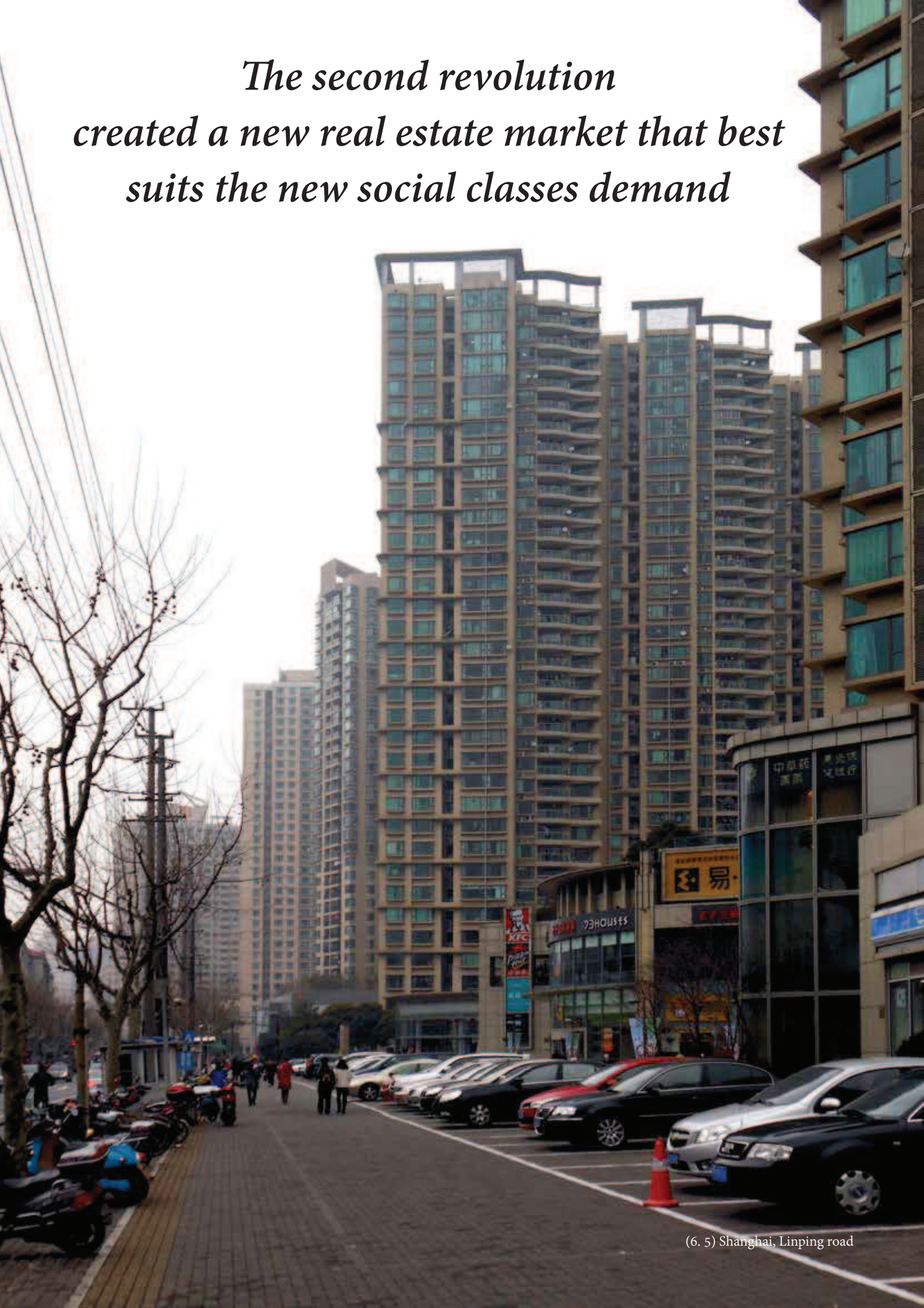
With the opening of the new real estate market the production of housing was most developed in order to suit the new demand. New social classes are formed. The new tastes that was form are, usually defined, nouveau riche or gaudy. Characterized by stylistic excesses and coarseness become part of a strong stylistic trend characterized the entire world. The European classicism was taken as an example, as in other parts of the world. In Shanghai this style was applied to many of the new high-rise housing that took the appearance of a floating palaces dressed with columns and various kinds of ornaments. The new classicism was not limited only to private homes, but also offices and government buildings. Advertising created a desire for global and luxury assets. The new housing units are characterized by every form of comfort: foods are stored in tall refrigerators and cooked in well-equipped eat-in kitchens, toilet paper and shampoo in the bathroom, every kind of entertainment equipment in the living room. The car became a new social symbol, given the enormous investment in the new road network during the 1990s. Responding to the challenge of Deng Xiaoping foreign settlements returned to life after a long hibernation during the socialist era. On the other hand the Chinese city disappeared almost entirely as a result of the cultural revolution of the previous years, except for Yu Yuan gardens and other trivial buildings, often new commercial areas development in traditional Chinese style appearance. Large part of the French Concession, developed in the 1920s and 1930s, returned to life with tree-lined streets, art deco apartments, bakeries, bars and western boutiques. Deng Xiaoping chose Japan and Western countries as new examples for the future Shanghai of the new millennium and lost a specific Chinese model.

From bird view the city spatial organization is clearly visible. Like the Chinese walled city which is now disappeared, Shanghai is characterized by irrational and informal organization. Free from any influence of the imperial order and the military strategy that characterized the ancient capital city or socialist era. Several elements, residence, culture, administration, commerce and industry, are spread on the whole region. This spatial model is very different from the Western model, that is divided into several districts. Instead the Shanghai model creates several not hierarchical centers in the city. After a dozen years from the start of the second revolution Shanghai seems to grow out of control. The growth and population migrations are the main issues of the city, and more generally of China. A series of informal flows change the metropolis structure. With an unprecedented economic growth at the beginning of the new millennium Shanghai proves to be resilient enough to accommodate the unpredictable forces of population movement and the extensive industrial expansion. When treaty ports were opened or during the first revolution, none could imagined the great growth happened in the 2000s. Among the largest and most populous city in the world, Shanghai can also be considered one of the richest. This huge success was achieved thanks to its ability to blend Western speculation and Chinese ambition since the 19th century. Also if the creation of a strong social inequality, clearly visible in the city structure.



(6. 4) Shanghai, Per capita annual income and Engel's coefficient of urban households

The second revolution created a new real estate market that best suits the new social classes demand



(6. 5) Shanghai, Linping road

(6. 6) Shanghai, Sun Wonderland boundaries

(6. 7) Shanghai, Sun Wonderland gate

(6. 8) Shanghai, Sun Wonderland inner garden

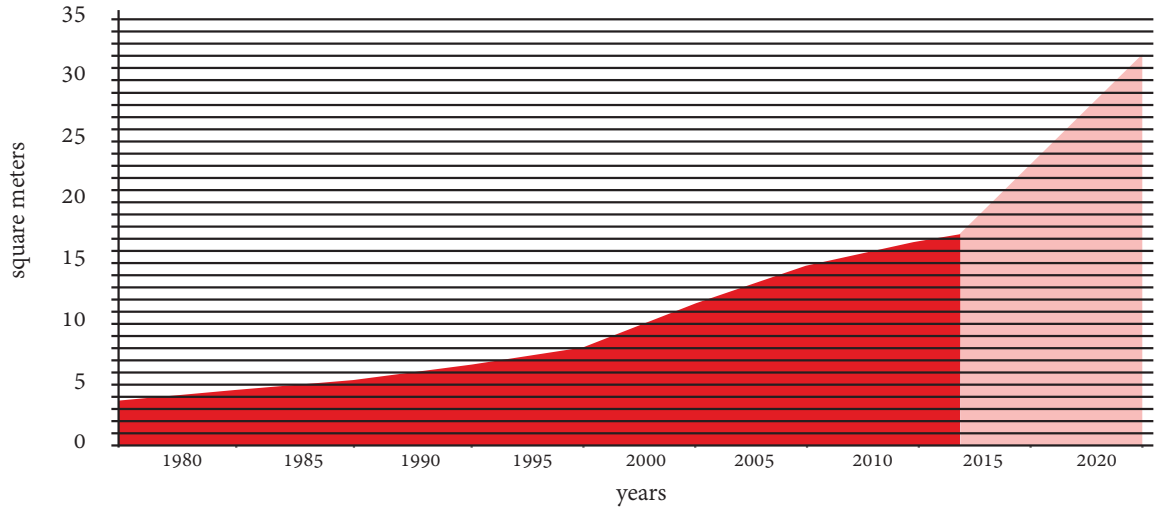
(6. 9) Shanghai, Sun Wonderland apartment

6. 3 Housing reforms

The housing market had been virtually eliminated before housing reform was launched in the mid 1980s. Housing was designated as a social rather than an economic sector, with important consequences on the city. With the steady increase of the urban population, there was a growing shortage of housing. The heavy subsidies required were used for other investments that are considered more profitable. At the end of the 1970s the shortage of housing became apparent, during the socialist years the square meters per capita of living space per capita gradualy decresed. In addition, the inevitable bribery created inequities in housing allocation. A new historic era in China began in December 1978 when the Third Plenum of the Eleventh Central Committee was held in Beijing. From that moment, after years of economic stagnation, China began a period of transition. The urban housing reform was one of the major focus for the economic transformation and then actualized with all the due precautions and experiments. In April 1980 Deng Xiaoping made a speech on urban public sector housing:

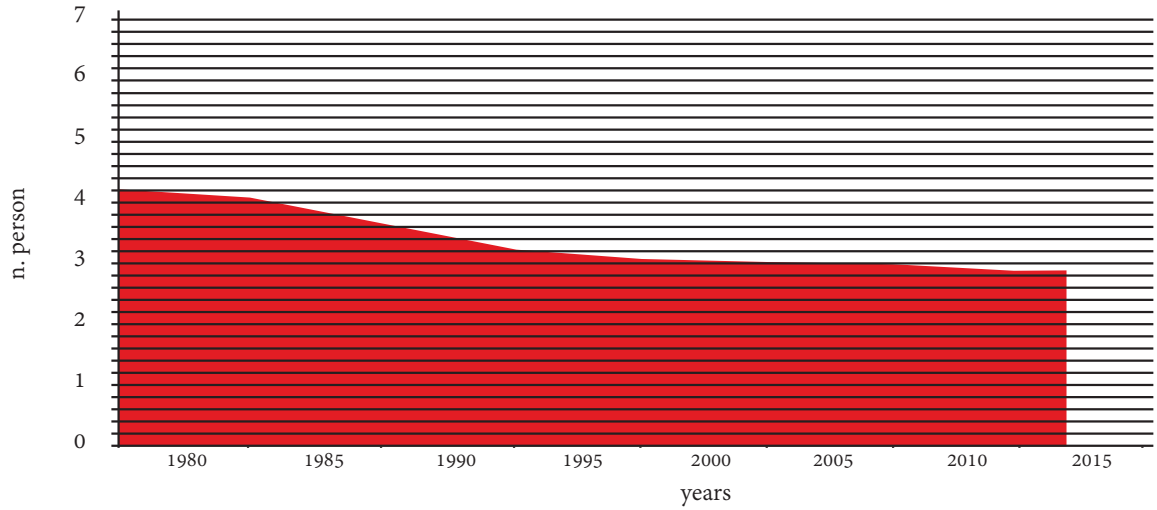
"... Urban residents should (be allowed to) purchase house, or to build their own houses. Not only new houses could be sold, old ones could be sold too. (The buyers may buy out-right; (they) may also pay by installment over a period of 10 to 15 years. I think the (public-sector) rent has to be adjusted in accordance with house building costs, and make people think purchasing worth more than renting … when increasing rent, low income workers should be subsidized. Housing policy should encourage the private and public sector to work together and the private sector may also participate in housing construction..." (Deng, 1980).

Starting from these guidelines different experiments were carried out in several cities during the years between 1980 and 1988. In this period there were few incentives to private, in 1990 the private housing still occupied only the 18.7% of all the total area of housing. During this time several competitors are tried to be introduce in the market without the privatization of public property. In the late 1980s, after several years of reform, most of the issues related to the housing sector continue to persist. The average floor space per person in urban area was 6.6 square meters in 1990. Housing investments continue to be insufficient. The first reform period was not successful in the aim to guarantee adequate return of the real estate investments. The low rent policy was the major cause of the several issues, including the low quality of new buildings and the bad quality of maintenance. During this period of change a quasi market economy was established in which market and central control both function. As a result, there was the creation of a rent gap between the subsidized rent and the market rent. This large gap led to the rise of a black market rent. At the beginning of 1988 the central government held the first national housing reform conference in Beijing. The conference, based on the previous experience of the various pilot projects, decided to launch a bigger step reform. The document "Implementation Plan for a Gradual Housing System Reform in Cities and Towns" extended the reform from the only pilot projects in selected cities to all the urban areas in the Country. One of the main points of the new reform was the increase of urban rents, marketizing the housing allocation and establish a fund for the public housing. This led to the rapid growth of housing sales. In the June 1991 the document "The Resolutions of The State Council about Appropriately Carry out Urban Housing Reform" detailed the goals and the procedures of the previous plan. One of the major action was to change the welfare distribution system with a monetary distribution. Instead of a distribution of accommodation by the government or the Work-Units, population had to provide to buy their own home from the market. This was possible because the increase of the average income in the urban areas due to the economic reforms. In July 1994 the State Council published an updated plan titled "the Decisions of the State Council on Deepening Urban Housing System Reform". This plan clarified the ownership of privatized public housing, which are right of occupation, right of use, right of profit and right of transfer, but the land in urban areas still State ownership. In addition, the 1994 plan clarified the difference between the different types of housing price: market price (free market price based on supply and demand), prime-cost price (price without profit set by the government) and standard price (subsidized price set with the average regions incomes level). The central government increased the demand for housing by reducing the housing sale price. This price was then raised gradually over the years, in order to make the housing sector self-sustained. The square meters per capita, which initially had reached 4,4 square meters, during the reforms period had a gradual increase and became 11,8 square meters per person in 2000. The government goal for living space per person is to reach 32 square meter by 2020, tripling unit size from 2000. In 2010 the average housing space estimated is approximately 16,7 square meter per capita with a family size of about 2,9 persons.



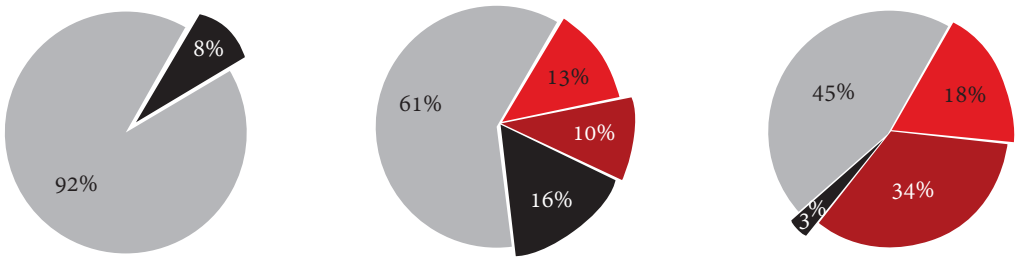
year	1980	1985	1990	1995	2000	2005	2010	2012	2020
sqm	4,4	5,4	6,6	8,0	11,8	14,9	16,7	17,3	32

(6. 10) Average floor area per capita in Shanghai



year	1980	1985	1990	1995	2000	2005	2010	2012
n. person	4,06	3,72	3,25	3,11	3,04	3,01	2,90	2,89

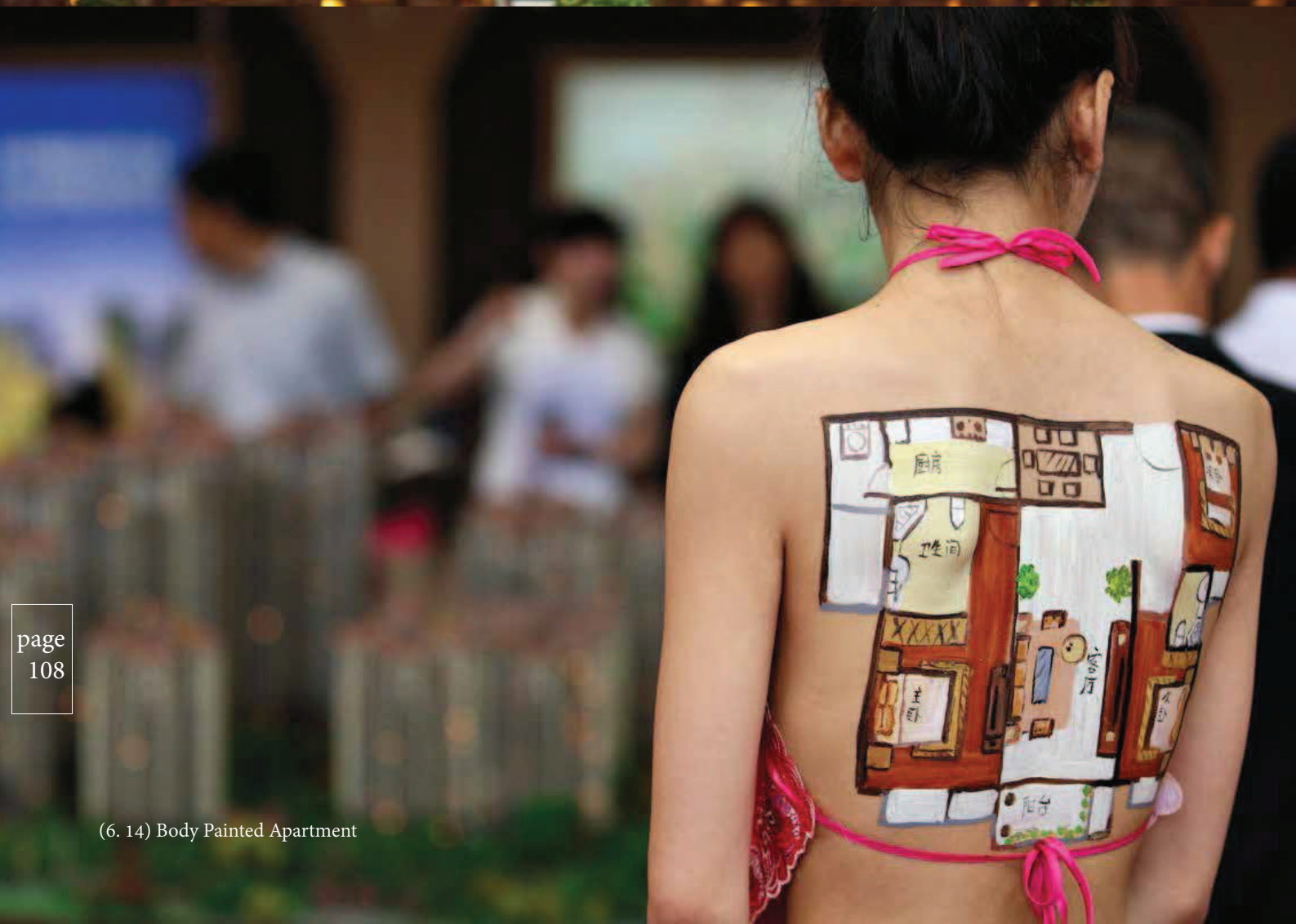
(6. 11) Number of person per urban household in Shanghai



year	1980	1985	1990	1995	2000	2005	2010	2012
total	45,43	118,56	227,08	1601,79	1869,67	3542,55	5371,67	5254,38
State	40,27	95,92	192,24	935,92	829,82	1240,27	2234,12	1855,24
Collective	3,58	10,44	18,29	247,11	156,34	131,07	183,07	112,41
Shareholding	-	-	-	150,17	421,53	916,27	1200,26	1417,80
Foreign	-	-	-	208,30	319,05	640,31	686,95	758,08

(6. 12) Total investment grouped by economic types (100 million yuan)

(6. 13) Workers install models in preparation for a real estate exhibition in Shanghai



(6. 14) Body Painted Apartment

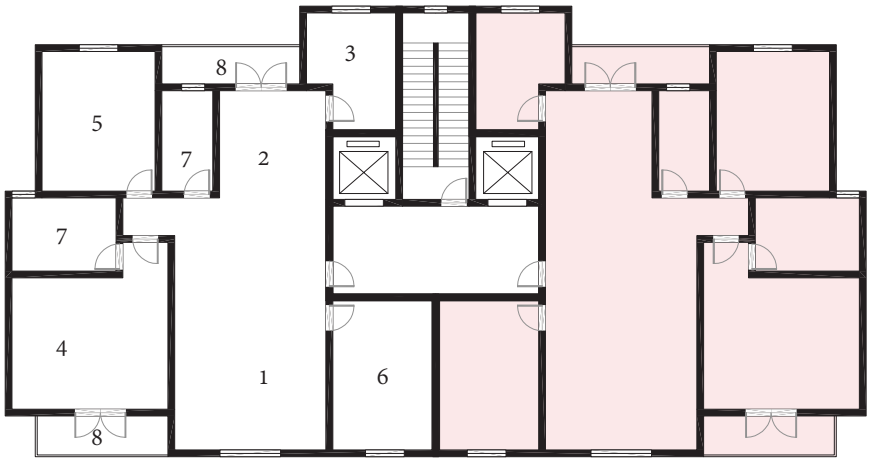
Many new investors crowd
the new free real estate market,
the design is often shaped
by the new trade rules

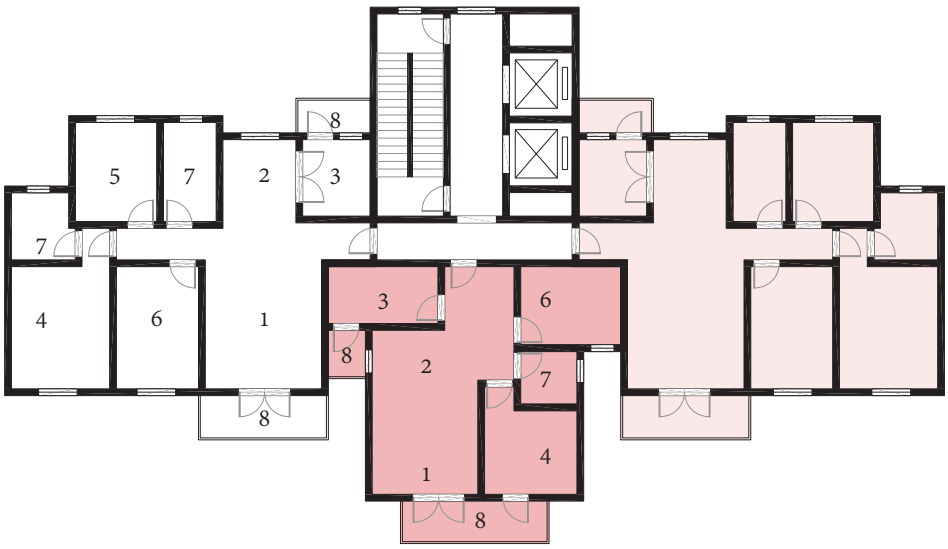
(6. 15) Google search for 高层住宅

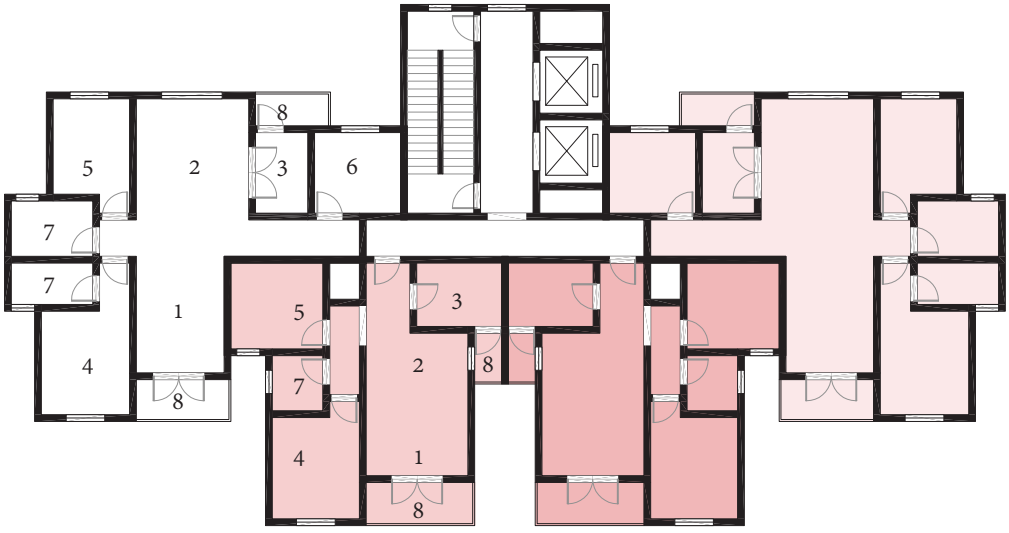
6. 4 Housing typology

The market economy replaced the former planned economy. The residential building in Shanghai played an important role in the formation of the new look of the city, with about 12 to 15 million square meters built annually. This sector was increasingly privately owned and sold since the early 1990s. The competitiveness and the overcrowding of the market make that the housing and its environment are studied with greater attention, from the market point of view, by investors. New buildings are designed in order to meet the needs and preferences of potential customers. A new taste for ornamentalism and mannerism is created by the new social values of the loss of the previous culture and the rise of commercialism. The government doesn't define rigid restrictions of building standards, except for basic regulations concerning the maximum building volume, building height and minimum services. Unique set limit is the 70 years long right land use owned by the government. The constructions are so adapted to the limited life period in order to achieve higher profit. The life expectancy of these new buildings is about 30 years, which varies depending on the location and the building target. The choice of the typology and the form are freely guided by the market. Cost and speed of construction are the main features of this architecture and these materials. In addition to speed up the design are often reused layout already tested, on which is applied a different skin that generates the identity and characteristics of the block. The architects receive specific guidelines from the developers, which define each point of the project to make it more competitive on the market. The target of this building typology is in the inner city a medium-high income, this means the presence of selected comfort and standards. Lighting and ventilation are the most significant aspects. These towers layouts are built around a central core, of stairs and elevators, placed in the north side of the building, where are usually distributed from two to four units. At the living room and the master bedroom is usually guaranteed the south exposure, while on the north side are arranged the various service rooms such as kitchens and bathrooms. The dining room, disposed in the north side, is connected to the living room. This open space provides a natural ventilation from south to north. Depending on the unit size additional rooms are added. They can be used as a small studio, bedroom for children or guests. The bathrooms ventilation, one common and one reserved for the master bedroom, is created through windows facing to the north. The kitchen, connected to the daily zone if necessary can be isolated, for noise and smells reasons, through sliding doors. This is also supplied with a small service terrace, usually used as storage, laundry and service room, in some cases an access to the emergency stairs is used for the waste management. From 1980 the living space grew gradually bringing the residential towers unit an average square meters of 80-120. The layout of four units per floor is characterized by smaller sized apartments that aim at a different target. The complexity of the layout is created by simple market rules and the different hypothetical buyers needs. The main aspect that emerges is a fragmented facade, full of moving back and ledges. This shape is a functional result in order to ensure a natural ventilation to all the rooms. Facade that characterizes most of the high-rise apartment. The high-rise buildings in China are often organized in residential compounds.

(6. 16) Lujiabang road







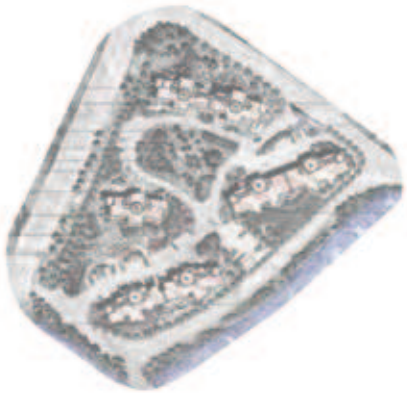
1. living room
2. dining room
3. kitchen
4. master bedroom
5. second bedroom
6. guest-room/studio
7. bathroom
8. terrace

(6. 17) Layouts types (2-3-4 unit per stairs)

(6. 18) facade detail

The minimal units, composed of a core and the apartments are joined together along the east and west sides in order to optimize the waste of construction materials, the construction speed and the building stability. The block is composed by an indefinite number of residential towers, depending on the lot size. The towers are often identical in layout, or can differ in few typologies. These are placed at a minimum distance in order to safeguard an adequate day lighting for all the apartments. For example, for towers lower than 100 meters, is required a minimal distance of 35 meters. The building height commonly doesn't exceed 35 floors. Often when the lot sizes is very small the towers can be placed in order of height (the lowest placed on the south side). This placement decrease the distance between them and optimize the small surface area of the lot. The underground levels provide ample parking space, they are directly connected to the several cores, creating an underground labyrinth that is used as a storage or as a bicycles and motorcycles parking. The ground floor is characterized by several gardens, for the only residents use, equipped with gym and fountains. All the boundaries are fenced and the inner side are hide by hedges or walls. Several guarded gates are placed at the entrances of the block creating a real gated community. Along the commercial streets, the more noisy, are also placed commercial basements that create additional shelter to the inner area and increase the economical value of the block. A settlement that refers to the Lilong block composition.

