

**A Study on the Relationship between Informal Rules and
Morphological Evolution of Urban Village in China**

(中国の「城中村」におけるインフォーマルルールと形態変化の
関連性に関する研究)

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A Study on the Relationship between
Informal Rules and Morphological Evolution of
Urban Village in China

Dissertation Submitted to
the University of Tokyo

in Partial Fulfillment of the Requirement for
the Degree of Doctor of Philosophy (Architecture) by

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ACKNOWLEDGEMENTS

I sincerely thank the following people, without whom this dissertation could not have been possible.

Prof. Tomonari YASHIRO, my supervisor at the Department of Architecture, Graduate School of Engineering at the University of Tokyo, for his instruction, encouragement and patience.

Prof. Kaori FUJITA, Prof. Yasushi ASAMI, Prof. Takaaki KATO, and Prof. Hiroshi OTA, for guidance, criticism and inspiration.

Prof. Ma Hang(馬航) in Shenzhen Graduate School of Harbin Institute Technology (HIT), Prof. Tong De(仝德) in Shenzhen Graduate School of Peking University, Prof. Zhou Suhong(周素紅) in Sun Yat-shin University, Prof. Wei Lihua(魏立華) in South China University of Technology, and Dr. HuangQuanle(黃全樂) in Design and Research Institute of SCUT, for their kindness, suggestion and guidance in the interview in the field survey.

The officers of Longdong Village, such as Fan Weifeng(樊偉峰), the Dean of Construction Office of Longdong Village, Fan Weipei(樊偉培), ex-secretary of Longdong Village and Fan Jinwen(樊錦文), the Dean of Culture Office of Longdong Village, for their kindness and help in the field survey.

All the members in the laboratory of Yashiro, such as Dr. Yuhei MAGORI, Dr. Yu MORISHITA, Ms. Mohamed Fatama kassim, Ms. Masako KOIKE, Dr. CHEW Voon Yau, Mr. LIAO Yuchia, and so on, for the support and encouragement.

My friends, such as LIN Xulin, TU Wei, WANG Yuxin, CHEN Kailin, ZHENG Shenglan, ZHAO Qi, HUANG Xiangyun, etc., for their encouragement.

Prof. XU Maoyan, my former supervisor in Tsinghua University, for continuous guidance and encouragement even I had graduated from Tsinghua University.

Finally, I would like to thank my parents whose patience, belief and love enabled me to complete this dissertation.

Tokyo, February, 2014

ABSTRACT

As the high-speed economic growth and super-rapid urbanization in China, many traditional villages are forced to become urban villages, which are unique phenomenon of landscape that city and village co-exist attributing to the urban-rural dual institutional system. Traditional village gradually evolved to the cluster of rental house that shielding indigenous villagers and migrants of the low incomes from other cities and rural area. Most of municipal governments are their best trying to upgrade or reconstruct them, but difficult to carry forward as the contradictoriness between formal institution and informal institution. Formal regulations fail to guide the land and property development in urban village. Informal rules are the effective rules guiding the villager's construction behavior in urban village.

The research purpose is to uncover the informal rules that influence the morphological evolution of urban village. It would try to make clear that: (1)Social characteristic and physical-social characteristic of urban village in China. (2)The common process of the evolution of urban village. (3)What kinds of informal institutions exist in urban village. What kind of informal settling institutions are there supporting the land and property development, and what specific informal rules are there referring the housing construction. (4)How those informal institutions(rules) affect the morphological evolution of rental house in urban village.

The study involves the disciplines of sociology, social management, urban planning, urban geography, architecture and so on. It is an interdisciplinary research. The research methods are including: information collection by internet, literature survey, field survey, information processing and graphic analysis.

The dissertation is composed of the following contents:

Chapter-1 is introduction.

Chapter-2 is a literature survey to examine the rural social composition and behavior logic in China, which are socio-cultural institution as the basement for the derivation process of informal rules in the following study.

Chapter-3 is another literature survey to examine the informal settlement in other developing countries and why urban village are deemed as informal settlement according to the specific formal institutions in China.

Chapter-4 elaborated the field survey which has been done basing on those literature surveys mentioned above. Four items of informal settling institutions, which dominates the land

and property development in urban village, are deduced as field survey findings in this chapter.

Chapter-5 is information processing and graphical analysis to elaborate the morphology of urban village within the scope of village scale. A theoretical outline of the morphology of urban village was drawn in this chapter. Via this analysis method, the social-physical character and developing process of urban village in Beijing, Guangzhou and Shenzhen were illustrated.

Chapter-6 is graphical analysis of the morphology of urban village in the scope of building scale to illustrate the effect of the informal settling institutions and specific informal rules. Eleven specific informal rules are deduced from the villagers' visible behavioral results. They are verified by facts of the graphic analysis and numeral evidence.

Chapter-7 is the conclusion. The findings of the study are concluded in those three aspects: social characteristics of urban village, physical-spatial characteristics of urban village, informal settling institution and specific informal rules.

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CHAPTER-1

INTRODUCTION

1.1 Research Background

1.1.1 The World More Attention on Informal Settlements

The economic globalization and industrial transfer have driven urbanization in many parts of the world. It allows more and more people to live a high quality of life in prosperous cities, where has comfortable environment, convenient transportation, abundant supplies and so on. However, in the areas where have been urbanized or are about to be urbanized, there are still many low-incomes and even middle-class have to live in informal settlement with very poor environmental and social conditions below the standard level.

In developing countries, significant numbers of urban dwellers are not only employed in the informal sector, but also have to seek their shelters in informal settlement, as unable to access affordable serviced land and formal housed. And in peri-urban areas of those countries, where the rapid urbanization would take place in the near future, informality is also a prominent feature. In developed countries of Western European and North American, there is little informal settlement in the city with the exception of travelers' settlements and some small-scale squatters, generally in disused buildings. Some informal occupation and modification of formal buildings occurs in inner city areas, especially by slum landlords and poor urban residents, including recent migrants. In the transitional countries of Eastern Europe and the former USSR (Union of Soviet Socialist Republics), the transition from centrally-planned to market-based economies was associated with dramatic increases in poverty, inequality and unemployment. Lower income households have been restricted to privatized deteriorating housing estates, or to low cost housing in peripheral villages and informal settlements (UN-HABITAT, 2009). It is reported that more than 50 million people in 15 member States of UNECE (the United Nation Economic Commission for Europe) live in informal settlements.

Rapid urbanization, poverty and lack of access to land and ownership, in addition to limited or no social housing, have led citizens to build their homes illegally under very poor environmental and social conditions. The phenomenon is growing at an exponential rate in Eastern Europe, Caucasus and Central Asia, and calls for urgent political, legal and planning solutions (UNECE, 2009).

1.1.2 Phenomenon of Urban Village in China's Urbanization

1) Rapid Urbanization and Migration from Rural to Urban

As the high-speed growth of economy and the super-rapid progress of Industrialization and urbanization after the launching of the Reform and Opening-up Program over 30 years ago, more and more towns has become cities, more and more rural population has become urban

population in China. Some isolated cities are becoming urban agglomerations, especially in the Capital region of Beijing, the Pearl River Delta and the Yangtse River Delta. The momentum of economical development in Chinese land spreads from coastal to inland, from east to west, from first-tier cities to the second-tier and third-tier cities. The wave of urbanization is sweeping across the whole country. As the Fig.2 showed, the urbanization rate of china has reached to 49.7% in 2010. Go on increasing, it is exceeded 50% in 2011, indicated the historical transformation of social structure.

The rapid development of urban economies and the transformation of rural industrial structures have also promoted the large increase of domestic migration flows. In 2011, the migrant population in China reached 230 million. Those rural migrant workers in the inflow cities tended to be long term and many became de facto the new urban residents. Rural migrant workers accounted for over half of the employees working in urban manufacturing and processing industry, construction industry, and service sector including sanitation, housekeeping and catering, etc (IEAS-CHINA & UN-HABITAT, 2012). The Rural migrants have made an important contribution to the urban development, however they always lack sense of belonging to the cities where they work. They don't have the same welfare with other urban residents but have to live in dilapidated old areas inside the city or peri-urban area at the edge of the city.

Besides the social and economical development, the urban space of many major cities in China has been dramatically expanding, annexing as more as possible village and farmland in the outskirts of cities. In the old region of the cities, unlike the cities in Europe, has being renewed without any trend of decline, as the migrants from rural area are constantly pouring into them. Actually, urban areas provide a number of socio-economic opportunities for jobs and income generation, but are also simultaneously becoming increasingly risk places to live, especially for low-income residents of cities in developing countries (United Nations Environment Program, 2007). In the case of China, the new comers to cities always gathers in the urban village, both in the core of the city and around the edge of the city, where has low rent residence and low price of daily necessities. Urban villages in China have become the proper shelters for rural migrants before they integrate themselves to the city.

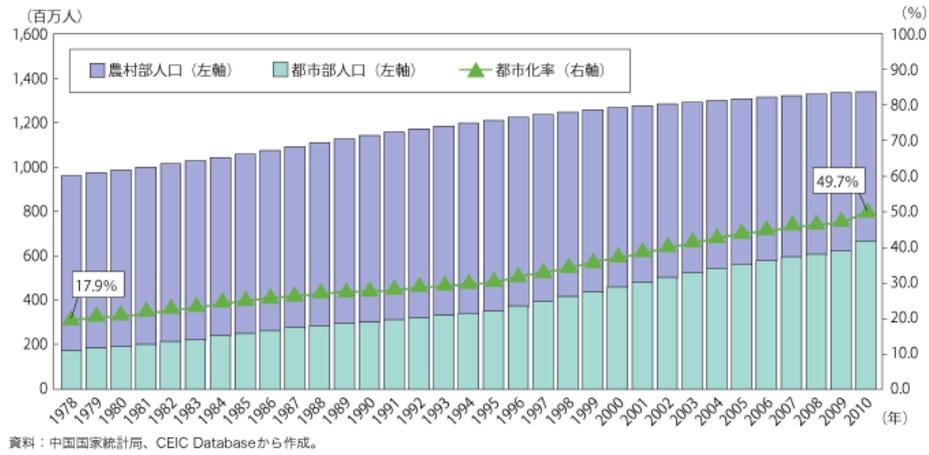


Fig. 1 The development of urban population and urbanization ratio in China
Source: National Bureau of Statistics of China



Fig. 2 Infrastructure under constructing in Kunshan(昆山) beside Shanghai (上海)
Source: by author in 2011.12



Fig. 3 Village surrounded by commercial residential under constructing in Kunshan (昆山),
Source: by author in 2011.12



Fig. 4 Constructing site in Shenzhen (深圳)
Source: by author in 2012.01



Fig. 5 Industrial plant in Wuxi (無錫)
Source: by author in 2011.12

2) Developing Process of “Urban Village” in China

In China, there are two kinds of land tenure system - National Ownership and Collective Ownership. The land of urban area is national owned by the government, but the land of village in rural area and in or around urban area is collective owned by the all the farmers as a whole. Based on that land holding system, there are two types of administration and services system. One is municipal administration; the other is self-organized village level administration which is always chaos, inefficient and lack of long-term vision.

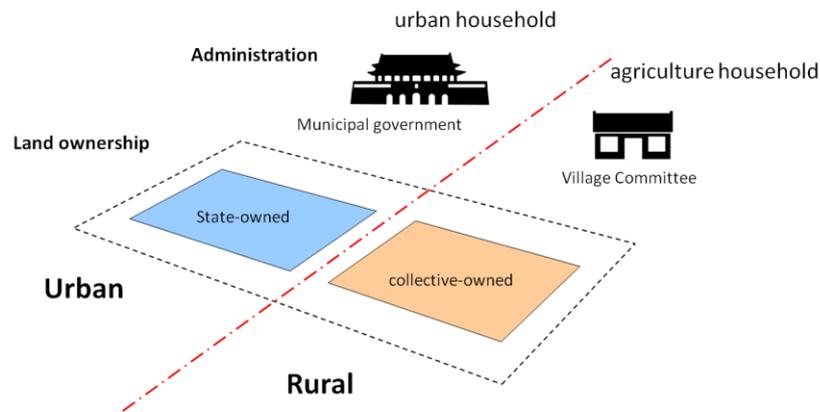


Fig. 6 Urban-rural dual structure in China
Source: made by author

Under those two main factors mentioned above, urban villages in China start their generating process during the past three decades since the policy of economic reformation and opening from 1979, especially in economical prosperous cities including Beijing, Shenzhen and Guangzhou and etc. Fig.7 abstractly shows the generating process of “Urban Village” in China in a simple way. As the rapid expansion of urban space in the super-rapid process of urbanization, farmland of the village in the suburban area of the city was requisitioned firstly by the municipal government becoming national-owned land. Government and developers are used to bypass the residential areas of the village to reduce the cost of land requisition, which led to the landscape that village is surrounded by high-rise buildings, transportation infrastructures, and other modern constructions. Such as Shipai Village(石牌村), Xiancun Village(洗村), Liede Village(猎德村) in CBD of Guangzhou, and Gangxia Village(岗厦村), Huanggang Village(皇岗村), Futian Village(福田村) in CBD of Shenzhen.

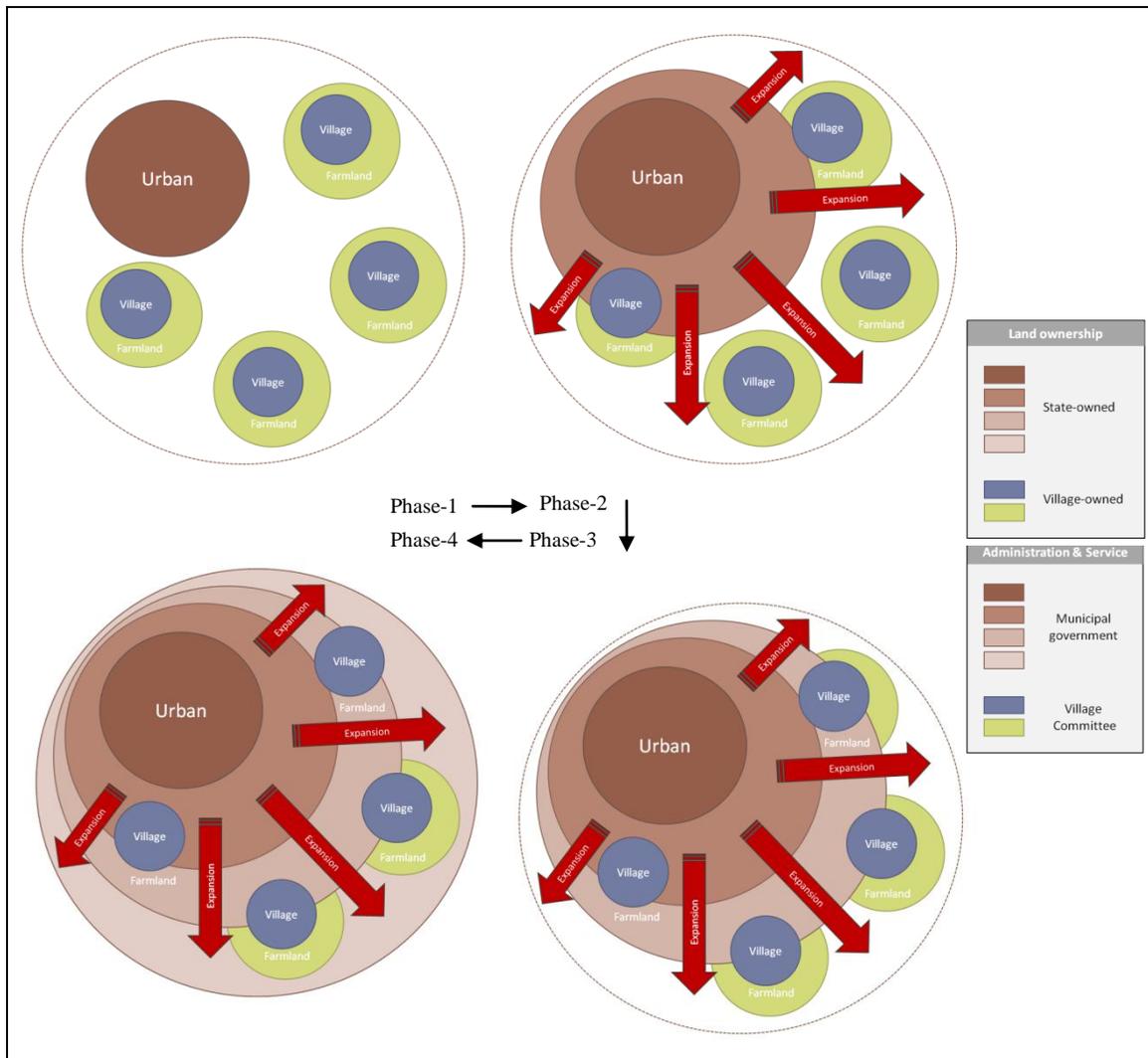


Fig. 7 Developing Process of "Urban Village" in China
 Source: made by author

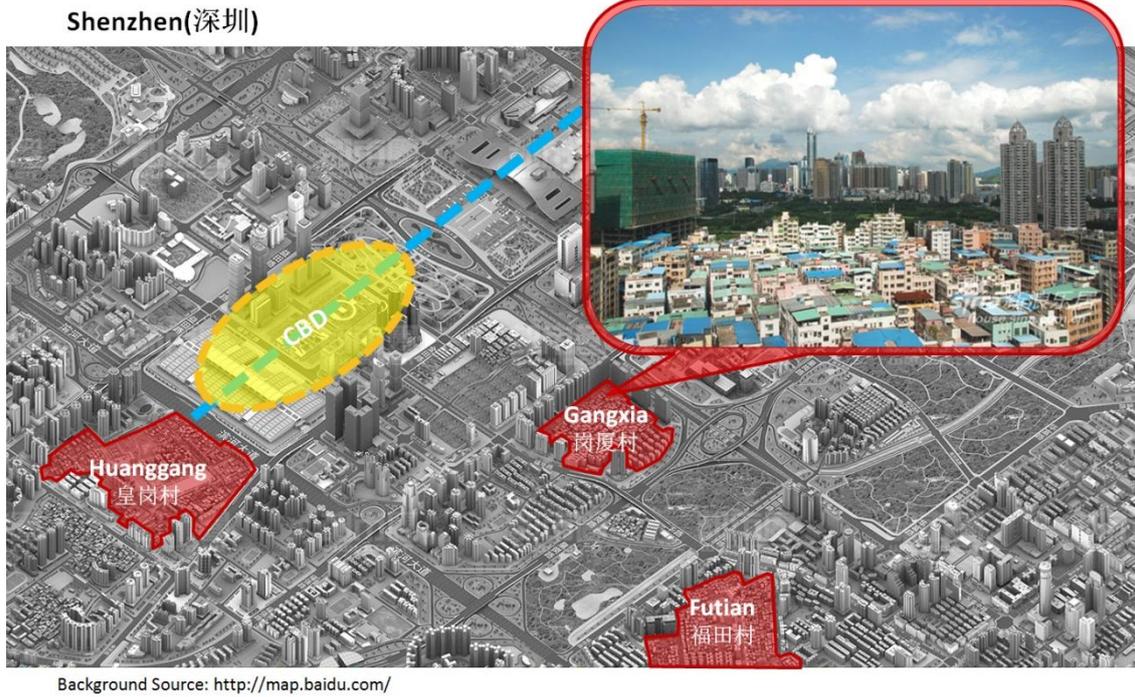


Fig. 8 Urban Village in Shenzhen,
Source: made by author

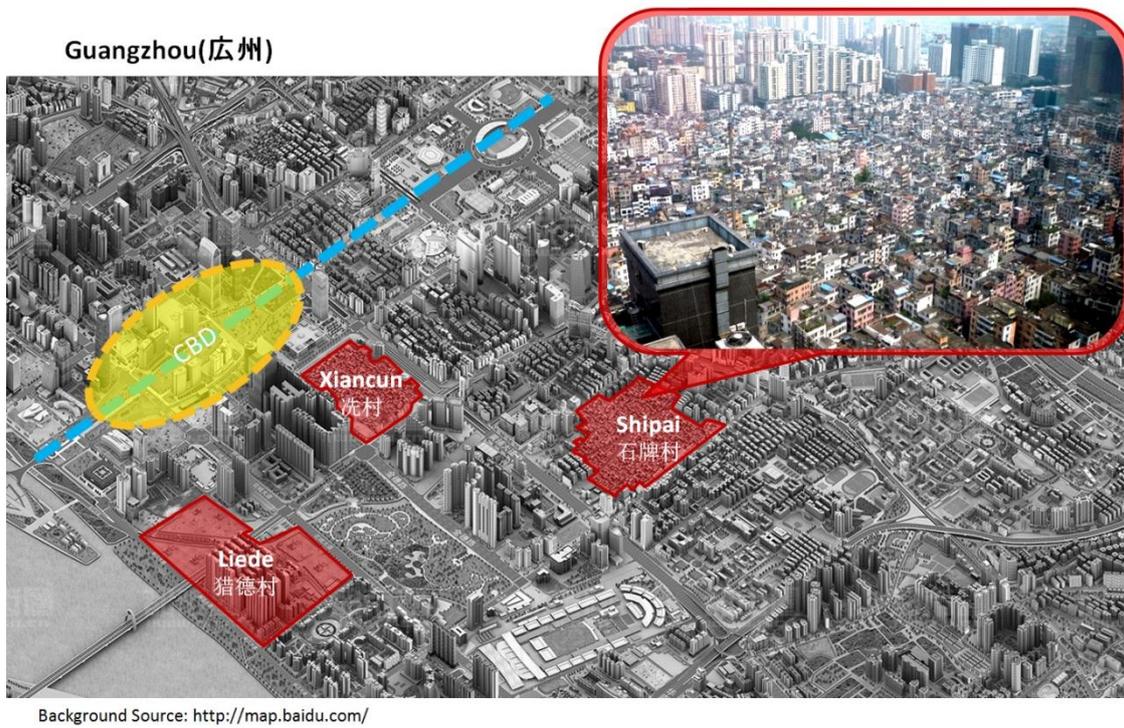


Fig. 9 Urban Village in Guangzhou,
Source: made by author basing on Baidu 3D City



Fig. 10 Urban village of Shipai (石牌村) in the central area of Guangzhou City (广州市) 2013/03
Source: by author



Fig. 11 Streetscape of Longdong Village in Guangzhou City 2013/03
Source: by author

1.1.3 International Challenge for Decision Makers

The challenge of informal settlements is widely recognized in international and national programmes fostering sustainable development. The UN-Habitat Agenda adopted in 1996 and the Declaration on Cities and Other Human Settlements in the New Millennium adopted by a special session of the United Nations General Assembly in 2001 reaffirmed the commitment of Governments to ensure that “Everyone will have adequate shelter that is healthy, safe, secure, accessible and affordable and that includes basic services, facilities and amenities, and will enjoy freedom from discrimination in housing and legal security of tenure” (UN Habitat, 2001). To achieve this fundamental goal an emphasis was placed on collaboration between public and private actors and institutions, as well as the identification of “enabling strategies” (UNECE, 2009).

In China, urban village is one of vulnerable areas between the municipal governance system and rural governance system. The problem of the phenomenon of urban village has become a more and more serious challenge of urban development for decision makers. Many municipal governments have tried various methods to solve it, such as Beijing, Guangzhou, Shenzhen, Xi’an, Tianjin, Tsingdao, ect.

As the preparation for Olympic Games 2008, Beijing started to remove 171 urban villages around the Olympic venues and renewed those which are inside the 4th Ring Road from 2004. After the Olympic Games, Beijing continue to promote the works of transformation of urban village. In 2010, there were 50 important urban villages in Beijing set to be the targets to transform. And the region of transforming would gradually be extended to all administrative villages in the metropolitan area of the Beijing City (LI-Jiwei, 2011). Similar transformation process also occurred in Guangzhou and Shenzhen in the Pearl River Delta. The first urban Village transformation project in Guangzhou - Liede Village Project - officially started on July 15th, 2007 to welcome the Asina Games 2010. Then the other 138 villages were arranged to renewal or replace in the transformation schedule of the city government of Guangzhou.

The phenomenon of urban village is a very complex social problem in China’s urbanization process, which involves the household registration system, land ownership system, housing supply system, administrative system, as well as the interests balance of all parties of people and organization that involved to urban village. Although many experts, scholars and decision makers have made great efforts on the work of transformation of urban village, it is still a very difficult task to promote. The transformation work of urban village also caused all kinds of controversy among the masses. The urbanization process of urban village in China is a difficult process to push forward while exploring.

1.2. Previous Studies of Urban Village

The phenomenon of urban village has become a significant issue in China's urbanization process. The research of urban village started in 1990s in Guangdong Province, where the phenomenon of urban village first appeared as a problem in China's urbanization process that plagued the city manager. Zhang Jianming (1998) is the first researcher to finish PhD dissertation to analysis of the mechanism of formation and evolution of village-in-city in Guangzhou City. Then it gradually caused concerns by many other scholars and communities. In these few years, overseas scholars also started to pay attention on it. (Ya Ping Wang, 2009; Bach J. 2010; Pu Hao, Stan Geertman, 2012; John Zacharias, 2013) Scholars from the field of sociology, geography, economics, urban planning and other disciplines have done a lot of research to define it, to sum up its characteristics, to study the mechanism of its formation, the countermeasure to reconstruction and so on. The academic achievements of urban village by other researchers are summarized as following.

Table - 1 Main Literatures of PhD Dissertations and books on urban village

Year	Author	Title	Category	Focus
2011	LI Jiwei	A preliminary study on the improvement of city Village in Beijing	PhD Dissertation	difficulties in policy implementation of improvement
2011	MA Hang	the space evolvement and integration of village in Shenzhen	Book	evolution of society, economy and morphological space
2011	ZHOU Suhong	Urban village renovation and transformation from village to community under rapid urbanization	Book	collective owned land and interests of different groups of stakeholders
2011	WANG Xin	the conflict among the interest groups in regeneration of village-in-city: a case study of Wenzhou's village-in-city regeneration	PhD Dissertation	interests relationship and the institutions
2011	SHEN Ying	Studies on the reform of living modality of urban village in Xi'an City	PhD Dissertation	living modality and reforming pattern
2009	ZHAO Jing	a study on the development and supply mode of informal housing in Shenzhen	PhD Dissertation	property right and supply mode of informal housing
2007	ZHOU Xinhong	urban village problems - an economic analysis of its formation, existence and transformation	PhD Dissertation	interests game model and economic institutions
2005	WEI Lihua	Studies on evolution of urban social space in China's social-economic transition times	PhD Dissertation	social distribution in urban space
2001	Li Lixun	the formation and reformation mode of village-in-city in Guangzhou City	PhD Dissertation	social and economic characteristics
1998	ZHANG Jianming	analysis of the mechanism of formation and evolution of village-in-city in Guangzhou City	PhD Dissertation	land use institutions, urban planning and administration

Source: made by author

As an issue in the urbanization process, urban villages are always considered as cancer of the city (ZHOU-Suhong, ZHOU-Ruibo, & WU-Zhidong, 2011). The negative physical

environment and social disorder are more concerned in the academic field of urban village study, such as low quality of living environment, uncomfortable appearance of streetscape, illegal constructing, violation of fire code, security problems and so on (WANG Yaping, 2009; LI Jiwei, 2011; SHEN Ying, 2011). From public security aspect, urban village is always considered as the hotbed of crimes as its high annual criminal rate heavy proportion of serious crime (LI Sizhen, 2007; JIANG Kankan, 2010; SONG Ji, 2012).