(6. 19) High-rise compound examples



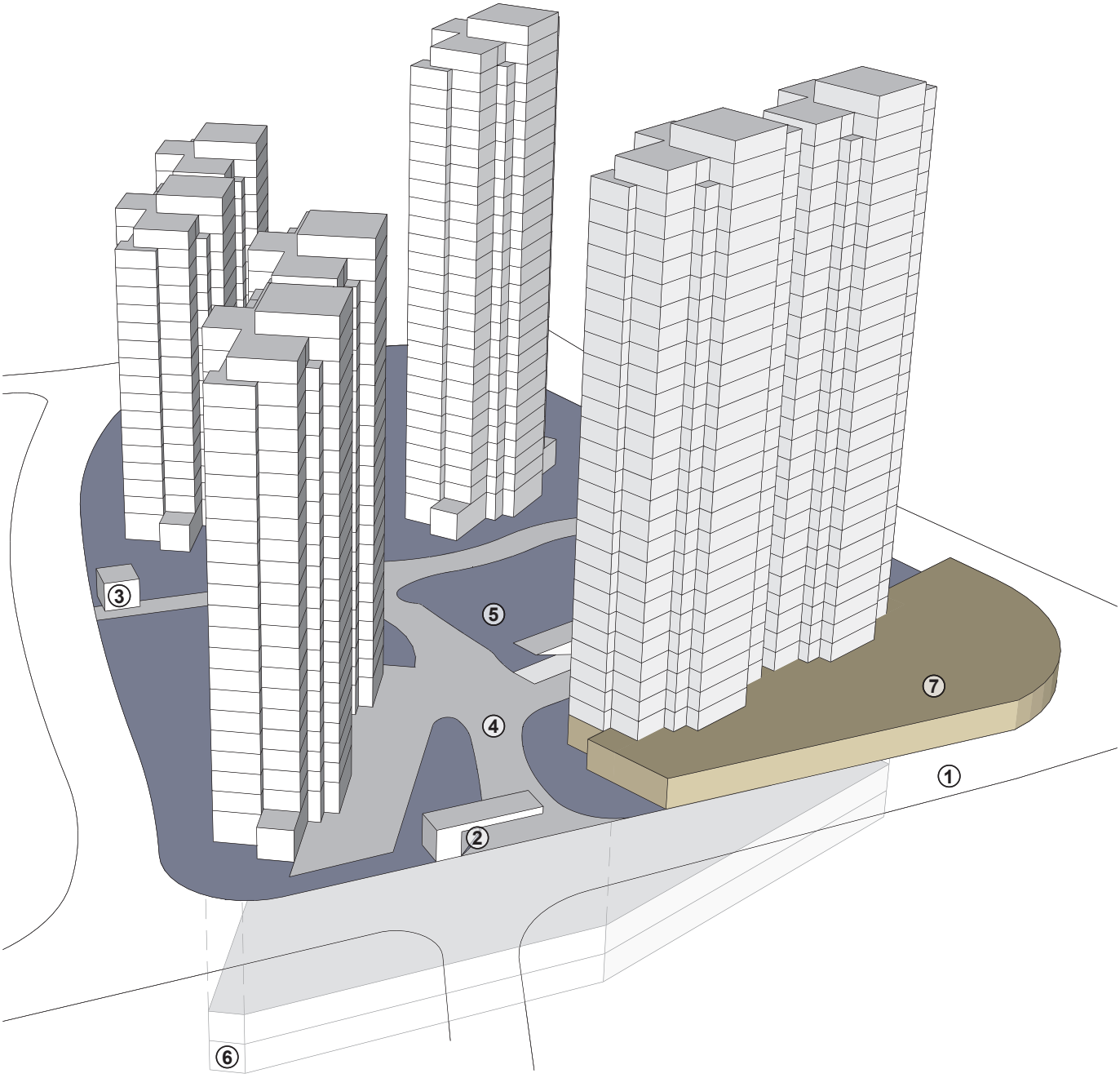
RUIJIAYUAN

1. Main road
2. Main community gate
3. Service gate
4. Block path
5. Inner garden
6. Parking

PUBBLIC FACILITIES

7. Commercial basement

RESIDENTIAL BUILDINGS



(6. 20) High-rise housing

(6. 21) Gated community

(6. 22) Compound guard

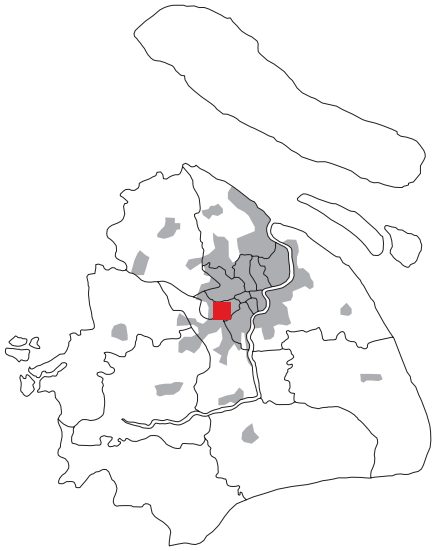
(6. 23) New apartment

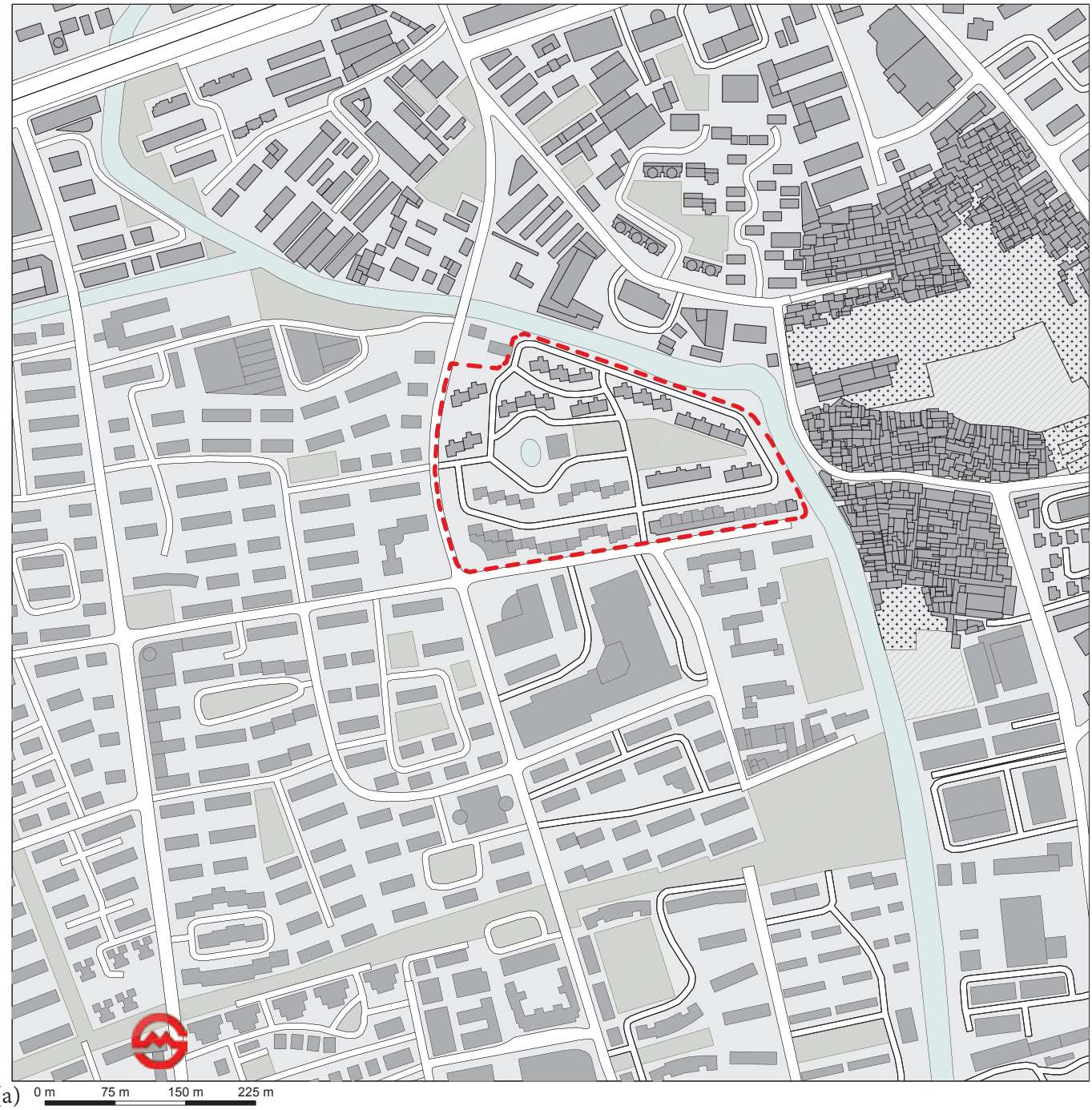
(6. 24) Common space

Anyway community that is created differs from the previous analyzed like Lilong housing and Work-Unit. A looser connection between units and communal space results from the vertical circulation, given just by the elevators. The different units arrangement with a greater verticality and the new capitalist and consumerist lifestyle creates a strong individuality. The strong interaction between the residents was created by the housing units fragmentation and the many activities carried out in the common lanes of Lilong neighborhood. In the socialist period the collective sense within Work-Unit block was due to the interaction of work and everyday life that united all residents. The community sense diminishes with increasing distance from the common areas, the amenities and the accommodation size. The high-rise housing is not the only reason of this loss, but also globalization and the rise of the new lifestyles that make locking up the new residents in their homes, eager to make money and collect every kind of facilities.

6. 5 Example

(6. 25) Jinhui Huaguang City, Shanghai:





(b) Main gate

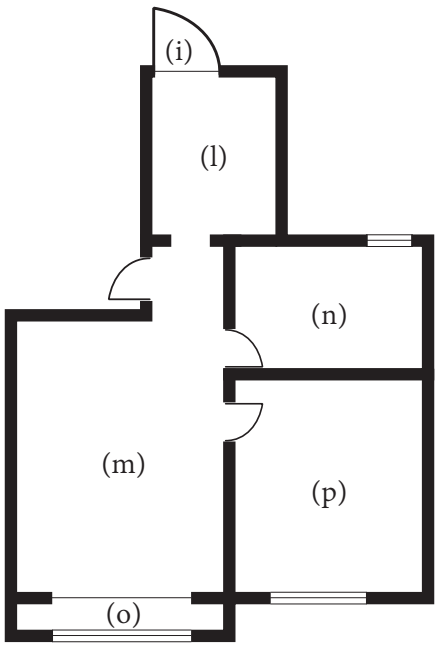
(c) Central fountain

Located in the northern part of Minhang District, the area is served by the metro line 10, with the stations of Shanghai Zoo in the north and Longbai Xincun station at the south. If compared between the Shanghai city center residential projects the compound can be considered medium-large in size, about 160000 square meters. It was developed in three stages between 1998 and 2003 and has a wide range of apartments types, from 75 to 300 square meters. The complex consists of 54 units divided into 15 residential towers with an average height of 10 floors and a plot ratio of 2.10 and 1003 households. The European classic architectural style is used to decorate the buildings. The main entrance, on Jinhui road, is highlighted with a white gate and decorated with lions sculptures. From the gate a flowery axis end in the central area where there is a large fountain decorated with white cherubs and as a background a small temple complete of pediment and columns. The different towers pitched roofs are covered with dark red tiles and the facade is decorated with white cornices. Several services for the community are present: a 24 hours security service, an underground parking (500 cars), a Club House for the residents, an outdoor bowling and tennis court and a children's playground. Between the buildings there are green space and gardens for the compounds dwellers outdoor time, the project greenery ratio is about 42% of the total area. On the Hong Song road side is built a commercial basement composed by supermarkets, restaurants and other services available for the community residents and not.

(d) Unit entrance

(e) Unit entrance

(f) Unit entrance



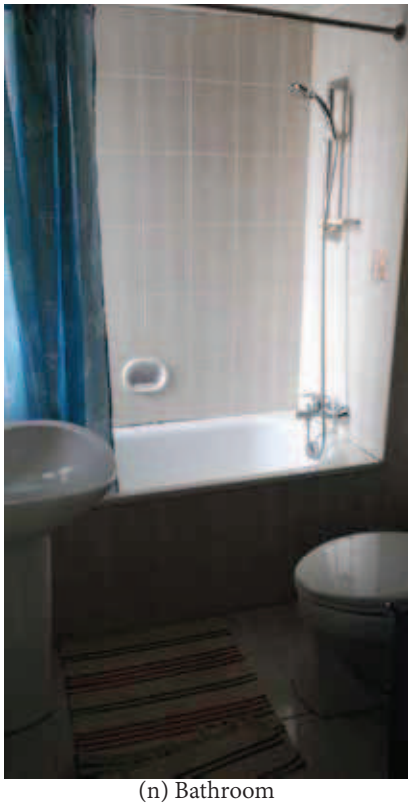
(g) unit plan

(h) Unit entrance

(i) Service terrace

(l) Kitchen

(m) Living and dining room

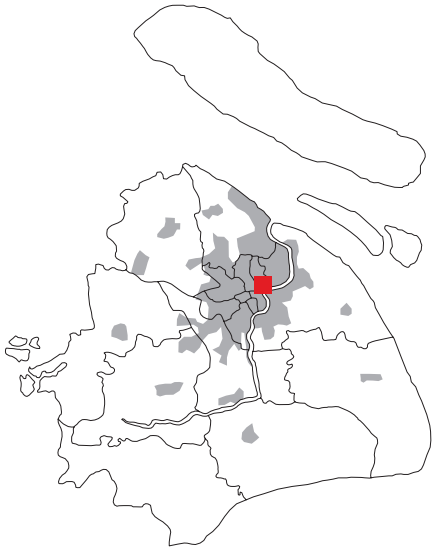


(n) Bathroom

(o) Terrace

(p) Bedroom

(6. 26) Yaojiang International Plaza, Shanghai:



(a)

(b) Residential building Block 4

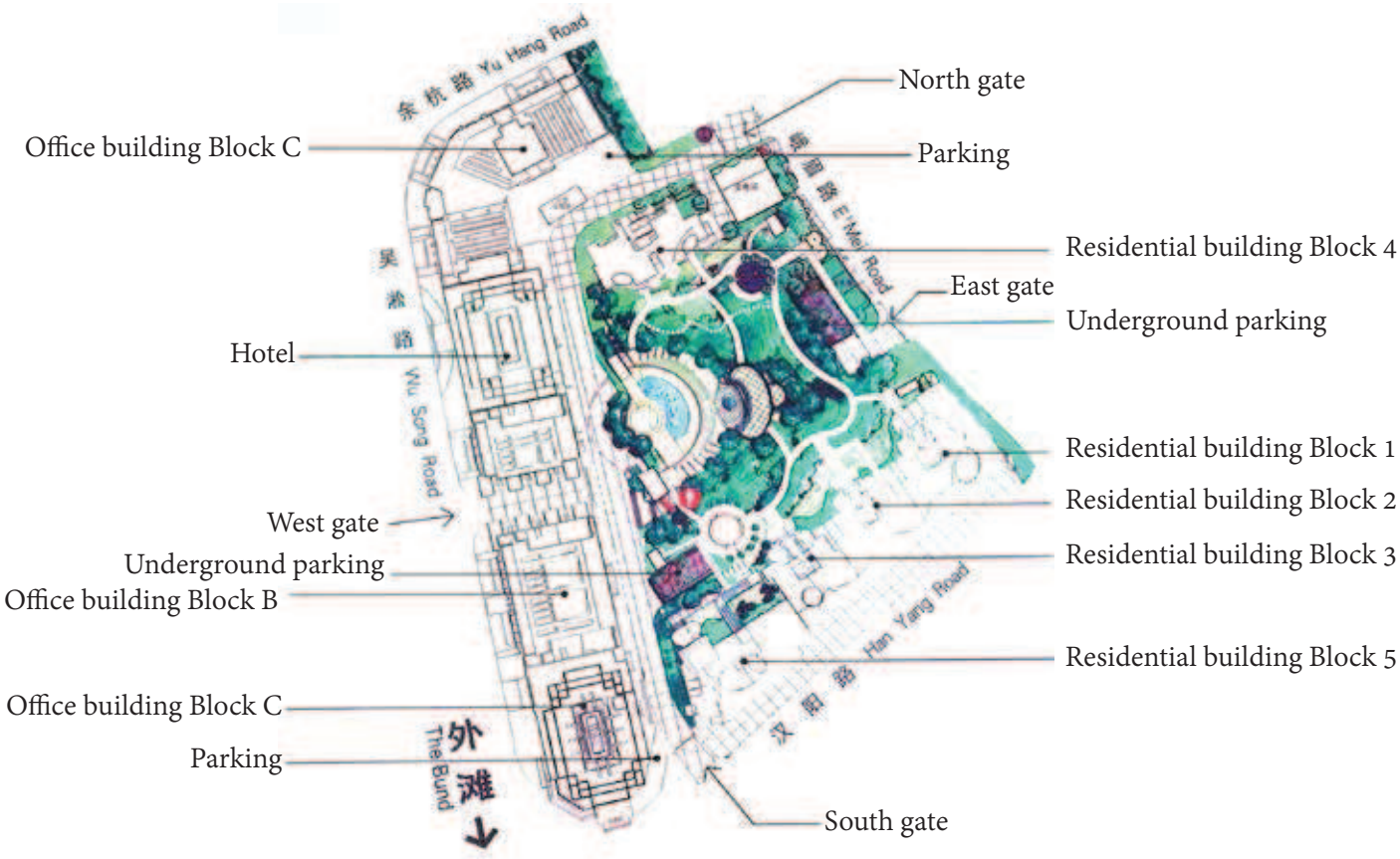
(c) Residential building Block 3

(d) Wusong road

(e) HanYang road

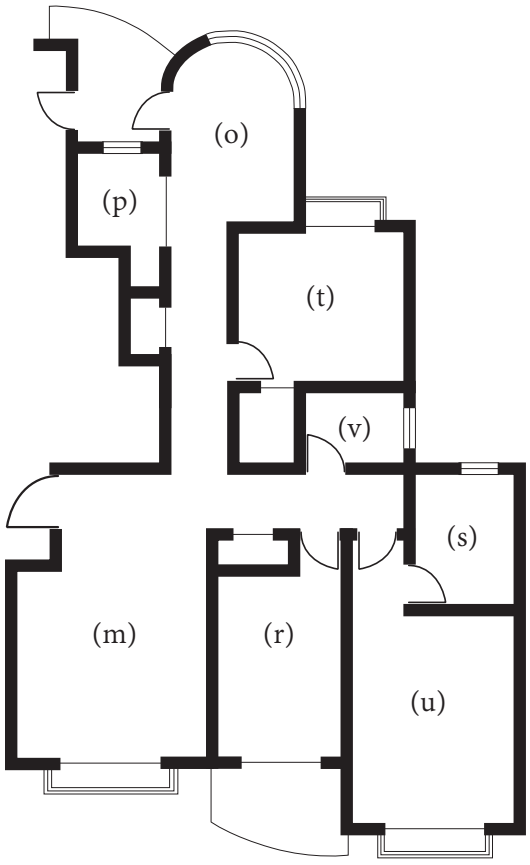
(f) E'Mei road

(g) East gate

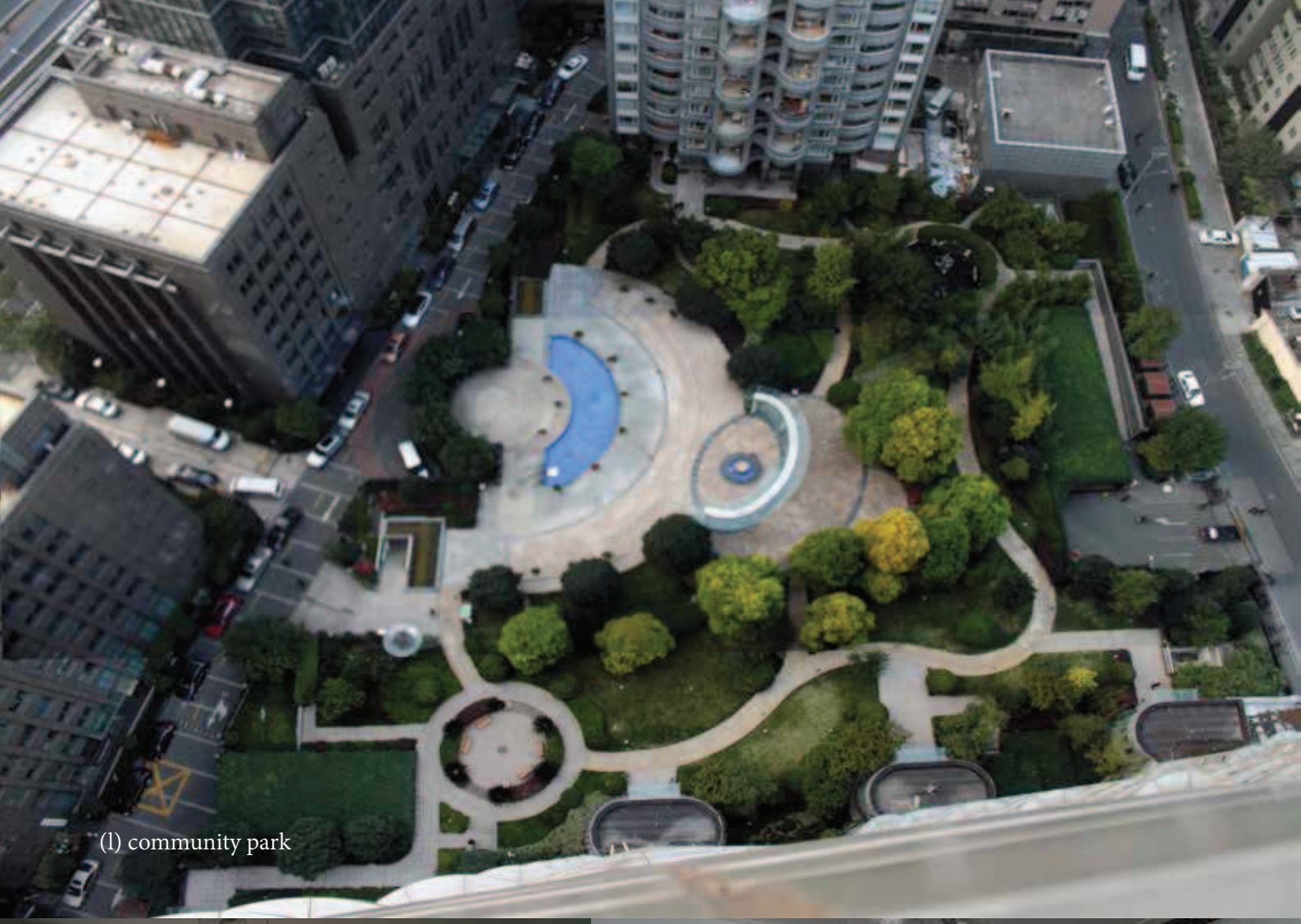


(h) masterplan

Located in Hongkou district in the North Bund area, close to the Shanghai Bund, the area is served by metro line 10 and line 4 with the station of North Sichuan road in the north-west and Hailun road in the north-east area. The complex, completed in the middle of 2006 is a mixed residential, commercial and retail compound, composed by four commercial, office and hotel blocks with two towers and five residential buildings blocks and a commercial basement on the HanYang road side with a 4.00 total plot ratio. The residences, with a total of 340 apartments, are spread into one 23 floors tower and four 32 floors towers (aggregated in two different building of 1 tower in the north and 3 towers in the South side). The unit size varies from 86 to 190 square meters. Between the different buildings, that are placed on the block boundaries, there is the community park, with a greenery ratio of 41%, composed by gardens, a little square with fountain and an outdoor gym. Furthermore the compound offers a 24 hours security service, an underground parking (400 cars) and several commercial activities on the boundaries as a supermarket, restaurants, bars and a drugstore.

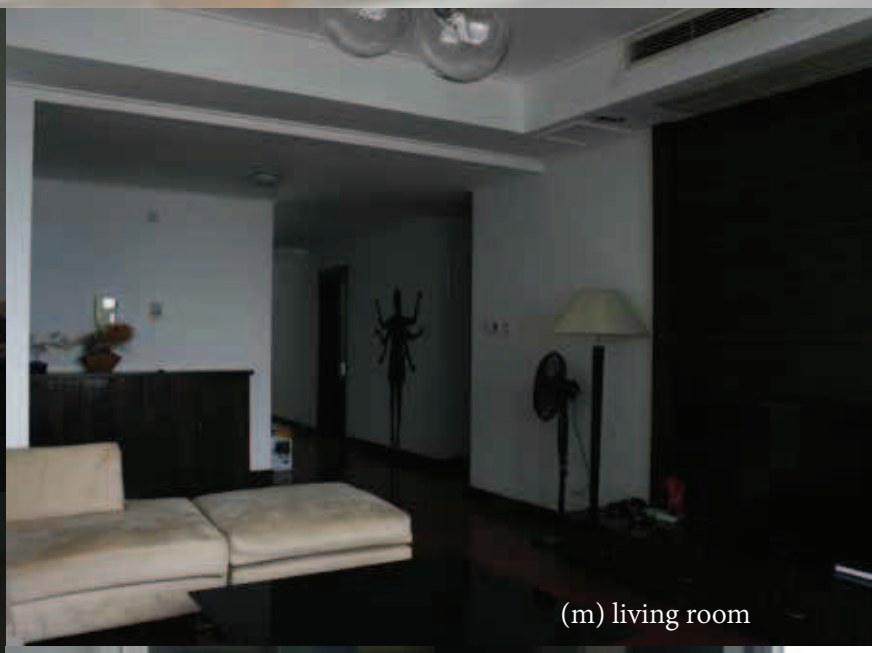


(i) unit plan

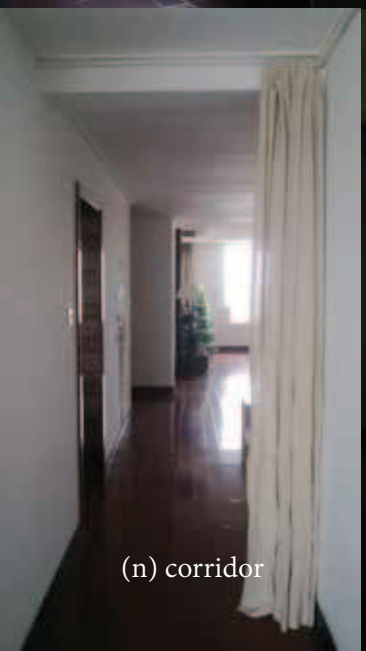


(l) community park

(m) living room



(m) living room

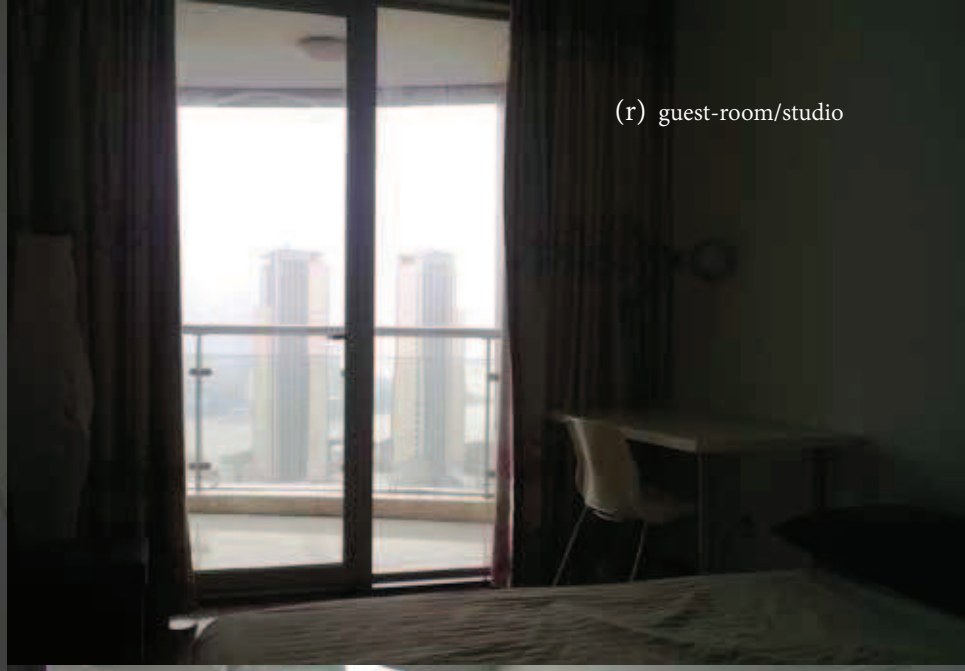


(n) corridor

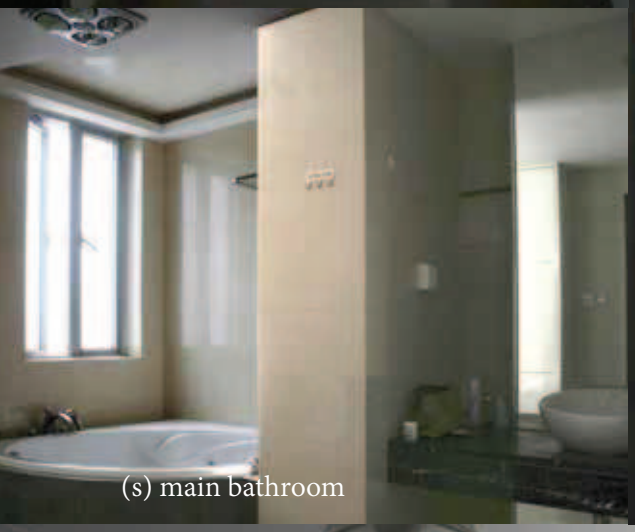
(o) dining room

(p) kitchen

(q) entrance



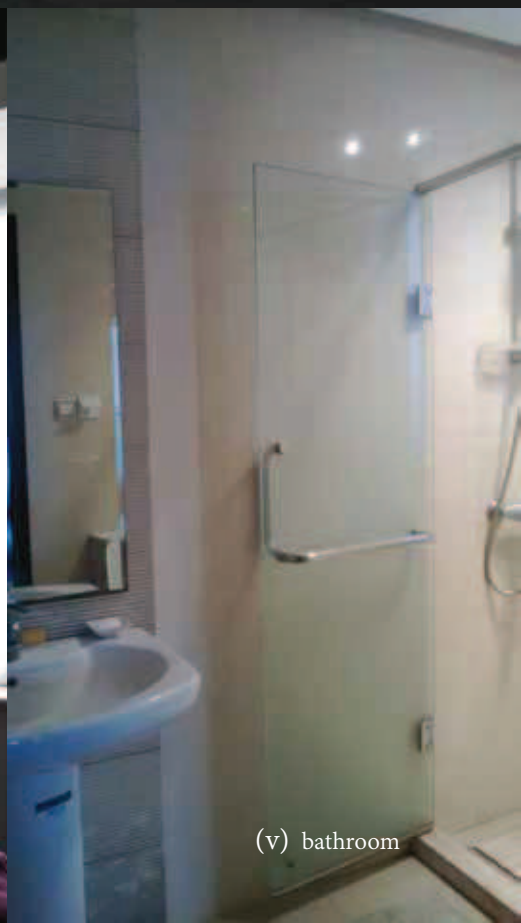
(r) guest-room/studio



(s) main bathroom

(t) second bedroom

(u) master bedroom



(v) bathroom

(5. 22) Shanghai, Quyang road

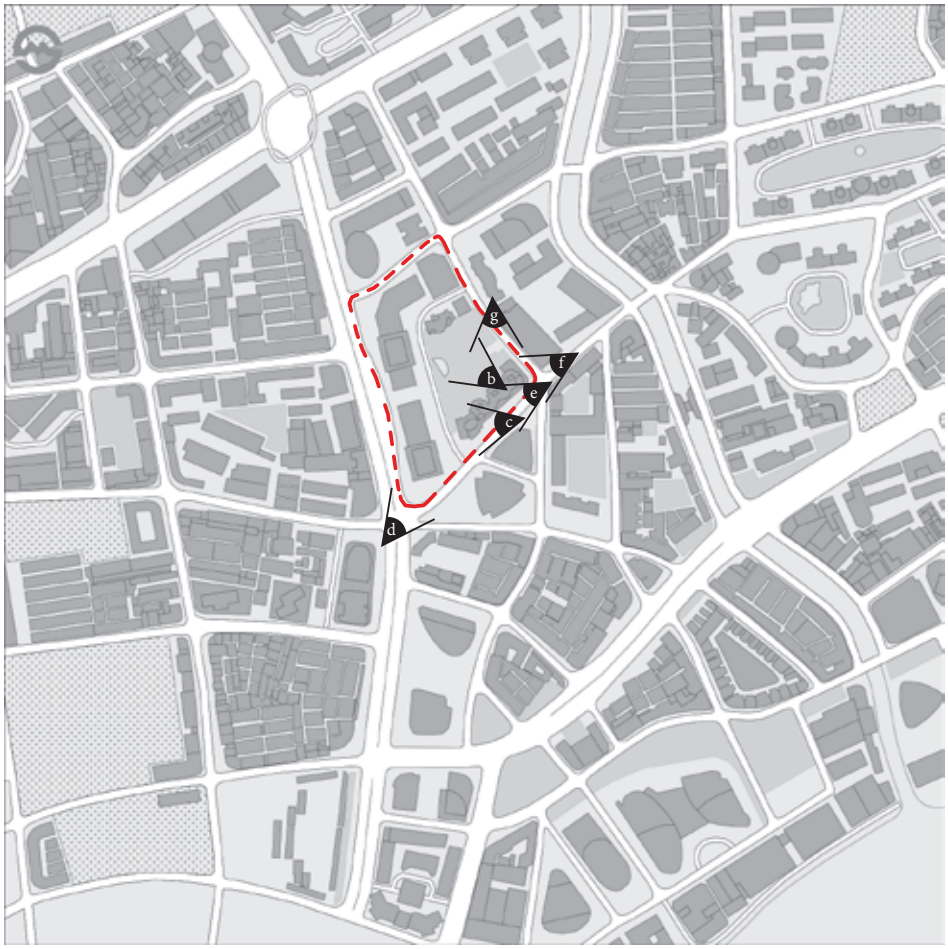
(6. 27) Shanghai, Gaoyang road

6. 6 Summary

The city of Shanghai is one of the fastest growing cities, in terms skyscraper construction, in the world. This growth started in the 1978 and the beginning of the second revolution. The real estate socialist market, based on the ideology that the housing belonged to the social sector and the State had to be provided for it, gradually, after a series of reforms, changed in a capitalist market, characterized by a free and competitive market based on the pure economic sector. Attracted by the 1990s economic boom many new investors, including foreigners, crowded the Shanghai market and changed the city's image. The high-rise housing was the typology favored by this new development. It optimized the land use, the construction speed and pushed to be the most economical as possible. This is usually made possible because the low quality of materials, construction and finishes. The choice of the type and its internal layout is often subject to the market rules. The developers usually control the internal layout, size and function, depending on the hypothetical clients needs. Often old models, valued profitable are used and adapted to the new demand. Where everything is fixed, the architect has the task of dressing these structures in order to give them character and make them arise within a crowded marketplace. The creation of a new social class characterizes the new houses style and the loss of the community sense, so important in the previous eras. The Shanghai's capitalist era is characterized by the glitz, almost extravagant, gated community, the new rich housing and the increasing individuality of the people.

- Jinhui Huaguang City, Shanghai:

- Yaojiang International Plaza, Shanghai:



Notes

(6. 1) SHANGHAI, Ruijiayuan（瑞嘉苑）: photo by the author.
(6. 2) Buildings over eight storeys: draw by the author, data: Shanghai Municipal Statistics Bureau (SMSB).
(6. 3) Shanghai Lujiazui Financial and Trade Zone: photo by Carlos Barria.
(6. 4) Shanghai, Per capita annual income and Engel's coefficient of urban households: draw by the author, data: SMSB.
(6. 5) Shanghai, Linping road: photo by the author.
(6. 6) Shanghai, Sun Wonderland boundaries: photo by Lowcola.
(6. 7) Shanghai, Sun Wonderland main gate: photo by renchenfc.com.
(6. 8) Shanghai, Sun Wonderland inner garden: photo by renchenfc.com.
(6. 9) Shanghai, Sun Wonderland apartment: photo by renchenfc.com.
(6. 10) Average floor area per capita in Shanghai: draw by the author, data: SMSB.
(6. 11) Number of person per urban household in Shanghai: draw by the author, data: SMSB.
(6. 12) Total investment grouped by economic types: draw by the author, data: SMSB.
(6. 13) Workers install models in preparation for a real estate exhibition in Shanghai: photo by Aly Song.
(6. 14) Body Painted Apartment: photo by bitrebels.com.
(6. 15) Google search for 高层住宅: photo by google search.
(6. 16) Lujiabang road: photo by the author.
(6. 17) Layouts types (2-3-4 unit per stairs): draw by the author.
(6. 18) Facade detail: photo by the author.
(5. 19) High-rise compound examples: photo by in order: -soufun.com -soufun.com -rizhao.dzwww.com -jiajienet.org -myliving.cn -cingov.com.cn -src.house.sina.com.cn -szjs.com.cn -soufun.com.
(6. 20) High-rise housing: draw by the author.
(6. 21) Gated community: photo by jo.sau.
(6. 22) Compound guard: photo by Peijin Chen.
(6. 23) New apartment: photo by ExcaliburZ.
(6. 24) Common space: photo by bricoleurbanism.
(6. 25) Jinhui Huaguang City, Shanghai: (a) draw by the author, photo by Bing map.
(b) photo by kahchoo2009.
(c) photo by kahchoo2009.
(d) photo by baidu street view.
(e) photo by rent.myliving.cn.
(f) photo by sh.esf.sina.com.cn.
(g) draw by the author.
(h) photo by kahchoo2009.
(i) photo by kahchoo2009.
(l) photo by kahchoo2009.
(m) photo by kahchoo2009.
(n) photo by kahchoo2009.
(o) photo by sh.esf.sina.com.cn.
(p) photo by kahchoo2009.
(6. 26) Yaojiang International Plaza, Shanghai: (a) draw by the author, photo by Bing map.
(b) photo by the author.
(c) photo by the author.
(d) photo by baidu street view.
(e) photo by baidu street view.
(f) photo by baidu street view.
(g) photo by baidu street view.
(h) based on a photo by the author.
(i) draw by the author.
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(q) photo by the author.
(r) photo by the author.
(s) photo by the author.
(t) photo by the author.
(u) photo by the author.
(v) photo by the author.
(6. 27) Shanghai, Gaoyang road: photo by the author.

7

(7. 1) Urban village Hailun Area

URBAN VILLAGES
城中村

7. 1 Introduction

In the modern urbanization informality was and is a regular constant of rapid urban growth.During the early industrialization, in an economic development period, already in the Wester countries the rapid urbanization was responsible for many imbalances. Assign land to industries, worker houses and public services was very difficult. At first the public authorities tried to plan standards, as the minimum level of fire protection and public health, but the large migration to the city made their control and the execution difficult.

(7. 2) 'A Court for King Cholera'

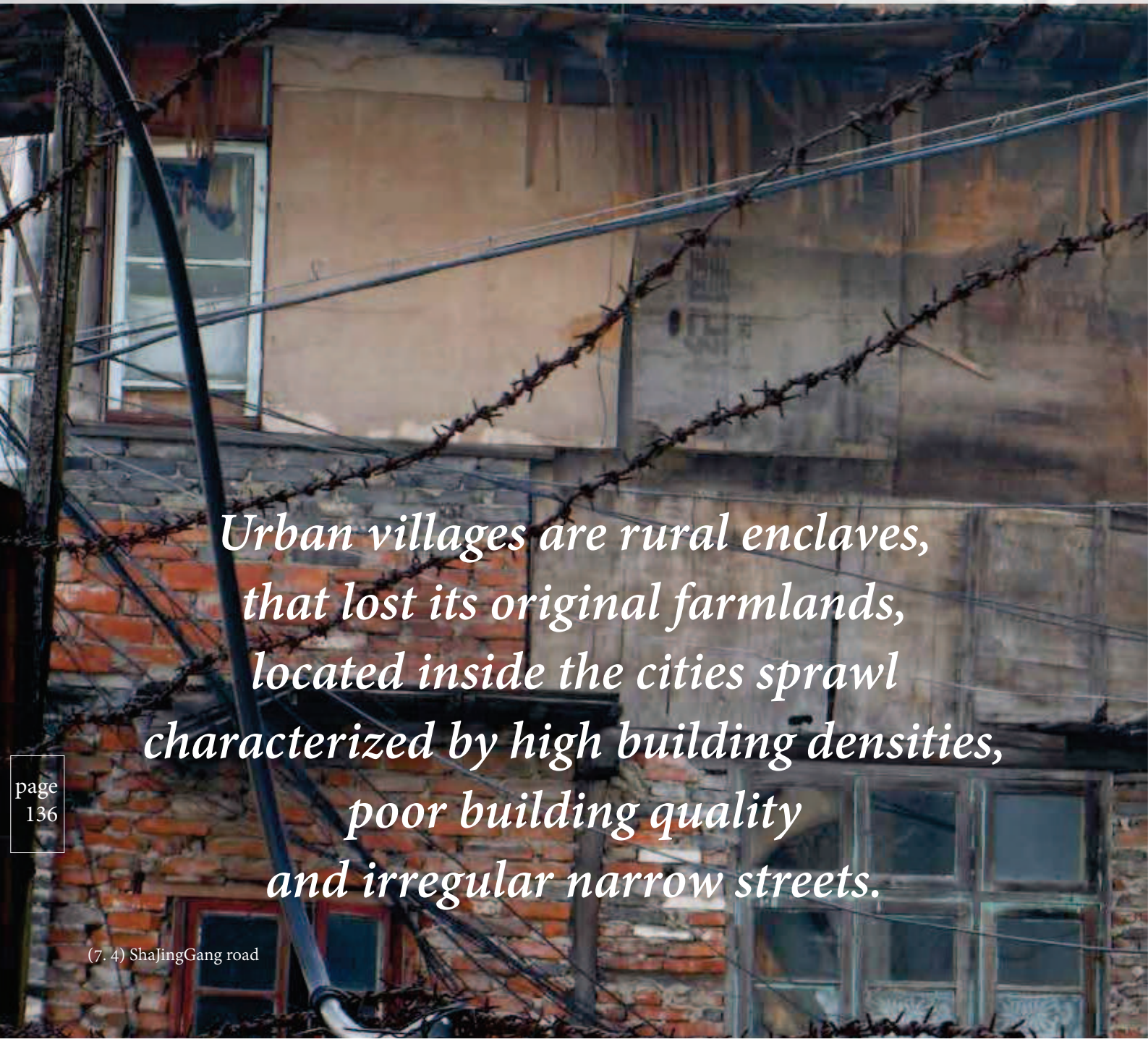
The life conditions that are created are well described by Friedrich Engels during his travel in Manchester in the first half of the nineteenth century:

"... The whole assemblage of buildings is commonly called Manchester, and contains about four hundred thousand inhabitants, rather more than less. The town itself is peculiarly built, so that a person may live in it for years, and go in and out daily without coming into contact with a working-people's quarter or even with workers, that is, so long as he confines himself to his business or to pleasure walks. This arises chiefly from the fact, that by unconscious tacit agreement, as well as with outspoken conscious determination, the working people's quarters are sharply separated from the sections of the city reserved for the middle-class; ... I may mention just here that the mills almost all adjoin the rivers or the different canals that ramify throughout the city, before I proceed at once to describe the laboring quarters. First of all, there is the old town of Manchester, which lies between the northern boundary of the commercial district and the Irk. Here the streets, even the better ones, are narrow and winding, as Todd Street, Long Millgate, Withy Grove, and Shude Hill, the houses dirty, old, and tumble-down, and the construction of the side streets utterly horrible. Going from the Old Church to Long Millgate, the stroller has at once a row of old-fashioned houses at the right, of which not one has kept its original level; these are remnants of the old pre-manufacturing Manchester, whose former inhabitants have removed with their descendants into better built districts, and have left the houses, which were not good enough for them, to a population strongly mixed with Irish blood. Here one is in an almost undisguised working-men's quarter, for even the shops and beer houses hardly take the trouble to exhibit a trifling degree of cleanliness. But all this is nothing in comparison with the courts and lanes which lie behind, to which access can be gained only through covered passages, in which no two human beings can pass at the same time. Of the irregular cramming together of dwellings in ways which defy all rational plan, of the tangle in which they are crowded literally one upon the other, it is impossible to convey an idea. And it is not the buildings surviving from the old times of Manchester which are to blame for this; the confusion has only recently reached its height when every scrap of space left by the old way of building has been filled up and patched over until not a foot of land is left to be further occupied. … Above Ducie Bridge, the left bank grows more flat and the right bank steeper, but the condition of the dwellings on both banks grows worse rather than better. He who turns to the left here from the main street, Long Millgate, is lost; he wanders from one court to another, turns countless corners, passes nothing but narrow, filthy nooks and alleys, until after a few minutes he has lost all clue, and knows not whither to turn. Everywhere half or wholly ruined buildings, some of them actually uninhabited, which means a great deal here; rarely a wooden or stone floor to be seen in the houses, almost uniformly broken, ill-fitting w and doors, and a state of filth! Everywhere heaps of debris, refuse, and offal; standing pools for gutters, and a stench which alone would make it impossible for a human being in any degree civilized to live in such a district...."

(From Friedrich Engels, The Condition of the Working-Class in England in 1844 (London: Swan Sonnenschein & Co., 1892))

(7. 3) Back Qinglongqiao road

In China, the economic and institutional environment of urbanization resembles the characteristics of urban growth during European industrialization, with significant differences.
In the first phase of urbanization process, between 1949 and 1990, China has managed the rapid urban growth without the creation of large slum areas thanks to a strictly control of rural-urban migrations. During these time the government provided housing for 300 million people without inequality. With the liberalization of migration policy as part of the economic reforms after 1978, rural-urban migration has turned into a massive flow. "Already in 1995 it was estimated that more than 80 million rural-urban migrants resided in China's major cities. This would be one of the largest flows of labor migration in history" (IIASA (a))- Since then, the flow has increased even further. The difficulties and challenges generated by a policy which tries to accommodate unskilled migrants as cheap labor in urban agglomerations with rapidly growing economies are camouflaged with the concept of floating population (liúdòng rénkǒu 流动人口) residing in urban villages. The political and administrative management of these constructs introduced strong elements of informality into urban land management and planning.



Urban villages are rural enclaves, that lost its original farmlands, located inside the cities sprawl characterized by high building densities, poor building quality and irregular narrow streets.

(7. 4) ShaJingGang road

7. 2 The Chinese Urban Village (Chéng zhōngcūn 城中村)

Slum areas don't exist in China. These informal neighborhoods are referred to as “urban villages”. This political term contain some truth because these areas are not slums in the strict sense of the word. Urban villages in China, just as its name implies, are rural enclaves, that lost its original farmlands, situated inside large cities characterized by the high building densities, poor building quality and irregular narrow streets. Anyway these neighborhoods typologies share some important characteristics with informal settlements:

- Legal: A big part of buildings violate against building and urban planning regulations.
- Physical: If the local residents have access to basic public services and facilities, most migrants have illegal con nections to water and electricity. Toilets and kitchen spaces are usually shared.
- Social: Most settlers belong to the lower income groups, they mainly work as laborers in construction, transportation, privately owned small informal enterprises.

Urban villages are different, so the characteristics change based on several conditions. The major differences are made by the location inside the city and the developing step. These informal neighborhoods are present in all the biggest Chinese cities, that had a fast growth. They are a typical urban settlements in the Pearl river delta region. Shanghai urban villages are less developed than the ones in the Guangzhou and Shenzhen areas. Settlements have a smaller size, buildings and density are lower. However in Shanghai this typologies still a clearly recognizable.

7. 3 Social groups

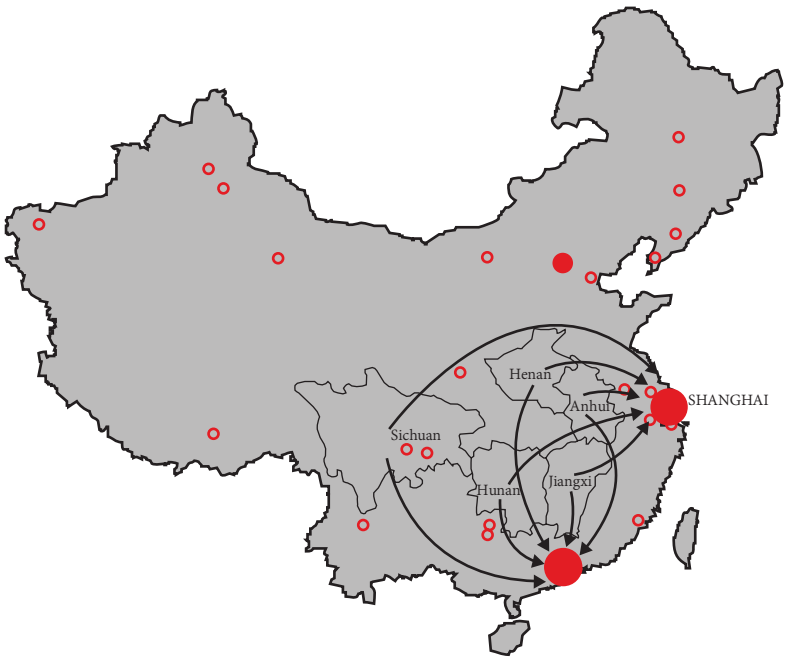
Urban village is made by several people typologies, that can be summed in three different social groups: indigenous villagers, migrant workers and urban residents. These categories housing conditions and ownerships are not uniform for different groups. Depending on the evolution step and the location, density and proportions of these three different populations ranging. More mature urban village is more density rises and the difference between the number of indigenous villagers and migrant workers and increases.

-Indigenous villagers:
most of them were born and grew up in the village and entitle to their house ownerships. Because the rural environment they still in a low education condition. Born as farmers, after the fields lost their incomes are given by small scale business in the ground floor and houses rent. They still registered under the rural village hukou.

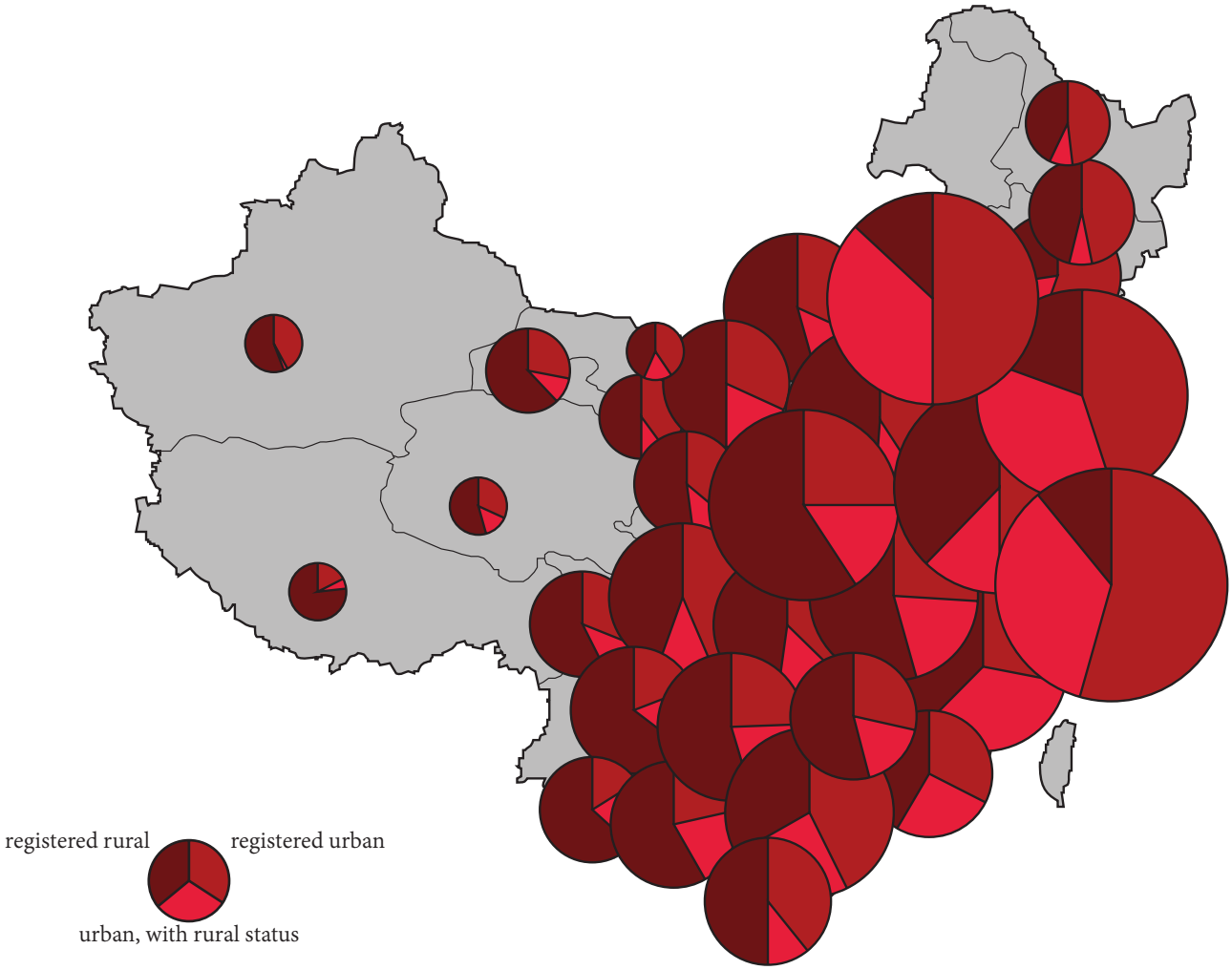
-Migrant workers:
they usually are surplus rural labors from Chinese rural provinces such as Sichuan, Anhui, Henan, Hunan, or Jiangxi. Most of the migrants are in the economically active age and married, but less than half of them migrated with their family. The majority are less educated than the urban population, though better educated than the local rural population. Earning money is the main, the only reason for move in the city. This population is registered under the rural hukou of the birth place. They are called temporary residents because moved in a different place of their registration location and are not legally classed as members of the destination community. Therefore migrant workers can't use the urban hukou services, they have very limited or no access to local schools, citywide welfare programs, health system, state sector jobs, or the social housing system. They have no access to the formal urban housing market, so migrants rent a room in the crowd urban village. In order to save money the can also share small space without any facilities as bathroom or kitchen. This population is usually know as floating population, cheap laborers working in the industrial and service sectors in large Chinese cities. most migrants are fluctuating between their rural home and their urban job without becoming urban residents.

-Urban residents:
they stay in the village but hold urban hukou, including those born in the village but move their hukou to working place or live in the village but come from other urban areas.

(7. 5) Mature village populations distribution



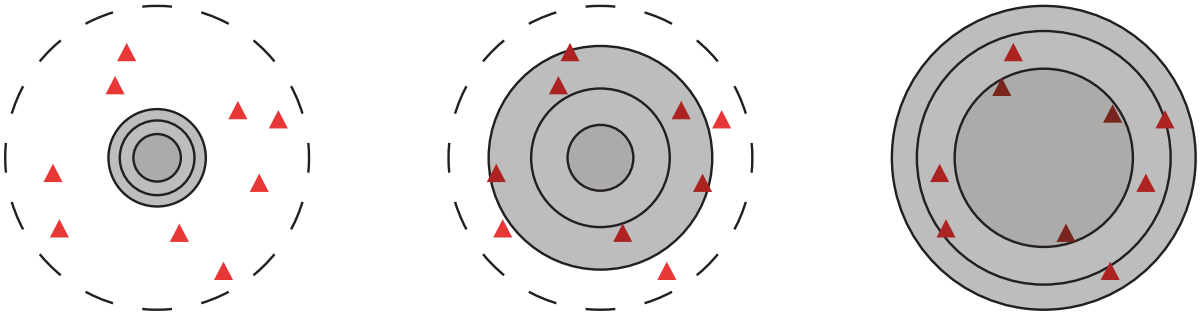
(7. 6) Workers migrations



(7. 7) Population %

7. 4 Urban village evolution

Rapid urbanization caused urban sprawl and urban built up areas extended in most areas of China in the past 30 years. Based on their location, their stage of development and their position in the city, urban villages can be divided into three categories: embryonic, growing and mature. In the first stage, village sites are considered in the urban land use plan, but still situated far from built-up urban areas. In the second stage, urban development approaches the rural boundary, where urban and rural land uses interlace. In the final stage, rural farmland is converted into urban uses, and the urban villages became rural enclaves in the city sprawl.



(7. 8) Urban Village evolution

state ownership land

collective ownership land

villages located in the city sprawl area do not automatically become part of the city, but maintained its rural administrative and living features.

Land ownership is one of the main cause of the informal settlements generation. After the First National People's Congress in 1954 land ownership in China has been divided into state ownership (guóyǒu tǔdì 国有土地) and collective ownership (jítǐ tǔdì 集体土地). The difference is clear. The state ownership lands are mainly used for urban development. They are urban land areas, confiscated, levied and requisition rural lands, barren mountains and lands. Chinese central government has the ownership of urban land and individuals and enterprises can apply to become the legal users. The collective lands are rural lands. They are used farming and villagers self-help housing. Collective has the ownership of rural land. It manages the land into different units by village catchment. Collective lands can be used only by village households, collective economic organizations and collective enterprises. For this distinction, between pubic and private land, villages located in the city sprawl area do not automatically become part of the city, but maintained its rural administrative and living features. A collective ownership land become a state ownership land only when all the village households change from rural hukou to urban hukou.

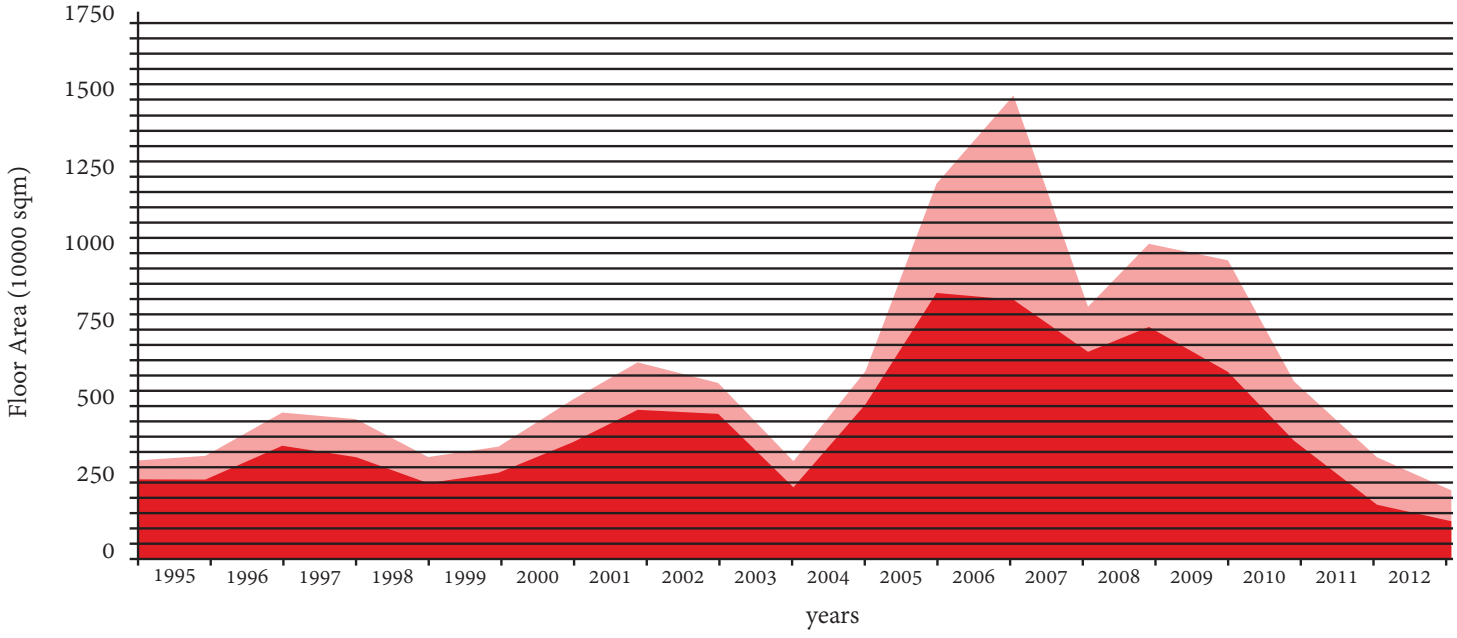
(7. 9) Gui jing cun village

Village's population is mainly made by farmers. Collective land is divided in order to provide for each family a property house and a farmland. Villages inside the city expansion areas are called urban villages. With the city growth they start to be incorporated in the city life. The first step is the loss of the surrounding farmlands. Easier expropriation fields become state owned and built. Millions of hectares of agricultural land in suburban areas have been converted into roads, large commodity housing projects, industrial parks, technology development zones etc. However, the development of populous village sites with built-up areas remains undesirable for developers. According to China's land expropriation and compensation system, the land value is determined by the type of land, size of land and the compensation for houses, crops, trees and other properties on the site. Therefore, built-up areas are much more costly to develop than vacant land or farmland. As a result, the high costs of resident relocation and housing compensation keep developers away from built-up areas. Gradually the villages become rural pocket enclaves surrounded by high-rise housing projects, industrial parks, technology development zones and highways. Although the presence of such enclaves is often in conflict with urban land use plans, the rising land value and growing density will make redevelopment profitless, hence the village sites are left as they are. Village rural resident become farmless, without their original agricultural profits villagers have to change jobs more related to the urban life. With a low education level and no industrial, retail and office working background village farmers are difficult to find jobs in the city. The main incomes become small informal business and the rent of their property house. One of the most important competitive advantages driving China's economic development is cheap labor. Most of the unskilled laborers working in the industrial and service sectors in large Chinese cities are not part of the urban population or of the local peasantry in the urban peripheries, but surplus rural laborers from rural provinces. Urban village inside the urban borderline and well served by city services become a privileged destination for migrants who are searching cheap rent houses. Based on the 2000 census, about 3.87 million rural-urban migrants lived in Shanghai. Rent is the only income of farmless, so in order to make more money, households have extended their houses as far as possible. Village become dense because these unplanned extension. More the city expands the value of the area increases and the surrounding city services grow. In this phase urban village is mature. The buildings, already occupied all the available space, start to be higher.