Some researchers prefer to define the house in urban village as “informal housing” rather than “illegal building”. Because urban village as a cluster of rent houses for the low-incomes of floating people in the city, supply the low cost dwelling house which should have to supply by the municipal government. Zhao Jing studied on the development and supply mode of informal housing of urban village in Shenzhen from the perspective of property right (ZHAO-Jing, A study on the development and supply mode of informal housing in Shenzhen, 2009). Wang Peng uncovered the characteristics and evolution of residential morphology of urban village in Shenzhen in the point view of informal housing market, and gave positive comment of the contribution of urban village to provide appropriate shelter for the low income of floating population (WANG-Peng, 2010).

Generally, the existing studies usually referred to the negative aspects of physical and social status of urban village, such as super-density buildings, disorder streetscape, short of public facilities, hotbed of public security, etc, which trouble most of the municipal government. However, the positive role of urban village has recognized by academics and politicians as the discussion on it was continually promoted, such as: 1) provide low-end production processes and life services for the city during the rapid urbanization process (WEI-Lihua & YAN-Xiaopei, Transformation of urban village and feasible mode, 2005); 2) efficiently solute the employment of migrants, residence, and social management (DING-Baosi, 2005); 3) reducing the city’s administrative costs and operating costs (LI-Jinkui, 2005).

1.2.1 Status quo: What is Urban Village

1) Physical and Social Space Between Urban and Village

Urban village can be considered that a third category of physical and social space between urban and village. Since the economic reform in 1979 introducing the unique combination of socialism and market economy, China’s recent rapid entry into the global system has created new social and spatial divisions. Some traditional rural villages located in the fast developing regions and suburban areas of major cities, such as Guangzhou, Shenzhen, Beijing, Xi’an and etc., were either partially urbanized or entirely overrun by the rapid urban sprawl.

Those villages have become parts of the city or town in terms of their geographical position, but their composition of buildings and residents remain some traditional characteristics. This unique phenomenon occurring in China's urbanization process has changed the simple dichotomy between the rural and the urban, creating a third category of spatial pattern - urban village. The emergence of those semi-urbanized spaces and population has also restored some characteristics of the pre-communist urban divisions in China. Modern business and commercial districts, occupied by official residents and linked closely with the global economic system, form a sharp contrast with informal and poor residential areas represented by urban villages (WANG-Yaping, WANG-Yangling, & WU-Jiansheng, 2009).

Indigenous villagers, the actual landholder of urban village, and rural migrants, ventured far from their homeland for jobs in city, combine together as a new type of settlement. It neither likes urban community nor traditional village. It has become isolated island in the city, separated from urban in terms of physical space and social organization.

2) Living Environment

Several researchers from Utsunomiya University are focusing on the living environment of urban village in Guangzhou (ABE Hideaki, REI Syosei, KANNO Kazuma, et al. 2010). They took surveys on the living activities in outdoor public space, the communication status of neighborhoods, and space composition of road network. What's more, SUN Li (孫立) from the University of Tokyo provide an assessment tool for valuate the actual situation of the physical environment of urban village, showing the bad conditions of living environment over there and the very necessity of improving those conditions [孫立, 城所, 大西, 2011].

3) Morphological Evolution of Urban Villages from the Scope of City Scale

Some researchers concerned on the physical space of urban village in a scope of city scale. Tong De (2011) examined the spatial and temporal characteristics of 91 urban villages in Shenzhen on land area, construction floor area and construction intensity, with developing mode of general urban space. She considered that the morphological evolution of urban villages match with the usual rules of urban developing but hold their own particularity: (1) in original village, there is no "distance-attenuation" tendency on land development intensity from city center to urban fringe; (2) in urban villages' initial developing period, land sprawl is the most remarkable mode; (3) in rapidly developing period, there is obvious "distance-attenuation" tendency in construction intensity, villagers in city center build more floors to increase land development intensity; (4) in maturely developing period, urban village in center area decrease buildings density to improve the streetscape and living condition; (5) in general scope, the land area and total construction floor area of urban villages in urban fringe are higher than those in urban

central area, and those in industrial zone is higher than towns area, however, the land development density decreases as distance increase from city center to urban fringe.

Pu Hao (2012) made spatial analyses of the urban village development process in Shenzhen during from 1999 to 2009. Three overlapping phase of urban village - expansion, densification and intensification - were examined quantitatively by analysis of variables such as the land coverage, the sum of the areas of all building footprints and the sum of all the building area. John Zacharias took Shipai Village in Guangzhou as case study to discuss the relationship between activities and the urban form, to investigate how the strong, emergent patterns of movement and exchange relate to the internal layout of the village and to the village's geographical position (Zacharias, HU-Yue, & HUANG-Quanle, 2013).

On the contrast, LI Shujing (黎庶旌) focused on the scope of village scale to observe the phenomenon of urban village. LI clarified both the main policies associated with the formation of urban village and the spatial evolution process of urban villages in Guangzhou city, by examining six villages for case study such as Shipai, Huangpu, Huangbian, Xiaozhou, Yuan and Yagang. He gave the conclusion that: Due to the rapid development of economy and the system of compensated use of land carried out since 1988, the villages have been stimulated to increase land needs and accelerate the expropriation of land. Since 1990s those villages brought a huge amount of housing construction for migrants within themselves. Meanwhile the territory of those urban villagers dwindled; their residential areas have expanded to become high-density in both population and buildings. Base on the location and the influences of policies, urban villages still have their own spatial characteristics in their old residential area [黎庶旌, 三橋, 藤澤, 2013].

4) Illegal Construction

According to the existing regulations of the government, almost all the rental houses in urban village in Guangzhou City and Shenzhen City are illegal buildings. There are several researchers concerned on illegal construction in urban village. Zhu Shuoping studied the problems and countermeasures of illegal construction in urban-rural fringe of Beijing (ZHU-Shouping, 1999). Zhou Ruibo discussed the causes and countermeasures of illegal construction in urban-rural fringe area in Guangzhou City (ZHOU-Ruibo & ZHOU-Suhong, 2007). Huang Jing focus on the phenomenon of illegal construction on urban village in Shenzhen and considered that the prevalence of illegal construction represent the unvoiced pact among the local power, capital and the upper official of the municipal government, which reflected by the fact that 40% of building area in Shenzhen is illegal (HUANG-Jing, 2011). YE Wenxiang also focused on the illegal construction on urban village in Shenzhen but in the aspect

of economic view point, and considered that there are close relations between the formation of illegal building in urban village and such factors as the supply and demand, property right and the price of the land in urban village (YE-Wenxiang, 2011). LI Sizhe discussed the compensation for dismantling illegal constructions in urban village in Guangzhou (LI-Sizhe, 2012).

Table - 2 Main Literatures of illegal constructing in urban village

Year	Author	Title	Category	Focus
2012	LI Sizhe	Compensation for dismantling illegal construction in urban village- a case study of Guangzhou	Journal	compensation policy for demolition when reconstructing
2011	HUANG Jing	The logic to explain the illegal construction of urban village in Shenzhen	Master Thesis	interests logic of different stakeholders
2011	YE Wenxiang	Economical analysis on the phenomenon of illegal constructing in urban village in Shenzhen City	Journal	land demand and supply, property right, land price
2007	ZHOU Ruibo	Causes and countermeasures of illegal construction in urban-rural fringe of Guangzhou	Journal	institutions and urban planning administration system
1999	ZHU Shouping	Problems and countermeasures of illegal construction in urban-rural fringe of Beijing	Journal	influx of migrants and urban planning administration

Source: made by author

1.2.2 Formation Mechanism: Why dose Urban Village Emerge

For the formation mechanism of urban village, ZHANG Jianmin (1998) considered that “land is the focus, administration of urban planning is the reason, and institutions are the causes.” Li Lixun (2001) considered that the different developing modes between urban and rural area which implemented by the urban-rural dual institutional system and policies are the formation mechanism. While LI Peilin (2002) argued that from the perspective of individual rationality, urban village is the result that villagers pursue the maximization of benefits, which are produced from the land and rental houses under the soaring price in rapid urbanization.

LAN Yuyun (2005) argued that urban-rural dual social structure is the macro institutional background, however, the urbanized indigenous villagers’ pursuit of interest and behavior for survival and development are the root cause of the phenomenon of urban village.

Pu Hao (2011) explored different dimensions of the development and redevelopment of urban village in Shenzhen, and considered that the physical and socio-economic evolution of urban villages is the result of the natural and logical response of the indigenous village population and the rural migrants in facing rapid economic development and social transition.

WANG Xin (2011) summarized five reasons of the formation of urban village: 1) the urban-rural dual social structure; 2) the different land ownership system; 3) the vacuum of

institution, lag and imperfect of laws and regulations during the social transition period; 4) strong social network of kinship of the villagers; 5) omission of municipal administration.

Table - 3 Different researchers' idea about the factors of formation of urban village

Year	Researcher	Factors of Formation of Urban Village
1998	ZHANG Jianming 张建明	land is the focus, administration of urban planning is the reason, and institutions are the causes.
2001	LI Lixun 李立勋	the different developing modes between urban and rural area which implemented by the urban-rural dual institutional system and policies
2002	LI Peilin 李培林	the result that villagers pursue the maximization of benefits, which are produced from the land and rental houses under the soaring price in rapid urbanization.
2005	LAN Yuyun 蓝宇蕴	urban-rural dual social structure is the macro institutional background, however, the urbanized indigenous villagers' pursuit of interest and behavior for survival and development are the root cause of the phenomenon of urban village.
2011	WANG Xin 王新	<ol style="list-style-type: none"> 1) the urban-rural dual social structure; 2) the different land ownership system; 3) the vacuum of institution, lag and imperfect of laws and regulations during the social transition period; 4) strong social network of kinship of the villagers; 5) omission of municipal administration.

Source: sorted by author based on literature review

1.2.3 Exploration of Countermeasures: How to Deal with Urban Village

Against the phenomenon of urban villages, the municipal government has done a lot of efforts, and some scholars have proposed a variety of countermeasures to reform the physical space and social management system in urban village. They try to transform urban villages in to urban communities, by improving or reconstructing the buildings and streetscape, restructuring the villagers' autonomous committee as sub-district administrative organization under municipal government, corporatization of the collective economic organization of urban village, and solving employment of the indigenous peasants.

TIAN Li (1998) proposed to strengthen the management of town planning, reform the villages around towns as soon as possible, develop planning regulations for villages and improve the social welfare system for villagers. LI Lixun (2001) recommended reconstructing the buildings and landscape of urban village as modern communities, according to the process of "demolition - compensation - resettlement".

However, WEI Lihua (2005) proposed his argumentation on sustainable transformation ideas and measures of urban village in Guangzhou. He argued that it is necessary to avoid the "landscape-oriented urbanization" without the "peasant-to-citizen" transformation. WEI stated that the government should pay more attention to the sustainable living of indigenous villagers and the floating population, who made big contribution to the urban development, as the emergence of urban village is inevitable in the socio-economic transition of the urbanization and

globalization process. WEI insisted that the mode of “self-transformation” guided by the government would be feasible under the current situation in China – transformation by the villagers themselves or the village committee with bottom-up pattern, keeping existence and possibility of development of the rental housing economy as a precondition (WEI-Lihua & YAN-Xiaopei, Sustainable urban-rural relation in rapid urbanization areas --Case of Transformation of "Urban Village" in Guangzhou, 2005).

From the perspective of urban sociology, Ma Hang (2011) examined the evolution of society (population, formal institutions and informal institutions), economy (land function, collective economic organization, and underground economy) and morphological space (distribution, space structure and construction intensity) in urban village in Shenzhen City, and then proposed the “endogenous reformation mode” for urban villages in fringe area of the city.

Actually, in order to solve this issue of urban village as one bottleneck for urban development, the municipal government has made lots of countermeasures of policies to control their malignant development or reform their physical and social structure. But most of policies and reformation proposals did not affect well, even complete failure. Generally, it is considered that the main difficulties of reformation of urban village are fund shortage and lag of reformation of the urban-rural dual institutional system (LIU Mengqin, 2010).

LIAO Yuantao (2012) systematically reviewed the reform policy for urban village in Guangzhou City from 1990s to 2010s, and evaluated their effects. He concluded that both approval of land right and private house property and demolition policy with a series of supporting measures are significant to affect the implementation of reform policy.

HUANG Yantao (2011) argued that reformation of collective land ownership is the key when dealing with the issue of transformation of urban village. He insisted that nationalization of the land of urban village is the best way, but should make a series of supporting measures such as establishing community welfare for villagers, corporatization of the collective economic organization, etc.

The transformation process of urban village is the adjustment process among representatives of different interests (Zhou Xinhong, 2007). There are many researchers concerned on the complex interests balance among the process of transformation of urban village. The stakeholders mainly include the government, the collectivity and the villagers. With strong fund for supporting the reconstruction of urban village, the real estate developers are also invited to take part into the game of interest balance in some particular case.

The models of rural to urban common community transition can be classified as three types:

government-led, villagers-led, bargaining equilibrium. Three stakeholders' fighting - the government, the collectivity and the villagers - for the interests of land of urban village is the fundamental driving force for promoting reformation. Bargaining equilibrium among different stakeholders is one proportionally fair model for reformation of urban village (WU Zhidong, 2009).

WANG Xin (2011) discussed the conflict among different interest groups in regeneration of urban village. WANG argued that the unequal standing game is the main cause of conflicts which repeatedly broke out in demolition and reconstruction of urban village in recent years, because both the local government and developers are the powerful stakeholders, the villagers are the most disadvantageous group. The government is not only the game player, but also the policy maker. The profit of villagers is significantly emphasized.

As the promotion of transformation of urban village, the residential and living right of the low-incomes of floating people is concerned more by the researchers for overall interest of urban development. JIA Shenghua (2011) argued that the core stakeholders should add migrant labors to the past concept of three groups of the government, real estate developers, village collective (include villagers). JIA considered that the effectiveness of redevelopment is the determined by whether or not it can meet the multiple needs of various groups in a dynamic environment, and by whether or not it can recreate new values of the stakeholders and the society.

Table - 4 Different researchers' suggestion of countermeasures by

Year	Researcher	Suggestion of Countermeasures
1998	TIAN Li	Strengthen town planning, reform the villages around towns, develop planning regulations for villages and improve the social welfare system for villagers
2001	LI Lixun	“demolition - compensation - resettlement” reconstructing the buildings and landscape of urban village as modern communities
2005	WEI Lihua	“peasant-to-citizen” transformation & self-transformation bottom-up pattern, keeping existence and possibility of development of the rental housing economy
2011	MA Hang	“endogenous reformation mode” for urban villages in fringe area of the city
2010	LIU Mengqin	reformation of the urban-rural dual institutional system
2012	LIAO Yuantao	nationalization of the land of urban village

Source: made by author basing on literature review

1.2.4 Position of This Study in the Academic Field of Urban Village

1) WHAT - Status Observation

The phenomenon of urban village is a complex issue that refers to social institutions, social

composition, semi-private of collective economy, land administration, property right, urban planning and administration, etc. Reviewed the previous studies, the problems of those different aspects are well discussed.

However, with respect to the physical status of urban village, the morphological evolution of urban village, most of the researchers are from the field of urban geography and urban planning, their research scope is macroscopic scale, observing urban villages as a whole in urban range, such as the spatial distribution of urban villages in the city and their distributional characteristics.

There are few studies concerning on spatial forms and structure of urban village in the scope of village scale. There are rare researches to specific detailed record the physical status of urban village in an objective angle, especially form the angle of architectural research. The buildings of private rental housing in urban village and their constructing process are rarely concerned by architectural researchers in China, because they are more concerned on the new developing projects rather than the houses without architects in urban village and rural area. And there are rare graphic data and image data to record the details of the buildings in urban village in the existing studies.

In brief, most of the previous studies are concerned urban village more on macroscopic aspect but less on meso-scope. In contrast, rather than in urban scope, this study prefers to observe urban village in village scope and in building scope, spatial characteristics of one specific urban village and even the building form of rental house (Fig-12 Anchor-1).

2) WHY - Formation Factors

Most of the researchers have reached the consensus of the formation mechanism of urban village. They can be examined as the external power supply, the internal demand and contributor as following:

First, the rapid expansion of urban land and space in the super-rapid process of urbanization is the external driving force of the generation of urban village.

Second, the villagers unified as an interests community to pursue the maximization of benefits produced from their land and rental houses is the internal motivation.

Third, the urban-rural dual social structure and institutional system is the significant environmental condition of its generation.

Reviewed the previous studies, although urban-rural social structure and institutional system has usually been discussed, they are too general to refer to many aspects, and less

connecting to the space and forms of the buildings of rental house. There are some studies, referring to the formal regulations relating to urban village, such as land law and urban planning regulation. However, until now, there was no systematical study to examine the construction regulations relating to self-built house in urban village. According to the regulations system in China now, there are little formal constrains to control the self-constructing of private house in semi-private homestead of collective owned land. Actually, as self-built and rough mode, the construction of private house in rural area and urban village is dominated by conventional informal institutions. But there is less concerning on that in the academic field. The informal institution is also one factor of the formation of urban village.

Thus, this study prefers to uncover and card the possible informal rules relating to morphological evolution of urban village as super high density settlement, especially in the aspect of rules for house in private homestead in collective owned land. (Fig-12 Anchor-2)

3) HOW - Countermeasures of Prevention

Although some mature typical villages in the central area of the city were demolished and replaced by neat high-rise buildings, the phenomenon of urban village has not disappeared. It continues to spread to the outskirts of the city. More traditional villages develop gradually and become new urban villages. Existing studies prefer to pay attention on how to transform the typical urban villages, rather than how to prevent the generation of new urban village. In addition to transformation, prevention is also important when deal with the issue of urban village. It is deserved to pay more attention on the countermeasures of prevention.

Reviewed the previous studies, most of them are developed under the presupposition that urban village is a monster which should be transformed in the profit view point the same with municipal government, as lots of the research are supported by government funds. So they may quite difficult to observe it from an objective angle. In my opinion, if preset a concept of how to transform it, the research cannot be operated in an objective way. The truth can only be discovered when observing without any profitable anticipation.

Thus, this study would try to record the unique truth and details of morphology of urban village and its relevant informal rules in the transition times of China, standing on an objective position without any value judgment of interest of the stakeholder as possible as it could be. It is expected that those record can help to reform and detail the formal constrains to prevent more tradition villages becoming as chaotic high-density settlements, both in urban fringe area and rural area (Fig-12 Anchor-3).

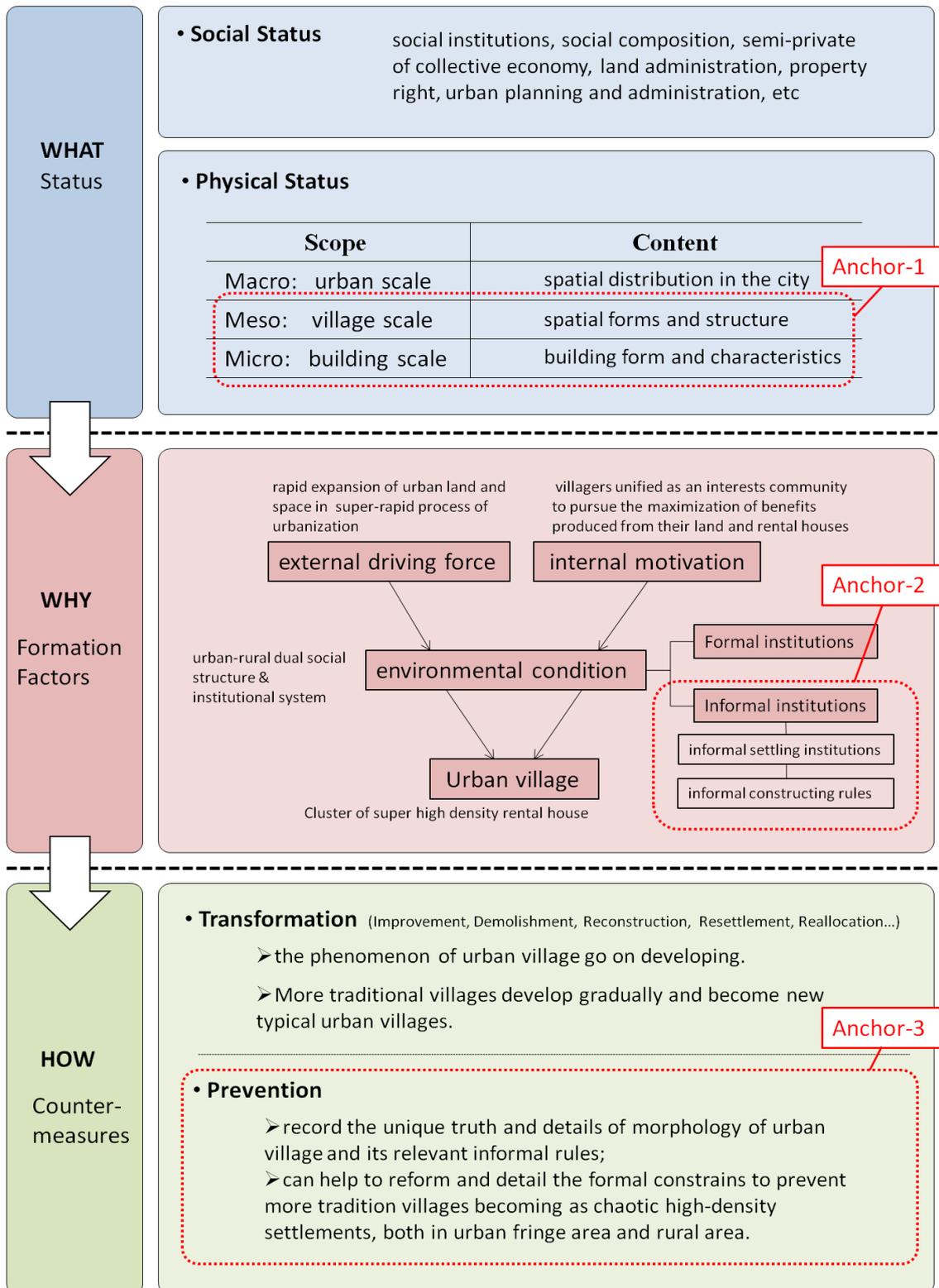


Fig. 12 Position of This Study in Academic Field of Urban Village
Source: made by author

1.4 The Study of Informal Institutions(非公式制度、非正式制度)

1.4.1 What is Informal

Informal refers to “*not following strict rules of how to behave or do something*”. It also refers to “*relaxed and friendly*” (Oxford Advanced Learner’s Dictionary, 6th Edition). However, its meaning has been extended in the academic field of economy and urban study.

The term of “informal sector” is first coined to describe small-scale economic activities and unregulated employment by Keith Hart in 1972. Then it was immediately taken by the International Labor Organization (ILO) as a topic. Now many studies and also official statistics adopt the definition that informal sector has the characteristic of the violation of formal state rules and regulations related to planning, building, employment, licensing, taxation, etc.

In the field of urban study, the twin terms of “formal” and “informal” is central to contemporary analyses of urban development, applied to many aspects of urban development, especially the build environment, the urban economy and the provision of services. A state land administration embraces tenure and its registration, regulation of land use and development, property taxation, and direct public intervention, often involving public landownership. Generally, urban development that comes within the purview of this system and its legal and regulatory requirement is labeled “formal”, but all the other land subdivision and development that do not comply with the official requirement are considered as “informal” (UN-HABITAT, 2009).

In this thesis, following the meaning in urban study, “informal” is used to describe something that is out of the formal system that is operated by the government. Besides the formal regulations, it is informal. In a word, “Informal” in this thesis means not formal, unofficial.

1.4.2 What is Institution and Rules

Institution here does not refer to the ordinary meaning of “*a large important organization that has a particular purpose*”, but refers to the meaning that most sociologists always used – “*a custom or system that has existed for a long time among a particular group of people*” (Oxford Advanced Learner’s Dictionary, 6th Edition).

The <Oxford Advanced Learner’s Dictionary, 6th Edition> gives explanation of “rule” as following:

1. A statement of what may, must or must not be done in a particular situation or when playing a game;

2. A statement of what you are advised to do in a particular situation;
3. A habit; the normal state of things; what is true in most cases;
4. A statement of what is possible according to a particular system, for example the grammar of language.

However, the coverage of the meaning of “rule” in the context of Japanese society is narrower than English society, also Chinese society. In Japanese, “ルール” (rule) refer to “規則、きまり”(regulations, something that has been fixed or determined). In most case, rule in Japanese only refers to the first meaning that <Oxford Advanced Learner’s Dictionary > gives - must or must not do.

As a guide for behavior, “rule” in this study covered the first, second and third meanings that <Oxford Advanced Learner’s Dictionary > gives: “*must or must not do*”, “*advised to do*” and “*habit*”. It is a statement of what you can do and can’t do. It refers to coined aspects of freedom and constraint.

Institutions are the sets which composed by many rules. “Institution” is an abstract word referring many abstract concepts that refer to a wide scope. “Rule” is more concrete and specific than “institution”. The “rules” combine together as a whole is “institution”. In some specific context, the term “institutions”, “rules” and “rules of the game” can be used interchangeable.

1.4.3 Institutions (Rules) as Behavior Guide

1) Institutions and Rules

Different levels of rules combine into a system becoming as a whole set called “institution”. “Institution” is an abstract word referring many abstract concepts. “Rule” is more concrete and specific than “institution”.

In the field of sociology study, an “institution” is any structure or mechanism of social order and cooperation governing the behavior of a set of individuals within a given community. Institutions are identified with a social purpose, transcending individuals and intentions by mediating the rules that govern cooperative living behavior (Miller, 2007).