Become over crowed, urban village is resulting in a chaotic built environment, an unhealthy living environment, and security and social problems. In order to solve the administrative, live standards, aesthetic issues and because the high price land government try to redevelop the area.

Redevelopment of urban village has become more and more popular in the recent years. It consist in the demolition of the old settlements and rebuild a new neighborhood. However last trends show that the research is in progress, on these topic, in order to find new redevelopment way. Local government has to mediate between collective administrator and developers. According to the Chinese Urban Redevelopment Policy developer has to provide, during the demolition and rebuild times, a relocation or temporary resettlements and a cash compensation, the price depends on the local quality of life standards. Urban village is owned by the collective that is made by several villagers. To expropriate the area all residents should be agree, so bigger and populous is the village more difficult is the redevelopment. Conflicts between developers and village households happened a lot, because of low compensation for housing plots. Usually village leaders often assume that when village collective lands transit to public ownership and put on the land market will depend on their decisions. Individual households' decisions have often been ignored in most villages and the bribery phenomenon become worse and worse between developers and village leaders. The conventional substitution of the informal density is formal density. Using density to handle density seems like the most effective and efficient way for redevelopment of urban villages. Firstly, property owners are able to obtain high compensation rate and share the benefits of the real estate development; secondly, private developers are able to promote business growth by developing more dense urban areas; and thirdly, local government is finally able to obtain the control of urban village lands. Not all the times the redevelopment is quickly negotiable. So the state often decides to work around the problem. As owner of the surrounding land, the village edges are closed through new buildings or walls.

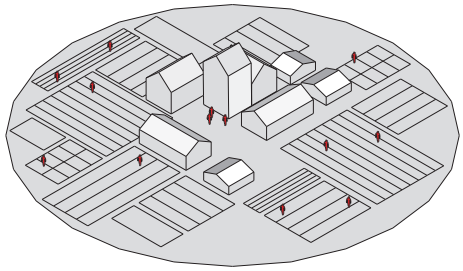
(7. 10) urban village Nanpu bridge area



year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
total unit	75777	89132	79857	78205	75185	70606	73728	101097	80858	42415	75857	81126	51354	53583	68286	39721	23112	21910
residence	73695	86481	77388	75157	73709	68293	71909	98714	79077	41552	74483	76874	49092	51288	65439	38441	22349	21262

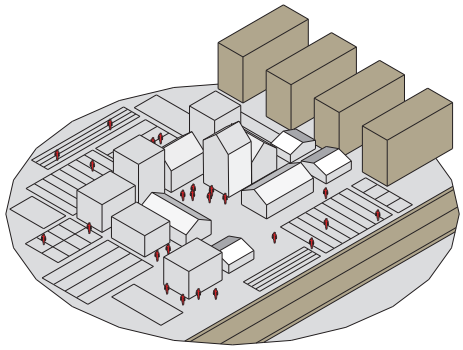
(7. 11) buildings expropriation (resettlement)

1.



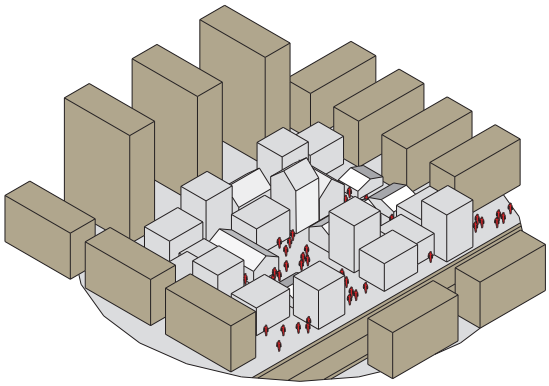
NATIVE VILLAGE

2.



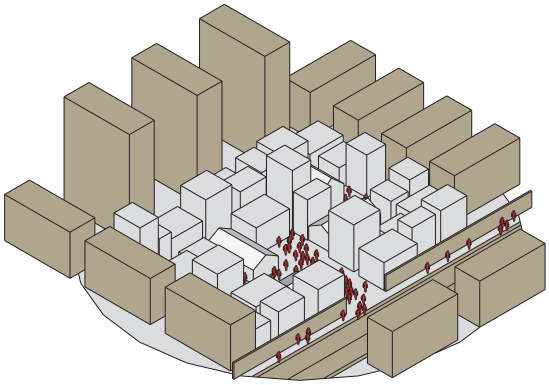
EMBRYONIC
URBAN VILLAGE

3.



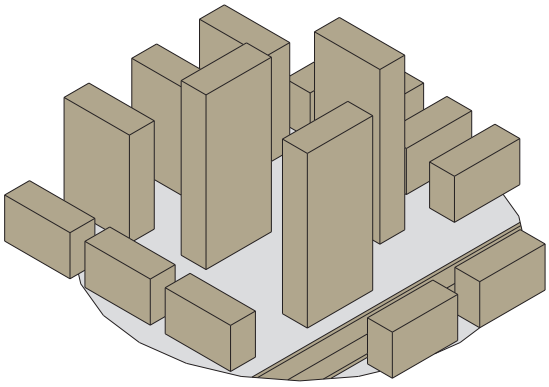
GROWING
URBAN VILLAGE

4.



MATURE
URBAN VILLAGE

5.



REDEVELOPED
AREA

(7. 12) Urban village evolution

(7. 13) Wuzhou road

7. 5 Boundaries analysis

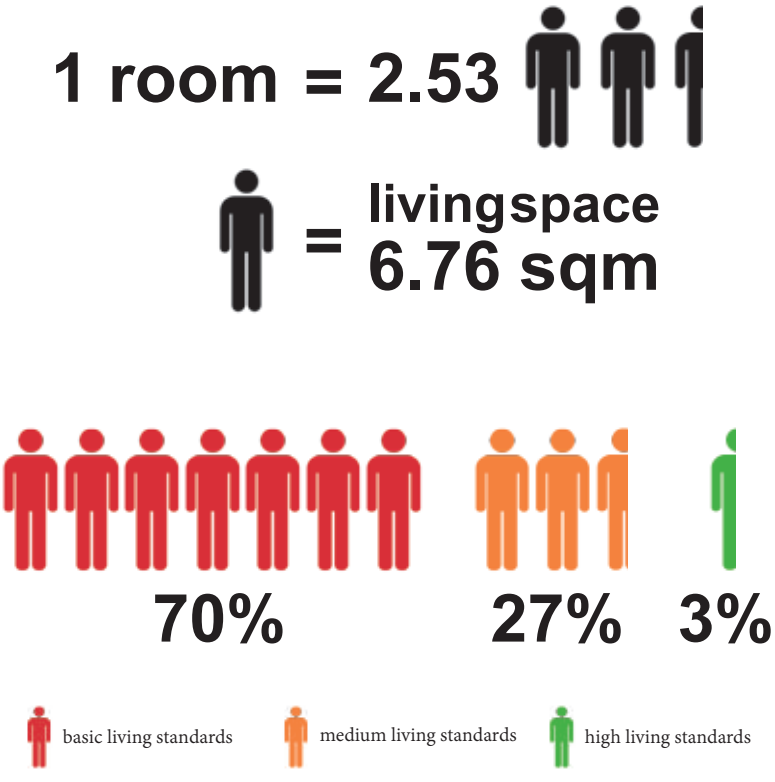
As already said, urban villages can be divided into three categories based on their evolution phase. With the evolution of the village also the boundaries change. Aerial photographs provide ample evidence of the juxtaposition of informal and planned neighborhoods in Chinese cities. Embryonic borders are less clear, but city starts to influence the settlement. Surrounding areas is made by several elements, natural elements, as river, infrastructures, new city housing environment and agricultural environment. On this stage some villagers keep their agricultural condition, but most of the activities start to be small business and rent. Urban village become mature with the city growth. Boundaries are more marked and stop the village lands. Collective losses his farmland and buildings start to polarize and become dense. From the outside it appears as a set of undefined elements. The various buildings are crowded each other going to form a single element only cut by narrow streets. In the last phase a direct relationship with the city is get lost. Along the road that divide the village from the city is built a real wall in which are placed the entrance gate from which sprout the various buildings. The area then becomes a construction area, where part of the demolition has already begun, waiting for all residents to be expropriated, on the walls are usually placed slogans of the future redevelopment. If the expropriation is not feasible in the short term, the surrounding area is built up. Only new buildings are visible from the street, that open only in a few points to pass the large flow of people from the inner village to the city and vice versa.

7. 6 Building typologies analysis

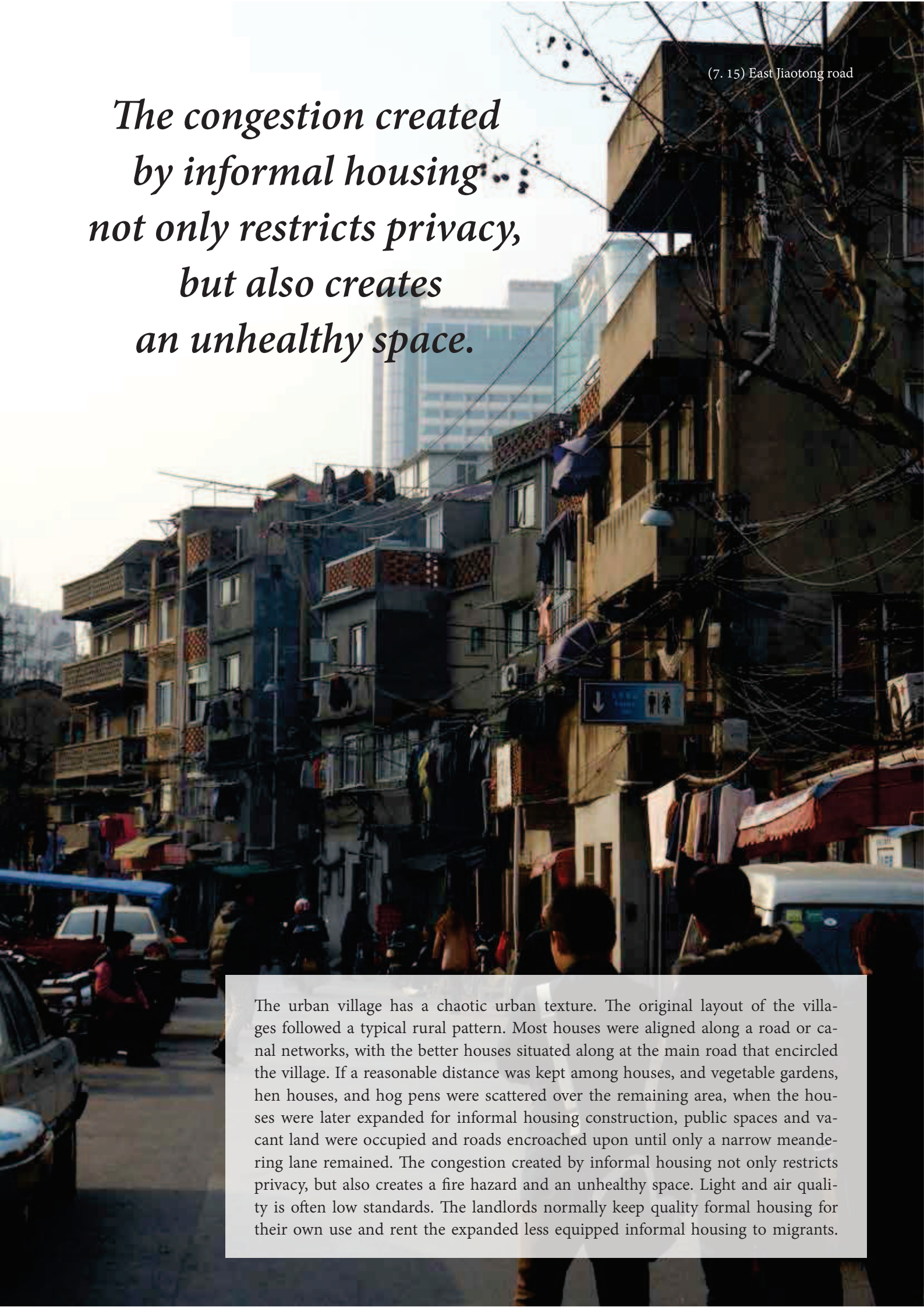
Houses in the villages are built with one to five stories in high density, also five to ten stories in the Pearl river delta region. According to their age and layout, they can be grouped in three types.

Traditional rural dwellings are about one of ten houses, usually one, two stores buildings. The traditional dwellings are often badly maintained and lack tap water connection and sanitation. In the second group, two out of three houses were built in the 1980s. Villagers constructed them with unpaid help of relatives and friends, keeping them rather simple in style and low in standard. Initially, these houses were typically two-store rectangular structures with one living room and few bedrooms, but later on they were extended illegally. This kind of house is usually composed by two typologies: a small one-room type of 6 to 9 sqm and a large one-room type of 18 to 24 sqm. It's mainly built with a durable material. More than 80% of these houses are made by concrete, mixed wood-concrete or stable wooden structures. The third group consists of houses built after 1990, when the rural population became affluent. These new houses are becoming more westernized and better equipped with modern kitchens, bathtubs and flush latrines. Almost all migrant households occupy only one room, but in many case two to three persons share a room. The average occupancy rate is 2.53 persons per room and the average per capita floor space 6.76 sqm. These rooms are multi functional and serve for living, sleeping, storing and cooking. There is a serious shortage of sanitation facilities. Most of the houses have no sewer connection and the toilet facilities in the villages are gross inadequate. Only 5% have their own bathroom, usually migrants have to share a public bathroom. Almost three out of four migrant households fall into the group with basic living standards, about one quarter have a medium and only 3% a high standard of living.

Buildings typologies distribution



(7. 14) Living population standards



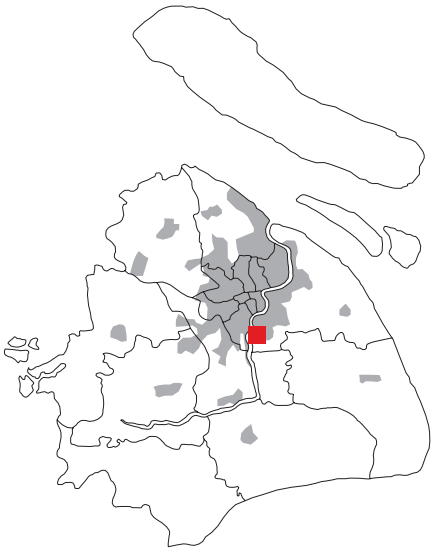
(7. 15) East Jiaotong road

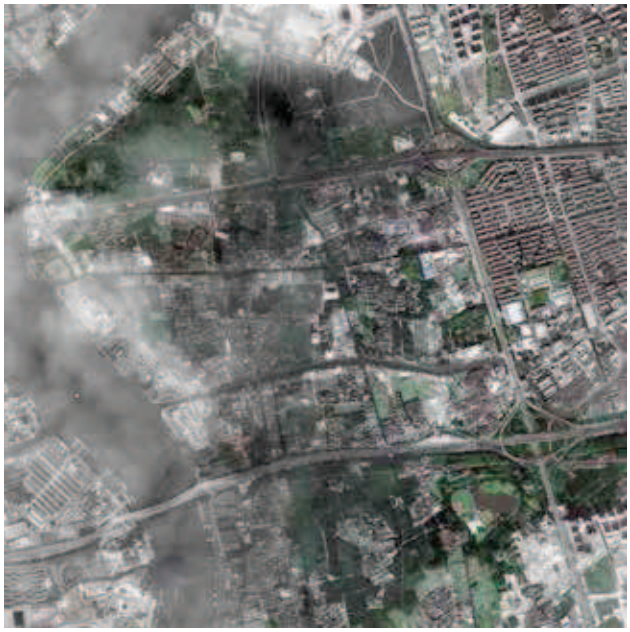
The congestion created by informal housing not only restricts privacy, but also creates an unhealthy space.

The urban village has a chaotic urban texture. The original layout of the villages followed a typical rural pattern. Most houses were aligned along a road or canal networks, with the better houses situated along at the main road that encircled the village. If a reasonable distance was kept among houses, and vegetable gardens, hen houses, and hog pens were scattered over the remaining area, when the houses were later expanded for informal housing construction, public spaces and vacant land were occupied and roads encroached upon until only a narrow meandering lane remained. The congestion created by informal housing not only restricts privacy, but also creates a fire hazard and an unhealthy space. Light and air quality is often low standards. The landlords normally keep quality formal housing for their own use and rent the expanded less equipped informal housing to migrants.

7. 7 Example

(7. 16) Lingzhao village, Shanghai:





(a)

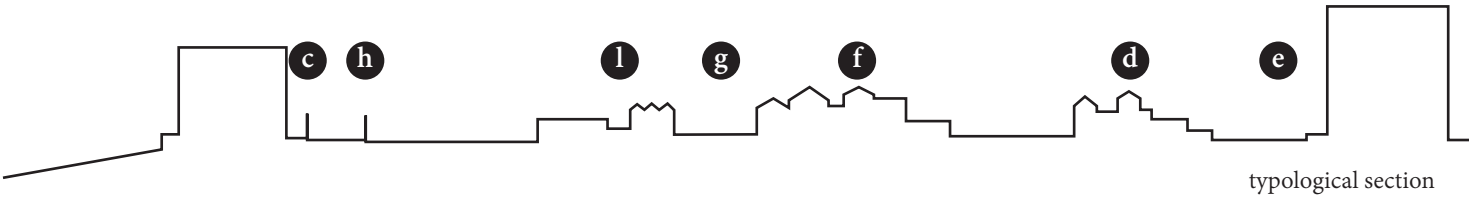
Lingzhao village is situated in the southern suburbs of the metropolitan city of Shanghai along the Huangpu river. This first case is an example of embryonic urban village. The urban sprawl has now come to the area, which is becoming an enclave. The village is located between, respectively in the north and south side, the Middle Ring and Outer Ring of the city. The river bank is now used by different new hotels and resorts, most still under construction. The different blocks are so walled up and the riverside is no longer viable. In the east side the Jiyang road divides the rural area of the village from the citizens residential blocks. If the center of the area, it retains its agricultural life, the edges of the area, especially towards the south-east, have developed a significant industrial character based of small to medium activity. The Lingzhao Xincun station serves the area. The metro line 8 leads directly at the center of the city.

(b) S20 Outer Ring Expressway side roads

(c) Yanjiang highway

(d) Shangpu west road

(e) Jiyang road

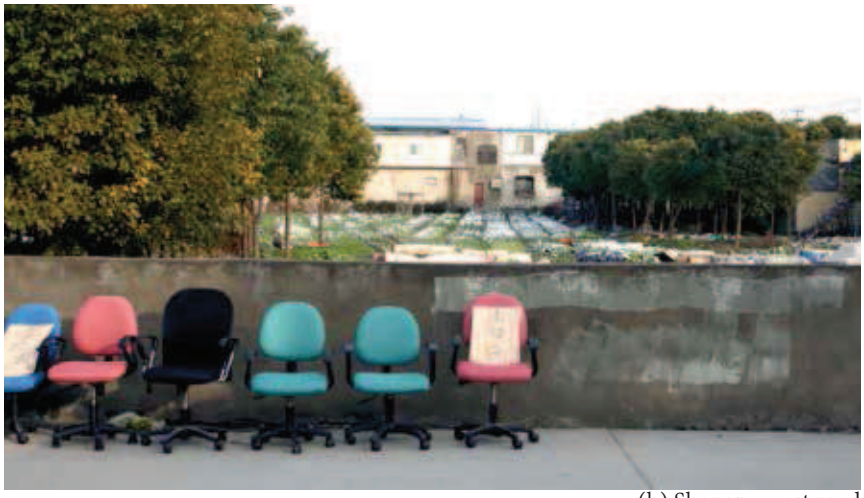


typological section

The village is composed by different typologies. The two worlds between agricultural and urban village is clearly visible. In small spaces, next to each other coexist farm fields, shops and restaurant and small and medium industries. Nearby the city's infrastructure, especially near the metro station, commercial activities are more link to the city and more developed. As you move away, far from the infrastructures you can find agricultural landscapes, which make up the central part of the area. Approaching the river, the landscape changes again. Here almost all the riverside is under construction. The new buildings are especially hotels and residences. Areas are completely closed, walled with no relationship with the previous environment. The houses, with sloped roofs, do not exceed three stories in height. The various buildings go to make several agglomerations, recognizable as small villages, which are arranged and evolve along the major streets. In the southwest corner of the area is also well established purely industrial area, formed by small and medium sized fabricated.

(f) Shangpu west road

(g) Shangpu west road



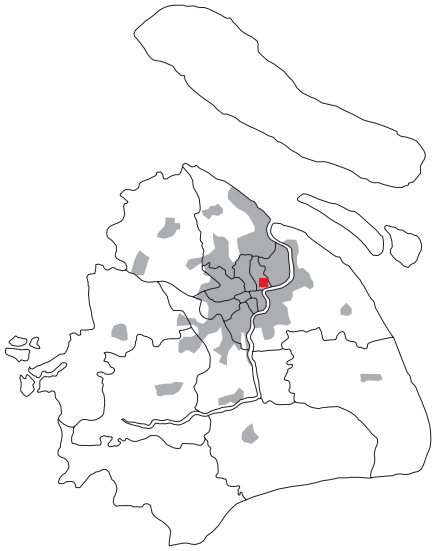
(h) Shangpu west road

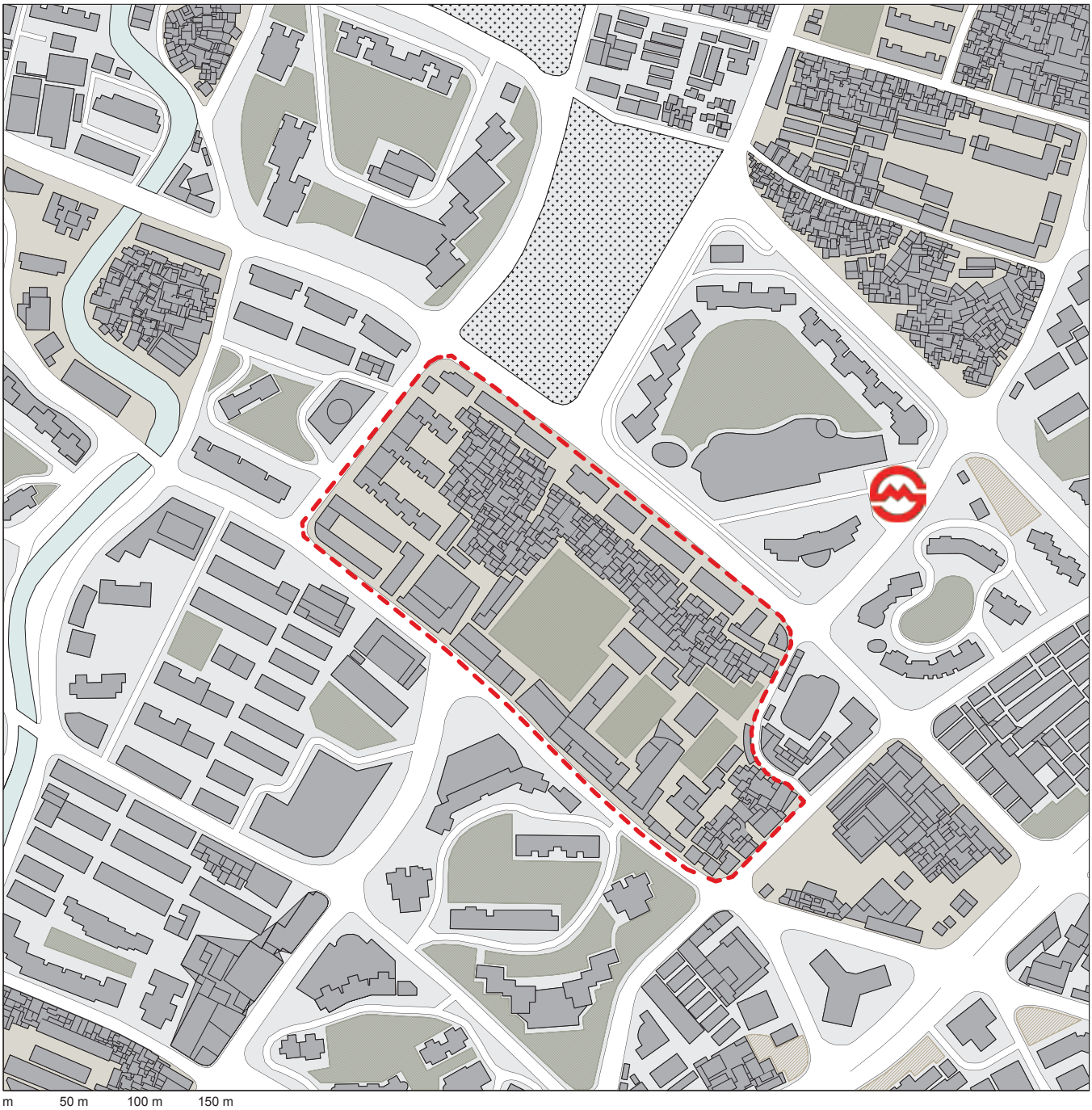
(i) Shangpu west road - Yanjiang highway

(l) Yanjiang highway

(m) Xinchun road

(7. 17) Urban village Linping area, Shanghai:

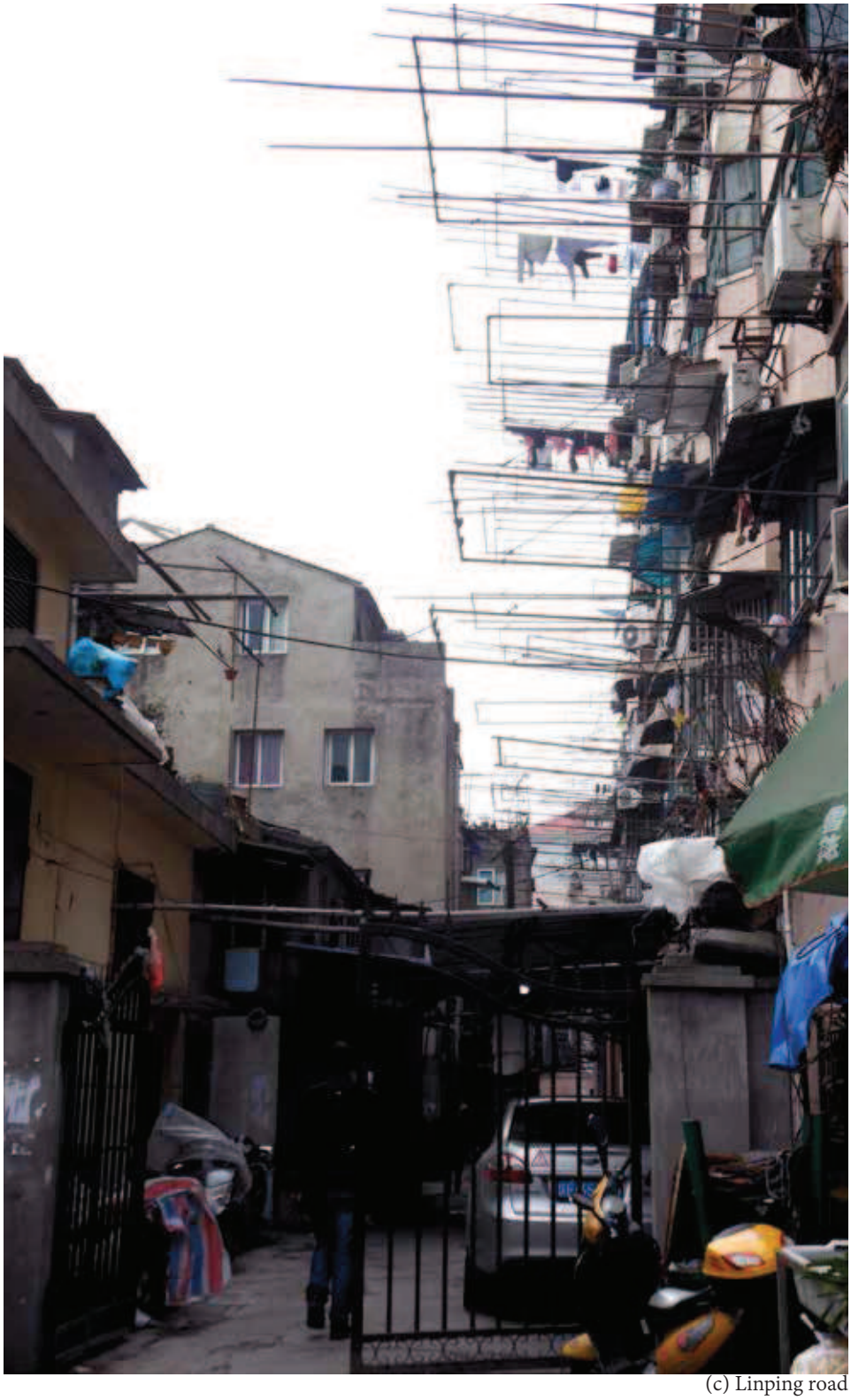




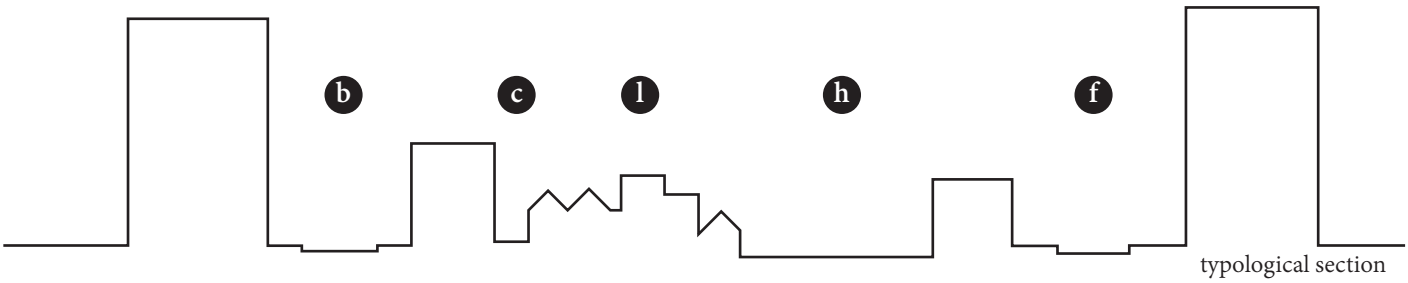
(a)

The urban village in question is located in Hongkou District, close to the metro station on line 4 Linping road. Located in the city center has good facilities linking the area with the rest of the city. Small in size is a good example of urban village in the urban area of Shanghai. Real enclave, the village is closed to the road by new construction. In the north, it is closed, hidden by a line of mid-rise buildings (5-6 floors) which form one side of the commercial street of Linping road. On the west side there is a small residential complex, Ruixin Apartments. Complex consists of small residential slats. The southern border is defined by a series of commercial buildings and offices, Furthermore the south-east corner is occupied by a school. Born as a result of the redevelopment of a large part of the village, the Jiguang Middle School occupies a good part of the neighborhood. On the east side differently from the other there is a boundary wall that closes the block. Wall of sports facilities of the school.

(b) Ruihong road, Linping road



(c) Linping road



typological section

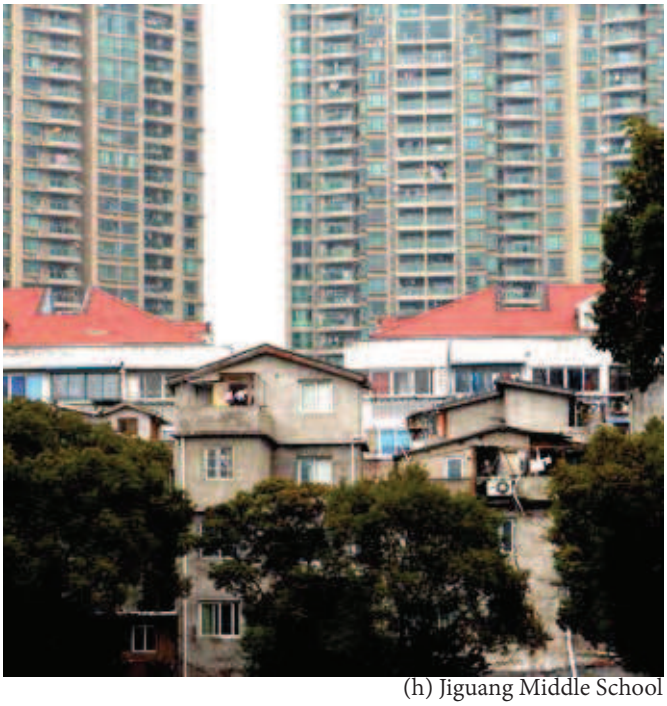

(d) Linping road

(e) Gaoyang road

(f) Haila'er road, Gaoyang road


(g) Yuezhou road

The only main entrance to the village is located at the cross between Linping road and Ruihong road, where the mid-rise line opens. The village is placed about 8 meters behind the commercial line of Linping road. The road from the entrance is also the largest in size, with an initial width of less than ten meters goes to narrow. Along this road you will find several shops, very small and informal, and the end of other narrow streets that serve the entire area, fully residential. Except at the entrance, the village is not very recognizable from outside. The few visible construction from the street are small pieces of buildings, which have reached a consistent height (5-6 floors). Only the inner side of the village is visible, side that is bordering the sports facilities of the school.



(h) Jiguang Middle School

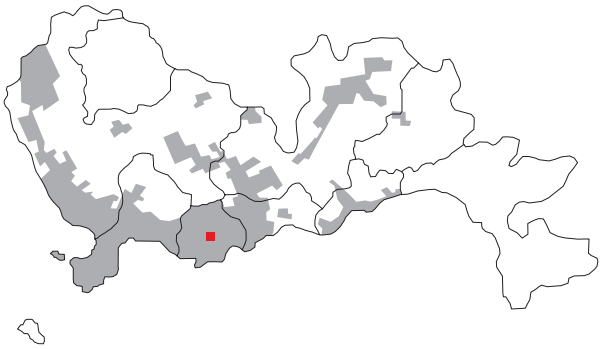
(i) Jiguang Middle School

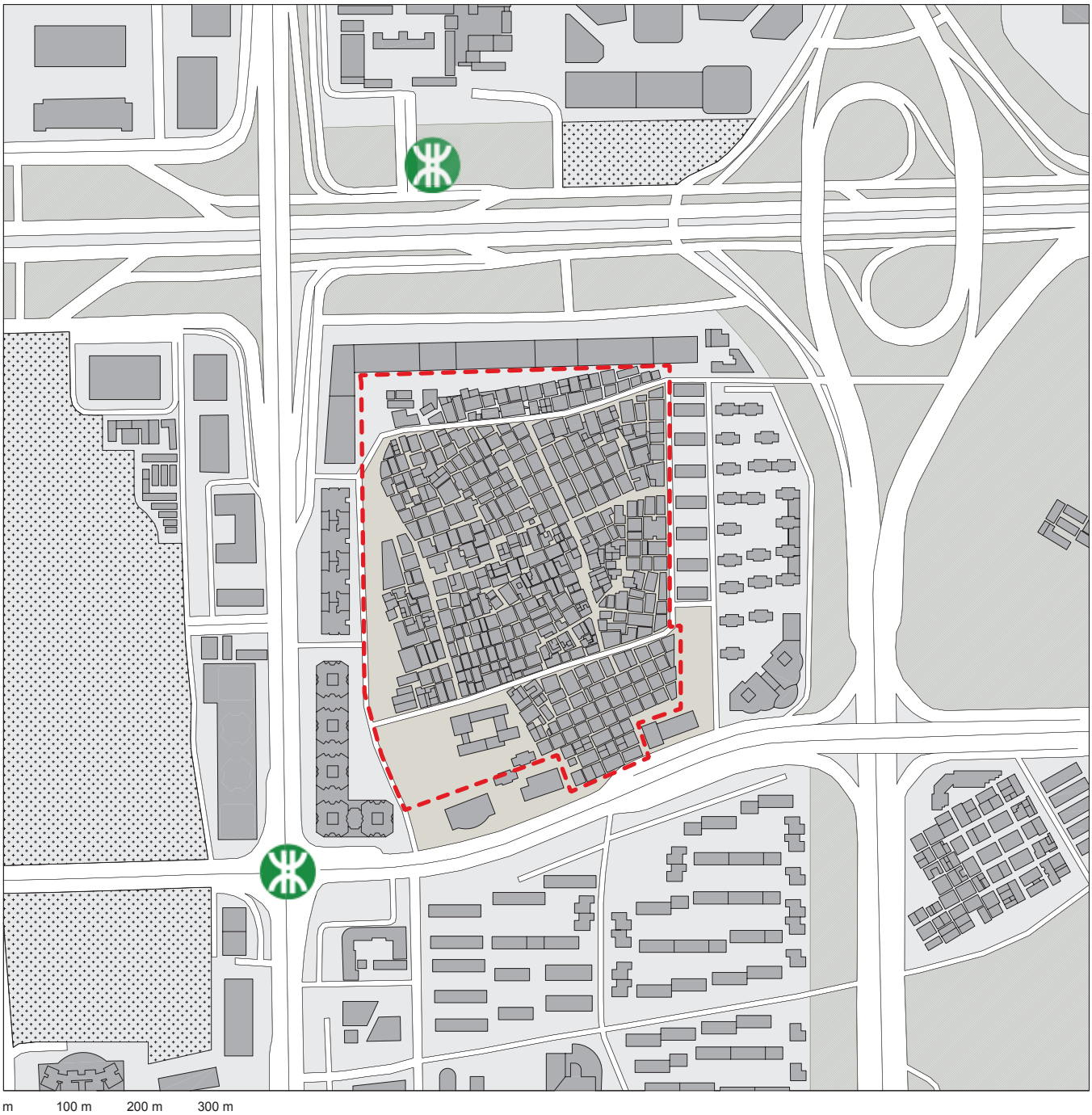
(l) inner road

(m) inner road

CITIES COMPARISON, SHENZHEN CASE

(7. 18) Gangxia village, Shenzhen:





(a)

(b) Fuhua road

(d) Gangxia East 1st road

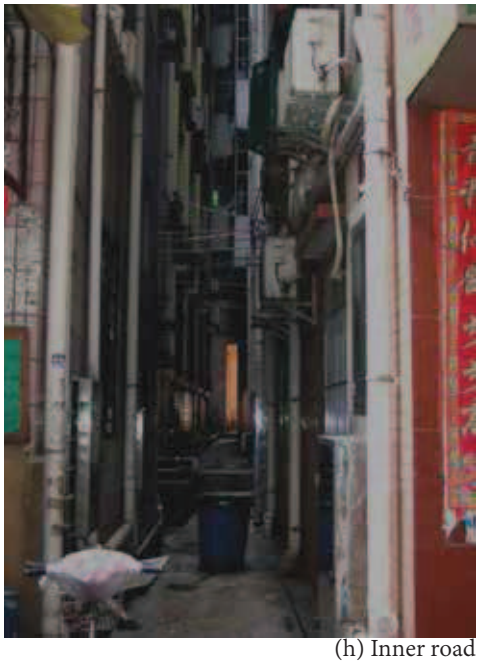
(c) Gangxia paifang road

(e) North borderline

The Gangxia village is located in the Futian district of Shenzhen city. As the following example, located in Guangzhou, these two villages in the Pearl river delta have reach a higher maturity level compared to the Shanghai examples. Although not strictly related to the shanghainese context, these two extremes examples of these settlements are shown in order to make the characteristics of the urban village. The village is completely surrounded by more recently buildings. The two different orthogonal grid make clearly visible the different texture. Also if not the only one, the main entrance of the area is signaled by the south gate of the village from which start the main street that divides the urban village to the city and make a loop that joins the major streets. A new building (the Greater China International Finance Center) give the north limit, where at the intersection of the two grids the buildings are touching. The buildings, higher and larger than the previous Shanghai examples, often have a distance in between not more than a meter and a half. The residential block in the urban village has often a role of sleeping place. The high density of the village forces all domestic spaces to be minimized. In order to compensate for this lack the streets take a role of extra-living and dining place for the residents.

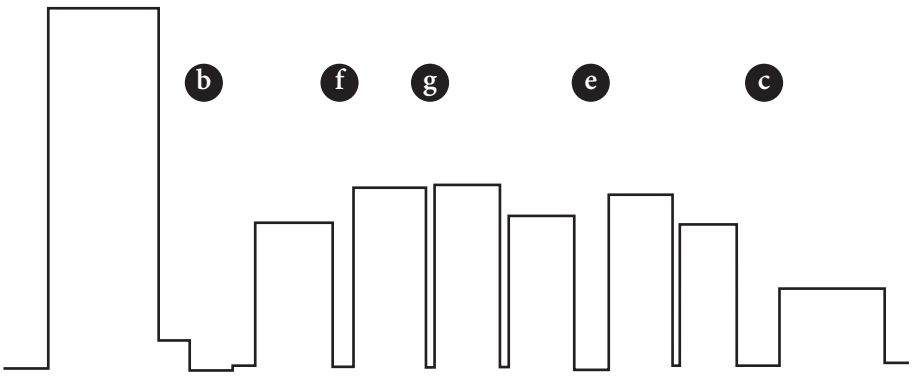
(f) Gangxia East 3rd road

(g) Inner road



(h) Inner road

(i) Inner road

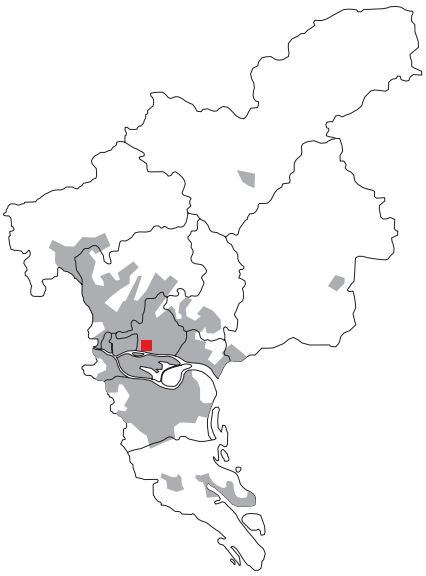


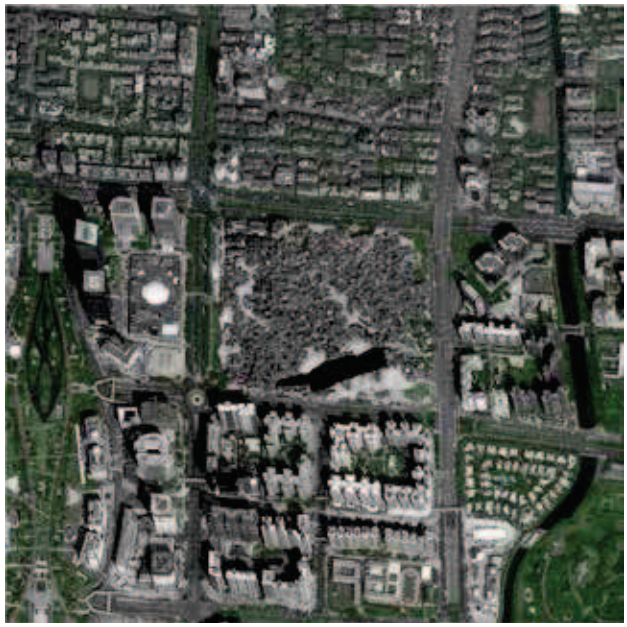
typological section

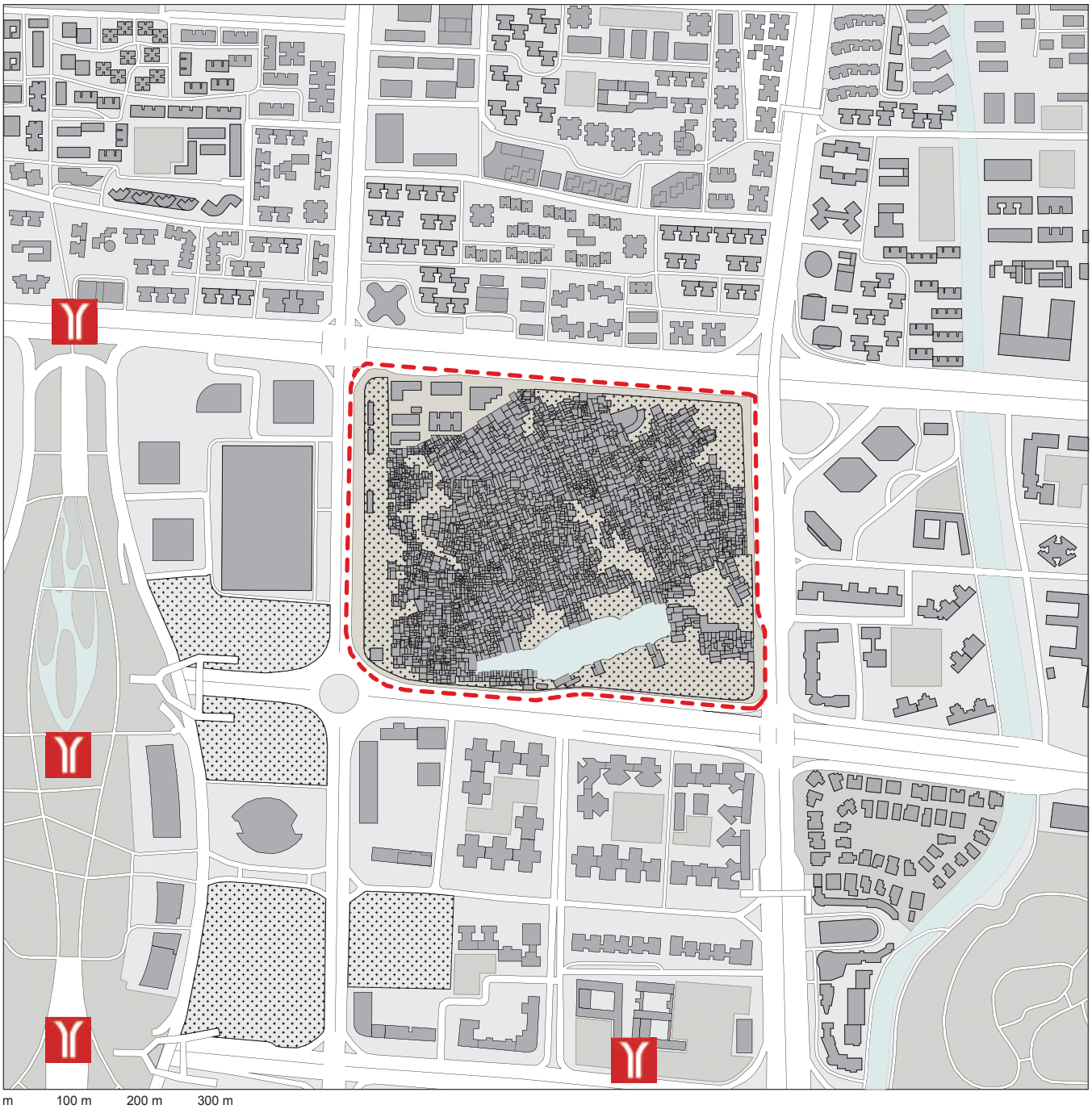
Depending on its size, the road takes a different importance and use: The main roads are for commercial purposes only. Here you can find medium and large size shops and restaurants, which can compensates for the lack of kitchens and dining place in most of the homes. The secondary streets, smaller in size, are almost for the residents use only. Here there are several game rooms and different community activities. The resulting spaces between the buildings are used as storage, technical space and junk place. The future of the area , even if not yet established, can be, as the surrounding neighborhoods, the total demolition and redevelopment of the block.

CITIES COMPARISON, GUANGZHOU CASE

(7. 19) Xian village, Guangzhou:

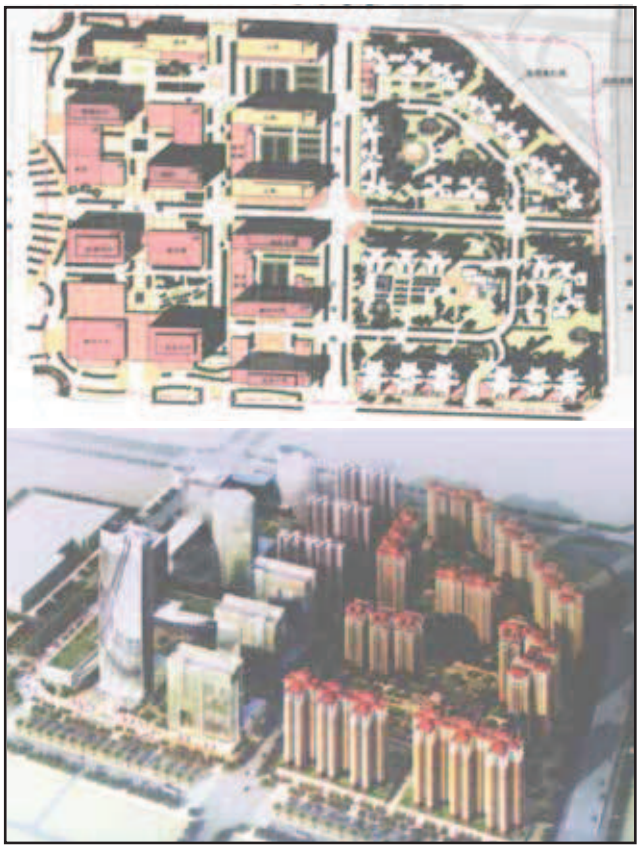






(a)

The village of Xian is located in the central area of Guangzhou city, along the Pearl river delta. The settlement is located in the new CBD (Central Business District) of the city, nearing completion. The area is in a highly desirable location for its central position. The redevelopment of the area is underway. The area has been fenced and demolitions are already under way. Along the perimeter are visible the various buildings, many of them uninhabited, enclosed by the border wall. Furthermore visible are the different slogans: advertising on the wall, on the new redevelopment project that will take the place of the village; for and against the demolition of the buildings, which encourage people to move from their homes in order to continue the demolition. The entrances to the village are few and monitored by guard posts. Inside there are different scenarios: the hills of demolition debris, buildings cut by narrow streets and small houses with pitched roof. But almost all of the buildings is composed of small apartment houses made of concrete or covered with clinker. The average height is 5-6 floors. Along the main road, even if small, there are small shops. The secondary streets, very narrow, are devoid of any activity. Given the predominant building typology, with balconies and small overhangs, the narrow streets are like tunnels between the buildings, with no natural light, an artificial lighting system lights the way all day long. "Over many years, officials from Guangzhou City and Xian Village's government have worked towards the development of Xian Village into high rise commercial and residential real estate. By early 2012, most of the villagers signed contracts ceding their land to development, but some land holders remain opposed." (http://xianvillage.wordpress.com/)



(b) "the new Xian village"

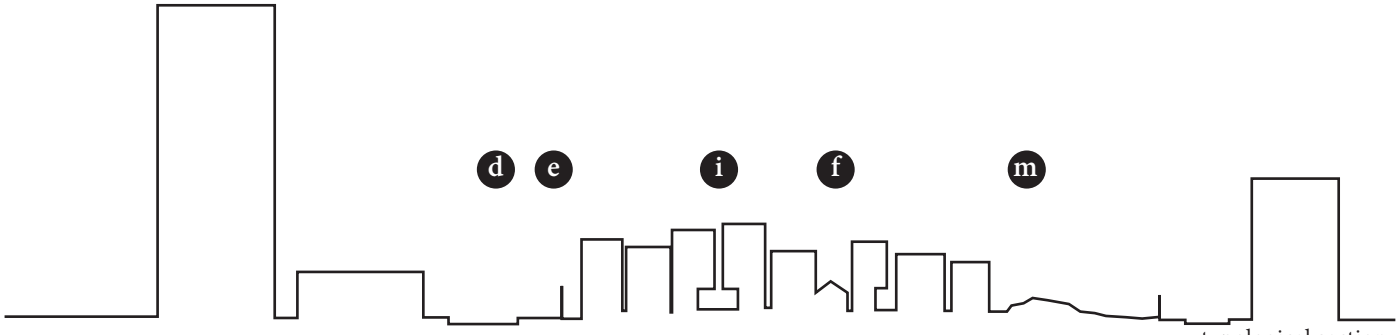
(c) Lake view

(d) Xiancun road

(e) Jinsui road

(g) inner road

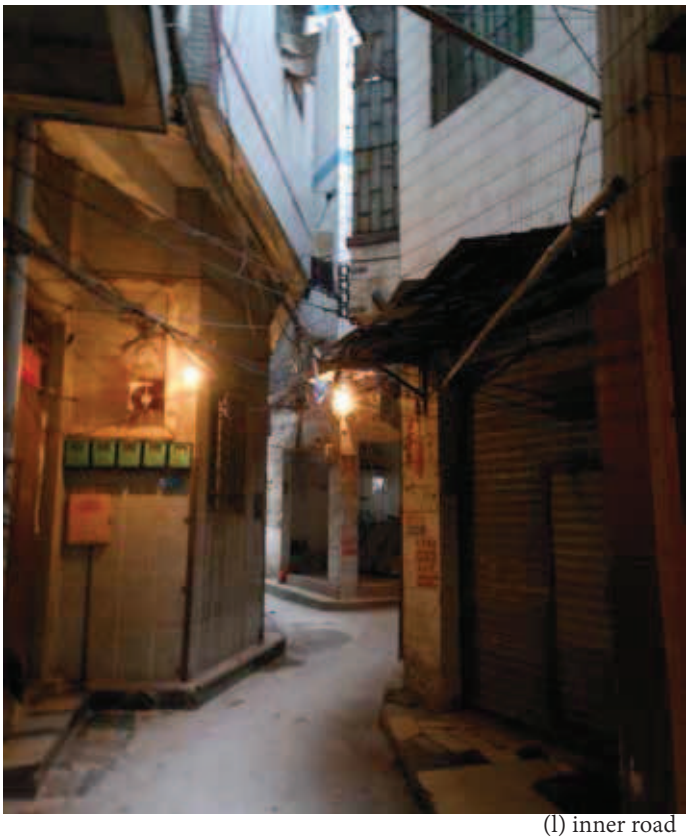
(f) inner road



typological section


(h) inner road


(i) inner road


(l) inner road


(m) inner road

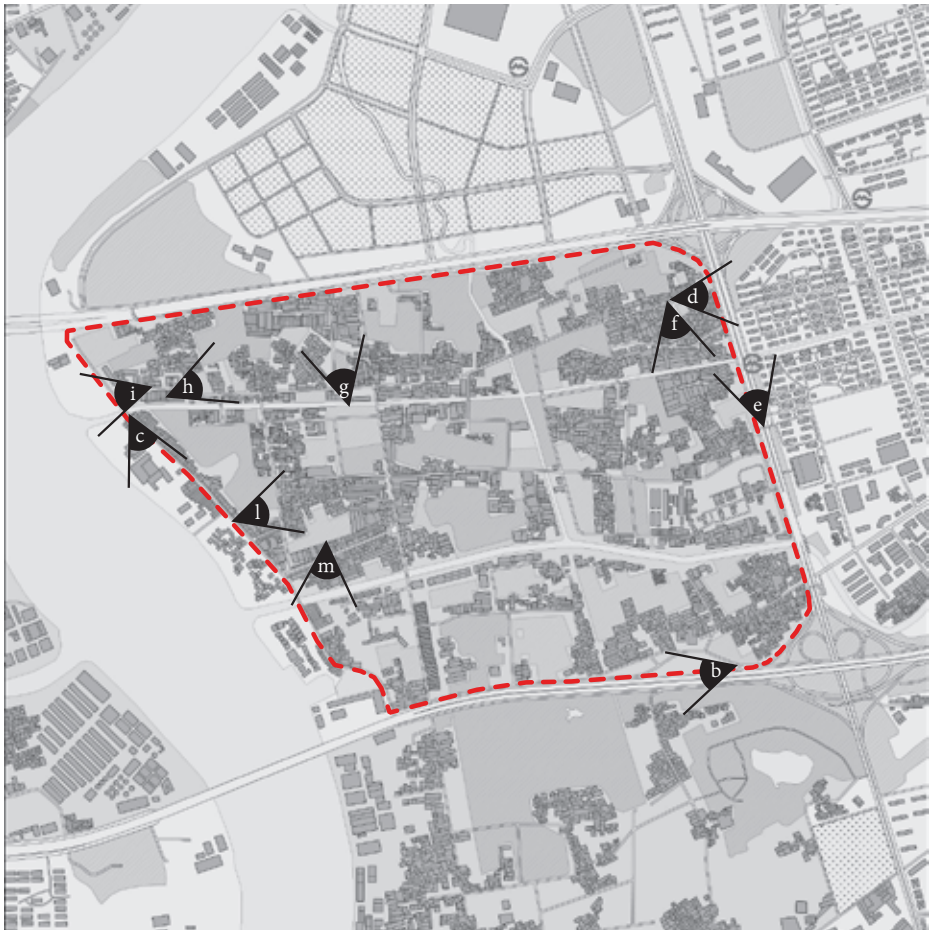
(7. 20) Back Qinglongqiao road

7. 8 Summary

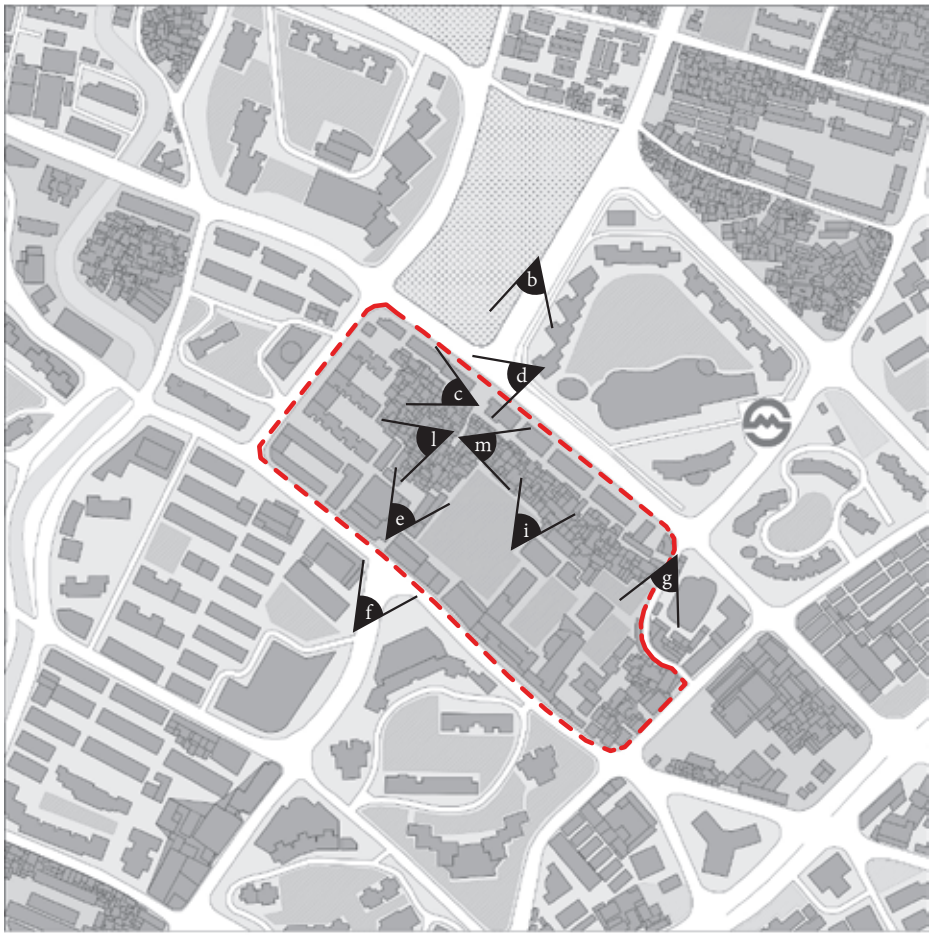
The massive rural-urban migration and urban villages in China are thus the consequence of joint effects of continuous economic growth, rapid urbanization, enlarged economic disparity between urban and rural areas and outdated political and institutional frameworks. The rural-urban migrants in the urban areas encounter enormous difficulties. Urban housing policies and recent reforms in urban housing provisions ignore the needs of rural-urban migrants. Public authorities ignore the social needs of migrants and to refrain from any intervention into their sprawling urban villages. "It is a good example of China's tendency to ignore or underestimate trends that are not consistent with the official state doctrine" (IIASA (a)). Anyhow, Shanghai urban villages for several factors can not achieve the levels of maturity of the Pearl river delta settlements. Here the presence of different affordable rents settlements in the inner city discourage the presence of such unlivable informal areas. Thousand of such villages have been demolished and rebuilt every year in china, and government lead the redevelopments in most cases. The result of social and physical changes shows village households are the group that received the least benefits compared to local government and developers, and they didn't involved the redevelopment plan and process. The city develop and image is often the main reason of this kind of redevelopment. Residents needs are usually ignore. Another issues of this model of qualification is the lost of this housing typologies. If the demolition of these area can be an easy way to redevelopment, not all the time can be the right one. Anyway in the latest years many researches still study urban village configurations in order to find any other possible ways.