North, representative personage of new institutional economics, argued that: “Institutions are the rules of the game in a society, or formally, are the humanly devised constraints that shape human interaction.” (North, 1990)

Institutions are behavioral rules for social interaction. These prescribe behavior for actors in recurrent situations of interaction with other actors – and thereby solve social interaction problems. They form ‘the rules of the game’ while the actors are the ‘players of the game’

(Eriksson Skoog, 2005).

In some specific context, the term “institutions”, “rules” and “rules of the game” can be used interchangeable.

2) A Choice More Than a Limitation

Institutions reduce uncertainty by providing a structure to everyday life (North, 1990). Rules guide human action. When actors are confronted with recurrent interaction problems, rules facilitate their decision making and behavior by shaping expectations about how to behave successfully in those situations, thus reducing their behavioral uncertainty. Rules thereby shape incentives for behavior. They codify accumulated knowledge, based on the experience of others before us about the type of behavior that proved successful in the past – just think of routines and traditions. Rules also communicate values, by containing social prescriptions for behavior – telling us what we should do (Bush, 1987).

As a guide for behavior, “rule” in this study covered the first, second and third meanings that <Oxford Advanced Learner’s Dictionary > gives: “*A statement of what may, must or must not be done in a particular situation or when playing a game; what you are advised to do in a particular situation; A habit*”. It is a statement of what you “can do” and “can’t do”. It refers to coined aspects of freedom and constraint. It is a choice more than a limitation.

1.4.4 Formal Rules and Informal Rules

Institutions can be categorized in a number of ways. One important distinction is formal and informal rules.

Institutions include any form of constraint that human beings to shape human interaction, either formal constrains – such as constitutions, statute and common laws, regulations, rules that human beings devise – and informal constrains with social recognition – such as sanctions, taboos, customs, traditions, conventions and codes of behavior (North, 1990).

Formal rules are consciously designed by humans and often codified in written form, such as constitutions, laws and regulations. They are also often enforced by some external authority. The police and the courts, for instance, enforce the rule of law. Enforcement requires enforcing organizations. Informal rules evolve spontaneously and unintentionally over time through human interaction, and take the form of unwritten conventions, routines, customs, codes of conduct and behavioral norms. Informal rules are often self-enforced, because all or most of actors find it beneficial to them (Eriksson Skoog, 2005). Informal rules often rely on previous instructions and formed habits. For example, most people follow the informal rule to enter a

conference room quietly when the Keynote Speaker is already talking or the activity is already in progress.

Neo-institutionalism, a new branch in the field of sociology, has given greater emphasis on the positive influence on economic development and social progress by informal constraints, which come from socially transmitted information and are part of heritage that we call “Culture”. Informal constraints are the basis and prerequisite for the formation of formal institution. As a supplement, expansion, correction, description, and support to the formal system, informal institution becomes social consensus of behavioral and psychological standards. “It is easier to describe and be precise about the formal rules that societies devise than to describe and be precise about the informal ways by which human being have structured human interaction.”North said, “But although they defy, for the most part, neat specification and it is extremely difficult to develop unambiguous tests of their significance, they are important. (North, 1990)” They claimed that the appropriate and effective institutional arrangements must be an organic unity of formal and informal institutions.

1.4.5 Previous Study of the Informal Institutions in China

1.4.5.1 Socio-cultural Institutions in China

During the past few decades, the political phenomenon in China has become easy and relaxed. Some scholars feel freer to discuss the topic of informal institutions beyond the socialist institutions. Informal institutions in China have been reconsidered.

Now in Chinese academic field, whenever referring to informal institutions, almost papers would cite Douglass C. North’s argumentation on formal and informal constraints. His institutional theory is an important theoretical support for China’s economic and other institutional reformation.

However, before 1949, the foundation of communist China, FEI Xiaotong had already paid close attention to the foundations of Chinese society, constructing a non-western theoretical foundation for sociology in China. His theory runs directly counter to a Chinese Marxist interpretation of Chinese society. Consequently, it has not been officially approved and spread widely at that time.

FEI created a concept “ChaXuGeJu(差序格局)”, differential mode of association, to describe the organizational principles of Chinese society. *Chaxugeju* is an egocentric system of social networks linking people together in multiple ways and placing different, though clear-cut, moral demands on each person in each specific context. (Hamilton & WANG-Zheng, 1992) FEI’s theory describes a society found on social relationships and interlocking social networks (FEI Xiaotong, 1947). That is the basic characteristic of Chinese society.

Following FEI’s theory, there are some studies to explore more deeply about the invisible

rules of human interaction in Chinese society.

Base on social exchange theory, HWANG Kwang-Kuo, from Taiwan, developed a theoretical framework to illustrate the social mechanism that Chinese are used to obey the rule of “Favor” and “Face” when due with human interaction (Kwang-Kuo, 1988).

YANG Yiyin, from Chinese main land, discuss on the interpersonal relationship and its typology and considered that even China is transiting from traditional society to modern society. She found that the ties of social relationship are also a vivid rule when interact with others and evolving as a more adaptive manifestation (YANG-Yiyin, 1995).

Then, ZHAI Xuewei argued that Chinese society is constructed in reasonableness, in which favor is a kind of long reciprocity without counting or estimating while face refers to one’s important position in other’s mind in his or her community. In reasonable society of China, through the operation of favor and face, people give up the rules, rational and institutions, but get immeasurable social resource, non-institutional social support and authority (ZHAI-Xuewei, 2004).

In sum, they all emphasized that, different from the western society, which more relies on laws, regulations and rationality, the rules for human interaction in Chinese society are much more variable, flexible, and reasonable, depending on the relationship between the inter-actors in specific situation.

1.4.5.2 Informal Institutions in Specific Topics

There are some studies related to informal institutions in specific topics. ZHEN Zhihong took an institutional analysis on China’s market-oriented economic reform to discuss the conflict and integration of formal and informal institution (ZHEN-Zhihong, 2004). TANG Shaoxin discussed the informal institutional arrangements of China’s special marriage customs, such as matrilocality, exchange marriage, children marriage and raising daughter-in-law marriage, are all important parts of the institution of marriage in China, as they could save transaction costs, shorten proxy chains and maintain a marriage market equilibrium (TANG-Shaoxin & WANG-Xiaoli, 2011). LI Zhenzhen took illegal burial at night to avoid official cremation in H Town in Henan Province as case study, to discuss the relationship between formal institutions and informal institutions in rural society (LI-Zhenzhen, 2012). ZHOU Haiping study on informal institution during the course of China’s urban housing institutional change, and concluded that the informal institution sectors such as Chinese tradition value idea, ideology and Confucian domesticism have influenced the real estate institution change (ZHOU-Haiping, 2006).

Base on new institution economics theory, WU Yuanxiang studied on the Chinese urban design institutions, and argued that the formal institutions of urban design in China are absent

now, but informal institutions become main behavior restriction. Besides the inadequate formal system of laws and regulations, he explored the aesthetics informal institutions which have significant influence on urban design and decision making, such as the aesthetical standards of visual shock of “Huge, Wide, High”, “strange, curious, surprised”, “western style” and so on. He proposed that China should construct both formal institutions and positive informal institutions of urban design (WU-Yuanxiang, 2009).

Either in the field of new institution economics of western world, or in Chinese academic field of economics or sociology and urban planning, the research of informal institutions is still in a primary developing process and deserves more systematical researches, as its complexity and specificity.

1.4.6 Specific Definition of “Informal rules” in This Study

1.4.6.1 Definition of “informal rules”

North considered that informal rules are culture with social recognition, while E.S. Gun argued that informal rules are self-enforced rules that spontaneously and unintentionally evolve. However, WU Si studied the political games in history and the social facts nowadays in China, then gave a definition of “hidden rules”. It mainly expresses the concept of informal rules in this study, too.

As a special concept in China, “hidden rules(潜规则)” refers to behavior rules which actually exist out of formal institutions, behind the clearly written regulations, but widely recognized by people. They win most of people’s acquiescence and compliance in different respective fields and become as another set of norms and codes of conduct outside relevant laws and regulations (WU-Si, 2009).¹

It contains three key aspects that:

First, it is behavior rules, another set of norms and code of conduct.

Second, it is actually exist beyond the formal regulations, outside relevant laws, unwritten clearly as a common document.

Third, it is widely recognized by people, win most of people’s acquiescence and compliance.

Responding to the situation in this study, here redefines “informal rules” again.

Informal rule is the actually existing behavior guide that gives a profitable choice for people when deal with social interaction, and widely recognized and complied by people, no matter it is legal or illegal according to the current formal laws and regulations. Although the behavior and its result are illegal sometimes, they are acquiesced by most of people, in a way, also by the government who make the formal regulations, and by the organization that enforce the implementation of formal regulations.

1.4.6.2 Informal Settling Institutions (rules) in this study

Informal institution can be examined in a framework with hierarchical structure. There are different levels. In Gun’s study, institutions can be categorized functionally, according to the types of activity that they regulate. Political rules regulate political activity and determine the characteristics of the political system, while economic rules make up the economic system – the framework that regulates economic activity. Socio-cultural institutions regulate social and cultural interaction, and mostly include informal rules determining for instance mutual rights and obligations between society members (Eriksson Skoog, 2005).

¹ The original text in Chinese is: “潜规则”一词是中国化的概念, 其基本含义为, 事实上是存在于各种正式制度之外, 明文规定背后的、被广泛认可的行为“章程”, 在各自的领域内得到大多数人的默许和遵守, 而成为相关法律法规之外的另一套行为准则和规范。(吴思, 2009)

“Informal rules” in the context of this study, just refers to social-cultural institutions. However, in order to narrow down the scope, here add “settling” before “institutions” as “informal settling institutions”, to exclude other informal rules that are not relate to the activities of making one place as human settlement. Informal settling institutions are the rules that control or influence the house construction in urban village. Settling rules may refer to the site selection, planning, construction, operation, and so on. But, here it only focuses on the rules in the building scope, such as the informal land use rules, informal constructing rules and informal operation rules.

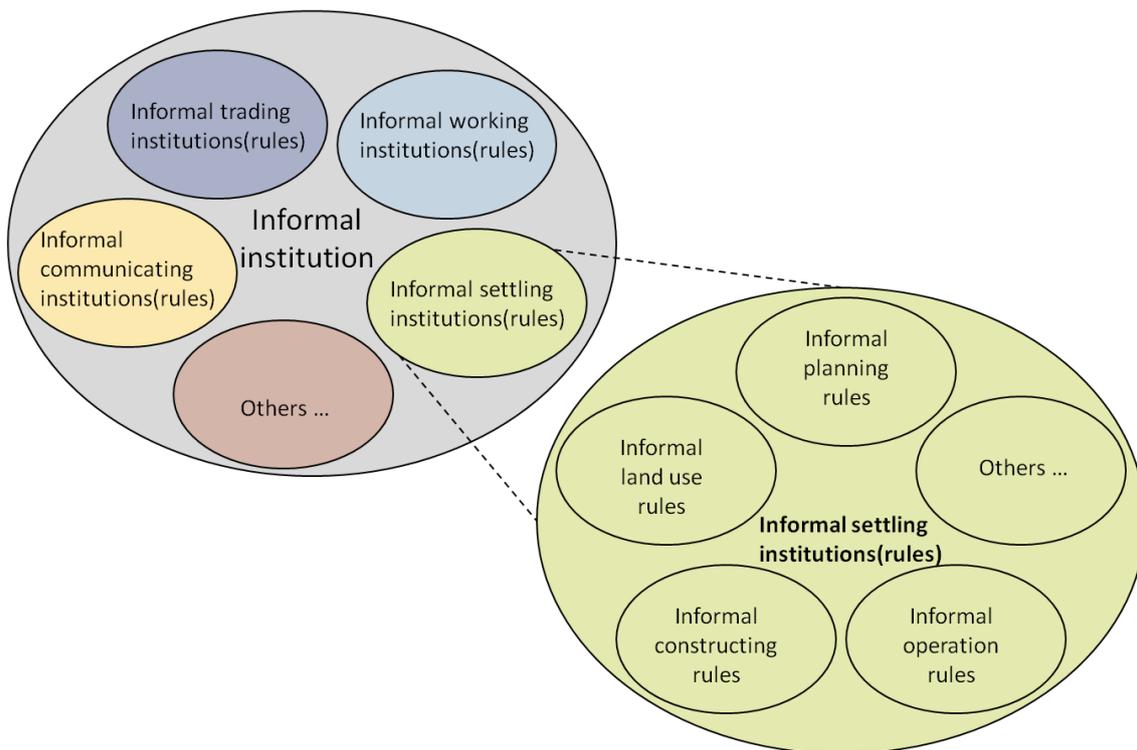


Fig. 13 Informal settling institutions (rules) in this study

Source: made by author

1.4.6.3 Characteristics

Informal rules are the common senses that generate from the previous instructions and formed habits of the villagers. They influence the constructing behavior of rental houses in urban village, not explicitly documented as formal regulations by the government, but respected by almost members in the village. It holds the characteristics that:

- a. Unwritten. Not be written down as document.
- b. Non-obligatory. Not 100% obeyed by all the members.
- c. Diversified. Details in different villages in one or different cities and areas are different.
- d. Uncertainty. The rule is changeable in different periods.

1.4.6.4 Actors: Municipal Government, Village Committee, Villagers, Floating People

Before examining the rules, it needs to make clear who is the actor involves in the study. Actors, the players of the game, could be organizations or individuals. According to North, organizations ‘consist of groups of individuals bound together by some common objectives’, and he identifies economic, political as well as social organizations (North, 1995).

In the context of this study, the main actors are the two kinds of organizations such as municipal government and the village committee, and two kinds of individuals such as the villagers and the floating people. Those four kinds of actors hold their own different interest positions. The villagers play the major role in this game. The village committee, representing the interest of the village as a whole, plays the role of a bridge to connect the individual of villagers and the organization of municipal government. The municipal government needs the village committee’s help to implement the policies and regulations. Each individual of villagers need the village committee to appeal their integral interest demand. The floating people only play a guest role to pay rent to the villagers to get a cheap shelter for temporarily living.

1.4.6.5 Specificity: Visible Informal Rule

Different from other socio-cultural rules in ordinary researches, informal rules here are not rules that directly perform in the interaction of behaviors, but rules that indirectly perform in the interaction of behaviors via the medium of physical object of buildings.

As E.S. Gun said, “The relationship between actors and institutions is two-sided. First of all, rules influence actors by constraining or promoting their behavior. The second relationship implies that rules in their turn are created and altered by human behavior – the actions of individuals and organizations”. “Consequently, rules do not exist in isolation – nor do they ‘act’ themselves – but always in relation to actors. This means that they cannot be studied in isolation, but only through their relationship and ‘interaction’ with actors. In fact, rules themselves cannot be observed; the documentation of formal rules can, but this says little about their actual use and effectiveness”. “One way to study institutions is to observe the behavior or behavioral patterns that implementation, enforcement and adherence to them gives rise to, as well as the consequences of such individual and organizational activity.” (Eriksson Skoog, 2005)

Informal rules in this thesis just cover the rules that give effect on the building and its accessories, the results of which are visible and can be directly observed. The rules dominate those informal constructing and using activities that lead physical results. From this perspective, it can be deemed as visible informal rule.

Informal rules here include two categories: First, the rules in the field that existing formal

rules do not refer or covered. For example, overhanging rules (see Chapter 6, Section 6.3.1). Second, although there are relative formal rules to constrain one kind behavior, in fact, it behaviors under another set of rules that win most of people's acquiescence. For example, rules of the gradual vertical expansion (see Chapter 6, Section 6.3.2).

1.5 The Study of Urban Morphology (都市形態学)

1.5.1 Defining Urban Morphology

First, the relationship of the term “morphology” and “Keitai”(形態) should be stated clear, because generally the term “Keitai(形態, Xingtai)” both in Chinese and Japanese only refers to the form and structure of something.² In many case, we get used to say “keitai(形態)” for shot to express the meaning of “keitaigaku(形態学)”, which leads to the misunderstanding that “morphology” only refer to the form of something, ignoring its formation process. Actually, the concept of “morphology” discussed in this study not only refers to form and structure, but also its formation process. That is to say, “morphology” here are not “Keitai”(形態), but the meaning of “keitaigaku(形態学)”.

The essence of the idea of morphology was initially expressed in the writings of the great poet and philosopher Goethe (1790); the term as such was first used in bioscience. In the field of biology, “morphology” refers to study the form and structure of animals and plants as a science. Recently it is being increasingly used in geography, geology, philology and other subjects. In the field of urban study, “urban morphology” refers to the study of the form of human settlements and the process of their formation and transformation. It seeks to understand spatial structure and character of a metropolitan area, city, town or village by examining the patterns of its component parts and the process of its development. In American geography, urban morphology as a particular field of study owes its origins to Lewis Mumford, James Vance and Sam Bass Warner. Peter Hall of the UK is also a central figure.³

Matthew Carmona considered that the study of urban morphology involves the analysis of physical structures at different scales as well as patterns of movement, land use, ownership or control and occupation. Typically, analysis of physical form focuses on street pattern, plot pattern and building pattern, sometimes referred to collectively as urban grain. Analysis of specific settlements is usually undertaken using cartographic sources and the process of development is deduced from comparison of historic maps. Special attention is given to how the

²形態(form)：物のかたち、また、組織的に組み立てられたものの、外に表れているかたち。(大辞林)

形態学(morphology)：生物の形と構造を記述・比較してその法則性を追究し、また形成過程を研究する学問。(大辞林)

3. http://en.wikipedia.org/wiki/Urban_morphology

physical form of a city changes over time and to how different cities compare to each other. Another significant part of this subfield deals with the study of the social forms which are expressed in the physical layout of a city, and, conversely, how physical form produces or reproduces various social forms. (Carmona, Tiesdell, Heath, & Oc, 2010).

To sum up, in the field of urban study, form and process are also the two main focuses.

1.5.2 Different Ways of Decomposing Morphological System

The morphological system of one city can be breakdown into different levels to establish simply for analysis purpose. The choice of components that serve to describe a complex system is arbitrary and depend on the observer's point of view. (Salat, 2011)

M.R.G. Conzen developed a technique called "town-plan analysis". There are three key aspects for analysis according to Conzene: town planning, pattern of building forms, pattern of land use. The town plan in turn contains three complexes of plan element: 1) Street and their arrangement into a street-system; 2) Plots (or lots) and their aggregation into street-blocks; 3) Buildings into the form of the block-plans (Conzen, 1969).

Alexander and Salingaros propose a series of alternatives ways of decomposing the city:

- a) Into buildings and their interactions via paths;
- b) As a collection of paths defined by buildings;
- c) As internal and external spaces connected by paths and reinforced by buildings;
- d) As the edges and interfaces that define space and built structures;
- e) Into patterns of human activity and interactions occurring at urban edge and interfaces.

Serge Salat considered that urban morphology can be sorted into six different levels that, superimposed, apprehend all the components of a city (Salat, 2011).

First level: people and activities. Social interactions largely govern the organization of a city, just as the urban composition impacts its interactions. Cities are sites of exchange and activities.

Second level: the network of streets and the road grid of the city. The arrangement of roads plays a primal role in transportation and in modes of travel and thus in the city's social activity and its footprint.

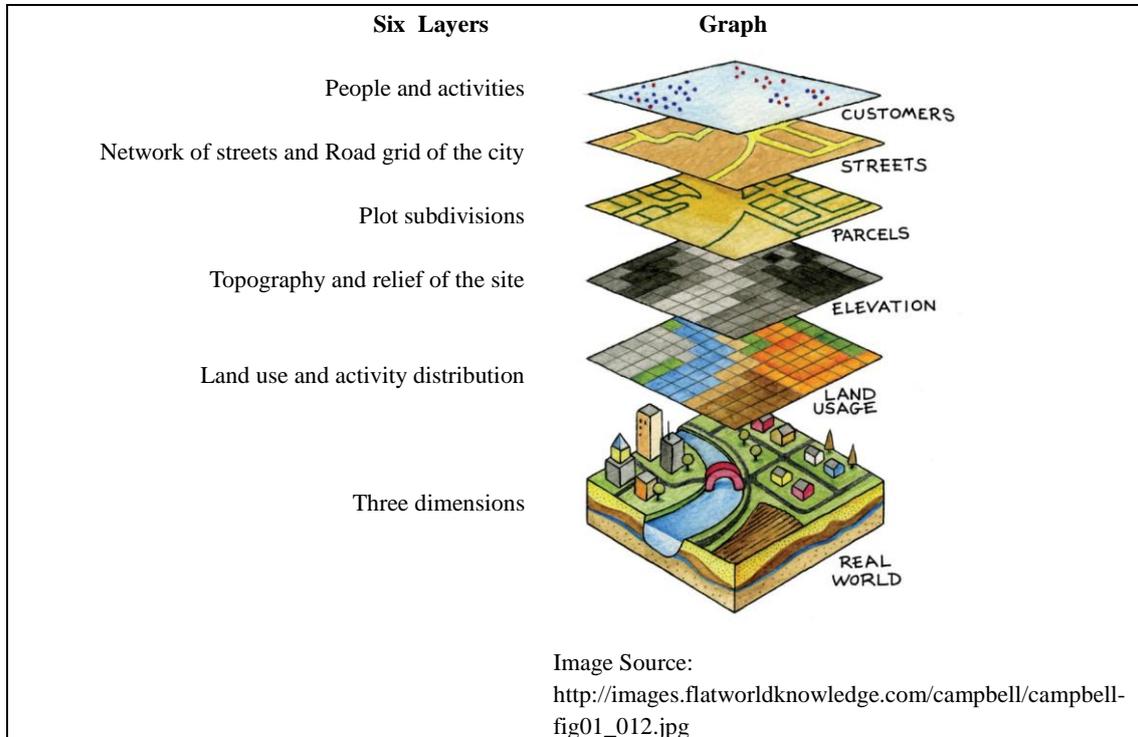
Third level: plot subdivisions. Their organization plays a decisive role in the form of the build environment.

Fourth level: topography and relief of the site. Topography impacts street patterns.

Fifth level: land use and activity distribution. These influence the flows of people, the consumption of transit-related energy, and the organization of different built elements.

Sixth level: three dimensions of the buildings and its infrastructure.

Fig. 14 Six different layers of Urban Morphology



1.5.3 Tools for Urban Morphological Analysis

As tools, there are some theories for urban morphology analysis, such as: figure and ground theory, linkage theory, place theory and space syntax.

Figure and ground theory is founded on the study of the relationship of land coverage of buildings as solid mass (figure) to open voids (ground). Each urban environment has an existing pattern of solid and voids, and figure and ground approach to spatial design is an attempt to manipulate these relationships by adding to, subtracting from, or changing the physical geometry of the pattern. The objective of these manipulations is to clarify the structure of urban space in a city or district by establishing a hierarchy of spaces of different sizes that are individually enclosed but ordered directionally in relation to each other.

The linkage theory is derived from “lines” connecting one element to another. These lines are formed by street, pedestrian ways, linear open spaces or other linking elements that physically connect the parts of the city.

The space syntax theory, known as the methods for the analysis of spatial patterns, is originally conceived by Bill Hillier, Julienne Hanson and colleagues at University College London in the late 1970s to early 1980s as a tool to help architects simulate the likely social

effects of their designs. The general idea of space syntax is that spaces can be broken down into components, analyzed as networks of choices, and then be represented as maps and graphs that describe the relative connectivity and integration of those spaces. Space syntax has been applied to predict the correlation between spatial layouts and social effects such as crime, traffic flow, sales per unit area, and so on (Hillier, 2009).

1.6 Research Purpose

Generally, the main purpose of the urban morphological study is to service the urban development, providing basement for urban planning and administration. In this study, the main purpose is to uncover the informal rules influence the morphological evolution of urban village.

This thesis would try to make clear that:

- 1) Social characteristic and physical-social characteristic of urban village in China.
- 2) The common process of the evolution of urban village in China.
- 3) What kinds of informal institutions exist in urban village? From the morphological point of view, what kind of informal settling institutions are there supporting the land and property development in urban village, and what specific informal rules are there referring the housing construction in urban village?
- 4) How those informal institutions (rules) effect the morphological evolution of rental house in urban village?

1.7 Research Methods

1.7.1 Interdisciplinary Research Method

As the development of urban village is a complex social and spatial phenomenon in China's rapid urbanization process, it holds the nature of interdisciplinary research. Therefore, the study necessarily involves the disciplines of sociology, social management, urban planning, urban geography, architecture and so on. Interdisciplinary method must be used in process of this study.



Fig. 15 Interdisciplinary research

1.7.2 Information Collection by Internet

The study can be considered as a remote study from Japan to China. Thanks to the convenience of internet which has narrowed down the spatial distance between different locations on the earth, internet survey has gradually become a significant method for the scholars to get the latest information. Of course, this study makes no exception. Most of the latest information about urban villages in China is obtained through Databases of Science Direct for English literature, and the China Knowledge Resource Integrated Database (CNKI) for Chinese literature, search engines of Google and Baidu (百度, a most popular Chinese search engines in China), and so on. The recent news and reports of information of urban village can timely be obtained. Recently, there is a popular saying in China that “ask Google for international information while ask Baidu for domestic affairs”. Internet is an important tool for information collection.

1.7.3 Literature Survey

Besides the literature review of previous study of urban village, some relevant theories such as the theory of urban morphology and the sociological study of informal institutions are also reviewed by author.

In order to make clear the social character of urban village, a literature survey of rural social composition and behavior logic in China was done from the perspective of sociological study. Details will be described in Chapter-2.

In order to make clear the situation of urban village in China, another literature survey was done from the perspective of urban geography, urban planning and public administration. Details will be described in Chapter-3. The formal regulations issued by the government are also examined in this literature survey.

1.7.4 Field Survey

In order to verify the results of the previous studies by other researchers and obtain first

hand information and graphic data for the morphological analysis, two field surveys were made by author in 2012 and 2013. Both of the social status quo and the physical-spatial status quo were observed in the field survey. A large number of graphic data were obtained by the filed survey. Details will be described in Chapter-4.

1.7.5 Information Processing and Graphical Analysis

Basing on the literature survey, the relevant information of urban village should be re-processing by author before they can use as evidences in the study. The information achieved from the field survey also should be processing. Verify their reliability by comparing deferent literatures. Then pick up the reliable information to fill in this study.

Graphical analysis is one most important method for this morphological study. The graphic data are including original photos token by author in the field survey, satellite photographs from Google Earth, maps from Google Map and Baidu (百度) Map, digital survey map of some urban villages and other graphs. Since Google Earth provides the history records of satellite photographs, observing and comparing the difference on those satellite photographs is one good method to understand the developing process of one specific urban village. But as Google Earth only has the historic records from the end of 1990s, and some may later than 2000, it is impossible to get information from 1980s, when urban village are dramatically developed in Guangzhou and Shenzhen. Anyway, based on those satellite photographs, some analyses to uncover the developing process of urban village are done within the possible range

The original photos are records of the physical result of the villagers' behavior. They are reviewed time and time again to abstract the useful information as evidences. Some of them ware pick up to support the idea or description in the thesis. Some of them were edited to make the key information obvious. Some of them were edited to add graphical analysis.

The digital survey map is not only provided graphic information but also numeral information, such as the width of overhanging and floor number of each house. Those information were picked up and recorded as statistical data in excel.

1.8 Research Flow

The research flow in this study is diagramed as following.

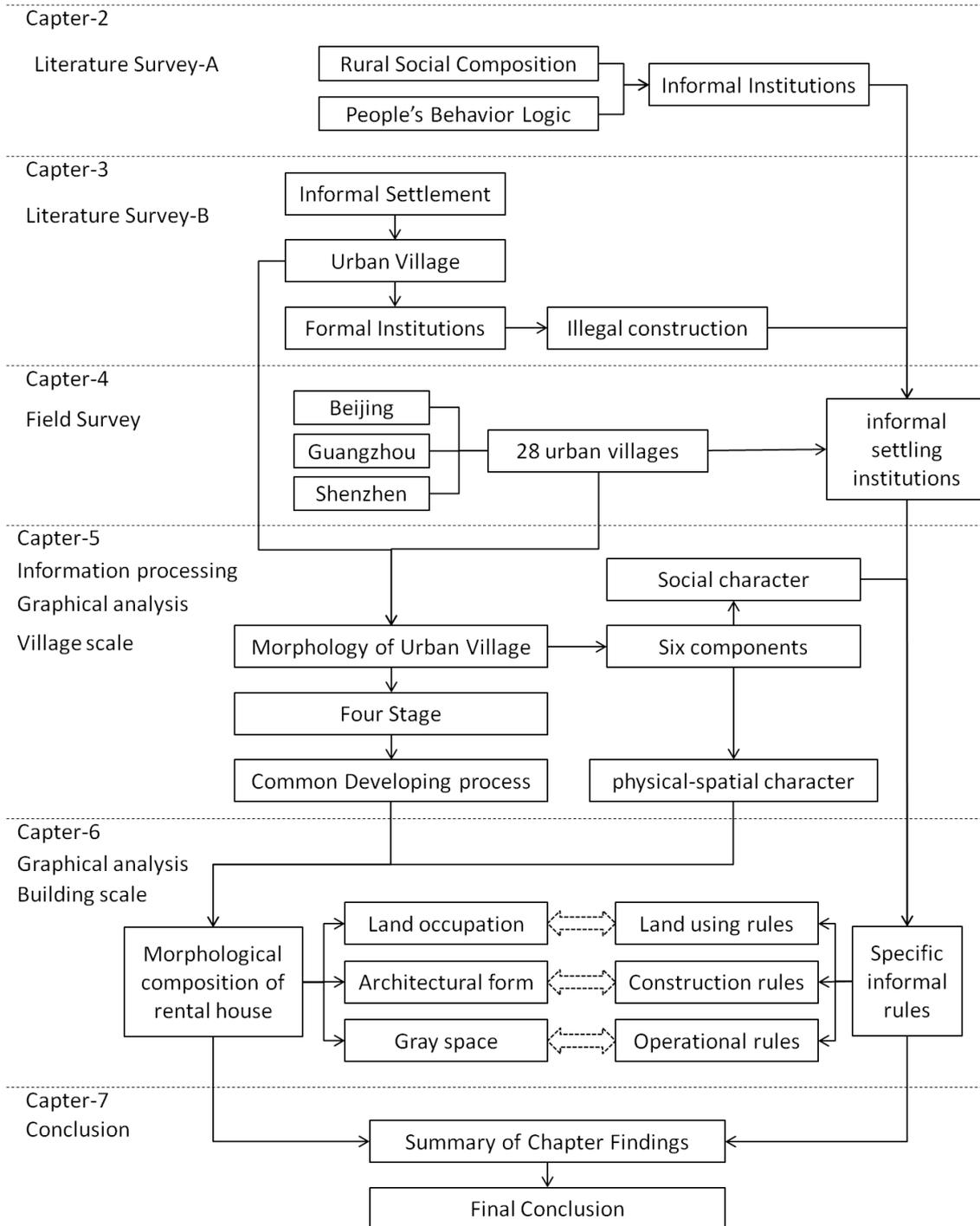


Fig. 16 Research Flow

1.9 Advantage and Disadvantage as a Remote Study in Tokyo

1) Advantage

Study in Tokyo can have a more international perspective and can get more international literature and data. There is an ancient poetry in China said that “Could not know the truth of the mountain, just because you are in that mountain”. As a Chinese scholar, only leave the land of China can make it more clearly to observe China. And, as far away from benefit relationship and competition of the government, the villagers and developers, urban village can be observed and recorded in a more objective point of view. The comments of it can be freer, too.

2) Disadvantage

It cannot do a lengthy investigation and observation like the scholars who study in China. Instead, it can only increase efficiency to do short-term investigation. In addition, it is much more difficult to get the Chinese literature and the local data, as urban village is the place that out of formal institutions.

1.10 Terms in the Study

1.10.1 Rural Homestead of *ZhaiJiDi* (宅基地)

ZhaiJiDi (宅基地) is rural homestead. In China, there are two kinds of land tenure system - State Ownership and Collective Ownership. The land of urban area is national owned by the government, but the village land both in rural area and in or around urban area is collective owned by the all the peasants as a whole. According to the land and housing policy in China, each family in rural area could get a piece of land as *ZhaiJiDi* to build its own house to live in (WEI-Lihua & YAN-Xiaopei, Sustainable urban-rural relation in rapid urbanization areas --Case of Transformation of "Urban Village" in Guangzhou, 2005). And another piece of new land can be obtained especially when their sons plan to marry.

On the contrast, the people in city holding the citizenship do not have the right to get that kind of land for private house construction.

1.10.2 Household Registration System of *Hukou* (户口)

The household registration system of *Hukou*(户口), was made for controlling the migration from rural area to the city. The people live in rural area are registered as “Agricultural *Hukou* (household)”, while population in the city labeled as “Non-agricultural *Hukou* (household)”. Either of them belongs to different administration system and welfare system. And the

household registration system of *Hukou* is an important symbol of China's dual urban-rural structure.

1.10.3 Floating Population (*Liudong Renkou*, 流動人口)

Due to the Chinese household registration system, the people who don't hold the *Hukou* (household) of one city in which they live are deemed to the Floating Population of that city. The floating population of one city always includes rural migrants and urban migrants from the economic less-developing regions. But actually most of them are migrants of rural population from other cities' rural area.

The rural migrants move into city but cannot become the citizens of that city to enjoy the welfare and security which the urban population of that city can enjoy. Even if they have lived in that city for more than a decade, their identity of rural population still cannot be changed as the problem of *Hukou*. Thus, they could be deemed as the most vulnerable groups in cities, who are excluded from the urban welfare system and have a lot of obstacles in terms of employment, social security residence, health care, education for their children and so on. What is more, in the transformation process of urban village in China, their right of living has always been ignored, although they had made a large contribution to the development of the city

CHAPTER-2

**LITERAURE SURVEY-A:
RURAL SOCIAL
COMPOSITION AND
PEOPLE'S BEHAVIOR LOGIC
IN CHINA**

2.1 Chapter Introduction

Actually, urban village is the settlement which evolves from traditional village. Although located in the city and has been urbanized in some extent, urban villages still keep some rural characteristics like traditional villages, as the blood relationship between the villagers and the land ownership in urban village is the same like traditional village. Before examine its socio-cultural institutions, it is necessary to examine the social composition of the traditional village and the behavior logic of the villagers in rural area of China. The social composition in rural area is examined as tow aspects, such as social organizational principles and the social basic unit. Then this chapter examines what the people's behavior logic there is.

2.2 Social Composition in Rural Area

2.2.1 Principles of Social Composition: ChaXuGeju(差序格局)

1) What is ChaXuGeju(差序格局)

“ChaXuGeju(差序格局)” in a very important concept created by FEI Xiaotong in his book <Xiang Tu Zhong Guo(乡土中国)> 1947, to illustrate the characteristics of social structure and interpersonal relationship in traditional society of China. It is the theoretical basement of the sociological research in China.

“Cha” (差) means “difference” or “dissimilarity”, “Xu”(序) means “order” or “sequence”, and “Geju”(格局) means “pattern” or “framework”. Mason Gertzler kept the term “Chaxugeju” un-translated in his translation of chapter 4 of <Xiang Tu Zhong Guo(乡土中国)>(Changing China[New York]:Praeger,1977,pp.210-14), because he said that no suitable translation could be found. But, Ichiro Numazhaki suggested Hamilton to translate it as “differential mode of association” in the English version of <Xiang Tu Zhong Guo> - <From the soil: the foundations of Chinese society>. Actually, there is one important key information not appeared in the term “ChaXuGeju” but in the illustration of FEI's argumentation. The “difference” is cause by the Confucianism's hierarchical concept to deal with interpersonal relationship. So “ChaXuGeiu” also can be translated as “Hierarchical Order”. Here, also keep the Chinese term “ChaXuGeju” in the discussion.

ChaXuGeju, the differential mode of association, is the organizational principles of Chinese society. FEI argued that western society is represented by straws collected to form a haystack, but Chinese society is represented by the ripples flowing out from the splash of rock into water. Western individuals produce their society by applying an “organizational mode of association(团体格局)”. People create groups that have clear boundaries. And the rights and duties of members are clearly delineated. All members in an organization are equivalent. By

contrast, people in China create their society by applying the logic of “differential mode of association(差序格局)”. The pattern is not like distinct bundles of straws. Rather, it is like the circles of waves that appear on the surface of a lake when a rock is thrown into it. Everyone stands at the center of the circles produced by his/her own social influence. Everyone’s circles are interrelated. (Hamilton & WANG-Zheng, 1992) Each circle spreading out from the center becomes more distant and at the same time more insignificant. Those circles reflect the concept of “Renlun” (人伦 human relationship) that the Confucian school called. The term “Renlun” itself signifies the ripple like effect created from circles of relationships that spread out from the self, an effect that produces a pattern of discrete circle. People utilizes different circle at different times and places.

With this mode of association, the society is composed not of discrete organizations but of overlapping networks of people linked together through differentially categorized social relationships. In this pattern, people’s social relationships spread out gradually, from individual to individual, resulting in an accumulation of personal connections. Those social relationships form an elastic network composed of each individual’s personal connections. (Hamilton & WANG-Zheng, 1992) The basic characteristic of traditional Chinese society is that it is a society found on social relationships and interlocking social networks.

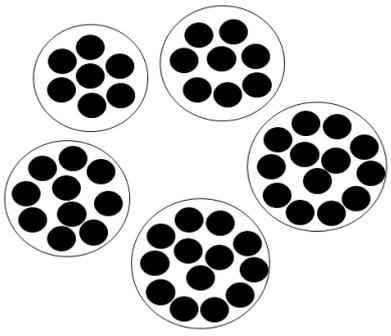
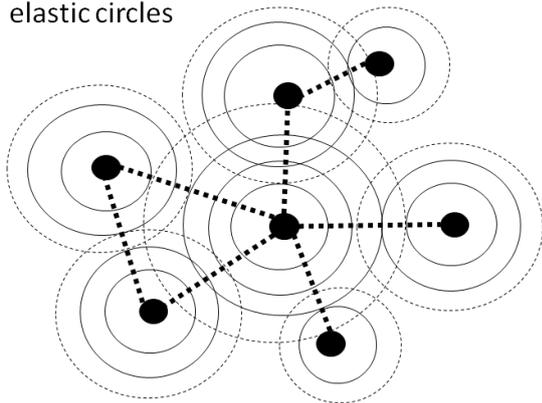
<p>Western Organizational Mode of Association 团体格局</p>	<p>Chinese Differential Mode of Association 差序格局</p>
 <p>clear boundary</p>	<p>elastic circles</p>  <p>overlapping networks</p>
<p>● individual ○ group</p>	<p>● Ji (己) ○···· relationship</p>

Fig. 17 Organizational mode of association and different mode of association
Source: made by author basing on literature review

2) Basement of “ChaXuGeju”: Consanguinity(血緣) and Territorial Relationship(地緣)

Consanguinity(血緣) and territorial relationship(地緣) are combined together as the basement of the organizational pattern of “ChaXuGeju”. The traditional society in China’s rural area is a stable society composed by acquaintances anchored in a piece of specific land. Consanguinity and territorial relationship are two inseparable relationships for people live in country side.

Kinship(血緣) is a social relationship formed through marriage and reproduction. In the pattern of “ChaXuGeju”, the networks woven by marriage and reproduction can be extended to embrace countless numbers of people. The web of social relationships linked with kinship is specific to each person. Each web has a self as its center, and every web has a different center. The center here is not an independent self, but a “family oriented self”.

On one hand, every “family oriented self” draw its own circle according to the close or distant relationship to other people. Of course, the closest circle is the core family. On the other hand, every core family regards its own household as the center and draws a circle around it. This circle is the neighborhood no matter has close blood relationship or not, which is established to facilitated reciprocation in daily life. The neighborhood is also not a fixed group. Instead, it is an area whose size is determined by the power and authority of each center.

This pattern of organization has the special quality of elasticity according to complex blood relationships and territorial relationships. Among the acquaintance society, family can be very small, but in the wealthy landlord and bureaucratic classes, families can be as big as small kingdom. These highly elastic social circles can be expanded or contracted according to a change in the power of the center (Hamilton & WANG-Zheng, 1992).

3) “Ji” (己) as a Center of Different Concentric Circles

In that framework of organizational principles of society, people construct their own social relationship according to the concept of “self-centered”. There is a “Ji”(己, self) at the center of each web in those relationship networks.

On one hand, “Ji” here is not an independent individual, but a person subordinated to the big family with kinship. In traditional Chinese society, almost no ones can separate themselves from the blood and family ties as a really independent individual. Even if there is, he will be seen as an alien (PU-Yongchun, 1997). The concept of “self-centered” is actually “family or clan centered”. One the other hand, psychologically, “Ji” should be an independent personality of self, however, in traditional Chinese society, “Ji” does not have the independent character, but

was wrapped in human relations. “Ji” here is also not in an equal position with other individuals like the Westerners, but in a relative position referring to others in hierarchical orders of Confucian Ethics. (BU-Changli, 2003).

Whether viewed the entity of “Ji” from the perspective of social structure, or viewed the personality of “Ji” from the psychological point, the “Ji” in the pattern of ChaXuGeju is not the same as an independent individual in Western culture. “Ji” includes not only somebody’s oneself, but also others people in the family, as well as the sense of status in the structure of their own family, and the awareness of their relative position to other people’s in the family.

“Ji” (己), the logical starting point of behavior can be considered as the “family oriented self” and the “family, clan, kinship” more than a simple “self”.

4) Differential Mode with Hierarchy of Confucius Ethics(儒教倫理)

According to FEI’s illustration, the factors to influence the difference in the mode of association are not only the close and far distance of kinship, but also the Confucius Ethics(儒教倫理). The core concept of Confucius Ethics is “Ren”(仁, benevolence). “Ren” advocates that we should love others. However, the love has difference and hierarchical order. It refers to the concept of “WuLun”(五倫, five orders), such as “Zun & Bei”(尊卑, noble & humble), “Gui & Jian”(貴賤, gentle & simple), “Shang & Xia”(上下, up & down), “Zhang & You”(長幼, old & young), “Qin & Shu”(親疏, close & distant) and etc., responding to different kinds of interpersonal relationship such as “emperor & minister”(君臣), “father & son”(父子), “husband & wife”(夫婦), “brothers”(兄弟), “friends”(友人) and etc. Among those five orders, the relations of family members are located in the dominant position. “Emperor & minister” and “friends” are actually the extension basing on the relationship of “father & son” and the relationship of “brothers”. (BU-Changli, 2003)

In the pattern of ChaXuGeju, the interpersonal relationship extending out from the self is sustained by a specific type of social ethic. The process by which the relations extend outward takes various paths, but the basic path is through kinship, which includes relations between parents and children and among siblings born of the same parents. The ethical values that match this sphere are filial piety(孝, Xiao) and fraternal duty(悌, Ti). An additional route out from the self is through friends. The ethical values that match friendship are loyalty(忠, Zhong) and sincerity(信, Xin). (Hamilton & WANG-Zheng, 1992)

2.2.2 Social Basic Unit in Rural Area: Core Family and Clan-Village

1) Core Family(核心家庭)

Generally, core family refers to the family composed by the couples and their children. But in China, it also refers to the previous generation of the couples in most cases. That is to say, it refers to three generations. Core Family is the basic identification and behavior unit for Chinese people. Chinese people are family-oriented, rather than individual-centered. This is the common sense in the academic field of sociological research in China.

2) Clan-Village(宗族-村)

Clan(宗族) is the community formed by a group of families with blood relationship. clan organization or group(宗族組織) is composed by the villagers of the same ancestor with one identified family name. One village generally composed by one clan, sometimes may by several different clans.

The concept of Clan(宗族) in China has a long history, which can be traced back to the Zhou Dynasty (周代). However, besides the blood relation, the combining purpose and social functions are totally different in cases before Tang Dynasty(唐代) and after Song Dynasty(宋代). Before Tang Dynasty(唐代), the Clan only referred to the top class of nobility. From Song Dynasty(宋代, 16th century), it has become popular to the ordinary people. Before Tang Dynasty, the main purpose of its combination is to maintain the political position and power, while became into the economic purpose of mutual support in Song Dynasty [溝口雄三, 2001]. At that time, the activities of clan, such as building ancestral hall, editing genealogy, setting monument of ancestor and worship, are consciously advocated by the nation, rather than be prohibited. To the Ming and Qing Dynasties(明代清代), the organization of Clan has become the autonomous force in local society (FENG-Erkang, 2005). Since then, Clan becomes the basic unit of grassroots governance in traditional rural area in China.

Entered in the 20th century, the basic social units in different regions of China are influenced by the revolutionary movement and the implementation of market economy. According to the different degree of changes of clans, HE Xuefeng argued that the social structures of village in rural area in China nowadays can be mainly classified into three typologies in different region, such as solidarity type(團結型) in Southern China, northern villages are distributed type (分裂型) in Northern China, dispersed type(分散型) in Central China. Their characteristics are summarized in the table as following.

Table - 5 Village social structure in different region of China

	Southern China	Central China	Northern China
Settling type 居住形態	aggregated residence 聚居	dispersed residence 散居	aggregated residence 聚居
Openness 開放性	Close 封閉	Open 開放	Close 封閉
Kinship organization 血緣組織	big and strong clan organization 多強宗大族	core families of loose kinship group 小的同族集團	different small-scale clan groups 小的血緣集團
Kinship	be influenced but still well kept	Basically broken, relation outside core family almost no effect	be influenced and broken into fragment
Local rules 地方性規範	Strong 強	Weak 弱	Strong 強
Social structure 社会結構	solidarity type 團結型	dispersed type 分散型	distributed type 分裂型

Source: HE-Xuefeng, (2012). *Regional differences in China's rural areas: Focus on village social structure*. *Open Times*, 10, 109-129, translated into English by author.

The clan(宗族) in southern villages is well developed and much stronger. Most of villages in rural areas of southern China are settlements with single surname. The clan organizations are more developed than other areas in China. On the contrast, most of villages in northern China are settlements with multiple surnames. The family groups with kinship in the village are dependent on their territorial relationship, and they function according to the territorial relationship. That is to say, the village structure in northern China is formed by different small-scale kinship groups basing on their territorial relationship.

The typical features of village social structure over in southern China are as following:1), settling together as a big family with kinship; 2) coincidence of consanguinity and territorial relationship; 3) strong family rules; 4) kinship-based clan structure is the basis for maintaining the order in the village. In those developed clan organizations, there are four important elements: ancestral hall(祠堂), genealogy(族譜), clan leader(族長) and common fields(族田).

The clan organization or groups(宗族組織) play an important role in social life, especially in villages society. In traditional society in China, the clan or natural village is obviously the dominant cultural identity for villagers and as the unit to acting with the world outside the village. (HE-Xuefeng, 2009) When dealing with external relations or external affairs, they can be united to form a strong concentric sense of community for common interests.

2.3 People's Behavior Logic in Rural Area

2.3.1 Villagers' Dual-identification: Core Family and Clan-Village

In the social pattern of ChaXuGeju, there are many circles pushed outward from individual, such as, the circle of family(家), the circle of Yajifangzhi (亚级房支), the circle of Juluofangzhi(聚落房支),the circle of Clan-Village(宗族-村), and other circles out of village(村外), which are listed in four levels by WANG Mingming.

However, HE Xuefeng, professor of rural sociological research in HuaZhong University of Technology, argued that in traditional rural area, according to practices inside the territorial range, the distribution of those circles are inhomogeneous. Beside the circle of family, the circle of Clan-Village(宗族-村) is predominant among other circles. That is to say, other circles lose efficacy in general case. This leads to the fact that the villagers always keep to two layer of identity. (HE-Xuefeng, 2009)

The first identification is the core family(核心家庭); the second identification is the clan(宗族) or the natural village(自然村) combined by relevant clans.

2.3.2 GongSiBuFen(公私不分): Elasticity between Public (公)and Private (私)

In the pattern of ChaXuGeju, the boundary between the public(公) and private(私) sphere is relative, even say ambiguous. Public order is achieved by moving toward the center of the secrete circles toward the family. Private selfishness, however, is justified by moving outward, toward the state. Both public officials and private persons use the same ambiguous conception of social order to define the context of their action. (Hamilton & WANG-Zheng, 1992)

There is a formula that, for one's own benefit, the interest of family can be sacrificed, or, for the benefit of core family, the interest of clan can also be sacrificed...so on and on. With this formula, it is impossible to prove that someone is acting for private purpose. The person concerned will deny selfish, because when he abandoned the clan's interest, he performing the pubic duty for the family. And when he abandoned the interest of the country, he is still acting on behalf of the public of some groups. In this pattern of ChaXuGeju, public and private are relative concept. Standing on any circle, the all inner circles can be considered as public. (FEI-Xiaotong, 2008)

The elasticity of public and private is an important property of this interpersonal relationship framework of ChaXuGeju. (ZHAO-Xiaofeng, 2012) The characteristics of the concept of public and private in traditional Chinese society can be summarized as following. First is Hierarchy. Between the great public of the whole society to individuals' little private,

there are lots of other categories of intermediate circles, such as family, clan, party, nation. Second is Prescriptive. Private is human's instinct. Private should be determined first, then public follows. Third is Flexibility. Public and private are relative beyond the circle in the middle zone, different people from different positions and angles can judge according to their needs. Fourth is Priority. For the public interest of any circle, the private interests of inner circle of that circle could not be sacrificed. Out circle's interests would be sacrificed firstly.

2.3.3 NeiWaiYouBie(内外有别): Flexible Rules for Different Interpersonal Reaction

NeiWaiYouBie(内外有别) means "there are differences between inner and outer". As HE Xuefeng said, "*In generally, the Chinese people's behavior logic is ethics-centered and under the pattern of ChaXuGeju. It is particularism rather than universalism. Second, Chinese people particularly concerns the situation of public sphere or private sphere. In the case of private sphere, in the field of 'us', people's behavior approach tends to be like 'communism'; while in the case of public sphere, in the field of 'not us', people's behavior approach tends to be instrumental(benefit-oriented).*" (HE-Xuefeng, 2009)

Traditional Chinese people obey different norms to treat different inter-actors according to different interpersonal relationship, as FEI said, "*People utilizes different circle at different times and places*". In that case, the people inside the circle is considered as "ZiJiRen"(自己人) which means people in the same group, acquaintances. On the contrast, the people outside the circle is considered as "WaiRen"(外人), which means people not in the same group, strangers. When interacting with ZiJiRen, people prefer to use favor(RenQing 人情), face (MianZi 面子), and local code. While interacting with WairRen, people prefer to obey the common rules, the national law. People get used to that flexible behavior guide when deal with different interpersonal reaction.

2.4. New Trend of Benefit-oriented Interpersonal Relationship in Semi-rural Area

2.4.1 Content Changes of ChaXuGeju in Contemporary China

Since 1949, especially since the reform and opening-up policy from 1978, the social and economic state in China has undergone tremendous changes. But, the social condition, which the pattern of ChaXuGeju originates from, still exists among modern Chinese society (BU-Changli, 2003). The kinship and territorial relationship, the basement of ChaXuGeju, is still the dominant interpersonal relationship among the peasants in contemporary China. The tradition of Confucius Rituals is still the main constraints when deal with human interaction in daily life in rural area and some other cities and towns, even which are industrialized. The improvement and promotion of legal system requires times. "Ruled by Law" and "Ruled by Rituals" are coexistence. (ZHOU-Yunqing, 1999).

The framework of ChaXuGeju still holds some applicability to explain the social structure and interpersonal relationship in China now. However, there are some changes in the content of ChaXuGeju.

First, the center of each web in the pattern of ChaXuGeju has changed. In traditional society, the closest relation to each people is the family and clan. But, with the development of industrialization and urbanization, economic unit is another important organization for each individual in the city. People get resources, social position, power, benefits and identity from economic units they belong to. Those kinds of people depend both on the clan with kinship and the units without kinship. They therefore push their social circles above those two basements. (ZHAI-Xuewei, 1996)

Second, after the economic system reformation in China, benefits-oriented market economy has been found. The benefit-oriented concept and behavior of each social member appear obviously. Benefits become an important factor affecting the distance of interpersonal relationship in the pattern of ChaXuGeju. (YANG-Shanhua & HOU-Hongxin, 1999) ChaXuGeju is no longer a simple association mode of difference of Confucius Rituals, but the 3-demenstional differences including rituals, emotions and benefits. (CHEN-Junjie & CHEN-Zhen, 1998)

Third, the range of interpersonal relationship in the pattern of ChaXuGeju has been extended to both the relatives of husband and wife, and to other close relationship with emotion and business connection with benefits. (BU-Changli, 2003)

2.4.2 Instrumental Multi-layered Structure(工具性圈層格局)

The research object of FEI's theory of ChaXuGeju is rural society in China. It is a relatively stable society with less mobility. It is a society of acquaintance without stranger. However, due to the vivid economic activity, the village society in rural area in some economic developed region or in urban village is a floating society with instability. TANG Tongxue proposed a new concept of "Instrumental Multi-layered Structure(工具性圈層格局)" from FEI's ChaXuGeju(差序格局), to illustrate the basic character of rural society in contemporary China.