(7. 21) GUANGZHOU, Xiancun village

- Lingzhao village, Shanghai:



- Urban village Linping area, Shanghai:



Notes

(7. 1) Urban village Hailun Area: photo by the author.
(7. 2) A Court for King Cholera: photo by Punch magazine, 1852.
(7. 3) Back Qinglongqiao road : photo by the author.
(7. 4) ShaJingGang road: photo by the author.
(7. 5) Mature village populations distribution: draw by the author, data: Hui Fang Cong, "Urban villages' Redevelopments: Physical and Social Changes". In 19th Annual European Real Estate Society Conference. ERES: Conference. Edinburgh, Scotland, 2012.
(7. 6) Workers migrations: draw by the author, data: Hui Fang Cong, "Urban villages' Redevelopments: Physical and Social Changes". In 19th Annual European Real Estate Society Conference. ERES: Conference. Edinburgh, Scotland, 2012.
(7. 7) Population %: draw by the author, datas: Haver Analytics; The Economist estimates.
(7. 8) Urban Village evolution: draw by the author.
(7. 9) Gui jing cun village: photo by the author.
(7. 10) urban village Nanpu bridge area: photo by the author.
(7. 11) buildings expropriation (resettlement): draw by the author, data: Shanghai Municipal Statistics Bureau (SMSB).
(7. 12) Urban village evolution: draw by the author.
(7. 13) Wuzhou road: photo by bricoleurbanism.
(7. 14) Living population standards: draw by the author, data: Shanghai Municipal Statistics Bureau (SMSB).
(7. 15) East Jiaotong road: photo by the author.
(7. 16) Lingzhao village, Shanghai: (a) draw by the author, photo by Bing map.
(b) photo by baidu street view.
(c) photo by the author.
(d) photo by the author.
(e) photo by the author.
(f) photo by the author.
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(7. 17) Urban village Linping area, Shanghai: (a) draw by the author, photo by Bing map.
(b) photo by baidu street view.
(c) photo by the author.
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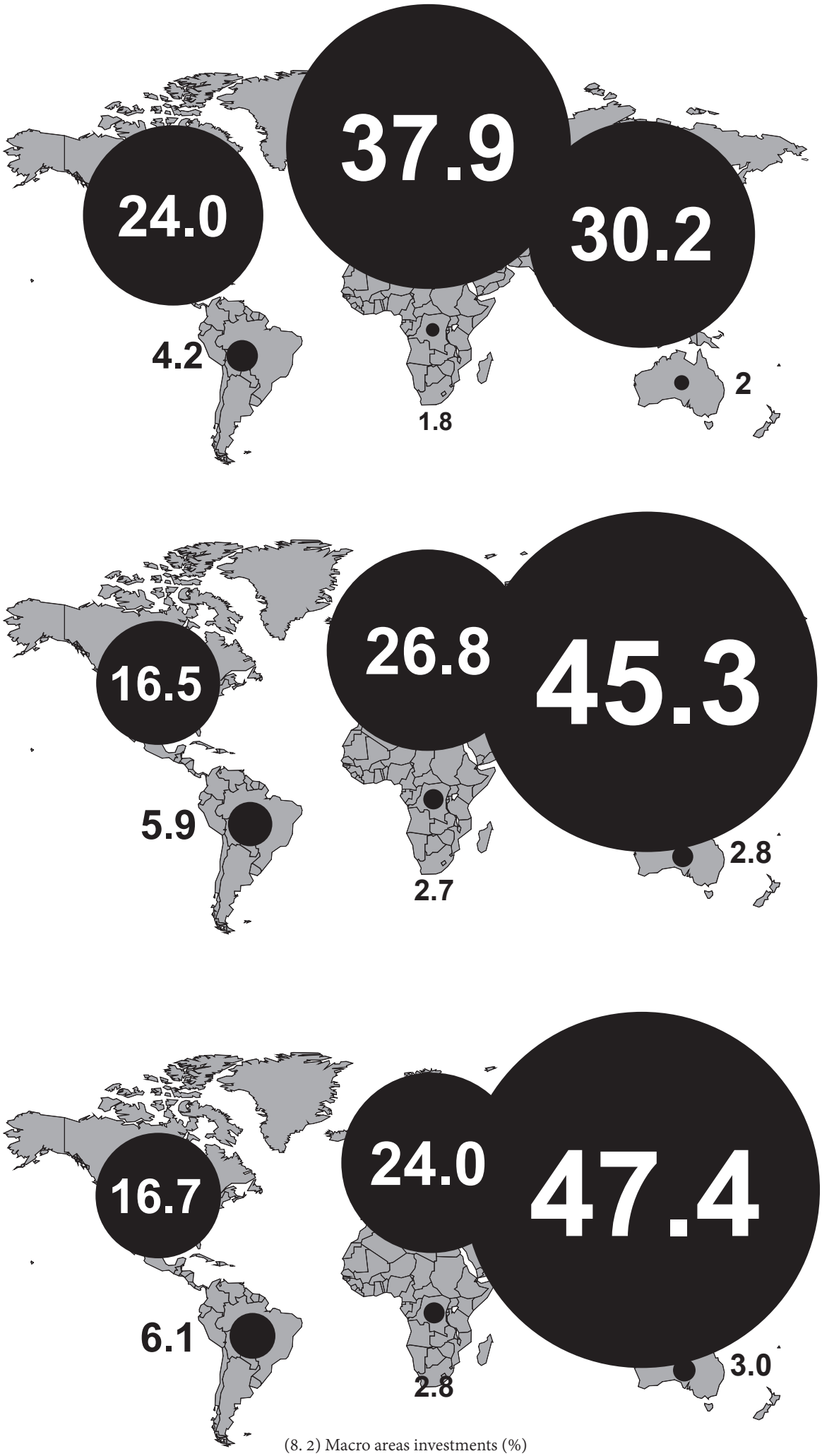
(f) photo by baidu street view.
(g) photo by the author.
(h) photo by the author.
(i) photo by weibo.com/chocolatedq.
(l) photo by the author.
(m) photo by the author.
(7. 18) Gangxia village, Shenzhen: (a) draw by the author, photo by Bing map.
(b) photo by beeplin.blog.163.com.
(c) photo by the author.
(d) photo by baidu street view.
(e) photo by the author.
(f) photo by the author.
(g) photo by the author.
(h) photo by beeplin.blog.163.com.
(i) photo by the author.
(7. 19) Xian village, Guangzhou: (a) draw by the author, photo by Bing map.
(b) photo by xianvillage.wordpress.com.
(c) photo by the author.
(d) photo by the author.
(e) photo by the author.
(f) photo by the author.
(g) photo by the author.
(h) photo by the author.
(i) photo by the author.
(l) photo by the author.
(m) photo by the author.
(7. 20) Back Qinglongqiao road: photo by the author.
(7. 21) GUANGZHOU, Xiancun village: photo by the author.

8

NEW TRENDS

With the new millennium beginning an exceptional Asian economies growth, particularly the Chinese, has led to a radical change in the construction world.

(8. 1) Shanghai construction site

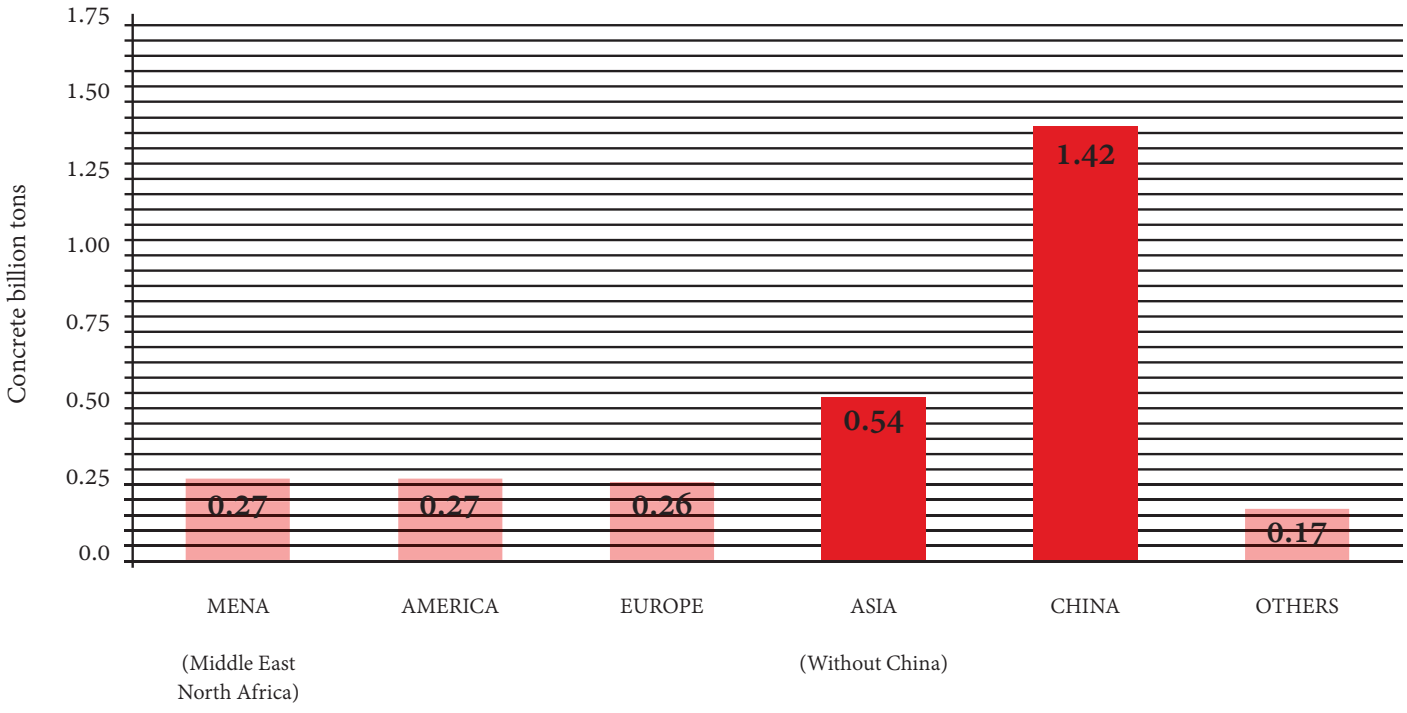


(8. 2) Macro areas investments (%)

8. 1 Introduction

Shanghai was taken as example for the People's Republic of China transformation. As we saw in the previous examples, it is a dynamic city in constant transformation. In particular, the last century of its evolution is characterized by a fast urbanization and an uncommon adaptability. The numbers of its development have not precedents, and with Shanghai also the others major Chinese cities. With the beginning of the new millennium an exceptional growth of the Asian economies, particularly the Chinese, has led to a radical change in the construction world. Today Asia is, to all intents and purposes, the center of the constructions world with almost the 50% of world investment. Just to give an idea of the size of the Chinese construction phenomenon, in China in 2010 were consumed something like 1.42 billion tons of concrete, half of the entire world's annual consumption.

In 2010 China consumed something like 1.42 billion tons of concrete, half of the entire world's annual consumption.

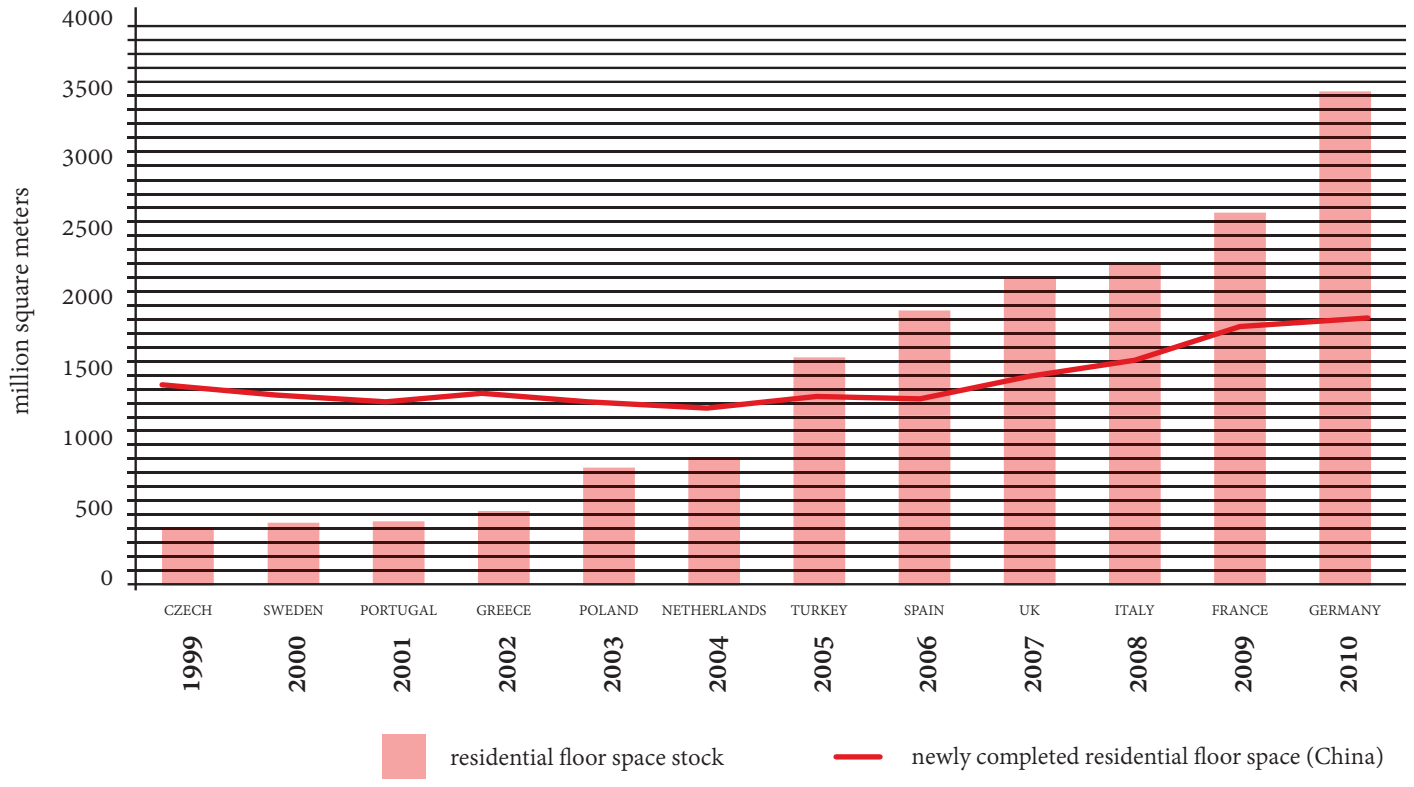


(8. 3) Concrete annual use in 2010 (billion tons)

(8. 4) Chinese cranes

"Perhaps Rome cannot be built in a day. But at China's current rates of construction, it would take roughly two weeks. It took the Asian hyper-economy roughly a decade to build the equivalent of Europe's entire housing stock, and there are few signs that the seemingly insatiable appetite of Chinese consumers for bigger and better housing will slow substantially."

("Building Rome in a Day", The Economist, 2011)



(8. 5) China: building Europe in 15 years

(8. 6) Shanghai Construction Group: construction site

The challenge in the next years is to be able to bring the country to the next step. As one of the major Chinese cities, Shanghai can be considered a prototype, an experiment that all the nation has to follow. The challenge for today's Shanghai is made by its urban development strategy in order to transform the city into an international metropolis and a cultural, economic, financial and commercial center. Shanghai today is facing an important transition moment, where several typologies are compared each other. As in previous changes, the residence evolution takes place in a gradual transformation more or less rapid. Certainly, in this historical moment the Chinese construction industry numbers make these changes quickly and easily perceptible. China just in the recent decades built what the European urbanization made in the last century. As a broad driver of economic activity, housing construction sets off a range of indirect demands for commodities and energy that are important to measure. For example, housing construction is closely linked to demand for cars, construction materials and energy. In the new Chinese contemporary city can be defined three distinct macro trends: a growing medium-low income population, thanks to the increasing migration from rural area driven by the urbanization policies; the rise of a new upper-middle class and a new bourgeoisie, formed by the new free market opening and the country internationalization; the increasing State consciousness for pollution and environment quality problems and the rise of new ecological and environmental trends. All these aspects contribute to the transformation and differentiation of the building prototypes that aim to satisfy the new demands. They are shaped in construction, physical and social features from the earlier types that evolve push to the different needs. A predominant prototype can not be easily recognized, but three different development ways emerge.

(8. 7) Shanghai view

8. 2 Generic buildings

With the decrease of the hukou system stiffness and the strong government urbanization policies a rapid cities growing led to increased the housing demand. It bring to a frenetic uncontrolled urban development, not terminated yet, where the quantity is favored to quality and the construction time are not enough to develop a higher quality design. In order to build more as possible copy and paste buildings are the mainly project developments. The almost absence of research of this type leads to the building typology stagnation that still anchored to the high-rise building of the early nineties. One of the major problems that result is the loss of the distinctive city character, the multiplicity of its buildings and the city complexity. The High-rise buildings typology is widely used for its convenience of costs and living standards (apartment facilities and unit size). Its massive use replaces the previous historic fabric and reshapes the boundaries of the city center. The prototype choice, the residential tower, as the predominant city typology in addition to replace the previous Li-long and Work-unit types, increase significantly the average city apartment living space in recent years.

In order to build more as possible copy and paste buildings are the mainly project developments.

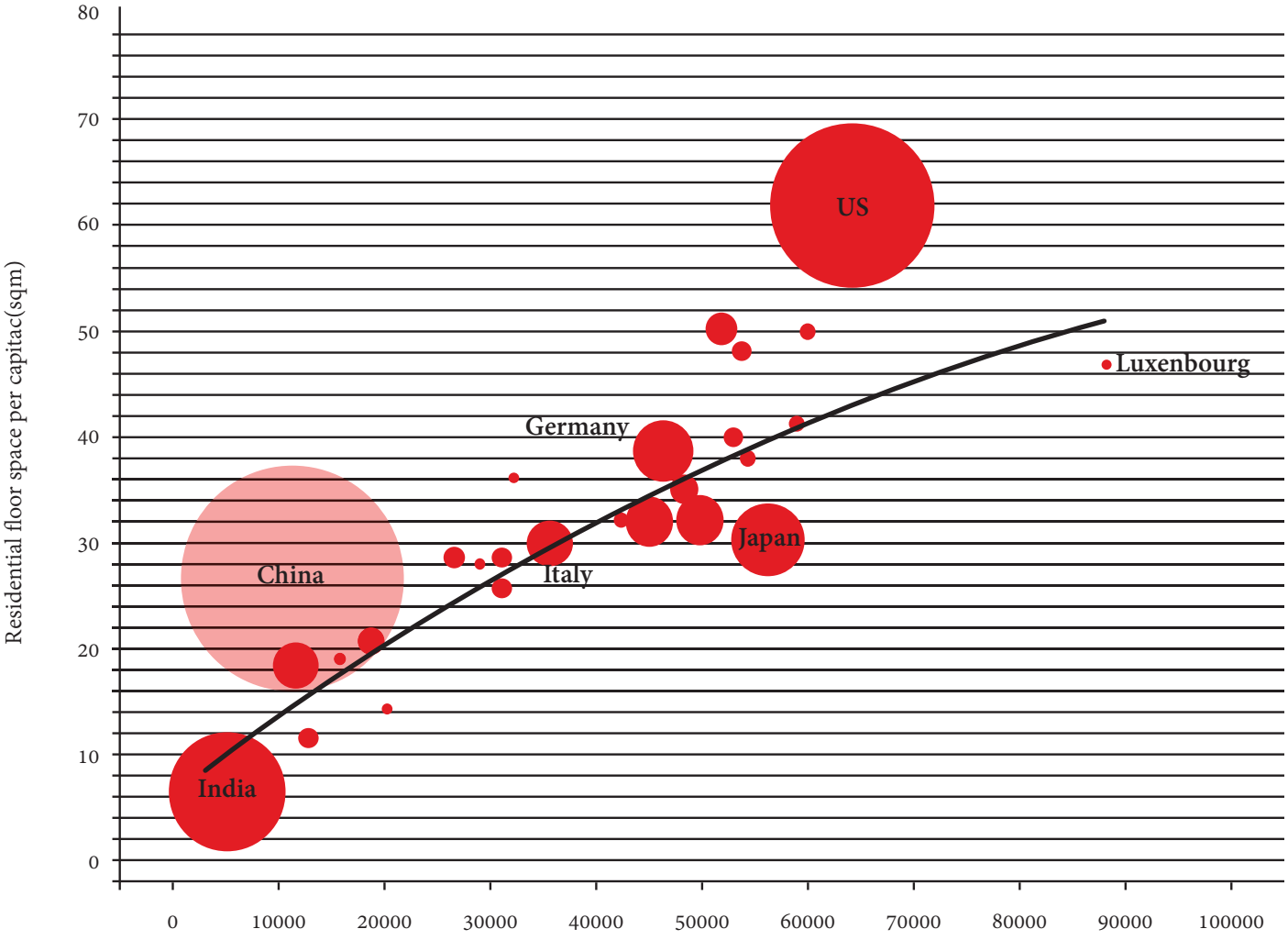
(8. 8) Construction site

(8. 9) Beijing suburbs

(8. 10) Yingkou new district

(8. 11) Shanghai housing

(8. 12) China housing market



(8. 13) Growth and house size

With the same GDP per head China can boast an average building size similar at richer Countries, part of the compromise is the different quality level of the buildings.

(8. 14) Sichuan Earthquake

(8. 15) Shanghai building collapsed

With the same GDP per head China can boast an average building size similar at richer Country, as the near Japan. Part of the compromise is the different quality level of the buildings. Furthermore to influencing this trend are the absence of significant nationwide property tax, the average size of Chinese household, equal to 2.8 in urban areas, and the materialistic approach of a large part of the Chinese population. It's often difficult to obtain objective parameters on the buildings quality, but the average lifespan of a building can be a good benchmark. The average lifespan of a Chinese building is about 30 years old, compared with 135 years in the United Kingdom. These buildings are often called "Tofu Buildings". The term "Tofu-dreg project" was coined in 1998 by Zhu Rongji, the former premier of the People's Republic of China, on a tour of flood dykes on the Yangtze River that they were as flimsy and porous as tofu dregs, the leftover bits in the tofu-making process. This word was used to describe those buildings built in a cheap and low quality way. Tofu buildings and their problems reached an international level only after the 2008 with earthquake in Sichuan, where buildings, built in a hurry and in low quality, collapsed.

A key role in this kind of projects is given by the speed of construction, often required in order to answer to the delirious demand and the short timescales. The so-called "tribute projects" have gained a negative attention in China. These projects, also if to a lesser extent, are built hastily in order to respect certain dates, state anniversaries or official visits. In addition to the construction and design timing, low quality buildings construction is also given by unskilled laborers. Money for qualified staff, materials and workmanship are invested in the various bribes, projects are often granted to companies that have more political ties and guanxi than qualifications, and safe in order to get more profit as possible.

New measures have recently emerged in order to face the problem, as a better supervision by the authorities. The buildings low quality and the few research of new types, able to answer to the large population demand, reflect the immediate housing needs in order to sustain the country's growth. This trend can be expected to decrease with the decreasing demand and the economy change. In addition to curb this trend the population consciousness and the market rules transformation.

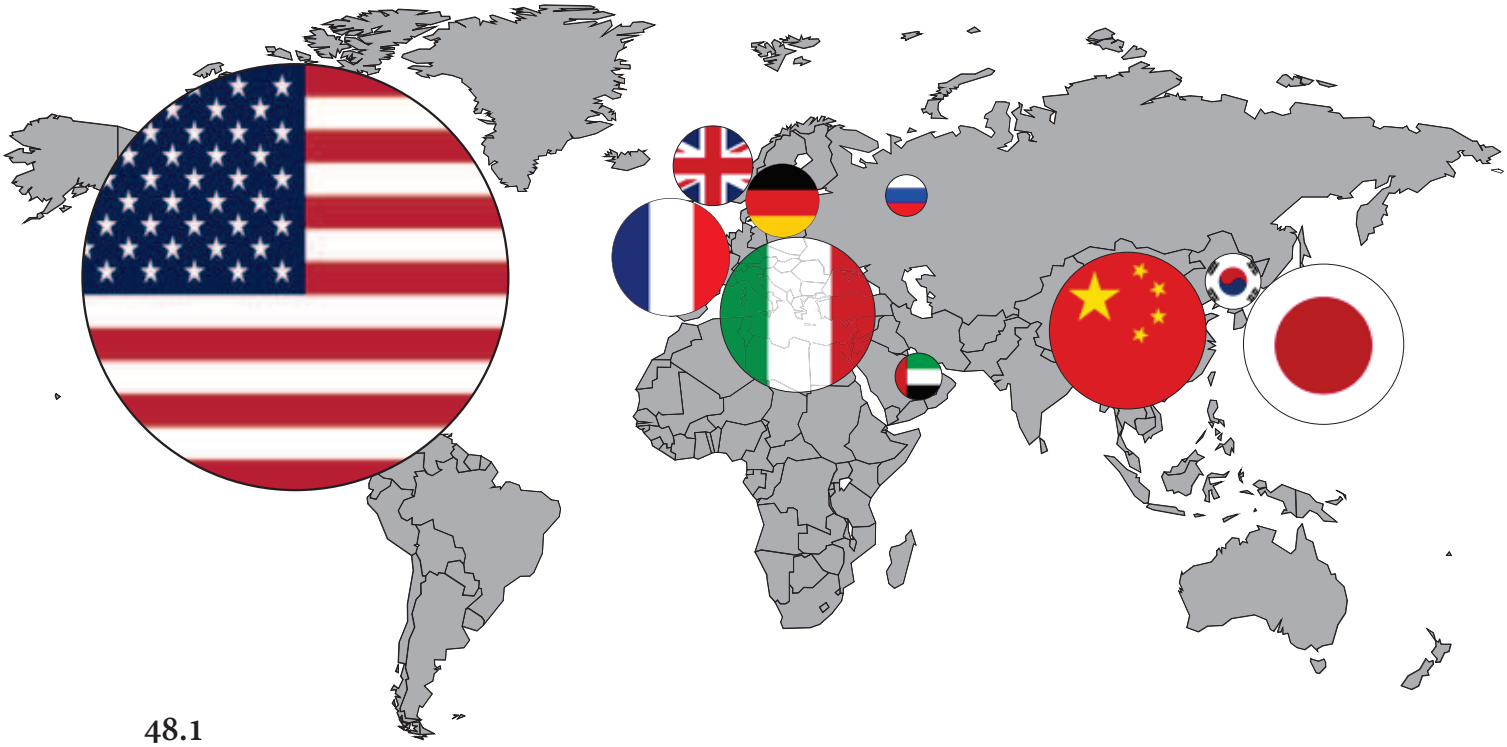
8. 3 High-end buildings

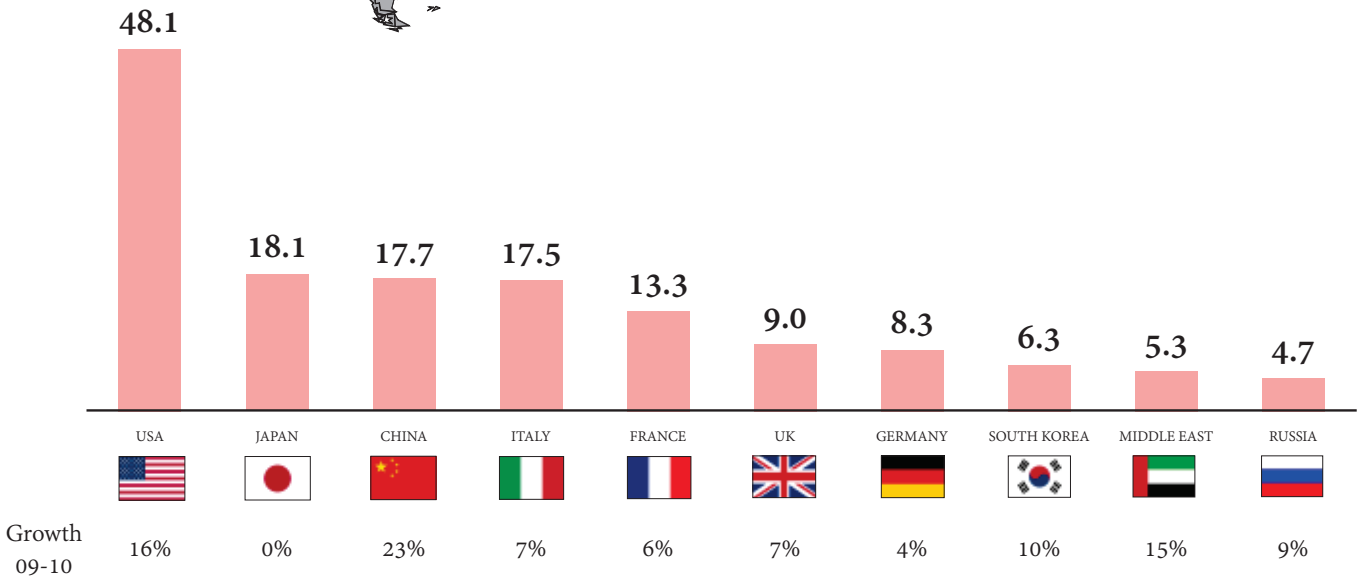
On the other hand, with the free trade policies, the increasing new high-middle class each year attracts over 15 million square meters destined to high-living standards and existing texture transformations. High-end residential property is defined as projects where the sales price is above 45,000 yuan per square meters for apartments and more than 30,000 yuan per square meters for villas. In 2020 China's luxury consumer base is expected to expand from 80 million to 180 million people, overtaking Japan in the consumption of luxury goods since 2015. This market, unlike the low-end market, continued to grow even after the government designed the restrictions to limit the number of residential homes that people can buy in order to cool the growing market and stop a possible housing bubble. These new high-end buildings can differ on type depending to the market of which they respond, they are subject to continuous variations but can be grouped into two main group: a traditional and an experimental types. Both are characterized by a higher quality of the building and interior design.

(8. 16) Shanghai IFC Mall

In 2015 China is expected to overtake Japan in the consumption of luxury goods.

In 2020 China's luxury consumer base is expected to expand from 80 million to 180 million people.





(8. 17) Personal Luxury Goods, Ranking by Country (2010, Billion €)

The traditional approach usually is focus just on the use of decoration, ornament, fine materials, unit size, compound services and location for answer to the demand, anyway the residential typology do not have important change from the previous types. Differently in the experimental way, in addition to the above features, many prototype are investigated in order to provide new housing. If in the "generic buildings" the research seems stop, various experiments, almost all from European influence, are introduced in this market segment: mixed use buildings and historical buildings reuse.

After the unprecedented increase levels of restrictions, the developers decided to focus not just on residential buildings, but extend their investments on commercial real estate and the mixed use buildings. The number of HOPSCA in China's big cities, including Beijing and Shanghai is growing rapidly. HOPSCA is a mixed use complex buildings composed by hotels, offices, parks, shopping malls, clubs and apartments. Integrate the different functions within the same complex led market differentiation, giving investors a better chance of selling and an increase of the area services for the high-end apartments, increasing their commercial value. As mentioned in chapter on Lilong and Work-Unit, a counter-trend in the last decade is started to redevelop the old overcrowded inner city blocks into high-middle income apartments. The deterioration of the new housing suburbs, that moved the middle class in the city outskirts during the Maoist era, and a new historical heritage consciousness is creating a new Chinese market. As has happened in Europe since the late 60s-70s the new rich return to the historical city center, push by the new consciousness and the possibility and technology to convert the old overcrowded housing in new apartments that can suit the modern living standards. The less availability of historic buildings given from the continuous demolitions during the recent years and the irreversible degradation of many other units, create a significantly raising prices of this typology and a new market. Even the old owners, if before were desrous to move into new structures now start to understand the historical value of the building. In recent years, many redevelopment projects are built in order to transform the historic fabric of the city into new apartments and commercial neighborhood.

(8. 18) Luxury residential compound

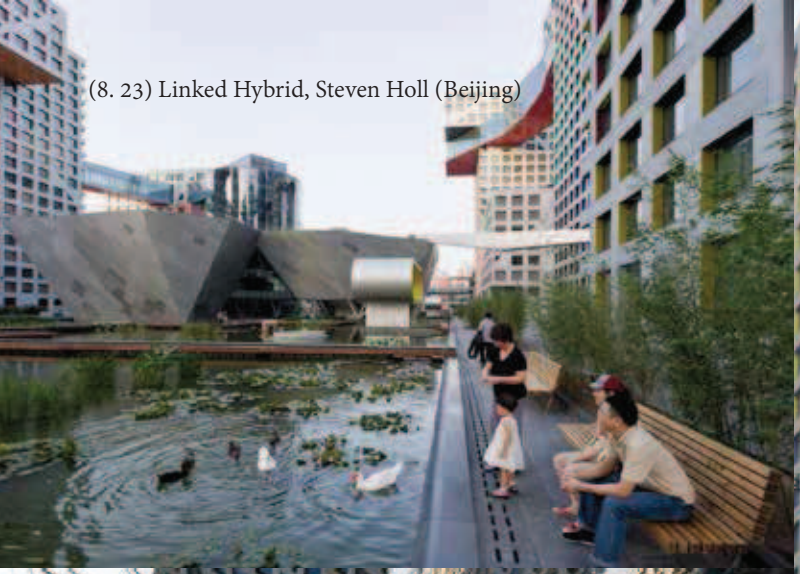
(8. 19) "The Regency Plaza"

better materials, decoration, unit size, services answer to a new rich demand.

(8. 20) Yanlord Garden

(8. 21) Xanadu, GBBN (Beijing)

(8. 22) Vertical Courtyard Apartments, Wang Shu (Hangzhou)



(8. 23) Linked Hybrid, Steven Holl (Beijing)

(8. 24) Linked Hybrid Gate, Steven Holl (Beijing)

(8. 25) Jianyeli, John Portman (Shanghai)

8. 4 Green buildings

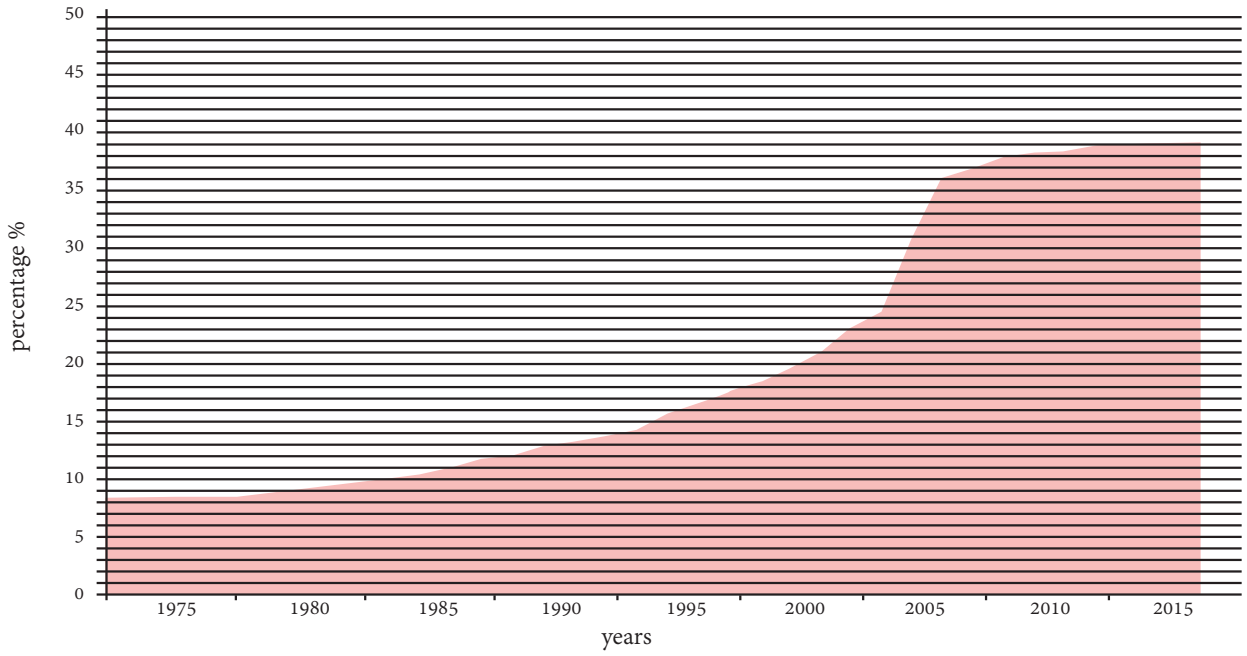
If in the previous two groups the type evolution is driven by new market rules and investors chooses, green buildings projects are push by government and public consciousness. During the last years Shanghai, more than any other city, has succeeded in improving the quality of the built environment and the urban life. Since the 1990s various trends focused on the improvement of the environment developed and the cities idea made around the human figure. The city public parks were considerably increase. From only 0.14 square meters in 1949, to exceed 15 square meters of green space per capita in 2010. Even more symbolic and defined examples were produced: Nanjing road was converted into a pedestrian street, the Bund was rebuilt as a waterfront boulevard; several cultural centers and museums were founded in converted old industrial areas. These measures tried to counterbalance the large development in the economic boom. More and more old living spaces lifestyle and traditional neighborhood interactions, due to the lack of an adequate space in the new buildings, were moved out of the residential blocks in parks and green spaces.

(8. 26) Shanghai, Century Park

(8. 27) Shanghai, East Nanjing road

(8. 28) Shanghai, East Nanjing road

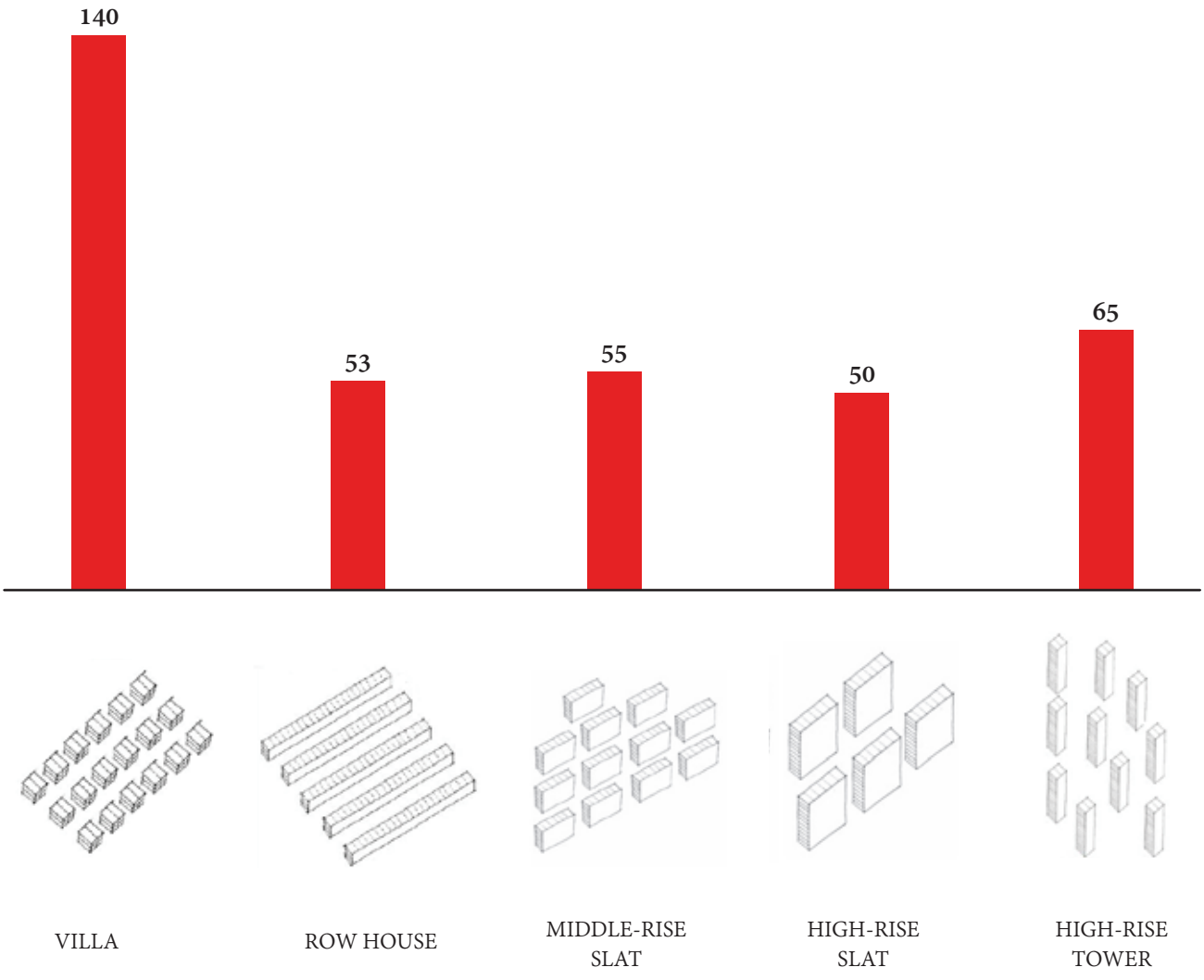
Green building projects don't follow market rules, they are push by government consciousness.



(8. 29) Shanghai Urban Green Areas coverage rate

The housing is the second sector for energy consumption, after the industrial sector. Urbanization and its lifestyle led to a considerable increase in demand for energy and materials. This demand is then forced to grow over the years. The only possible solution is to improve the energy efficiency of residential buildings. From a typological point of view there are no big changes from previous types, the main changes are therefore focused on the choice of the site, materials and plants. Anyway there are some basic guidelines to follow in a green building project:

- Site: preservation and development of environmental and historical context are important issues to consider in the location choice.
- Orientation: Based on the movements of the sun, in the northern hemisphere, the house typically have windows (glazing) on the southern facing side of the building in order to absorb the sun's heat energy to warm a building during the winter. In order to stay cool in the summer it relies on a shading system to keep the building cool.
-Shape: in a building less external wall exposure means less energy dispersion and higher energy efficiency. For example row houses which share walls save energy, materials, and land area compared to villas.
-Indoor quality: natural ventilation reduce cooling energy use, natural lighting reduce artificial lighting demand. Moreover both contribute to a higher internal wellness.
-Material: preferential use of sustainable, recyclable and local materials. The building envelope has to provide the best insulation in order to reduce the energy required.
-Plants: centralized heating and cooling systems are more efficient than individual plants. Solar and geothermal plants and energy and water conservation systems contribute to reduce the external energy demand.
-Management: without a good building management during the year all the different aspects mentioned above can not well work.



(8. 30) Kwh per year per square meter by different shapes

(8. 31) Dongtan Eco-City (project)

(8. 32) Tianjin Eco-City (project)

(8. 33) Tianjin Eco-City (project)

(8. 35) Tianjing eco-city

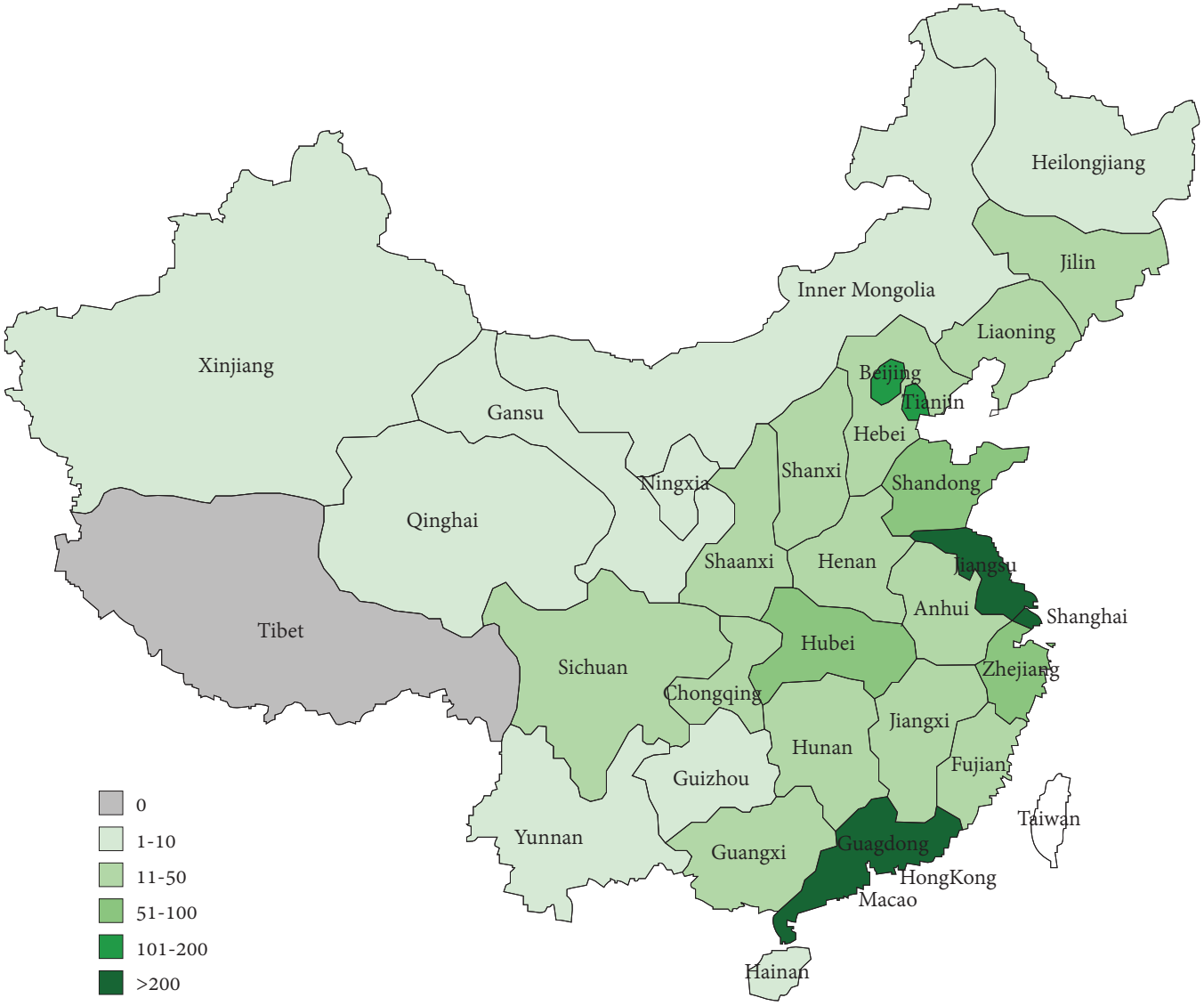
(8. 34) Tianjing eco-city

(8. 36) Tianjing eco-city

(8. 37) Tianjing eco-city

Evaluating all buildings and development projects in China that take these strategies into account is difficult, but developers are increasingly applying for green building labels, such as LEED certification and the Chinese green building certification, the Green Building Design Label, also known as "Three Star". However the Chinese housing market still not interested in these systems of energy certification. The house choice, opposite to what happens in Western countries, is no affected by the energy consumption and the materials quality. The only green influence in the Chinese real estate market is the presence or not of gardens, plants and water. Also builder doesn't care about it. Because the average short lifetime of the buildings and the market demand, the construction decisions are often made based on short-term costs, such as material and construction costs, instead of considering the long-term savings from energy efficiency or green building techniques. Anyway the Chinese residential energy saving consciousness has improved in recent years attributed to increased environmental publicity by the government. Are an example of these new trend the different experimental eco sustainable cities now in the design or construction phase throughout China. For example the new strategy for Chongming eco-island is a good sample of the Shanghai consciousness for these new issues.

developers are increasingly applying in green building labels, however Chinese housing market still not interested in energy certification systems.



(8. 38) Green building projects 2012

Notes

(8. 1) Shanghai construction site: photo by David Wicks.
(8. 2) Macro areas investments (%): draw by the author, data: Cresme/SIMCO 2012.
(8. 3) Concrete annual use (billion tons): draw by the author, data: Cresme/SIMCO 2012.
(8. 4) Chinese cranes: photo by Mamta Badkar.
(8. 5) China: building Europe in 15 years: draw by the author, data: Shanghai Municipal Statistics Bureau (SMSB).
(8. 6) Shanghai Construction Group: construction site: photo by Arndalarm.
(8. 7) Shanghai view: photo by julienpons31.
(8. 8) Construction site: photo by Natalie Behring.
(8. 9) Beijing suburbs : photo by chicagotribune.com.
(8. 10) Yingkou new district: photo by Tim Franco for The Wall Street Journal.
(8. 11) Shanghai housing: photo by Arwcheek.
(8. 12) China housing market : photo by Tomohiro Ohsumi | Bloomberg | Getty Images.
(8. 13) Growth and house size: draw by the author, based on: "Building Rome in a day: The sustainability of China's housing boom". The Economist Intelligence Unit Limited, 2011.
(8. 14) Sichuan Earthquake: photo by nickyloh.com.
(8. 15) Shanghai building collapsed: photo by Nir Elias.
(8. 16) Shanghai IFC Mall: photo by prc-magazine.com.
(8. 17) Personal Luxury Goods, Ranking by Country (2010, Billion €): draw by the author, data: Bain luxury goods worldwide study 2011.
(8. 18) Luxury residential compound: photo by reuters.
(8.19) "The Regency Plaza": photo by Arnd Dewald.
(8. 20) Yanlord Garden: photo by Kaiser Kai.
(8. 21) Xanadu, GBBN (Beijing): photo by GBBN Architects.
(8. 22) Vertical Courtyard Apartments, Wang Shu (Hangzhou): photo by Evan Chakroff.
(8. 23) Linked Hybrid, Steven Holl (Beijing): photo by Iwan Baan .
(8. 24) Linked Hybrid Gate, Steven Holl (Beijing): photo by disentropia.wordpress.com.
(8. 25) Jianyeli, John Portman (Shanghai): photo by Evan Chakroff.
(8. 26) Shanghai, Century Park: photo by fromindianatoshanghai.wordpress.com.
(8. 27) Shanghai, East Nanjing road: photo by gaoloumi.com.
(8. 28) Shanghai, East Nanjing road: photo by jedlinscy.com.
(8. 29) Shanghai Urban Green Areas coverage rate: draw by the author, data: Shanghai Municipal Statistics Bureau (SMSB).
(8. 30) Kwh per year per square meter by different shapes: source MIT Building energy calculator.
(8. 31) Dongtan Eco-City (project): photo by Arup.
(8. 32) Tianjin Eco-City (project): photo by Surbana.
(8. 33) Tianjin Eco-City (project): photo by Surbana.
(8. 34) Tianjin Eco-City: photo by BOON KUANG HAN.
(8. 35) Tianjin Eco-City: photo by Natalie Behring.
(8. 36) Tianjin Eco-City: photo by Jordan Pouille.
(8. 37) Tianjin Eco-City: photo by Natalie Behring.
(8. 38) Green building projects 2012: draw by the author, data: gbmap.com.

9

(9. 1) Shanghai view

CONCLUSIONS

9. 1 Introduction

Since the opening of the international concessions in Shanghai, various architecture types reflected the close connection with the rich culturally daily life. The Shanghai buildings, more than in any other Chinese city, presents a model of coexistence and multicultural mix made by the hybridization and the evolution of different types. These hybrid typologies characterize the contemporary Chinese city. The housing prototypes analyzed previously, reflecting different periods of the China modern history, with a particular focus on Shanghai. Looking at the city the different types that compose it are clearly visible. Residential towers and mid-rise compounds seem to be set in the historic fabric of the city made by a low and dense low-rise buildings layer. These typologies, that may seem belonging from two different worlds, are characterized by very similar generating elements. They are no more than the city's answer for the frenetic and ever growing demand for housing, in different eras. The phenomenon size, new technologies and new experiences, based on previous events, leading to the creation of this different new forms and buildings organizations. This living systems transformation respects an organic evolution and it has a great influence on the city spatial structure. Each different buildings in Shanghai became part of its historical memory. The city evolution and its types are characterized by these various changes. Even if they are different from each other and belonging to different periods these buildings keep several characteristics elements and highlight a clear housing typology evolution.

(9. 2) Lilong housing

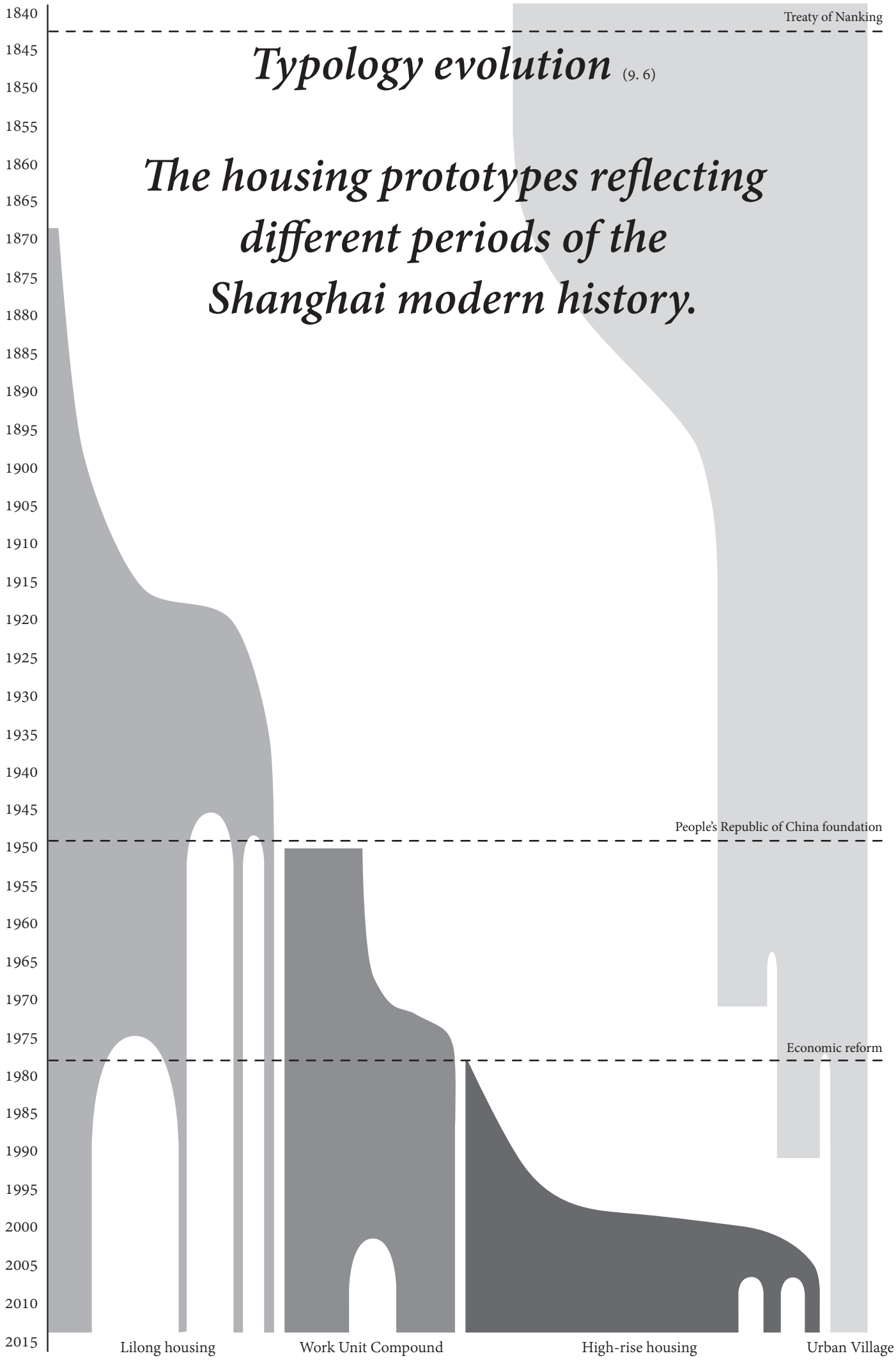
(9. 3) Work Unit Compound

(9. 4) High-Rise housing

(9. 5) Urban Village

Typology evolution (9. 6)

The housing prototypes reflecting different periods of the Shanghai modern history.