QuanCengGeju(圈層格局) refers to the networks and structure of the concentric relationship that is pushed out from the center of "Ji" (己,self). Quan(圈, circle) refers to the concentric networks of horizontal social unity, while Ceng(層,layer) refers to the hierarchical structure of vertical social unity. Instrumental(工具性) refers to the benefit-oriented principal applied by villagers when deal with the relationship between the center and other multi-layers.

Here, "Ji" mainly refers to the core family of each individual. As Inside the core family, the Confucius Ethics still effects to each individual. Out of the circle of core family, the benefit relationship is much more important than the kinship, territorial relationship and other relationship dominated by the Confucius Ethics.

The distance of interpersonal relationship, close or distant, is determined by the level of instrumental value, rather than the Confucius Ethics. The boundary between public and private, between self and group, still holds the characteristic of elasticity.

The factor influencing the elasticity is no longer the norms of Confucius Ethics, but the calculation of actual interest.

The kinship and territorial relationship also emphasized by villagers, in case that there is no conflict with the interest of their core family. (TAN-Tongxue, 2009)

2.5 Chapter Findings

Traditionally, the society in China is constituted by each “family-oriented self” under the framework of ChaXuGeJu(差序格局), the differential mode of association. In the pattern of ChaXuGeJu, there are many circles of interpersonal relationship pushed outward from the center of each individual. However, in the village society, the circle of family and the circle of Clan-Village(宗族-村) are both predominant among other circles. The villagers hold dual-identification. The first one is the core family(核心家庭); the second one is the clan(宗族) or the natural village(自然村) combined by relevant clans. For the villagers, that dual-identification is the starting point of behavior logic. In that social pattern of ChaXuGeJu, the people's behavior logic has two important characteristics. The first one is the elasticity between public and private. The boundary between the public(公) and private(私) sphere is relative, even say ambiguous. The second one is different rules to deal with the inners and the outers. Favor(RenQing 人情), face (MianZi 面子) and the local code are for the case of the inners, while the common rules and the national law are for the case of the outers.

Since the reform and opening-up policy from 1978, the social and economic state in China has undergone tremendous changes. But, the kinship and territorial relationship, the basement of ChaXuGeju, is still the dominant interpersonal relationship among the villagers in the semi-urbanized village society. The boundary between public and private, between self and group, still holds the characteristic of elasticity. The factor influencing the elasticity is no longer the norms of Confucius Ethics, but the calculation of actual interest. The kinship and territorial relationship also emphasized by villagers, in case that there is no conflict with the interest of their core family. Out of the circle of core family, the benefit relationship is much more important than the kinship and territorial relationship. The villagers' behavior logic has become more benefit-oriented.

CHAPTER-3

LITERAURE SURVEY-B: URBAN VILLAGE AS INFORMAL SETTLEMENT IN CHINA

3.1 Informal Settlement

3.1.1 What is Informal Settlements

Generally, informal settlements refer to human habitations, which are developed out of the state land administration system, including the tenure and its registration, regulation of land use and development, property taxation, and which do not comply with the legal and regulatory requirements.

Informal land and property development always occurs in areas that are undeveloped because they are zoned for future development, or beyond the current built-up area, or are unsuitable for development. In those settlements, property owners have no security of tenure and therefore invest little in their houses or other aspects of neighborhood development (UN-HABITAT, 2009). They cannot provide their inhabitants an adequate standard of living. They are characterized as the settlement which: is unplanned; has informal or insecure property tenure; has an inadequate or non-participation in government, resulting in lack of basic services, registration and infrastructure; has a vulnerability of discrimination for the residents (UN-HABITAT(Kosovo), 2007). They are dense settlements comprising communities housed in self constructed shelters, and typically the product of an urgent need for sheltering the urban poor, which are common features of developing countries (UN Habitat, 2011a).

Across the United Nations Economic Commission for Europe region, despite a great range of spatial manifestations of informal settlements, there are several major types of informal settlements as following (UNECE, 2009):

- a. Squatter settlements on public or private land;
- b. Settlements for refugees and vulnerable people;
- c. Upgraded squatter settlements;
- d. Illegal suburban land subdivisions on legally owned private, with illegal changing of land-use regulations, often on the urban fringe;
- e. Overcrowded, dilapidated housing without adequate facilities in city centers or densely urbanized areas.

3.1.2 Why do Informal Settlements Develop

UN-Habitat considered the key factors giving rise to the informal land and property development as following. First, governments are often unable enforce laws and regulations governing land and housing development. Plan proposals are therefore over-ridden sometimes from ignorance, but more often because of a desperate need for housing and income. Second, Procedures for registration and obtaining approval are often time-consuming and costly which

increases housing costs and price by limiting supply. (UN-HABITAT, 2009)

The ministry of environment and spatial planning association of municipalities of Kosovo considered that the reasons why informal settlements develop are (UN-HABITAT(Kosovo), 2007):

- Unaffordable land and housing for low income groups;
- Absence of timely urban planning and land management;
- Absence of policy for social integration of low income group;
- Population migration and rapid urban growth;
- Lack of resources of the urban authority;
- Irresponsible sub-division of land by private landowners;
- Lack of enforcement of rules due to weak and ineffective governments.

In all, the development of informal settlements is a response to the ineffective planning, inappropriate standards and unenforceable regulations.

3.1.3 Informal Settlement in Developing Countries

As unable to access affordable serviced land and formal housing, the low and even middle income groups in developing country have had to seek building plots or house in informal settlement. Even where considerable public investment in planned settlement occurs, there is frequently a mismatch between what is built and what people need and want. It is reported by UN-HABITAT (United Nations Human Settlements Programme) that 62.2 % of the urban population of Sub-Saharan Africa respectively lives in informal settlement, 42.9% of it in Southern Asia, 36.5% in Eastern Asia and 27% in Latin America and the Caribbean, 14.5% in North Africa.

The sprawling pre-urban areas of developing countries are characterized by inadequate infrastructure, lack of safety and security and wide disparities in wealth. Limited governance capacity for planning and development regulation leads to proliferation of informality in pre-urban areas. In addition to the densification and redevelopment of existing towns and cities, it is estimated that much future urban growth in the region will be accommodated in pre-urban area where informal development is widespread: three-quarters in Jakarta, over half in Bangkok and 40% in China by 2050. An estimated 70% of new housing production in Latin American and Caribbean is informal. (UN-HABITAT, 2009)

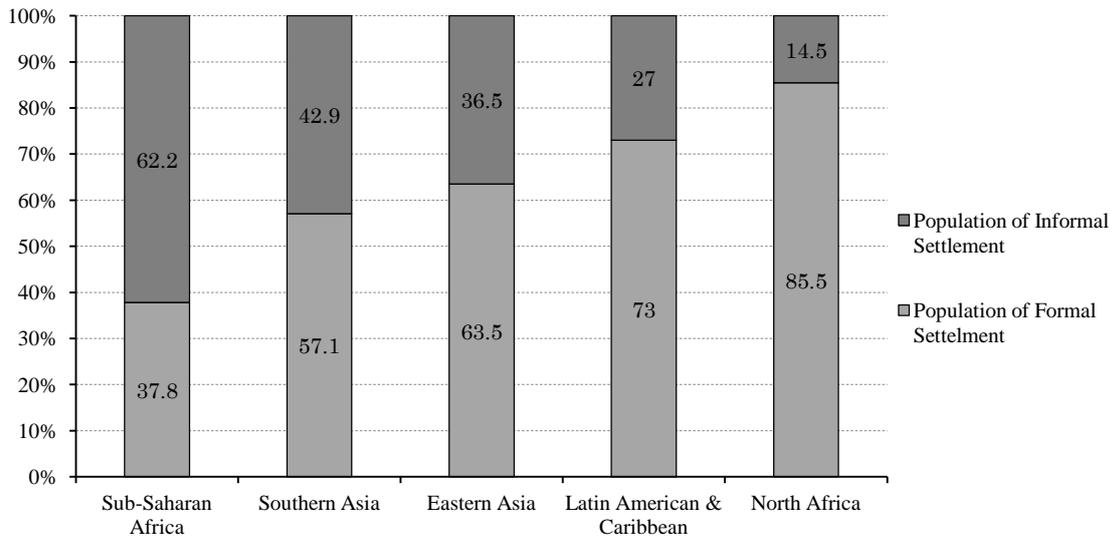


Fig. 18 The share of population living in informal settlement in developing countries 2009
 Source: by author basing on the data from UN-HABITAT

3.1.4 Kampung in Indonesia

In Indonesian, “Kampung” means village. Although the administrative unit of village level is officially determined as “Desa” in Indonesia now, the word “Kampung” is still kept using by common people in general case both in urban area and rural area. The physical environment of Kampung in urban area is similar with slum in other developing countries. However, they are not squatter settlements on public or private land. Shuji FUNO considered that Kampung cannot be deemed as “squatter” or “slum”. Kampung inherit the character of corporate from the Desa (traditional village) in Java. The concepts of “gotong royong”(相互扶助, mutual aid) and “rukun”(和合, harmony), which is the highest value consciousness for the Javanese, are still supporting the people’s life in kampong. [布野修司, 1991].

In Jakarta, the majority of the poor provide their own shelter in spontaneous those informal settlements. Much of the urban expansion of Jakarta in recent years has taken place in peri-urban areas to the west, south and east. Investment in roads has enabled members of rural households in peripheral areas to commute to urban jobs, and increased incomes have enabled investment in agricultural intensification, non-farm economic activities and house improvements. Gradually, villages have urbanized in situ and joined up by mixed-used infill development. Informal land and housing development on former rice fields in and around early urban settlements and peripheral villages has provided large numbers of affordable houses for low and middle income households. Today, approximately 60% of Jakarta metropolitan region’s population lives in Kampung (urban village). (Firman & Rakodi, 2008)

Kampungs are often formed without land titles. Land and buildings are acquired without authorization from government. The Kampung Improvement Program (KIP), financially supported by UNDP/World Bank, initially started since 1979 to upgrade the physical infrastructure in Kampung, but did not include the land tenure issue. The illegal land occupancy status has deprived the people living in Kampung of citizenship rights and access to basic infrastructure and services. NGOs have played an important role in mobilizing the community's resources and building their confidence in developing their settlement. Two major NGOs, Institut Social Jakarta and World Vision International, successfully assist the Kampung Penas Tanggual, the informal settlement located along the Cipinang River in East Jakarta, to upgrade both physical environment and secure land tenure, and became formal community as RT(Rukun Tetangga). It is founded that positive perception on security of tenure is important in encouraging the community to invest in their settlement. (Winayanti & Lang, 2004)

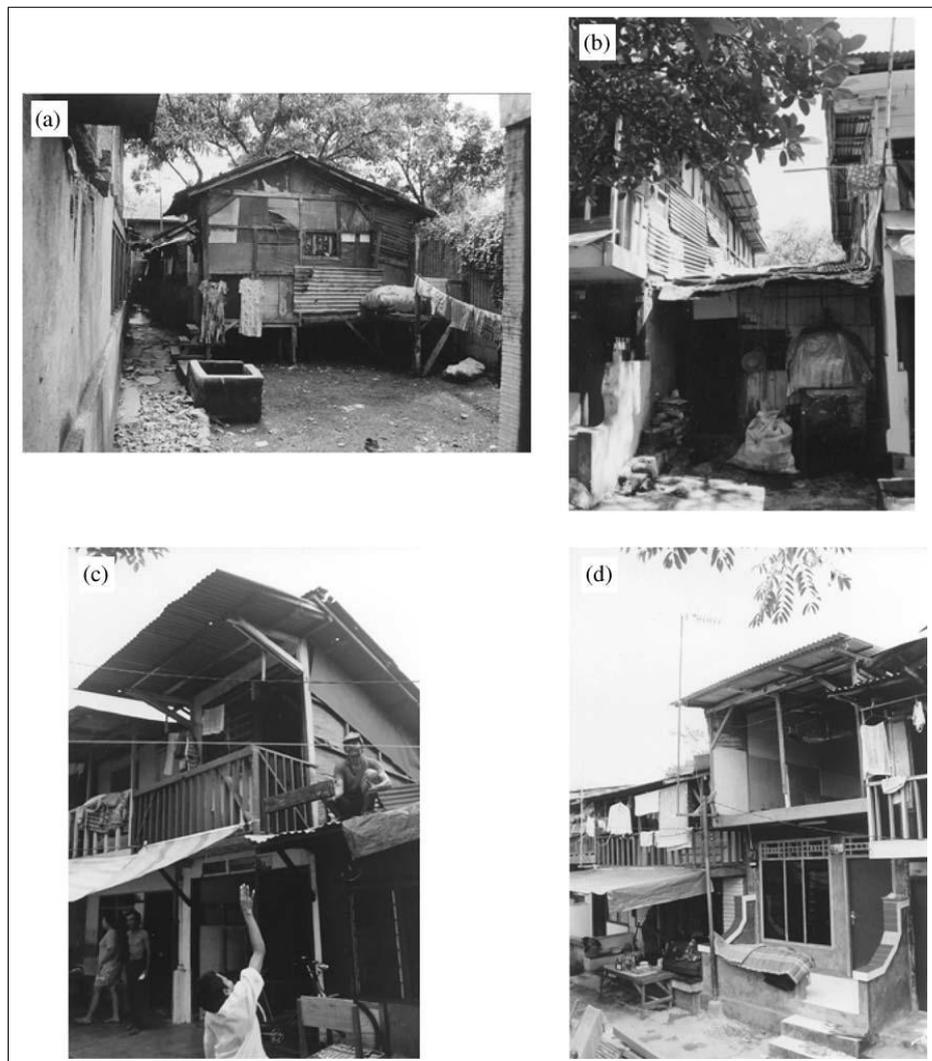


Fig. 19 Stage of house improvement.in Kampung Penas Tanggual
Source: (Winayanti & Lang, 2004)

3.2 Urban Village in China

3.2.1 Definition of Urban Village (*ChengZhongCun*, 城中村)

Urban village (Chinese: *Chengzhongcun* 城中村; literally: “village in city”) refers to the village that is compassed by the city due to the rapid expansion of urban space in the process of urbanization in China. It is one kind of informal settlements located in urban built-up area, which evolved from traditional village to the residential cluster of rental houses, shielding not only indigenous villagers but also the low income migrants from other cities and rural areas.

It is a unique phenomenon of binary landscape that the city and the village co-exist due to the rapid expansion of urban space in the process of urbanization in China (GAO-Feng, DONG-Xiaofeng, HOU-Dian'an, & CHENG-Gang, 2006). These kinds of villages appear on either the outskirts or the downtown segments of big cities, such as Beijing, Shenzhen and Guangzhou. Actually, *ChengZhongCun* has gradually become a negative term in the context of Chinese society, because most of municipal government consider them as the “malignant tumor” of city and advocate to transform them even exterminate all of them.

1) Definition of Urban Village in Different Context

In the transformation process of urban village, many local governments in China give a variety of definitions of it in their policy documents according to their local situation. The municipal government of Shenzhen City gives the definition that “urban village” refers to “the built-up area in non-agricultural construction land which is reserved for the indigenous villagers of the original rural collective economic organizations and their step-by organizations to use in the process of urbanization in accordance with the relevant provisions”.⁴ In Xi’an, “urban village” refers to “village in the urban built-up area, which lost or almost lost the arable land but still implement village autonomy and the ownership of rural collectivism”.⁵

Some research organizations and scholars also give different definitions of “urban village” from various angles for their different research needs. The Research Project Team of *the Ministry of Housing and Urban-rural Development of P.R. China* defined that urban village is the rural settlement that emerges in the planning area and surrounded by urban construction land, but the land ownership, household registration and administrative system are still retains rural mode (Research Group of Ministry of Construction of China, 2007). Moreover, WEI Lihua,

4. Municipal Government of Shenzhen City, <Temporary provision of urban village transformation in Shenzhen City>, 2004/10/22. (《深圳市城中村(旧村)改造暂行规定》深府[2004]177号)

5. Municipal Government of Xi’an City, <Management approach for transformation of urban village in Xi’an City>, 2007/9/17. (《西安市城中村改造管理办法》)

Professor of *South China University of Technology*, argued that urban village is a rural community in urban built-up areas because of drastic urban sprawl, suburbanization and industrial dispersion. And in reality urban village exists as the residential cluster for floating population, which is rural-urban transitional “monster” possessing the dual urban-rural socio-economic structure (WEI-Lihua & YAN-Xiaopei, Sustainable urban-rural relation in rapid urbanization areas --Case of Transformation of "Urban Village" in Guangzhou, 2005).

Reviewing those definitions of urban village, it can be found that they always including two key information of content: 1) Located in built-up area or planning area in the city; 2) Keep rural characteristics.

2) Redefinition of Urban Village in This Thesis

Based on the definition mentioned above and according to the research purpose in this study, “urban village” in the context of this thesis could be defined as that:

Urban village is one kind of informal settlements located in urban built-up area, which lost or almost lost the arable land but still implement village autonomy and the land ownership of rural collectivism. It evolved from traditional village to the residential cluster of rental houses, shielding not only indigenous villagers but also the low income migrants from other cities and rural areas. In urban village, almost all the peasants’ private houses are “illegal building” according to formal regulations. And the living environment in most of urban village is quite bad and lack of sound infrastructure. However, as informal sector, they provide low cost residence to the underclass who gives low-cost services to support the operation and development of the city.

3.2.2 Categories of Urban Village

Viewing urban villages from different angles, different researchers hold their different classifications of them. The different classifications according to different angles would be sorted as following.

1) According to Economic Point of View

When studied on four villages in Tianhe District and Haizhu District of Guangzhou City, Zhang Jianming analyzed the basic information of those villages by utilizing statistical methods such as factor analysis and cluster analysis, and divided them as three categories such as the superior infrastructure type, the collective economic strong type and land resources sufficient type (ZHANG-Jianmin, 1998).

Liu Weiwen divided urban villages into three categories: First, villages that is integration

with the city in terms of forms, but not engaging in agricultural production; Second, villages that is located on the edge of the city, still holds a small amount of agricultural production and is transforming into completely urban village; Third, village that is outside in the city, situated in the upcoming development area of the urban planning, but mainly engaging in agricultural production. Those types are divided on the basis of production mode of the villagers. (LIU-Weiwen, 2008)

2) According to Residential Density

Similarly, using the method of cluster analysis by selecting eight indicators such as location, size, population density, registered population density, transient population density, traffic conditions, building density and per capita housing area, Wang Ruyuan divided urban villages in Shenzhen City into the following five categories (WANG-Ruyuan, 1996):

- a. Central village with low population density and high building density;
- b. Interfacial village with high population density and high building density;
- c. Edged village with medium population density and medium building density;
- d. Peripheral village with low population density and medium building density;
- e. Remote village with low population density and low building density.

3) According to Relational Position of Urban and Village

According to the morphological characteristic of the relationship between urban space and village space, Chen Yi has divided urban village as all-surrounded type, half-surrounded type external-tangent type, enclave-adjacent type, phase-release type and internal-tangent type (CHEN-Yi & PAN-Shujian, 1995).

4) According to Degree of Development

Yaping WANG argued that not all urban villages are located inside the city's main built-up area in Shenzhen. Though they all share some similar characteristics, they also differ in one way or another, reflecting local physical and economic circumstances and the different stages of village urbanization (WANG-Yaping, WANG-Yangling, & WU-Jiasheng, 2009). Three types of urban village can be identified:

Chengzhongcun (城中村): villages located inside the main built-up areas;

Chengbiancun (城边村): semi-urbanized villages located at interface zones of the main built up areas;

Chengjiaocun (城郊村): semi-urbanized villages in suburban areas or industrialized towns.

According to the location of urban villages in the city, as well as the degree of development

and the amount of agricultural land, LI Lixun divided urban village into three types - mature type, growing type and infant type (LI-Lixun, 2001); LI Peilin sorted urban village as in downtown of the city, in suburban of the city and in the urban periphery (LI-Peilin, Perspective of urban village: research methodology of the study on village's death, 2004); and Wu Zhigang classified urban village as the typical village in city, the transitional villages around city and the edged village in periphery of city (WU-Zhigang & ZHOU-Suhong, 2005).

5) According to Aggregation of a Certain Sectors or Occupations

As refinement of the research on urban village in China, some scholars created new words to describe the characteristic of one specific urban village according to the aggregation of a certain sectors or occupations.

Chen Shuang focus many *Xiaobiancun*(校边村) in Wuhan City. *Xiaobiancun* means urban villages beside university, of which rent house is built for college students and graduated students. And their economic development almost depends on the students' daily consumption in the village (CHEN-Shuang, 2010).

Professor Wei Lihua in SUT and Professor Ma Hang in HIT Shenzhen both recently concerns on *Chuangbiancun*(厂边村), literal means village beside factory, in cities of the Pearl River Delta where manufacturing industry is well developing and attracting lots of migrants from inland area in China.

Dafen(大芬) in Shenzhen is famous as oil-painting village in western world because on its production and export of oil painting. And urban village of Xiaozhou(小洲) in Guangzhou becomes artist village during the past decade. Bajia(八家) in Beijing is deemed to recycling village, as its industry of electronics waste recycling.

6) Comprehensive Classification of Urban Village

There are some common characteristics that the classifications mentioned above mainly refer to: their geographical location of in the urban planning area, land category and usage, spatial pattern, population composition, economic circumstances and the different stages of village urbanization. Base on those classifications, urban village in China would be sorted in three types as following: Senior Urban Village, Junior Urban Village and Primary Urban Village. It may be better to understand.

Table - 6 Three types of urban village

Category	Senior Urban Village	Junior Urban Village	Primary Urban Village
Geographical location	In central area of main built-up area	at interface zones of main built up areas,	outside main built up areas but inside planning area,
Spatial Characteristic	external expansion basically stopped, internal structure has changed as self-rebuilt; surrounded by state-owned land, clear boundary of state-owned land and collective land, all agricultural land was occupied by buildings; has greater impact on city	external expansion besides internal update, but outward expansion more active; state-owned land carve much into collective agricultural land, city compete with village for land for construction; spatial relationships of urban and rural is changing; contradictions appear gradually with increasing	gradually accelerated outward expansion without internal update; state-owned land begin to carve into collective agricultural land on scale, agricultural land in stock; urban and rural has relatively distant relationship, contradictions is not obvious
Economic Characteristic	agriculture demise; secondary sector decline; tertiary sector and land revenue become the main economic source; informal sector developed	agriculture decline ; secondary sector, tertiary sector and land revenue become the main economic source; informal sector active	agriculture active, secondary sector developing, secondary sector and land revenue is a large proportion of economic source; informal sector developing
Population Characteristic	influx of migrants is saturated, migrants far beyond indigenous villagers; indigenous villager are urban <i>hukou</i> holders, some or most of them move out	Large-scale of migrants influx; migrants beyond indigenous villager; indigenous villagers partially converted to urban <i>hukou</i> holders	floating population gradually increasing; indigenous villagers begin to change <i>hukou</i>
Examples	Shipai, Xian in Guangzhou (G3); Huanggang in Shenzhen(S5)	Yimutian in Beijing (B7); Longdong in Guangzhou(G4); Yangmei in Shenzhen (S1);	Xiaocun in Beijing (B10)

Source: made by author based on literature review

3.2.3 Proliferation of Urban Village in China

Urban village has been developing in Chinese land from coast to inland in the urbanization process during the past three decades. The phenomenon of urban village first appeared in 1980s in Shenzhen City, one of most dynamic cities in China and the experimental field of China's reform and opening Policy, and then spread to the rapidly developing area in the Pearl River Delta. Then, as unique spatial and social phenomenon, more and more urban villages appear in other big cities across the whole country with the urbanization process.

Before 1979, Shenzhen was a small town of Bao'an County next to Hong Kong. In August 1980, the Chinese central government carved an area of 327.5 km² of land out of Bao'an County to create the first Special Economic Zone (SEZ). In 1993, the Bao'an County government was abolished; the remaining area under its control was divided into two districts and merged with the SEZ to form the greater Shenzhen Municipality. Together with the 4 inner districts inside

the SEZ, the Shenzhen Municipality covers a territory of 2020 km² (WANG-Yaping, WANG-Yangling, & WU-Jiansheng, 2009).

The experiment of the Shenzhen SEZ was successful judging by the growth in population size, spatial development and various economic parameters. Its GDP increased from 200 million RMB in 1978 to 958 billion RMB in 2010 (SSB, 2011). The economic growth has driven a huge influx of migrant workers and urban spatial expansion. It has now developed to be a metropolis with 8.278 million inhabitants in 2005 and 10.372 million inhabitants in 2010 (SSB, 2011). In those 8 million inhabitants of 2005, there are 5 million people living in 320 urban villages which are scatted in the urban build-up area but only covers an area of 9,349 km² in the city. In urban villages, there is 4.6 million of floating population, accounting for 93.17% of the total residents (PuHao, Sliuzas, & Geertman, 2011).

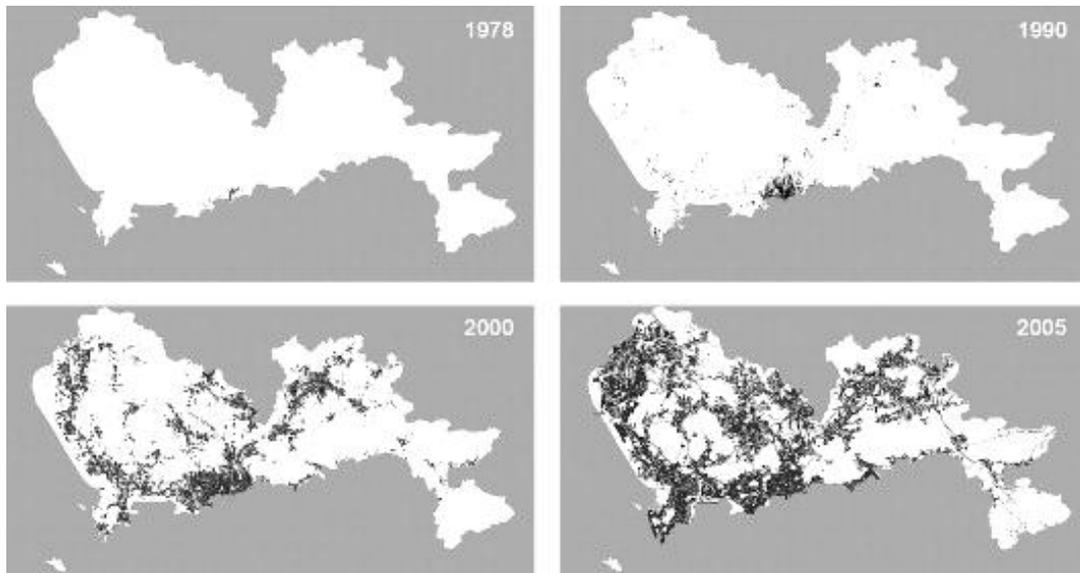


Fig. 20 Growth of urban built-up area in Shenzhen City 1978 - 2005
Source: Shenzhen Urban Planning Bureau

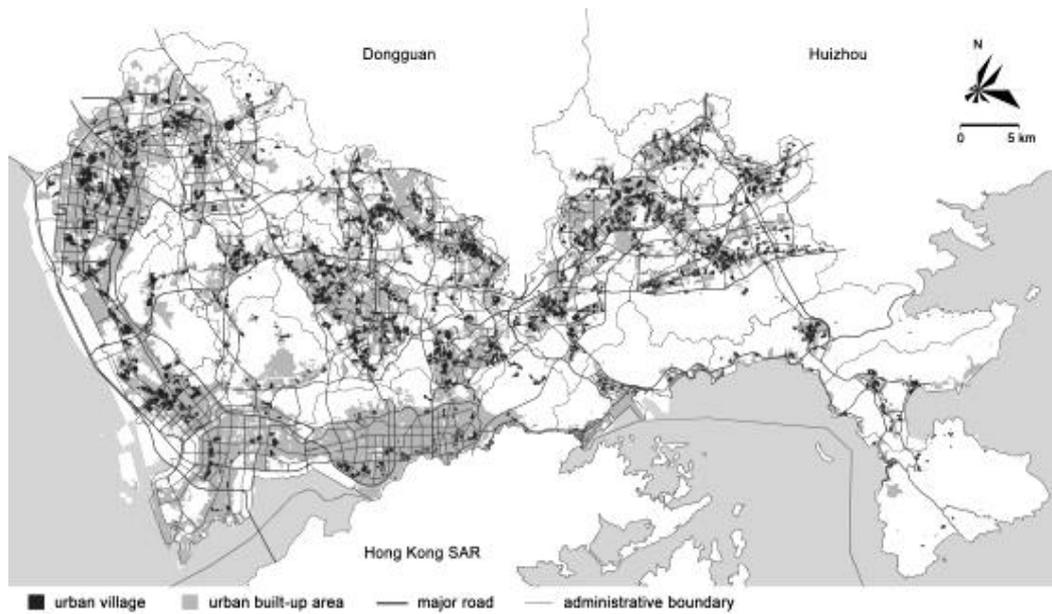


Fig. 21 Spatial distribution of urban villages in the whole Shenzhen City
Source: Shenzhen Urban Planning Bureau

As the central city in the Pearl River Delta, Guangzhou has an almost simultaneous development pattern of the phenomenon of urban village. Guangzhou's urban sprawl has been greatly accelerated during the 1990s, with its built-up area reaching 308 km² in 2001, while only 182.26 km² in 1990. The average annual sprawl rate is 4.89%. Many traditional villages in suburb were surrounded by urban land use and became urban villages. By 2000, there were 139 villages in urban built-up area of Guangzhou, with a total area accounted to 80.6 km², holding 26.17% of urban built-up area. Urban villages are mainly located at urban fringe and distributed along the traffic arteries (WEI-Lihua & YAN-Xiaopei, Sustainable urban-rural relation in rapid urbanization areas --Case of Transformation of "Urban Village" in Guangzhou, 2005).

In Beijing, where there are strict administrative system and the aggregation of state-owned units, urban village has been developing since the development of private sector and expansion of urban planning area. The urban planning range in Beijing expands from 600 km² in 1958, to 750 km² in 1982, to 1040 km² in 1993, and up to 1085 km² in 2004. In order to provide basic information for urban village upgrading before Olympic Game 2008, the Beijing Municipal Administrative Committee conducted an investigation of urban village in the city in 2004. The results showed a total number of 231 villages in main built-up area of the city (LI-Jiwei, 2011).



Fig. 22 Expansion of built-up area in Beijing 1975-2002
 Source : Overall Urban Planning of Beijing 2004-2020

Similarly, as the largest international city in China, Shanghai is a high urbanization place. A mayor of Shanghai city said that there is not a serious problem of urban village in Shanghai. But in recent years, with the expansion of built-up area, many of the traditional villages between the Inner Ring and the Outer Ring become into village inside planning area of the city. The same phenomenon of urban village occurred again in Shanghai, especially in Minhang District and Pudong New District (WANG-Mingfeng, LIN-Xiaoling, & NING-Yuemin, 2012).

With the trend of the development of market economy gradually spreading to inland areas in China, especially the trend of the development of small and medium-sized private enterprises, the phenomenon of urban village have also begun to appear in the capital city of many provinces in central China and western China, such as Wuhan, Xi'an, Chongqing, Kunming.

Table - 7 the Number of Urban Villages in Metropolitan Area of Beijing, Guangzhou and Shenzhen

Beijing(北京) Data of 2004		Guangzhou (广州) Data of 2003		Shenzhen (深圳) Data of 2005	
District	Number	District	Number	District	Number
Dongcheng (东城区)	4	Tianhe (天河区)	28	Futian (福田区)	15
Xicheng (西城区)	3	Haizhu (海珠区)	20	Luohu (罗湖区)	24
Chongwen (崇文区)	7	Fangcun (芳村区)	17	Nanshan (南山区)	28
Xuanwu (宣武区)	19	Huangpu (黄浦区)	16	Yantian (盐田区)	24
Haidian (海淀区)	70	Baiyun (白云区)	46	Longgang (龙岗区)	91
Chaoyang (朝阳区)	57	Luogang (萝岗区)	12	Baoan (宝安区)	138
Fengtai (丰台区)	51				
Shijingshan (石景山区)	20				
Total Number	231		139		320
Occupied Area (10000m ²)	1092		/		9349
Floor Area (10,000m ²)	2,735		/		10,561
Total Residents (10,000)	/		/		502.09
Villagers (10,000)	/		/		32.68
Migrants (10,000)	/		/		469.41
Rate of Migrants (%)	/		/		93.49

Source: sorted by author based on literature review

3.3 Deficient Formal Institutions for Urban Village

Urban village in China is different from the slum and squatter in other developing countries which often illegally occupied public or private land. Generally, the homesteads in urban village are legally owned by the indigenous villagers. They have secure property tenure in some ways. The deficient formal institution is the key factor giving rise to the informal land and property development in urban village. The unenforceable regulations and inappropriate standards, which made by the government, cannot well enforced through the village organization who directly manage the land and property development in the village.

3.3.1 Village Administration System

Urban villages are located in the city, but most of them still keep the same administration system like other traditional villages in rural area. It is hard for the municipal government to completely integrate them into the municipal administration system like other urban communities in the state owned land.

3.3.1.1 Rural Autonomy

The rural villager autonomy system is gradually established after the abolishment of People's Commune System (人民公社) and the implementation of the Household Contract Responsibility System(家庭聯產承包責任制). In 1978, after the Third Plenary Session of the 11th Communist Party, the People's Commune System with "integration of government and enterprise" collapsed, making a temporary "vacuum" period of China's rural grass-roots social management. At that time, a new social grass-roots organization is curiously needed to fill the gaps in the management system. At the begging of 1980, villager autonomous organization spontaneously appeared in Guozuo village, Yishan Xian, Guangxi Province. At the same time, some similar villager organizations also appeared in villages in Sichuan, Henan, Shandong Province, etc. The original function of those villagers organization is to maintain the water conservancy facilities as well as social public security. However, its function gradually expanded to the rural grass-roots' self-administration in the field of political, economic, cultural, social life, etc., and the properties of villagers committee also evolved to the mass autonomous organization. (WANG-Xinfu, 2008)

After nearly 30 years of development, the villager autonomy system has become an important part of Chinese socialize democratic politics. Following the first confirmation of the legal position of village autonomy committee by the 1982 constitution, a system of villager autonomy supporting laws and regulations is gradually formed.

The implementation of rural autonomy system frees the economic and political

development in villages, while also decrease government's administrative effect in the village. Many mature urban villages in Guangzhou and Shenzhen are formed in those 30 years. This period is a process of power transmission from the central government to the village organization. In the three decades, the village's economic strength has been getting stronger and villager's construction of their village became freer.

Table - 8 Evolution of Administration System of Rural Autonomy Regulations

Year	Regulation	Organization	Content & Effect
1982	The new Constitution	The Fifth Session of the Fifth National People's Congress	Summed up the practical experience of the villagers' autonomy, established the legal status of the village committee. The constitution stated that the village committee is China's rural grass-roots group and autonomous organizations, and pointed out the basic direction of the villagers' self-government for rural social management.
1987	Law of the Villagers' Committees of the People's Republic of China (for Trial Implementation)	The six meeting of the twenty-third NPC Standing Committee	made comprehensive provisions about villagers committee's nature, status, duties, organizing method, institute structure and working methods, as well as the rights of the villagers' meetings and organizational forms, so that the villagers' autonomy as a new type of mass self-government system and the system of direct democracy formally established up in law.
1990	Notice on carrying out villagers autonomy demonstration activities in the rural area	Ministry of Civil Affairs of the People's Republic of China	Village self-government demonstration activities carried out around the country.
1998	Law of the Villagers' Committees of the People's Republic of China	The nine meeting of the fifth NPC Standing Committee	Villagers' autonomy fundamental law, to set down the villagers' autonomy as a new model of governance in law. Since then, the provinces, autonomous regions and municipalities directly under the Central Government to local realities, have formulated a way of supporting the Organic Law of Villagers implementation approaches and village elections.
2004	Advices on improving and perfecting the village affairs and democratic management system	General Office of the CPC Central Committee, the general office of the State Council	Further improve the system of village affairs, to protect farmers' right to information; further standardize the democratic decision-making mechanism to protect the decision-making power of the masses of peasants; further improve the democratic management system, to protect the rights of participation of the masses of peasants; further strengthen the mechanism of supervision and management of village affairs, security the peasant masses to supervise.

Source: Made by author based on literature review

3.3.1.2 Independent Finance of Village

Although the Village Party Branch Committee exists as the most grass-roots organization of Communist Party, the lowest level of government agency is the town government. The town government administrates the autonomous organization, the Villagers' Autonomous Committee, through the Communist Party Branch Committee in that village. But only officials above the town level government are subordinated to the country's administrative system, and could be paid by the government. The members of the villagers' committee, as well as members of the Village Party Branch Committee, do not belong to the national cadres, while they belong to the staff of the local self-government bodies. They could not be paid from the government budget. The village leaders' income comes from their own labor and subsidies from budget that handed in by the villagers, or by collective economic organization of the village. Therefore, the village finance is a separated system different from the local government. It determines that the formal system of the country is difficult to fully penetrate into the village, because of their different economic interest standings.

So, when there is a conflict between governments' formal system and the interests of the village itself, the village committee naturally will not execute the formal regulation strictly and even just ignored. That is one important reason why a variety of informal system is possible to exist in the village society.

3.3.2 Formal Institutions of Land and Property Development

3.3.2.1 Land Tenure System

1) Two Independent Systems: National Ownership and Collective Ownership

The different two kinds of land tenure system of urban area and rural area in China has defined since 1982 when *<Constitution>* and *<Ordinance of Land Requisition for State Construction>* were implemented. The urban land is owned by the municipal government; while rural land owned by the peasant collectives.

2) Acquire Collective Owned Land by Compensation

According that binary land tenure system, when the state requisitions collective own land as state own land, the government should pay compensation to the land owner of the village committee. For example, according to *<the Land Management Rules of Guangzhou City>* implemented from 1995, the municipal government of Guangzhou should pay not only monetary compensation, but also land compensation to the village collective organization, when they requisitioned collective land from the village organization. The area of compensation land

is 8%-10% of the requisitioned land. That compensation land are non-agriculture land (construction land), and the village collective organization can build properties to develop industry and service sector, as villagers no longer hold the farmland for agriculture.

The village committee utilizes the compensation land to build more real estate to earn more money and become stronger. The villagers utilize the monetary compensation to build the private house as rental house. Monetary compensation and land compensation are effective power of economic basement to support the formation of urban village as rental property economy.

Table - 9 the evolution of regulations of land requisition

Year	Action	Regulation	Main Content
1982	Land Compensation System started	<Constitution> & <Ordinance of Land Requisition for State Construction>	1) urban land owned by the municipal government; rural land owned by the peasant collectives
			2) land user do not need to pay the land use fee when utilizing a piece of land
			3) in case of land requisition, new land user should pay compensation to the old land user
1988	Urban Land Compensation System started	<Constitution (amendment)> & <The land administration law of the People's Republic of China (amendment)>	1) land user should pay the land use fee to the municipal government when utilizing urban land
			2) use rights of urban land can enter the land market to be trade
1995	Compensations not only monetary compensation but also land compensation	<Land Management Rules of Guangzhou City>	When collective land requisitioned, not only monetary compensation but also land compensation should be pay to the land owner of the village as land for collective economic development. The area of compensation land is 8%-10% of the requisitioned land.

Source: Translated from Japanese into English by author, Shujing LI, A study on the relevance of the regulation and spatial structure in formation process of urban village in Guangzhou China, J.Archit Plann, 2013(02), Vol.78 No.684,p.83-391

3) Incomplete Property Right of Rural Homestead

According to <The land administration law of the People's Republic of China>, the ownership of rural homestead belongs to rural collective economic organizations. People don't have individual ownership of the collective owned land, only the rights to use.

<The land administration law of the People's Republic of China (amendment2004)> has the following relating provisions:

Article 8: Land in urban districts shall be owned by the State. Land in the rural areas and suburban areas, except otherwise provided for by the State, shall be collectively owned by peasants including land for building houses, land and hills allowed to be retained by peasants.

Article 37: the use rights of the collective ownership land such as arable land, rural homestead and hilly land cannot be mortgaged.

ZhaiJiDi (宅基地) it cannot be sold, leased or illegal transfer. Rural Householder is entitled to ownership of the attachments on the homestead, the sale rights and the lease rights without infringement. After the house be sold or rented, the use right of homestead belongs to the transferee or lessee, but the homestead ownership is always collective-owned.

The collective-ownership determines the villagers' homestead is incomplete property. It cannot be free traded in land market and lack of free circulation. The homestead can only kept by the people who belong to the village.

3.3.2.2 Planning Law and Regulation

The implementation of China's urban planning regulations is relatively late, the first national *<Urban Planning Law>* came out late in 1989. And the guide policy for the planning and construction in rural areas – *<Regulations of planning and construction management for villages and towns>* was proposed in 1993. Since urban area and rural area have been separated of the two different systems, the planning of rural area has been in a state of management lacking. In *<Urban and Rural Planning Law of the People's Republic of China 2008>*, the rural planning is also incorporated into the framework of the law. However, although the *<Urban and Rural Planning Law>* sets down comprehensive provisions in urban and rural planning, approval, implementation, modification, and supervision, etc., the planning and management for urban village is still ambiguous. The problem still lies on that as the land ownership of urban village is collective owned although they located in urban area. Should urban village follow the requirements of urban planning, or follow the *<Regulations of planning and construction management for villages and towns>*? It is not clearly defined.

In addition, the actor of urban planning is the municipal government, and urban planning is managed by the government. On the contrast, the actor of rural planning was supposed to be the village self-government committee, but because of the backwardness of rural economic, lack of funds, lack of awareness on the importance of planning, it do not take the initiative to the preparation of the village planning. Therefore the affair of village planning fell to the lowest level of government - Township government, or the upper County government. The planning organizers are not stakeholders, so that the government's public interest and the interests of the village committee does not coordinated in some aspects. This also resulted in the planning of village developed without implementation.

3.3.2.3 Procedure for House Construction

In China, the administration process of construction on collective owned land is different from the process of the project which built in state-owned land. According to *<Regulations of planning and construction management for villages and towns>*, when villagers build house, they should make a housing application to the village committee at first. After discussed on the village committee meeting and approved by the township government, the construction is allowed to start. And before delivered to use, it should be made acceptance check by the government.

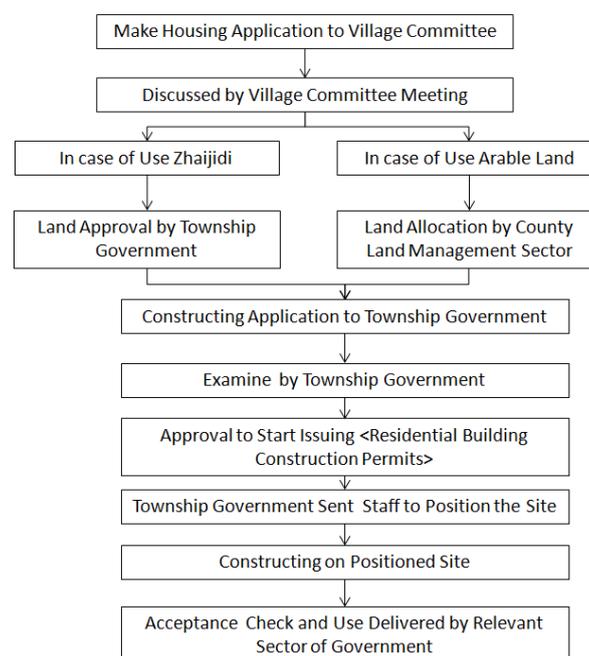


Fig. 23 Administration process of construction management on collective owned land

Source: made by author based on *<The regulation of village and town planning and construction 1993>*

However, that official procedure has not been well implemented in the real world of village. According to formal regulations in Guangzhou city, there is an official set of examinational and approval procedure for housing construction in urban village, but it contains a large number of informal factors in the process of actual implementation. For example, the drawing for construction of a building always is not accordance with the real drawings of the construction. The people who are in charge of acceptance inspection always are bribed in the process of acceptance inspection. If no loss is claimed, the projects always will pass the acceptance inspection.

Actually, the urban planning administration sector is powerless to enforce that procedure. On one hand, the homestead belonging to the village and its' long-term delivery to the villagers, generally there is no detailed geographical survey of the village. The planning administration

sector is lack of specific knowledge on the land information. On the other hand, the management department in the township government is the grass-roots administration unit where corruption is easily to take place as lack of necessary supervision. As economic development, more and more villagers apply for housing. However, the government staff is relatively not enough, leading the tendency of simplifying procedures, and even to handle by villager committee. This let some villagers have a chance to use the relationship with the village cadres to expand the size of homestead over the formal constraint, or illegal occupy the land for public facilities in the village. (ZHOU-Suhong, ZHOU-Ruibo, & WU-Zhidong, 2011)

3.3.2.4 House Construction Regulations

In China, there is no unified national construction regulation to constrain the peasants' house construction in rural area. Each local government has their inappropriate standards. Those standards are always rough and lack of details for actual operation.

In case of Guangzhou City, the municipal government has tried to incorporate the villagers' construction into the urban planning and management system since 1989. The government issued a number of regulations for the planning in rural areas and administration of peasants' house construction. The first regulation of rural planning and construction was issued in 1995. Then gradually amend and complement.

Table - 10 Regulations of rural planning and construction issued by Guangzhou Municipal Government

Year	Regulation
1995	Interim Provisions for Guangzhou Rural residential land for construction management
2001	Construction regulations for Guangzhou rural residential land
2001	Guangzhou rural planning regulations
2012	Residential planning and construction guidelines for Guangzhou Rural villagers (Trial Implementation)
2012	Provisions of the Guangzhou Urban and Rural Planning Procedural

Source: Made by author based on literature review

Those regulations are guide for planning. There are few words referring to the house construction. From those regulations, the technical indicators which closely relate to the house construction are summarized as following.

1) Requirements for new building

a. One rural household can only own one homestead. The household residential building basement area shall not exceed 80 m², while the construction area shall not exceed 280 m².

b. Villagers floors should not be more than 3 layers, according to need additional staircase, the building height of the 3-story part shall not be higher than 11 meters, and height of buildings with staircase shall be not more than 14 meters.

c. Main building orientation between residential buildings should be not less than 0.8 times the calculate distance of the building height of the block construction as well as not less than 8 meters, and the secondary building orientation should be not less than 4 meters, and should meet the requirements of fire safety.

d. When the objective conditions such as land-use indicators or construction status does not meet the spacing requirements, it should at least meet the requirements of the Fire Safety pitch, as well as the consent of the neighborhood owners.

2) Requirements for rebuilding on the old site by demolition of old buildings

a. The residential nature of the building could not be changed, and should not exceed the boundary of the original homestead.

b. After rebuilding, the homestead area should not excess the original area, and not more than 80 m², and the total construction area should also not excess 280 m².

c. The spacing between houses and height of the house should comply with the basic requirements of planning regulation in the village.

d. the house, located in the protection scope of the historical and cultural area, should be performed in accordance with the relevant provisions.

According to the regulations, villagers are supposed to submit building design drawings in order to get the permission for construction. However, because the property right of rural collective land does not belong to the municipal government, the actual implementation is quite difficult. According to the fact in the village, the technical indicators in those regulations are too strict to be implemented. The recently issued <Provisions of the Guangzhou Urban and Rural Planning Procedural 2012>, actually passes the right to village committee to audit the house construction in the village. This makes the actual practice be very flexible with relaxation.

3.4 Illegal Land and Property Development in Urban Village

3.4.1 Illegal Land and Property Development both by the Villagers and the Village Committee

The illegal development of land and property are always carried out both by the village collective committee and villagers. In urban villages, the illegal behaviors not only refer to the individual of villagers but also to the village committee. The illegal buildings mainly include the villagers' illegal private rental house, and illegal factories, business offices or collection housing, etc., which are constructed by the villager's collective organization. (ZHOU-Suhong,

ZHOU-Ruibo, & WU-Zhidong, 2011)

In the process of urbanization, the city government, the village collective and individual villagers are all scrambling for the possession of limited land resources for construction. The government tries to make many policies and regulations to control the land resources in the city. However, the land of the villages has been actually controlled by the village collective organization and individual villagers. Both of them are violating the government's formal regulations, grabbing every chance to build houses on the open space before the city government starting construction program, which is defined as the illegal land and property development by the government.

Illegal land and property development includes the illegal land occupation and Illegal construction.

Illegal land occupation refers to the behavior that violates *<the land administration law of the People's Republic of China>*, *<urban and rural planning law of the People's Republic of China>*, and other relevant laws and regulations, including illegally transfer, illegally examination and approval, illegally occupying both the national owned land and collective owned land. According to the formal regulations, the arable land in the village could not be used as construction land without the agreement from urban planning and land managing departments of the municipal government. The collective land, which is not provided as land for economic development, cannot be used for carrying out benefiting building construction.

Illegal construction refers to the behavior that violates relevant laws and regulations, such as to build houses on the land which is illegal occupied, or to build houses which do not conform to the laws and regulations although it is on the legitimate land. The illegal construction of private housing includes private construction without or beyond the permitted area, and private renovation, expansion on the original homestead. For example, some villagers violate the regulation of "one house for one household", and some others' houses exceeded the building area or allowed floors by the government.

3.4.2 Illegal Building in Urban Villages in Futian District of Shenzhen City

The phenomenon of illegal private construction is serious in urban village. In the case of 15 urban villages in Futian District of Shenzhen City, there are 8720 buildings, and a total construction area of 9 million m². Among them, the private houses are up to 8252, building area about 7.7 million m². Most of them are of reinforced concrete frame structure, and reconstructed for 2 ~ 3 times. Illegal buildings are more than one-third of the residential area in the whole urban villages; the construction area surpassing the red line is more than 1.3 million square

meters. The proportion of the buildings whose height below 3 floors is very small, only accounts for 3%; houses of 6~9 floors and 10 floors respectively accounted for 9% and 4%; most houses are mainly of 7~9 floors, accounted for 85%. (ZHAO-Jing, A study on the development and supply mode of informal housing in Shenzhen, 2009) According to the regulation in Shenzhen City, the house over 4 floors is deemed as illegal building. That is to say, 97% of the private houses in urban village are illegal buildings. In the 15 villages in the Futian District, the average area of each building far exceeds 480m² required by the Government.

Table - 11 Numbers and floor area of rental housing in urban village of Futian District, Shenzhen 2004

village	numbers of buildings	total floor area(m ²)	average floor area per building(m ²)	floor area ration	plot coverage (%)
Xiameilin 下梅林	636	834303.5	1311.8	4.05	72.0%
Shangmeilin 上梅林	448	470929.1	1051.2	3.70	76.3%
Xiasha 下沙	673	592637.2	880.6	3.94	66.9%
Shangsha 上沙	970	1035701.9	1067.7	4.29	74.7%
Shazui 沙嘴	397	373160.3	940.0	4.21	71.9%
Shawei 沙尾	510	345664.7	677.8	4.08	58.6%
Xinzhou 新洲	466	526706.4	1130.3	4.22	60.2%
Shixia 石厦	504	425138.5	843.5	4.13	66.3%
Shuiwei 水围	335	278849.7	832.4	4.14	72.6%
Gangxia 岗厦	425	394600.0	928.5	4.66	70.4%
Tianmian 田面	48	88841.8	1851.0	5.03	88.5%
Futian 福田	859	605490.9	705.0	3.12	54.3%
Shangbu 上步	787	724761.3	921.0	3.96	64.4%
Huanggang 皇岗	592	510234.3	861.9	2.67	66.0%

Source: < the 11th five-year plan of urban village renovation in Futian District >

3.4.3 Failure of Formal Regulation to Control Illegal Development

Despite the government has the policies, but they cannot actually be performed.

On one hand, the village committee and the villagers are tied together as a community of the same interest for their blood relationship. They unite together against the government's policy. Facing villagers' guard for their land inherited from one generation to another generation, the government can only compromise again and again, such as modifying previous policies and regulations, relaxing the constraints, and approving the illegal building through hand out penalty.

On the other hand, many regulations are made and implemented much later than the existing informal building. Every time a wide range of large-scale illegal construction appears, the city government would introduce some so-called formal regulations to restrain it. And it is common to do adjustments and modifications even they start to implement.

The villagers often race against time to build house before a new policy or regulation start

to effect. It is complicate and hard to for the government to make clear that whether an illegal house in urban village is built before or after the new implemented regulations. Facing those illegal houses, the government could only carry out minor penalties and accept their existence. The villagers would always be able to break through these constraints by the illegal building boom right before the implementation of the new policy. After the implementation of the new policy, the government has to deal with those illegal constructions, but it only ends in poor effect.