Lilong housing (9. 7)

Treaty of Nanking

Sanheyuan

Western Experience

Shikumen Lilong

New Type Lilong

Apartment Lilong

Garden Lilong

People's Republic of China foundation

Redistribution

Economic reform

Fragmentation

Demolition

Redevelopment

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Treaty of Nanking

Work Unit Compound (9. 8)

Soviet Model

People's Republic of China foundation

1rs phase: Work Unit compound

Economic reform

2nd phane: Xiao Qu (small district)

Requalification

Treaty of Nanking

High-rise housing (9. 9)

Free Market

People's Republic of China foundation

High-rise

Economic reform

Generic city

High-end city

Green city

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Urban village (9. 10)

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Treaty of Nanking

Urbanization process

Native village

Embryonic urban village

People's Republic of China foundation

Growing urban village

Economic reform

Mature urban village

Demolition

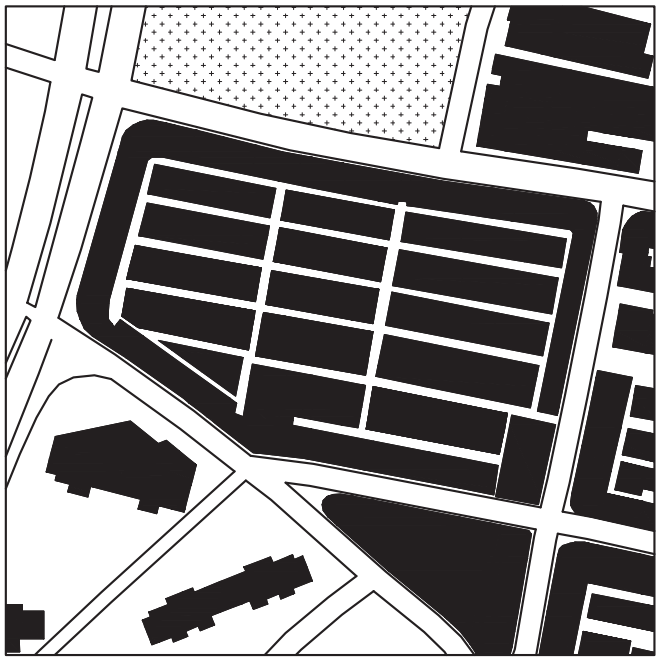
9. 2 Types comparison

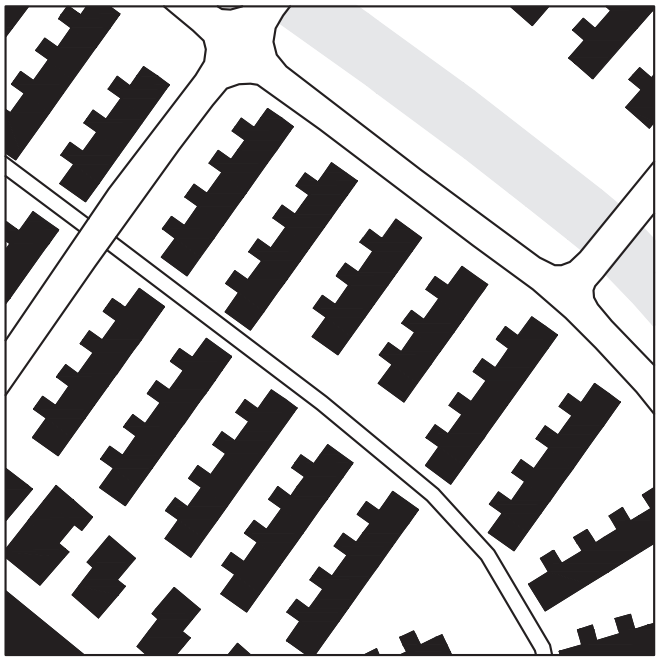
Starting from Lilong housing, or even before from the traditional courtyard houses, the Siheyuan, through the Work-Unit and up to the contemporary high-rise housing typology, the evolution of the prototype for the residential building in Shanghai, and China, consists by clear features and goals. The increasing building verticality, from two floors the houses during the nineties exceed the thirty floors, is an example of the constant housing typology efficiency growth. The Liliong housing FAR of 1.8 during the last century exceed a FAR of over 4.0 in the new high-rise housing. However the population density is not to grow too much. In the same area the new residential towers, with a less footprint in order to guarantee an adequate natural lighting, give home to just few more residents of the previous Lilong units. The big difference between the typologies consists in the size of each unit and the quality of the living spaces. Just thanks to the fragmentation in the years of the housing unit the Lilong can reach a high population density as the residential tower. The increasing average size of the house, the quality of life and the rising number of comfort in the common home are the main differences. The new life expectancy and the growth of a new middle class have led to the evolution of new living standards quite different from the previous dwellings built in order to answer to the growing demand for low-cost housing for workers and refugees. A more specific use of the rooms are shaped because the new technical and technological discoveries, with the result of a progressive increase in the house size. Then from a typological, technological point of view the new residential prototypes ensure higher standards than their predecessors.

(9. 11) Shanghai layers

Lilong housing

Work Unit Compound





High-rise housing

Urban Village

(9. 12) Types comparison

(9. 13) Lilong housing

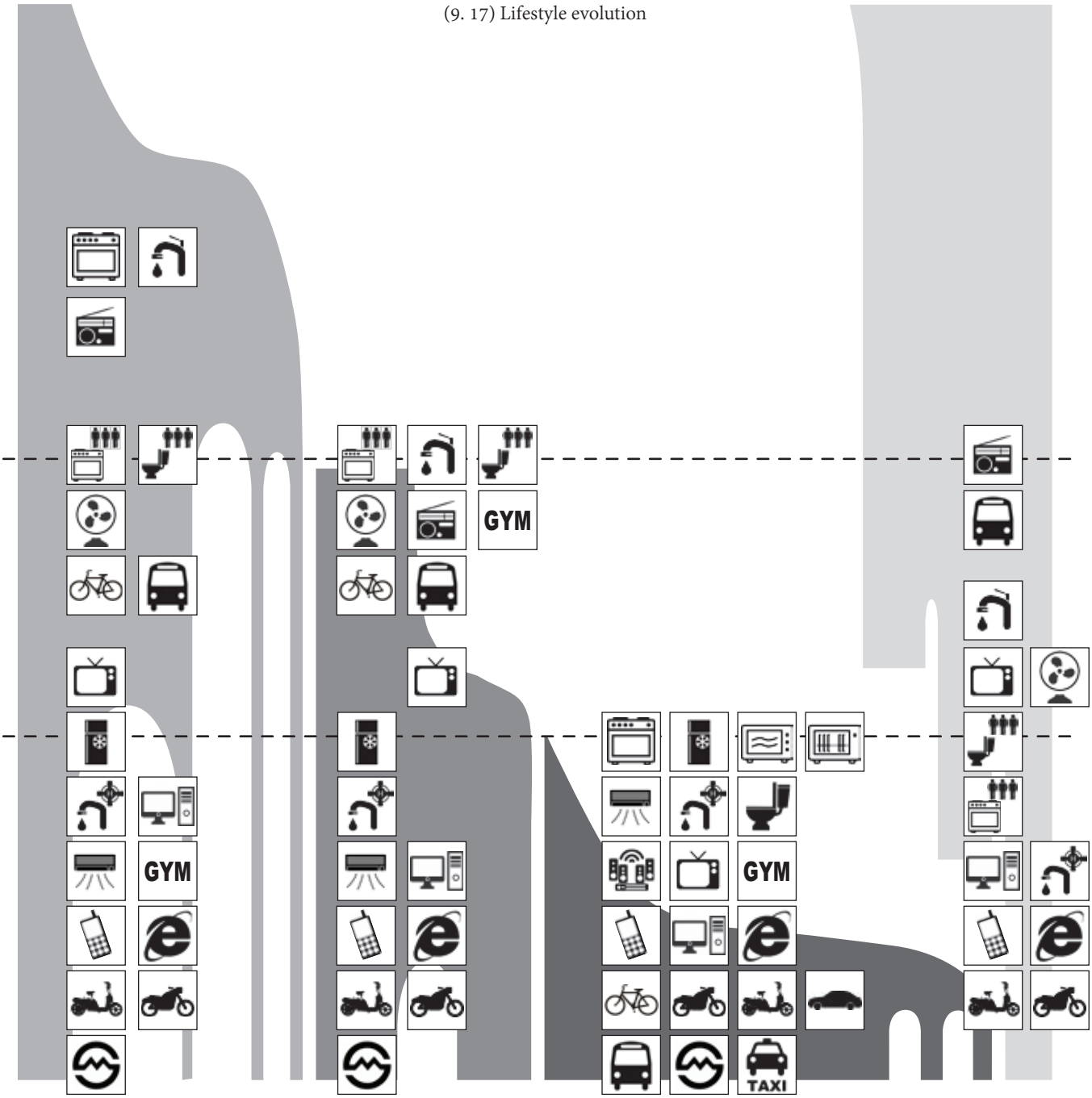
(9. 14) Work Unit Compound

(9. 15) High-Rise housing

(9. 16) Urban Village

In addition to the visible physical and architectural appearance also the social context of the different housing prototypes is changing. In high-rise buildings the units are located on different floors of the towers, they are developed in order to ensure the maximum privacy and autonomy. Every room in the residential tower has a specific use, independent of the others, which not encourages the interaction between residents and the social activities. The only common space is located on the compound ground floor. It's consisting of a circulation area, pedestrian and vehicular, and a recreation space. Differently in Lilong housing the lack of space in the units move several activities in the neighborhood alleys creating a strong social interaction. The community sense, important in the traditional Chinese culture, decreases with the increase of verticality, the specificity and the introversion of the housing units. During the twentieth century the house evolution reflects the social environment changes of the country, from socialist state to the new capitalist and consumerist model. The loss of the community sense is influenced by the new people lifestyle. The new housing demand is not driven just by convenience or the developers and government choices, but by a new buyers typology, more interested in the new comforts that community life. The new housing demand leads the typology evolution and the transformation from neighborhood community to golden ghettos. As well as the various transformations and evolution that lead to positive and negative changes, other components, that characterizing the residential construction in China, in the housing typology are unchanged. One of the main element is, with no doubt, the wall.

(9. 17) Lifestyle evolution



The new housing demand leads the evolution from neighborhood community to golden ghettos.

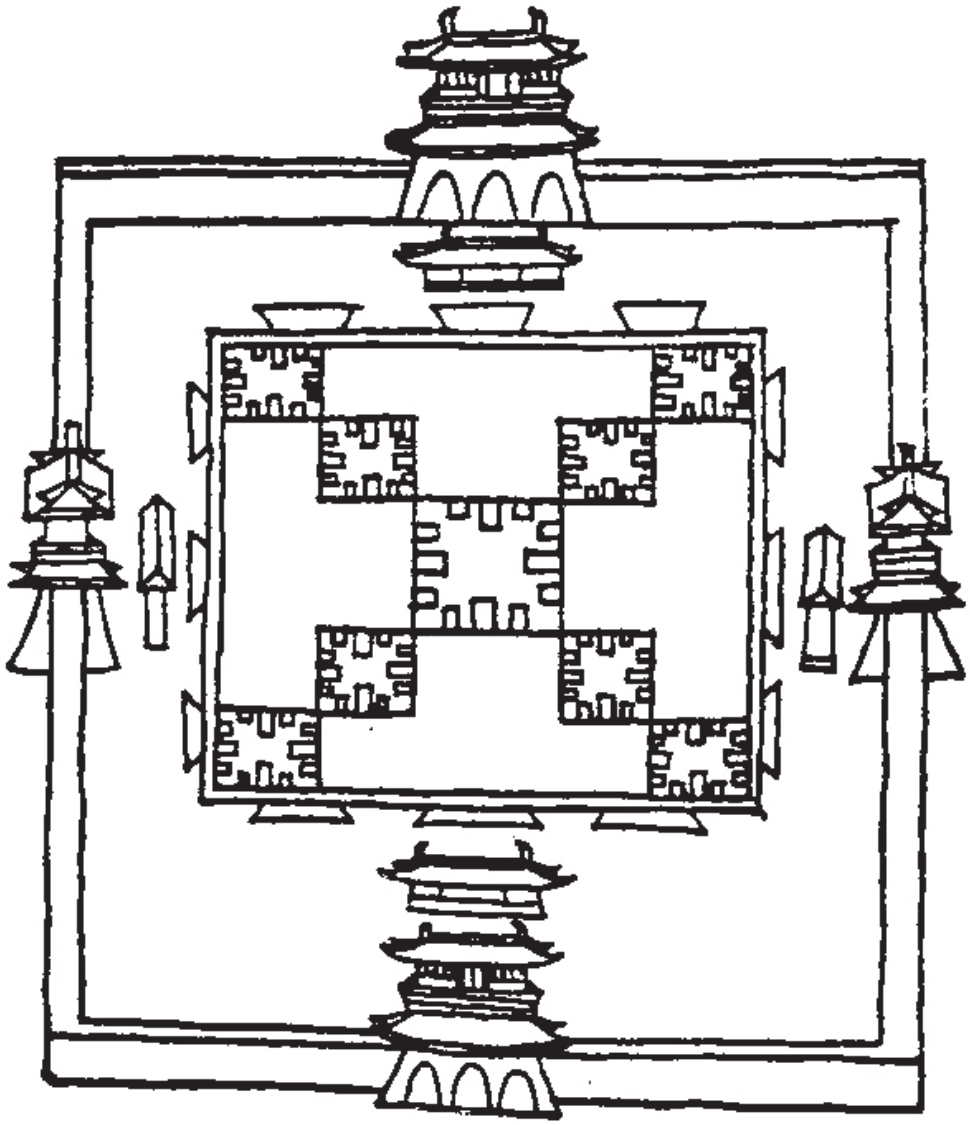
(9. 18) Hailun rd bridge

9. 3 Walled neighborhood

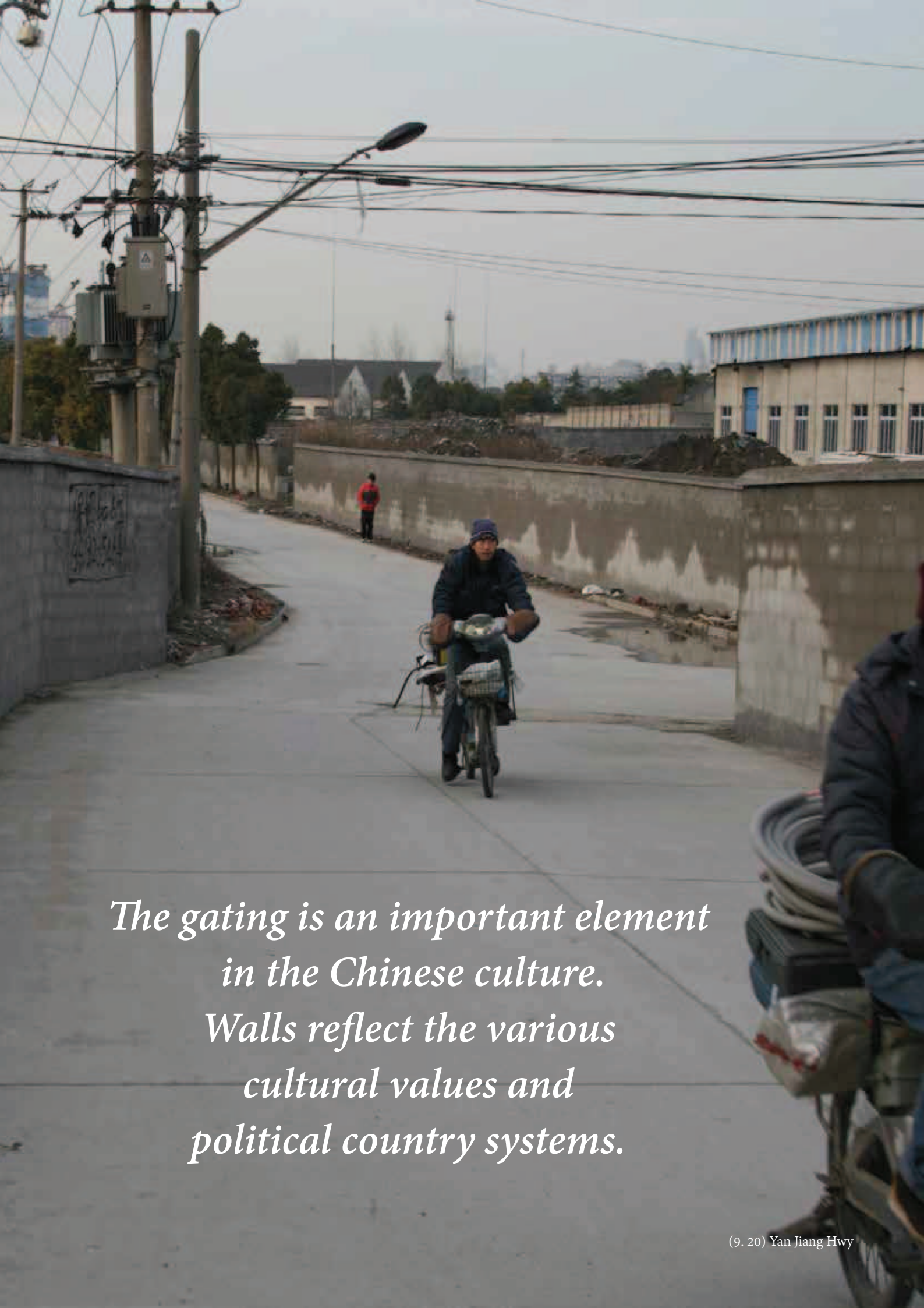
"Walls, walls and yet again walls form the framework of every Chinese city. They surround it, they divide it into lots and compounds, they mark more than any other structures the basic features of Chinese communities."

(Osvald Sirén, Needham 1971)

The gating, real walls or just physical barriers often mix with commercial activities, has always been an important element in the Chinese culture. It reflects the various cultural values and political country systems. In socialist countries, like China, the State dominates the provision of public services, although lately are emerging various supplies by the private sector. The gating is used as a tool for facilitate the different services delivery and for have more political control. During the new privatization trend the walled neighborhoods, for various reasons, are becoming increasingly attractive to the government, investors and citizens. The collectivist culture, deeply embedded in Chinese society, offers a specific explanation for the phenomenon of gating all over the country. The walls create a sense of security and are symbolically used to define a community. Collectivism has remained at the center of Chinese culture despite the profound socio-economic transformations that have characterized the Chinese last century history.



(9. 19) The ideal city



The gating is an important element in the Chinese culture. Walls reflect the various cultural values and political country systems.

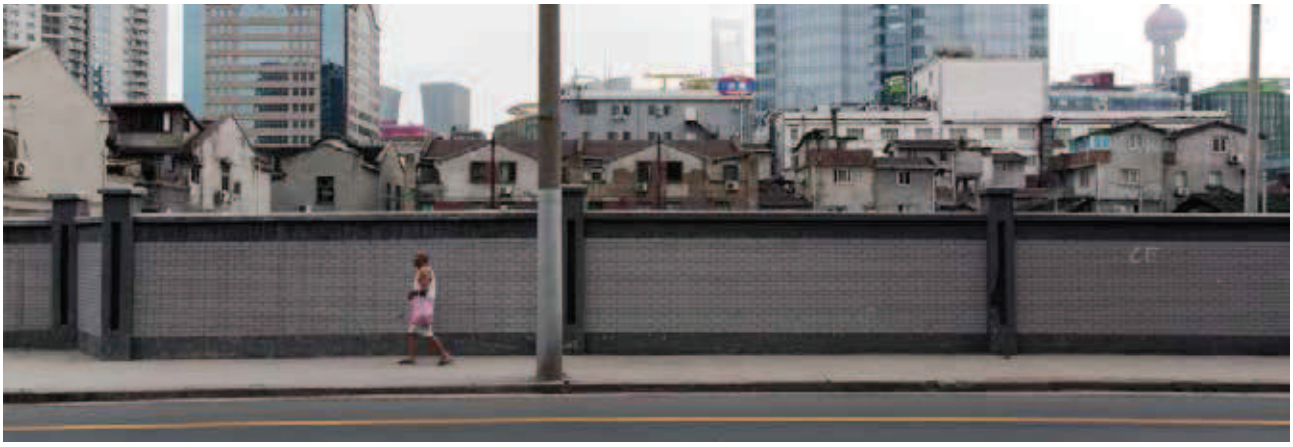
(9. 20) Yan Jiang Hwy

The enclosed neighborhoods characterized the residential Chinese cities landscape since the Shang Dynasty (1600-1046 BC) and the Zhou Dynasty (1045-256 BC). The jiefang system, using large avenues and narrow lanes, divided the area into smaller residential wards, called fang. Surrounded by walls and gates, these blocks discouraged interaction to the outside, but created a strong relationship and a strong sense of community among their residents. This typology of courtyard houses was developed in Chinese cities until the Qing Dynasty (AD 1644-1911). The administrative system, called baojia system, emerged from these physical characteristic of residential districts fragmentation and it will remain as the basis for the next developments. This system consisted of a division by a hierarchical system of the society into smaller units. It had to provide the population registration, the taxes collection and facilitate the political control. Even in the coastal cities, under foreign occupation, this culture was well established in Chinese society. In Lilong housing in Shanghai, although strongly influenced by the English terraced houses, the main features of gating and closing to the outside continued to persist.
A dramatic city transformation was starting from 1949 with the rise to power of the Communist Party of China. The Work-Unit compounds became the predominant new residential typology. It combined in the same block work necessities, house and every kind of service for the every day life. Although in a different shape gating and enclosure have remained an essential element in the residential development. Inside the Work-Unit its residents are surrounded by walls and gates controlled by security guards, they shared every aspect of the everyday life in order to creating a new socialist collective lifestyle. The new communities that were created did not differ too much from the traditional extended Chinese family. Based on labor the Work-Units were regarded as a public families involved to ensure the welfare of its members. These neighborhoods were also the basic unit for political control, they guaranteed a close watch and the possibility to shape almost every aspect of the private lives of its members, work, marriage, education. To be able to marry, move or make the most mundane aspects of daily life you had to belong to a Work-Unit and have his consent. Combining economic, social, and political elements within the walled boundaries, as well as a close political control, uniform neighborhoods are created without, or with small, differences in social and housing inequality, apart a strong community sense and belonging.
Even after the second reform period, in the nineties, residential housing was characterized by the districts introversion and closure from the outside, although driven by different aspects compared to previous eras. Consequently the market privatization there was a growing in housing inequality and residential segregation. The main residential buildings of this last period can be divided into two different prototypes, the high-rise building compounds and the Urban village typology. These two opposite aspects of the new development are characterized respectively by a high-middle social class the first and a low income the second. The new residential compounds are equipped with several community services as street cleaning, gardening and security provided, different from the Work-Units, by private investors for a monthly fee. Under various elements this type shares similarities with the gated communities in the United States. The new middle and high class compounds are characterized by an emerging individualistic subculture result of the market transformation. The community sense can no longer be defined in the traditional way as in the previous examples. The community that is defined inside the walls is shaped by the investors through strong characterization and distinction from the outside. The developers model it more attractive for the new demand market by new services (shops, restaurants, café, gardens) that promote a new and unique community lifestyle. Socioeconomic status, lifestyle and interests in property rights have become the main factors for people to live together within the gates. Although different from courtyard houses, Lilong housing or Work-Units, they represent a continuity with the past, the political control and the collectivist culture that characterize the Chinese society are promoted by different agents. The government continues to promote gating and enclosure in urban planning for greater control, security and a better city image. Gating is often used by the government for promote urban renovations. Urban Village, real enclave within the city, are surrounded by new buildings and walls in order to limit the area, hiding from the citizen view and foster the redevelopment.
With the growing maturity of the Housing Market in the contemporary Chinese city different walled neighborhoods can be distinguish. Walls characterize all the city's elements, from the migrant enclaves imposed by the government to the new golden ghettos desired from the new elite for more privacy. These components, that characterize the new Chinese cities communities, reinforce the social and spatial segregation, in all the positive and negative aspects.

(9. 21) Lilong revamping

(9. 22) Weifang Unit (block n.7)

(9. 23) Linked Hybrid



(9. 24) Shanghai brickwall

9. 4 New scenarios

The residential sector in China has not yet found its stability, it's still closely monitored. The bursting of the housing bubble is the main concern in the short to medium term. However, also if the Chinese market has definitely been targeted by speculation, most of those who buy new homes today come from increasingly large middle class and do not do it for speculative purposes. Furthermore the government is introducing several restrictions to slow this phenomenon and the expansion of the prices, as the limit on the second homes purchase. The government goal is to create a new consumers class in order to expand a domestic demand and allow China to unhook from an economic model based on large investments. The main new urbanization plan purpose is a sustainable development planning, the downsizing of coastal mega-cities and the medium and small sizes cities development.
China, as a developing country, is considered a newcomer in the modernization process of urbanization. The main goals of this modernization are a better development and the living population conditions raising. The new urban development predominant typology must evolve from the previous Chinese and international examples. The urbanized Western countries experiences should be depth studied and adapted to the new environment and the Chinese society characteristics for the future cities development. Also in the West, as in China, the urbanization process has presented oppression and deprivation elements against individuals. Historically, urbanization has been

(9. 25) Shanghai cityscape

the capital expansion result. It was a response to the cheap labor demand, raw materials and a new kind of market. Anyway after the workers movement rise, the class struggle, the various economic crises and the resulting social costs, the Wester urbanization has reached a rather stable phase. For example Europe get precious urbanization experiences during the last centuries as the ancient city transformation, the construction and test of new living models, the environmental and health protection and the cultural heritage safeguard. These new topic are the main propose to implement in order to improve the urban life.

One of the main questions is whether China is trying to find its own modernization way or simply retracing the steps of the West, with the risk of losing its specific culture and identity. Certainly the new Chinese urbanization should focus on the individuals welfare. Though highlighting the rapid development and efficiency, it's necessary let people enjoy of these benefits bring by the new development in a perspective of social equity and housing quality. At the moment the Country still in an urban transformation phase centered on the ideology to build the most in the least time possible, in order to accommodate the large migration waves from the countryside and specially develop the country's economy. At the end of this frenetic development China will have to focus more on quality of buildings at the expense of the quantity, to be able to embark on a new urbanization phase and continue the housing evolutionary process.

Notes

(9. 1) Shanghai view: photo by the author.
(9. 2) Lilong housing: photo by the author.
(9. 3) Work Unit Compound: photo by the author.
(9. 4) High-rise housing: photo by the author.
(9. 5) Urban village: photo by the author.
(9. 6) Typology evolution: draw by the author.
(9. 7) Lilong housing: draw by the author.
(9. 8) Work Unit Compound: draw by the author.
(9. 9) High-rise housing: draw by the author.
(9. 10) Urban village: draw by the author.
(9. 11) Shanghai layers: photo by the author.
(9. 12) Types comparison: draw by the author, photos by Baidu street view.
(9. 13) Lilong housing: (a) photo by "Shanghai Living"by Hu Yang, 2005.
(b) photo by Wang Qing.
(c) photo by Eric Firley.
(d) photo by Evan Chakroff.
(e) photo by Barry Zee.
(f) photo by bricoleurbanism.
(9. 14) Work Unit Compound: (a) photo by pro-unit.org.
(b) photo by pro-unit.org.
(c) photo by bricoleurbanism.
(d) photo by bricoleurbanism.
(e) photo by bricoleurbanism.
(f) photo by bricoleurbanism.
(9. 15) High-rise housing: (a) photo by timbeckenham.
(b) photo by Marc van der Chijs.
(c) photo by Toby Simkin.
(d) photo by Pete Lin.
(e) photo by author.
(f) photo by Toby Simkin.
(g) photo by Toby Simkin.
(9. 16) Urban village: (a) photo by the author.
(b) photo by bricoleurbanism.
(c) photo by qd.focus.
(d) photo by qd.focus.
(e) photo by qd.focus.
(f) photo by bricoleurbanism.
(9. 17) Lifestyle evolution: draw by the author, data: Shanghai Municipal Statistics Bureau (SMSB).
(9. 18) Hailun rd bridge: photo by the author.
(9. 19) The ideal city: photo by cloud-cuckoo.net.
(9. 20) Yan Jiang Hwy: photo by the author.
(9. 21) Lilong revamping: photo by Urbain, trop urbain.
(9. 22) Weifang Unit (block n.7): photo by Baidu street view.
(9. 23) Linked Hybrid: photo by Baidu street view.
(9. 24) Shanghai brickwall: photo by Arnd Dewald.
(9. 25) Shanghai cityscape: photo by the author.

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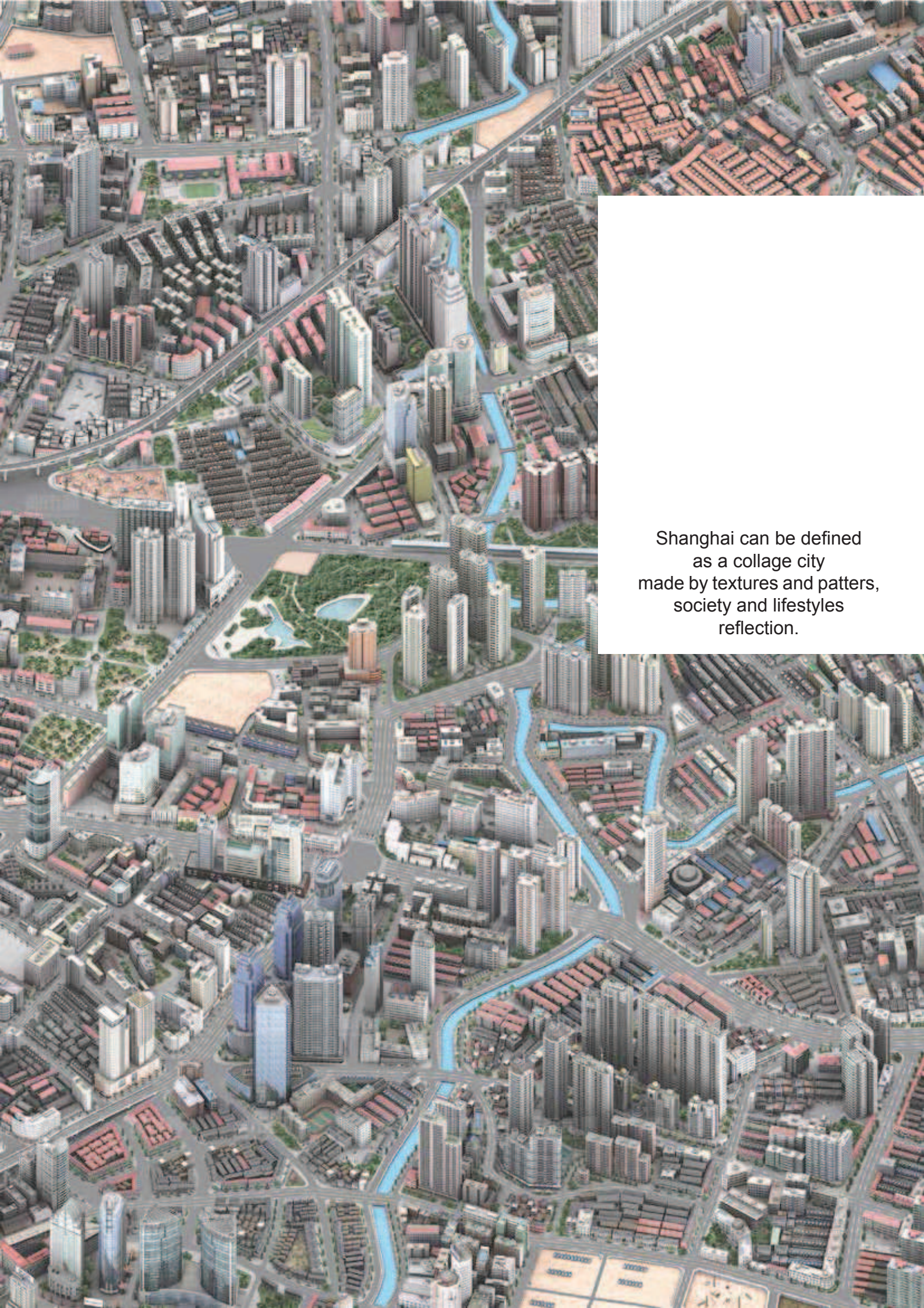

Shanghai can be defined
as a collage city
made by textures and patters,
society and lifestyles
reflection.