In Shenzhen, the government began to carrying out regulations against illegal construction of the village from 1982. The Shenzhen municipal government announced the implementation of *<the Decisions on Investigating Illegal Construction>* in 1999, but they could only accept the existence of about 100,000 illegal buildings which had been built in a short time in the urban villages. Till the year of 2004, when the expansion of the villages in the city of Shenzhen Special Economic Zone reached the saturation stage, the city government has developed a series of formal regulations to curb illegal construction. However, the real result is a compromise, and gradually relaxed restrictions.

In the past 20 to 30 years, both the villagers in Shenzhen and Guangzhou mostly achieved victory in the process of constantly fight with the city government. Because of the government's concessions, urban village become the high density informal settlement that is full of rental houses gathering a large number of floating people. The formal regulations made by the municipal government are failed to control the illegal land and property development in urban village. The government's constraints on the number of floors of the village house have become furnishings with no practical utility, ineffective letters.

Table - 12 Evolution of formal regulations and development of urban village in Shenzhen

Year	Formal Regulations	Key Content	Development of Urban village
1982	Interim Provisions of the Shenzhen Special Economic Zone Membership Housing in Rural Areas	Village (residential) land area: 150 m ² /household; House base area ≤ 80 m ² ; land for collective economy: 15 m ² / household	Farmers lost their land as a source of life, the phenomenon of illegal construction of private houses appeared
1986	Notice on Further Strengthening the Rural Planning in the Shenzhen Special Economic Zone	Reaffirming the 1982 requirement. Stricter land use standards: house ≤ 3 floors; per capita floor space ≤ 40 m ² ; building area of one house ≤ 240 m ² .	The right of land using still rests in the hands of the village collective. Free construction by villagers without planning at all
1989.01	Several Provisions of the Shenzhen SEZ Land Acquisition	Unified the collective owed land inside SEZ into state-owned land	Villagers collective rush risked to build large-scale private houses illegally in the fear of losing land rights
1989.11	Emergency Notice to Stop the Illegal Occupation of Land in Rural Areas and Unauthorized Rental of Land	Constrain the collective economic organizations' activity of changing of land use without government statutory procedures, as well as rent out collective land, illegally occupying land to build houses	Villagers and Village collective legalized the illegal land occupation and illegal construction by paying the fine
1992	the Provisional Regulations of Shenzhen Special Economic Zone Rural Urbanization	1) Land has been allocated to rural collective land for collective industrial enterprises and private homestead use rights remain the property of the user; land without rural land requisition would take a one-time levy and became state-owned 2) Separation of enterprise from administration of village organization	Collective stock company represents the interests of the villagers, completely controlling the planning and construction of the village land
1993	Issues of Shenzhen Special Economic Zone Real Estate Ownership	Took control on the illegal occupation of the original rural collective industrial and commercial land, illegal transfer of land, and cooperative constructing rental house	Due to the difficulty to define the problems left over from history, the government has to only authorize the village committee to implement the policy. The policy did not play expected role since the committee represent the interests of villagers.
1999	Municipal People's Congress's Decision to Resolutely Investigating Illegal Construction	Stressed on the close cooperation between different bureaus such as land administrate, urban planning, public security, fire of the municipal government and village collective organization	Due to the lack of specific assessment criteria and action rules, the provisions were not implemented
2001	Provisions of the Shenzhen Special Economic Zone on Historical Illegal Private Houses	Increased the maximum area of the impunity of illegal construction (total gross floor area ≤ 480 m ² , ≤ 4 floors), and allow the recognition of the legitimate property rights of illegal construction by paying a fine	Provided a way to legalize illegal construction. Loosed fine standard firm determination of the villagers illegal construction, leading to another illegal constructing boom
2009	Shenzhen Urban Renewal Issues	Includes the comprehensive improvement of the functional changes, and the demolition and reconstruction	Village collective and villagers have gained a lot of land, constructing a large number of rental houses

Source: made by author basing on literature review

3.4 Chapter Findings

As one kind of informal settlement, urban village in China has similar characteristics with informal settlements in other countries.

First, they are low-cost residence for the low-incomes even mid-income groups in urban, responding to urgent need for shielding the large migrants flowing into the city as the rapid urbanization.

Second, they are spontaneously developed out of the state land administration system, violating the regulation of land use and development.

Third, they are dense settlements full of sub-standard buildings, which do not comply with the legal and regulatory requirements.

However, different from the informal settlement, urban village in China has its specialties due to the urban-rural dual structure of the formal institutions.

First, rural land tenure system allows the villagers in urban village have the right to occupy the homesteads and dominate them. As the indigenous villagers actually hold the ownership of the collective-owned land, which is property of great value in the urban area, they are not belongs to the urban low-income group. In the urban village which located in central area of the city, the villagers are even much richer than the middle class in that city.

Second, as the independent land tenure system of rural land and urban land, it is difficult for the municipal government to incorporate the land of urban village into the administration system of urban planning. The villagers' homesteads are collective-owned by the village, which is out of the national-owned land tenure system. The municipal government could not manage them by formal regulations like other communities on national-owned land in the city. The villagers hold more autonomy to build private houses on their homesteads.

Third, the storeys of the most of rental houses in urban village are over the official standards, but lead by the market force. According to the official standards, all the villages in the same city, whether is located in the high cost land or low cost land, there is on one technical indicator, the plot coverage and floor area ratio is the same. That is less realistic to respond to the truth value of the land of each specific urban village. It could be considered that the illegal buildings in urban village are attributed to the inappropriate formal regulations.

CHAPTER-4

**FIELD SURVEY:
URBAN VILLAGE IN
BEIJING, GUANGZHOU
AND SHENZHEN**

4.1 Purpose of the Field Survey

The main purpose of the field survey on urban village is:

1) to verify the results of the previous studies by other researchers through the personal direct experience;

2) to have more better of understand the social structure in urban village;

3) to observe the physical status quo and people's activities, and collect graphic data for morphological analysis;

4) then find out the informal settling institutions which giving direct influence on the morphology of urban village.

4.2 Targets Selection for the Field Survey

4.2.1 Target Cities - Beijing, Guangzhou and Shenzhen

Beijing is the political center of China, which most of formal regulations are made in. Beijing largely influences many other cities, especially in Northern China, and almost represents the current situation in China nowadays.

Guangdong Province in Southern China is the place where the Reform and Opening up Campaign started at the end of 1970s. Its tempo of economic and social development is the most fast in China. The phenomenon of urban village appeared there is also the earliest one among all Chinese cities. Guangzhou and Shenzhen are the top two cities in Guangdong Province. Guangzhou is the capital city of Guangdong Province, which is the third big city in China after Shanghai and Beijing. Shenzhen City is the Special Economic Zone and the pioneer of economic and social development and reform, where the political institutions and regulations are much more flexible to update according to the economic reformation.

4.2.2 Target Villages – 28 Villages in Three Big Cities

In the fieldtrip of Beijing, the villages of Dayouzhuang (大有庄), Yimuyuan (一亩園), Guajiatun (掛甲屯), Liulangzhuang (六郎庄), Qinghe (清河) and Bajia (八家) in northwest of Beijing City, and the villages of Shiliuzhuang (石榴庄) and Xiaocun (肖村) in Southeast of Beijing city, are set as objects for investigation. The former ones are near the IT center of Zhongguancun (中關村) in Haidian District (海澱區), and the later two ones are near the CBD zone in Chaoyang District (朝陽區).

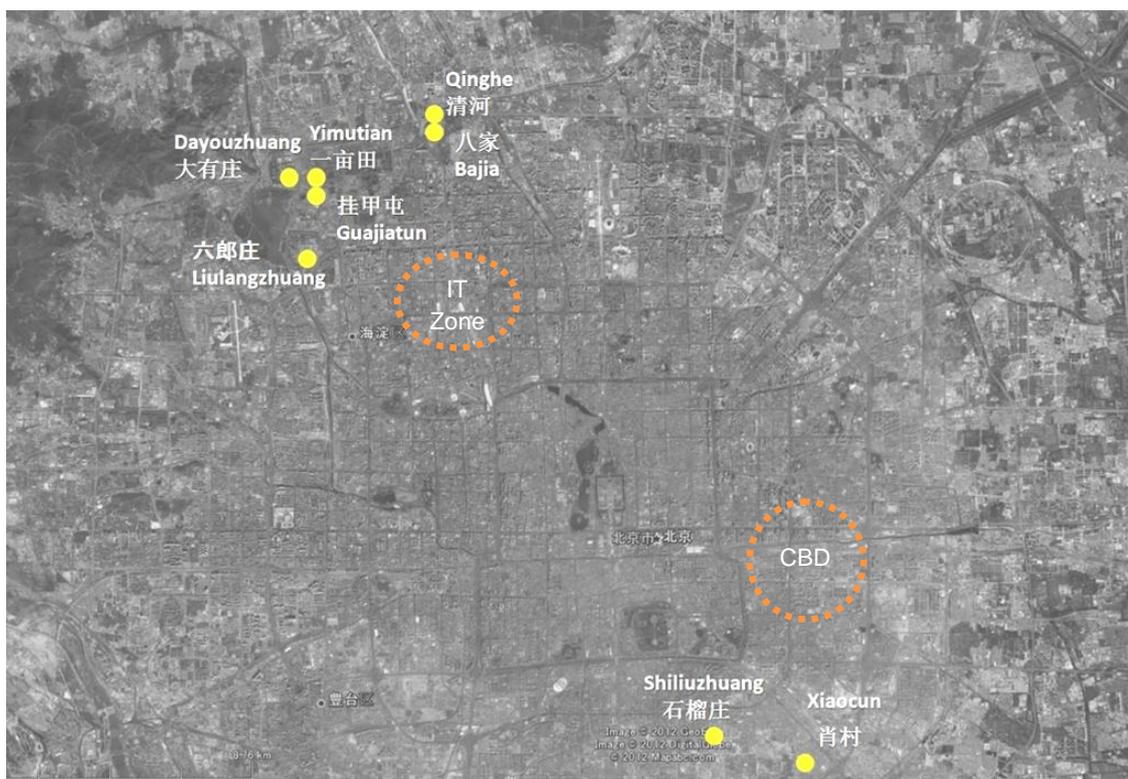


Fig. 24 Targets of urban villages in Beijing
Source: made by author

In case of Guangzhou, eight villages from center to outskirts of the city are set as objects for investigation. Setting the new developing CBD as center, two circles were made. Inside the circle of 5km radius, the villages of Liede Village (猎德村), Xiancun Village (冼村), Shipai Village (石牌村) were set to be targets, between the circle of 5km radius and 10km radius, is Longdong Village (龙洞村), Lijiao Village (沥滘村), Xiajiao Village (夏滘村) and a historic village Huangpu Village (黄埔村). Outside 10km radius, is Nating Village (南亭村) in Guangzhou Higher Education Mage Center. All of them are gradually encircled by the municipal infrastructure of roads and viaducts as the urban sprawl.

In case of Shenzhen, most of targets of villages, such as Futian (福田村), Gangxia (岗厦村), Huanggang (皇岗村), Shuiwei (水围村), Shangsha (上沙村) and Xiasha (下沙村), were selected in the administrative region of Futian District (福田区), which is the newly developed Central Business District. The urban village in that area developed from 1990s and became mature until 2005. Most of them were upgraded in 2006, such as infrastructure update and public facilities construction. On the edge of central area of the city, urbanization is developing rapidly and urban villages are dramatically growing as those in central area developed during 1995 to 2005. Three villages in outskirts of central area were chosen as investigation targets, such as Dafen (大芬村), Yangmei (杨美村) and Nantou (南头古城).

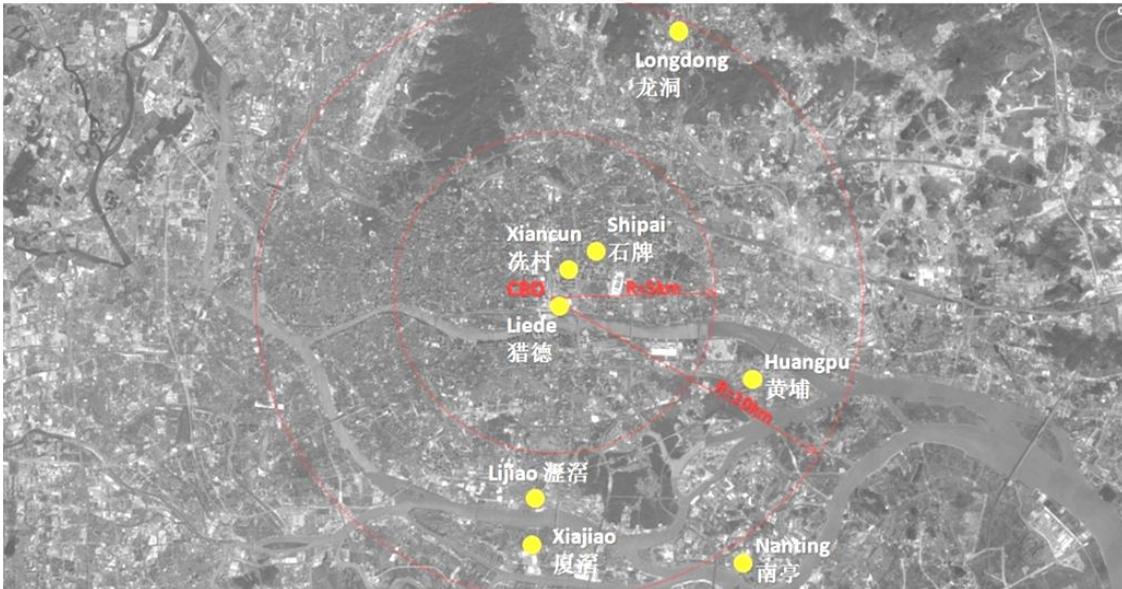


Fig. 25 Targets of urban village in Guangzhou
Source: made by author

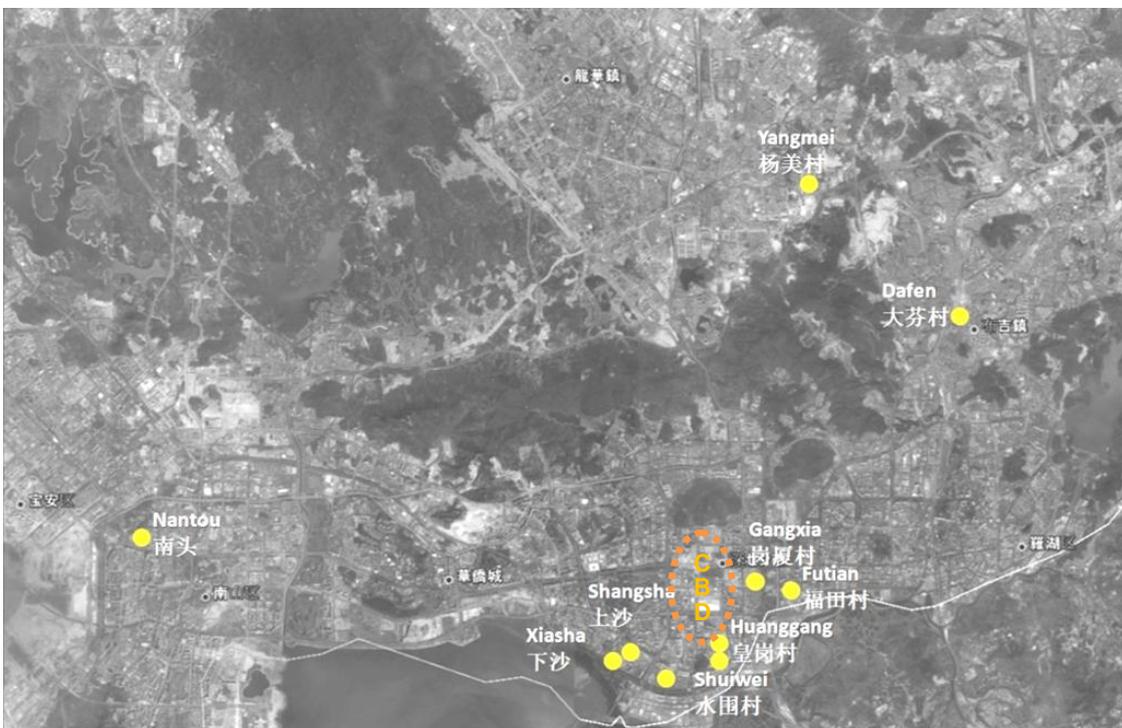


Fig. 26 Targets of urban village in Shenzhen
Source: made by author

4.3 Field Survey

4.3.1 Outline of the Field Survey

An overall investigation was carried out from Nov. 5th, 2012 to Nov. 22nd, 2012. In that investigation, 28 villages mentioned above were visited to get general information of urban village.

After that, another investigation of typical cases was also carried out from Feb. 26th to March 22nd, 2013. Trying to get more detail information for study and analysis, 5 villages were visited again. They are Huanggang (皇岡村), Shuiwei (水圍村), Yangmei (楊美村) in Shenzhen City, and Shipai Village(石牌村), Longdong Village(龍洞村) in Guangzhou City. In the 2nd investigation, more attentions were paid on informal constructing behavior and ambiguity of boundary of private space and public space.

4.3.2 Methods of the Field Survey

The methods of the field survey are including observation, photographing, data recording, data collecting and interview.

4.3.2.1 Observation

During the investigation, the physical space of built environment and the behavior of the people living in urban village are observed.

The observation of the physical status quo in those villages includes the living environment, the streetscape, the spatial relationship between each private house and the spatial relationship between private house and the common space in the scope of village scale, and including the building form and characteristic of the illegal rental house in the scope of building scale.

The observation of people's activities includes constructing behavior of building extension and business operations, which intrude into the common space.

4.3.2.2 Photographing and Data Recording

In the first field survey, according to the schedule, there was only 3~4 hours per village for visit. Thus photographing to record the status quo is one effective and rapid method to get the necessary information and collect the graphic data for morphological analysis in the following research. Photographing is the supplement for field observation.

In the second field survey, more time is spent in Longdong Village to take pictures of the horizontal and vertical extension of the rental houses. As the constructing behavior in the village

is still active in these few years, the floor numbers of the villagers' house are inconstant. The data of floor numbers in the central south area of Longdong Village are also need to record as the updated information.

4.3.2.3 Data Collecting and Interview

In the second field survey, some scholars devoting themselves to the research of urban village and its transformation in Guangzhou and Shenzhen were interviewed. They advised and provided some useful literatures as references for the following research. What's more, it is lucky to have interviews with the officers of Longdong Village. Due to them, some official rules and data, details of graphic information of the village were obtained. Finally, it took some casual conversations with the natives and migrants living over there to get the unhidden information, avoiding the formal interview to receive the decorated result of answers.

4.3.3 Results of the Field Survey

4.3.3.1 Image Data, Numerical Date and Digital Data

By the field survey, some image data, numerical date and even digital data were collected. In the field survey, 7321 photographs were taken to record the grass-root social and living environment of urban village, which are valuable records even many Chinese people may not know. The updated numerical data of floor numbers in the central south area of Longdong Village were recorded by counting them one by one in the site. The book of <Longdong Almanac> was provided by the village committee. And it is lucky to obtain the digital data of the official survey map from the district government, which are not publicly available data in China to avoiding commercial activity, but only available for academic research.

4.3.3.2 Status quo of 28 Villages in Five Categories

Based on the field survey, those 28 villages of can be classified into five categories, such as demolished, demolishing, developing, upgraded and upgrading. Some urban villages in profitable and cost-efficient location of the city become the objects to demolish and replace by real estate, office building and shops. That is common in the case of Beijing. However, some of them are struggling to against the municipal government and still developing, such as Shipai Village in Guangzhou. But, some are located in the unprofitable and cost-inefficient places and too poor to interest the developer or governors, such as Yimuyuan in Beijing. On the contrast, the situation in Shenzhen is much more positive. Led by the government, most of urban villages in Futian District were re-planned and infrastructure upgraded in 2006. Now they are stable and there would be no dramatic physical changes in short term.

Table - 13 Information of photographs of investigation

City	No.	Village	Date	Number	Equipment
Beijing	B1	Bajia 八家	11/06/2012	28	NikonD5100
	B2	Qinghe 清河	11/06/2012	115	NikonD5100
	B3	Liulangzhuang 六郎庄	11/07/2012	69	NikonD5100
	B4	Dayouzhuang 大有庄	11/07/2012	88	NikonD5100
	B5	Shaoziying 哨子营	11/07/2012	134	NikonD5100
	B6	Xiaojiahe 肖家河	11/07/2012	33	NikonD5100
	B7	Shiliuzhuang 石榴庄	11/08/2012	48	NikonD5100
	B8	Xiao 肖村	11/08/2012	258	NikonD5100
	B9	Yimuyuan 一亩园	11/09/2012	158	NikonD5100
	B10	Guajiatun 挂甲屯	11/09/2012	227	NikonD5100
Guangzhou	G1	Liede 獵德	11/13/2012	128	NikonD5100
	G2	Xian 冼村	11/13/2012	103	NikonD5100
	G3	Shipai 石牌	11/14/2012	873	NikonD5100
			03/09/2013	256	NikonD5100
			03/2013	7	iPhone4s
	G4	Longdong 龍洞	11/15/2012	530	NikonD5100
			03/10/2013	306	NikonD5100
			03/12/2013	17	NikonD5100
			03/13/2014	17	NikonD5100
			03/14/2013	21	NikonD5100
			03/15/2013	117	NikonD5100
			03/16/2013	264	NikonD5100
			03/17/2013	10	NikonD5100
			03/2013	88	iPhone4s
G5	Huangpu 黃埔	11/16/2012	97	iPhone4s	
G6	Xiajiao 厦滘	11/16/2012	136	NikonD5100	
G7	Lijiao 滘滘	11/16/2012	101	NikonD5100	
		03/10/2013	32	NikonD5100	
G8	Nanting 南亭	11/17/2012	266	NikonD5100	
Shenzhen	S1	Yangmei 楊美	11/19/2012	122	NikonD5100
			03/06/2013	237	NikonD5100
	S2	Dafen 大芬	11/19/2012	311	NikonD5100
	S3	Gangxia 崗厦	11/20/2012	161	NikonD5100
	S4	Futian 福田	11/20/2012	207	NikonD5100
	S5	Huanhgang 皇崗	11/20/2012	97	NikonD5100
			11/21/2012	23	NikonD5100
			03/04/2013	230	NikonD5100
	S6	Shangsha 上沙	11/21/2012	198	NikonD5100
	S7	Xiasha 下沙	11/21/2012	188	NikonD5100
S8	Shixia 石厦	11/21/2012	176	NikonD5100	
S9	Shuiwei 水围	11/21/2012	198	NikonD5100	
S10	Nantou 南头	11/22/2012	360	NikonD5100	
Jieyang	J1	Zhumei 諸美	03/21/2013	71	NikonD5100
	J2	Zhainei 寨內	03/21/2013	215	NikonD5100
/		Total	2012 & 2013	7321	/

Source: made by author

Table - 14 the Status quo of 28 Villages of Five Categories in 2012

City	No.	Village	Status quo Picture	Stage
Beijing 北京	B1	Bajia 八家		Demolished
	B2	Qinghe 清河		Demolishing
	B3	Liulangzhuang 六郎庄		Demolished
	B4	Dayouzhuang 大有庄		Developing
	B5	Shaoziying 哨子营		Developing

City	No.	Village	Status quo Picture	Stage
Beijing 北京	B6	Xiaojiahe 肖家河		Demolishing
	B7	Yimuyuan 一亩園		Developing
	B8	Guajiatun 挂甲屯		Developing
	B9	Shiliuzhuang 石榴庄		Demolished
	B10	Xiao Village 肖村		Demolishing

City	No.	Village	Status quo Picture	Stage
Guangzhou 广州	G1	Liede Vil. 獵德村		Demolished
	G2	Xian Vil. 洗村		Demolishing
	G3	Shipai Vil. 石牌村		Developing
	G4	Longdong Vil. 龍洞村		Developing

City	No.	Village	Status quo Picture	Stage
Guangzhou 广州	G5	Huangpu Vil. 黄埔村		Upgraded
	G6	Xiajiao Vil. 夏滘村		Developing
	G7	Lijiao Vil. 滘滘村		Demolishing
	G8	Nanting Vil. 南亭村		Developing

City	No.	Village	Status quo Picture	Stage
Shenzhen 深圳	S1	Yangmei Vil. 杨美村		Developing
	S2	Dafen Vil. 大芬村		Upgraded
	S3	Gangxia Vil. 岗厦村		Upgraded
	S4	Futian Vil. 福田村		Upgraded
	S5	Huanggang Vil. 皇岗村		Upgraded

City	No.	Village	Status quo Picture	Stage
Shenzhen 深圳	S6	Shangsha Vil. 上沙村		Upgraded
	S7	Xiasha Vil. 下沙村		Upgraded
	S8	Shixia Vil. 石厦村		Upgrading
	S9	Shuiwei Vil. 水围村		Upgraded
	S10	Nantou Ancient Town 南头古城		Developing

4.4 Findings of the Field Survey

4.4.1 Differences of the Urban Villages in Those Three Cities

4.4.1.1 Different Mode of Development

The developing mode of urban village in Beijing, Guangzhou and Shenzhen are different.

Beijing can be defined into “top-down”. As in the capital city of political center in China, the rules in Beijing are stricter than the places that are far from the capital. What’s more, villagers in Beijing City are largely dependent upon the government, and are not so much initiative as those who in Guangzhou City and Shenzhen City, where the economic reform was firstly proceeding, form planned economy to market economy.

On the contrast, Shenzhen is “bottom-up”. As Shenzhen is the special economic zone, the economic rules and laws are more flexible. The villagers have a strong sense of democracy and self-innovation, and their economic strength is so strong that they can independent from the government.

In the case of Guangzhou, it combined with “top-down” and “bottom-up”. Guangzhou is a commercial city but also has been strongly controlled by the government as its long history and the position of capital city of Guangdong Province. The villagers there are more conservative than the Shenzhens, but more radical than the Beijings.

In a word, Beijing and Shenzhen are located at the two extremes, but Guangzhou is an intermediate state.

4.4.1.2 In Different Period form Self-living Village to Rental Houses Cluster

The plot coverage and the floor area ratio of those urban villages in Beijing are much lower than those in Guangzhou and Shenzhen. In the terms of the stage of development, urban villages in Beijing have just begun to develop since the end of 1990s, and most of them are not as mature as the cases in Guangdong Province. In Guangzhou and Shenzhen, the phenomenon of urban village has been developing about 30 years. The villages in urban central area, such as Shipai, Liede and Lijiao in Guangzhou, and all the villages in Futian District of Shenzhen City, have become matured and developed in saturated state. New developing urban villages at the edge of the city have rapid been developing during the past decade, such as Longdong, Nanting and Xiajiao in Guangzhou, and Yang Mei and Dafen in Longgang District of Shenzhen. Yangmei Village in pre-urban are in Shenzhen has outward expanded in a large degree in the past decade. 80 % of the building is built as high rise rental apartment. Most of them in the new village area is more than 10 floors in the regular plot of 10m×10m area of homestead. The

cases in Guangzhou and Shenzhen are maturer than the cases in Beijing. The cases in Shenzhen city are the most developed among those three cities.



Fig. 27 Nighttime overall view of Yanfmei Village, Zhenzhen
Source: photographed by author in 2012



Fig. 28 Satellite photograph of Yanfmei, Zhenzhen, 2012.3
Source: form Google Earth

4.4.1.3 Different Quality Level of Living Environment

The living environment of the cases in Beijing is worst among those three cities. The cases in Shenzhen are the best, which are well developed and in a relatively high degree of urbanization, relatively close to urban communities. For example, Huanggang Village in Shenzhen is urbanized to nearly achieve living environment of urban community. Its economy is strong enough to build a huge square in the centre of the village. The public space and commercial space inside the village are almost the same with the urban landscape outside the village.



Fig. 29 Satellite photograph of Huanggang, Zhenzhen, 2012.3
Source: form Google Earth



Fig. 30 Village streetscape in Huanggang(皇岗村), Shenzhen.
Source: Photographed by author in 2012

4.4.2 Interest Conflict between Different Stakeholders

4.4.2.1 Different Stakeholders

In the urbanization process of urban village, the stakeholders of urban village include government (local government & central government), village committee (or village owned company), indigenous villagers, sometimes referring to the construction cooperators of rental housing and the real estate developers, even referring to the low-income group of floating people.

The village autonomous committee, constituted by indigenous villagers, is a bridge between the villagers and the municipal government. Towards up, it represents the overall interests of all the villagers, while towards down, it is the organization to implement the policy of the municipal government, as well as to manage the public affairs in the village. In fact, the constructing activity in urban village is not directly managed by the municipal government, but by the village committee. The village committee became a main body to enforce the implementation of formal regulations.

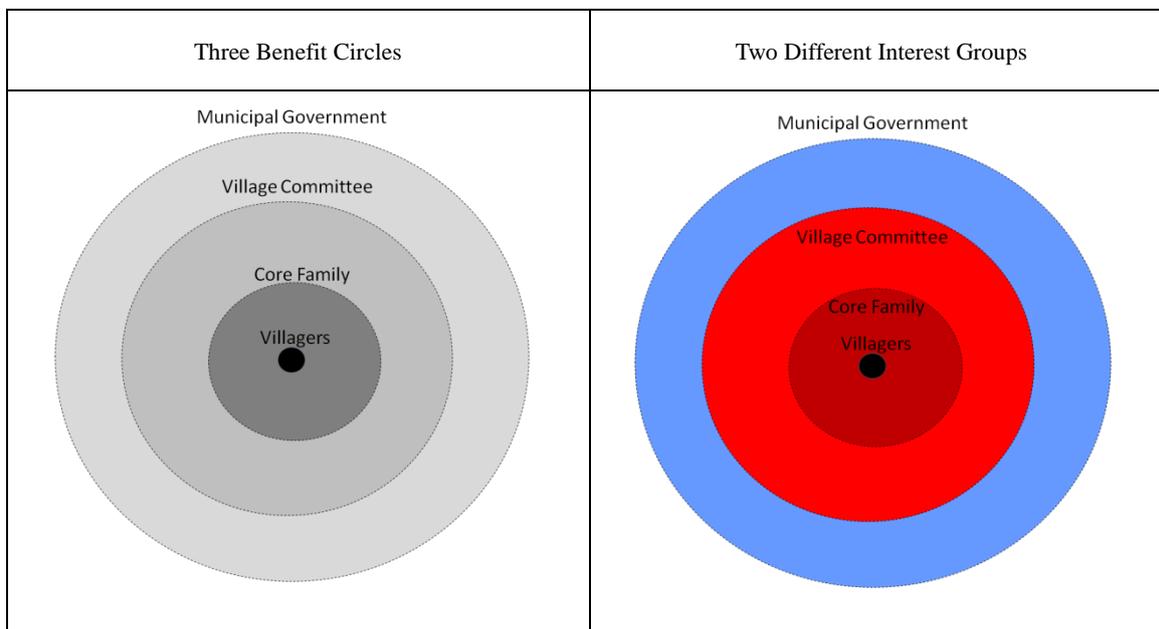
4.4.2.2 Benefit Relationship between Villagers, Village Committee and Municipal Government

According to the mode of ChaXuGeju introduced by FEI Xiaotong, there are three benefit cycles with the center of each indigenous villager in this study. The closest benefit cycle for each villager is the core family. Then it is the common interest circle of the village as a whole. The farthest one is the municipal government. However, according to HE Xuefeng's theory of "villagers' dual-identification of core family and clan-village", for each villager, the interest of the core family is the first interest demand, and then is the interest of the whole village. The interest of the municipal government has less relationship for them. The village committee and the villagers are in the same interest group. Actually, the village committee and the municipal government are different interest groups.

Each village is an economic interests group independent from the municipal government. In terms of each villager, they hold the core interests for their family. They are trying best to obtain economic benefits by convenience of the infrastructure investment as urban sprawl. For the village committee, the relationship to the municipal government is "outside" relationship, while relationships to the villagers belong to the "inside" relationships. According to the tradition of "NeiWaiYouBie"(内外有别), when interact to outsiders, formal rules are applicable, when treat insiders, informal rules are applicable. Therefore, the national rules and the municipal government's policies are filtered by the village committee. The village autonomous committee

has a filtering affect on the formal regulations. It covers the villagers’ activities of illegal construction. The village committee and the villagers together collectively violate the formal regulations.

Table - 15 the benefit relationship between villagers, village committee and municipal government



Source: made by author

4.4.2.3 Transformation of Urban Village - A Game of Interest Balance

Actually, the movement of transformation of urban village in China aroused by the government is a game of interest balance between different stakeholders.

The same with informal settlements in other developing countries, urban villages are presupposed as negative space and urban disease by most of municipal government in China. The municipal governments are vigorously promoting the transformation of urban village to enhance the urban landscape. The municipal government of Guangzhou set their main tasks of urbanization as “Transformation of Three Old”, including urban old area renewal, industrial heritage reuse and urban village transformation (both of upgrade and reconstruction).

The powerful government in Beijing can demolish urban village much easier than the governments in Guangzhou and Shenzhen, which are less autocratic as they located in the most south region in China far away from the administrative center. In Guangzhou and Shenzhen, the economic development of the village is earlier than Beijing’s. When facing of demolition and renovation by the government, villagers are strong enough to confront with the municipal government. However, in the case of Beijing, most of villagers consider that building rental house is a transitional form for economic benefit. One day, when the urbanization wave

developing to a certain extent, the houses in their village will all be removed, rebuilt into high-rise buildings as common urban space.

The municipal governments in Guangzhou and Shenzhen are trying to reduce the autonomous right of the village, to strengthen the administrative control of the village. But the power for land and property development is still held by the villagers' organization. For example, Tianhe District government in Guangzhou reorganized the *Shipai Village Autonomic Committee* as *Shipai Sub-district Office* in May 1997, which was an earliest pilot unit of the implementation of the restructuring of administrative system of urban village in Guangzhou. And legally, Shipai became a subordinate administrative organization of the municipal government. The main restructuring measures are as follows: Firstly, the corporatization of collective economy, establishing *Sanjun Group Company of Shipai Village*, which consists of 27 stock co-operations. Second, the community affairs were passed over to the newly established community committees, instead of the village committee. The 27 stock co-operations are still financially independent, and the management of community affairs belongs to 4 community committees and 27 residents' groups. However, the restructuring measures, no matter to apply the economic concept of corporatization, or to establish residents' community committees, are depending both on the original rural organizations and the social network of indigenous villagers. *Sanjun Company of Shipai Village* is still an economic entity of village, and in fact it is still the leadership core of village affairs. Together with the newly established *Community Committees*, they became the self-governance organization. That is to say, although the original village autonomic committee is reorganized as the Sanjun Company of Shipai and the *Community Committee of Shipai*, it fails to change the truth that the villager's organization and the individual of villagers is the same stakeholder with kinship different from the government.

In this wave of transformation, the internal social contradictions of urban Village are very intense. As being unfair treated, some villagers are holding fierce opposition from the corrupt practices of the village committee, and against the municipal government. For example Xiancun in Guangzhou and Liulangzhuang in Beijing, are in demolition. Most of the villagers' houses have been demolished by the time of the field survey. However, there are still many villagers hanging a national flag on their houses, showing a strong confrontation against being evacuated from the village.

The Floating people living in urban village are always ignored as stakeholder although they provide low-cost service for the urban development. Most of them considered that it is a transitional behavior to live or engage in informal commercial activities in urban village. One day, they will leave there in the near future, moving to a better place to live when they earn enough money. Or, return to their original place of birth to live comfortably.



Fig. 31 a family in Liulangzhuang(Beijing) is fighting against demolishing.



Fig. 33 Posters asking villagers to vacate for new home in Xiancun, Guangzhou.



Fig. 32 Streetscape in new developed area in Longdong, Guangzhou.

Source: Photographed by author in 2012

4.4.3 Informal Settling Institutions in Urban Village

4.4.3.1 Tradition of Inhabiting with Consanguinity and Territorial Relationship (血縁と地縁関係によって定住する伝統)

Urban village is an integrated interest unit formed by the indigenous villagers with consanguinity(血縁) and territorial relationship(地縁) and the village committee which representing their interest as a whole. Although urban village is located in urban area among other ordinary communities in the city, the intrinsic property of urban village is more like traditional village, which also established by consanguinity and territorial relationship. But, unlike traditional village with simple social and economical interpersonal relationship, urban village is more like a big hotel built and operation by a big family of the indigenous villagers with complex social and economical relationship.

The villagers' ancestral idea (宗族意識) in Guangzhou and Shenzhen is much stronger than the case in Beijing. In most cases in Beijing, there aren't ancestral hall in the village. While in the case of Guangzhou and Shenzhen, every village has one or more ancestral halls to commemorate ancestors. Many public events will be held in the ancestral hall, such as ancestor worship, marriage ceremonies, funerals and villagers' meeting. Ancestral hall is the important building for villagers.

In most cases in the investigation, the number of indigenous villager is much less than the floating people. But, as the villagers are the owner of the land and property of urban village, they dominate the village society. In the case of Longdong Village in Guangzhou, according to statistics in 2000, the population of indigenous villagers is about 8,000, while there is 30,000 migrants. Among the indigenous villagers, there is 73.8% of them surnamed Fan(樊). They dominate the right of administration and benefits distribution in the village. There are 7 people surnamed Fan(樊) among the 9 cadres of Longdong Village in 2002. And the top leaders in village are always the Fans. There are 9 ancestral hall of Fan(樊) in the village, but no ancestral hall named with other family name.

Consanguinity and territorial relationship are the most important property of urban village. Urban village is an independent group with common interests which composed by groups of families with close blood relationship inside the territory of the village. In the case of Guangzhou and Shenzhen, the municipal governments have been trying to change this state and collapse the relationship between the village committee and villagers, changing their rural household as urban household and reorganize the village committee as sub-district office of the municipal government. It still could not change the fact that they are a kinship solidarity body. When facing economic benefits, they will still unite as a whole to confront against external

organizations. The village committee will not become the assistant of the municipal government to implement the policies that against themselves. Consanguinity and territorial relationship are the ties of the villagers' activities.



Fig. 34 Ancestral hall of Fan(樊) in Longdong Village
Source: made by author

Table - 16 Family name proportion of the villagers in Longdong Village, Guangzhou 2000

No.	Family Name	Households	Head Count	Male	Female	proportion of total population
1	Fan (樊)	1733	4729	2328	2401	73.8%
2	Tan (譚)	81	227	118	109	3.5%
3	Feng (鳳)	31	75	33	42	1.2%
4	Ma (馬)	22	52	25	27	0.8%
5	Others	508	1330	583	747	20.7%
	Total	2375	6413	3087	3326	100%

Source: From <Longdong Almanac>

4.4.3.2 Custom of Ambiguous Boundary between Common Space and Private Space (共有空間と私的な空間との境界を曖昧化する慣習)

Unlike neighborhood in urban space, where the boundaries between public space and private space are clearly separated, the boundary of common space and private in urban village is much more ambiguous. It is obviously appearance that the private activities always extend to public spaces to occupy and possess it.

After the establishment of the communist country in China, the concept of private property has been weakened, all exists as common. After the economic reform and opening up in 1979,

the rationality of private property has slowly been admitted, such as land and real estate. As the formal system failed to clearly define the boundary of common and private, people only fall into the state of social anomie with no standard guidance. During this transitional period, the concept between public and private is indeed not clearly separated in people's minds. Physically, it appears as the fuzziness of the boundary of space.

There is a previous study about the boundary of private space and public space in China done by ZHENG Ying. Basing on the investigation of some Beijing quadrangles and collective houses, ZHENG found that common phenomenon that people are used to expanding private sphere to public in daily life. There are differences between the residential ownership boundaries and the boundaries of public and private space in the residents' cognition. When conditions permit, people's psychological boundaries are tend to extend more to the public space. (ZHENG-Ying & Hajime, 2011)

In the field survey, the phenomenon that expanding private sphere to public in daily life also could be found easily any where any place inside the village. In the case of Beijing, many villagers not only put different kinds of daily necessities in the common space beside their house, but also add some rough and self-built huts intruding to the small alley as kitchen or storeroom. The alley becomes narrower as the private occupation. In the case of Guangzhou and Shenzhen, it is common that the business operation of the shops on the bottom of each rental house intrude to the roads. On the other hand, most public facilities are laid on the villager's private walls, such as wires, street lamp, telephone cables, TV cables, mobile signal transmitter and so on. With the absence of effective management in urban Village, individuals occupy public space while public organizations interfere in private space. The two are intertwined and cannot be separated clearly.

4.4.3.3 Tradition of Self-building and Construction Team (自助と施工隊による建設伝統)

In the field survey, it was found that although urban villages are located in city where the economic and social development degree is more progressive, they still keep the same tradition of self building or built by local construction team.

In China, there is a huge social gap between urban and rural areas as the economic development of rural area is lagging far behind the city. Housing construction has not really been included in the government management system. The construction process of private house even small public project in the rural village is still in a simple rough and original way. The tradition of self-built is still a main construction process in some rural area. A few people can form a simple construction team without any certification from professional organization or

authority. They can build house without any architect in a simple way. Construction organization and architect with professional ability and formal certification are not interested in that small scale construction project as less economic benefits. Almost the houses in rural area are built in that construction way.

The housing construction process in urban village is the same with the traditional village in the rural areas. The difference is that the mode of production and construction technology in the city will be more complex and professional than that in rural areas. The construction team in urban village is composed either by the villagers of the village or migrant workers from rural areas. Their way to build is also entirely different from the larger scale construction project in the city.

In the case of Guangzhou and Shenzhen, the economic power of villagers is stronger than the case of Beijing. Villagers are affordable to ask some the people who have received some education of architectural design, not necessarily a practicing licensed architect, to do architectural design for them as the big volume of rental house and complicated layout of several dwelling units inside. Each building cost a cheap price of few thousand RMB to get architectural drawings. Then ask construction team to build. For example, the villager in Longdong Village paid designer about 2000 RMB for each building or about 5 RMB/m² for architectural drawings in 1990s. As a template, when neighbors need to build a house, there is no longer need to ask to architect to draw, just copy the existing house.

As many practicing, some construction team can build without architectural design. They do not require design drawings. Clients are only required to make a decision about the number of stories, the number of dwelling units, units composing how many rooms, whether need a bathroom and kitchen or not, the construction team will be able to construction according to their own experiences. The construction team will be able to decide the size and position of the beams and columns with how many steels and cement to build. They no longer need to ask the engineer to do the building structural design and make structural drawings.

Generally in every village there would be a construction team composed by the native villagers. For example, in Shipai Village of Guangzhou City, there is a collective own construction company evolved from small builder team during the period when it becoming urban village from 1980s- 2000s. Almost the houses in the village were built by that collective own company. The villagers' construction team builds in their self-land inside the boundary of village, which is one important reason why the municipal bureau of city administration and law enforcement can't be free to perform their management into the village.

With those folk constructing manner, there is much freedom in the construction process

when rebuilding self-living house as rental house. They are relatively free from the constraints of the national construction laws and regulations.



Fig. 35 Two builder carrying bricks in Dayouzhuang Beijing 2012.11



Fig. 36 Simple construction tools and concrete mixer in Shaoziying Beijing 2012.11



Fig. 37 Self-built house under constructing in Shaoziying Beijing 2012.11



*Fig. 38 Self-rebuilt by villager in old area of Xiajiao village, Guangzhou.
Source: photographed by author in 2012*

4.4.3.4 Mentality of “FaBuZeZhong” and Conformity (法不責衆と盲従の社会心理)

In China, there is a traditional mentality of “Fa Bu Ze Zhong” (Laws Cannot be Used to Punish the Majority) and Conformity. In the field survey, it can be found that this mentality is still a popular concept and works well in the urban village.

1) FaBuZeZhong (法不責衆)

The term “FaBuZeZhong(法不責衆)” is a Chinese idiom means that the law cannot be enforced when everyone is an offender. FBZZ is administrative strategy for the ancient rulers in China when facing with the affair that most of people similarly committed something bad. In Feudal Society, the minority ruled the majority. As the ruling class’s laws are usually contrary to the mass’s interest, most of people do not want to comply. If punish the mass, it can easily lead to confrontation and even riots between officials and the mass; if let them be, rulers are humiliated. Thus, the ruling class preferred to take that compromise approach of “FBZZ”.

2) Conformity(盲従)

Conformity is the act of matching attitudes, beliefs, and behaviors to group norms (Cialdini R.B., 2004). In the field where there is not any formal regulation as a constraint or suggestion to behavior, the action who acts firstly is the template for the other people to follow. In the field where there are some existing formal regulations, however, if the action that violating those formal regulations is acquiesced or less punished, others would also follow it, too. That is the psychological process that most villagers in urban village go on rebuilding their house higher and higher, ignoring the existence of formal constraints of construction.

3) Villagers’ Common Activity of Illegal Building

In the case of Guangzhou and Shenzhen, illegal construction in urban village has become the common phenomenon that the government cannot afford to deal with. The Villagers make full use of the social psychology of “laws cannot be used to punish the majority” to build together. Who is the first one to violate the construction regulation is difficult to find out. Even be punished, the result is only to demolish the illegal part of the building in most cases. After the law-enforcement officers left, they can rebuild again. The illegal behaviors of the villagers in urbanized area are the guidance for the villagers who live in the pre-urban area. The degree of illegal is always more serious. Most of rental houses in urban villages outside the Special Economic Zone in Shenzhen, built in these few years, are much higher than those inside the Special Economic Zone. The average floor number of rental houses in Yangmei Village in Longgang District is more than 10 storeys, while the average floor number in Futian District is about 7 floors

4.5 Summary of the Findings in the Field Survey

According to the field survey on 28 urban villages in Beijing, Guangzhou and Shenzhen, there are some main findings as following. Some findings are as academic results to support other researchers' previous studies. Some of them are new findings or newly concerned by other in the academic field of urban villager study. They are remarked as the following table showed.

Table - 17 Academic effects of the Findings of the field survey

Findings of the field survey of urban village in Beijing, Guangzhou, and Shenzhen according author's observation		Previous researchers	Remark	
Differences	different mode of development	Beijing "top-down"; Shenzhen "bottom-up"; Guangzhou intermediate	×	new finding
	in different developing period	Beijing, just began to develop but be demolished; Guangzhou, matured and state to transformation, Shenzhen, matured and transformation completed.	×	new finding
	different quality level of living environment	Beijing is worst; Shenzhen is best, be urbanized; Guangzhou is middle	×	new finding
Interest conflict between different stakeholders	different stakeholders	government, village committee, villagers, developers, floating people	○	confirmed
	benefit relationship between villagers, village committee and municipal government	as dual-identification of core family and clan-village, each village is an economic interests group independent from the municipal government.	○	confirmed
	transformation of urban village is a game of interest balance	villagers become stronger and stronger, floating people are always ignored	○	confirmed
Informal Settling Institutions	tradition of inhabiting with consanguinity & territorial relationship		○	confirmed
	custom of mixing the boundary of common space & private space		×	new concerned
	tradition of rural self-building & construction team		×	new concerned
	mentality of FaBuZeZhong (法不責衆) & conformity		○	confirmed

Source: made by author

1) Differences of development

The developing mode of urban village in Beijing, Guangzhou and Shenzhen are different. Beijing is "top-down", Shenzhen is "bottom-up", while Guangzhou combined with "top-down" and "bottom-up". The plot coverage and the floor area ratio of those urban villages in Beijing are much lower than those in Guangzhou and Shenzhen. Comparing to the cases in Guangzhou and Shenzhen, the cases in Beijing are still in the beginning stage. The cases in Shenzhen city

are the most developed and matures among those three cities. There was no previous study to do comparison of the urban villages in these three cities.

2) Interest Conflict between Different Stakeholders

The Stakeholders in the issue of urban village mainly include government, village committee, indigenous villagers, the real estate developers, even referring to the low-income group of floating people. Although urban villages are located in the urban space, sometimes even in the central area of the city, they are still autonomous bodies with close kinship like tradition village in rural area. The village committee administrating urban village is actually the organization representing the villagers' common interest, which determines that it is not an effective enough organization to enforce the government's formal regulations. The village committee covers the villagers' activities of illegal construction. Whether in the academic field of urban village study or rural sociological study, the different stakeholders of villagers, village committee and municipal government are discussed in the previous studies. The findings of the filed survey in those 28 villages are new academic supports to the previous study.

3) Informal Settling Institutions

There are some informal settling institutions which have directly influence on the land and property development in urban village, such as:

- A) the tradition of inhabiting with consanguinity and territorial relationship,
- B) the custom of mixing the boundary of common space and private space,
- C) the tradition of self-building and construction team,
- D) the social psychology of "laws cannot be used to punish the majority" and conformity.

"A" and "D" were concerned in the previous studies, but not considered as informal settling institutions. "B" and "C" are newly concerned by author in the academic field of urban village study.

CHAPTER-5

**SOCIAL-PHYSICAL
CHARACTER AND SPATIAL
DEVELOPING PROCESS OF
URBAN VILLAGE**

5.1 Theoretical Outline of the Morphological Composition of Urban Village

Basing on literature survey and field survey on urban villages, this chapter would try to develop a theoretical outline to decompose the morphological composition of urban village.

Urban morphology is study refers to the form of human settlements and the process of their formation and transformation, and seeks to understand their spatial structure and character by examining the patterns of the components and the process of development. Form and process are the two main focuses. However, there is little difference that the scope and range of “morphology” in other study field covers. In architecture and engineering study, morphology is the research that uses the geometry theories of two dimensional and three dimensional symmetries to plan buildings and structure. For social study, morphology refers to the form and structure of society (Wikipedia). As this study involving the rules which guide people’s behavior, the specific people who live in urban village and their activities should also be covered into the morphological analysis. Therefore, urban village is examined in two aspects, static: people and the physical environment where their activities happen; and dynamic: the developing process.

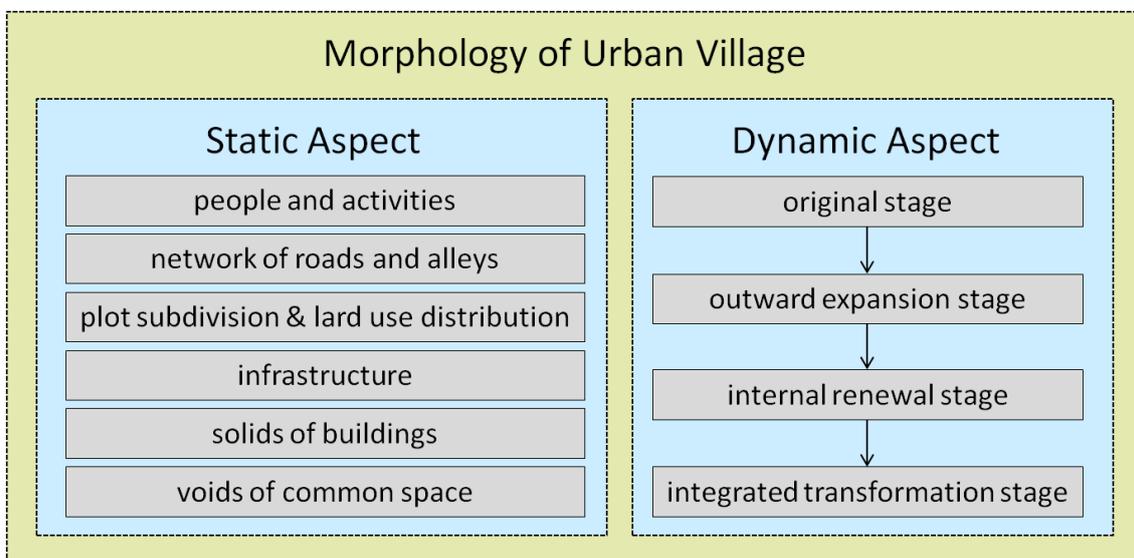


Fig. 39 Theoretical outline of the morphological composition of urban village
Source: made by author

First, the static aspect of urban village is decomposed into six components. They are the people and activities, the network of roads and alleys, the plot subdivision and land use distribution, infrastructure, the solids of buildings, and the voids of common space.

Second, the developing process of urban village, from traditional village to be transformed, is rationally divided as four stages. They are original stage (OS), outward expansion stage (ES), internal renewal stage (IS) and integrated transformation stage (TS).

This theoretical outline is used as one kind of method to observe the social-physical structure and character of urban village, and its spatial developing process in this study.

5.2 Static Aspect of the Morphology of Urban Village

5.2.1 Decomposing Urban Village

Basing on the decomposing method that Serge Salat used to analyze cities and forms, another decomposing method for urban village is developed in this study.

Salat's method is not applicable for the morphological study of urban village. On one hand, the research scope is different. Salat's method is applicable for the analysis of urban system, which is more complex than village system. Since the scale of urban village is much smaller than the overall city, it needs to be modified to fit the scope of village scale. On the other hand, the research purpose is different. Salat's method is aiming at uncover the sustainable urban planning methodology, by analysis the different urban patterns in the world, most of which are planned and constructed according to the formal regulation system, the western urban planning principles. Unlike the cities, urban villages in China develop in a spontaneous way referring to special rural social organizational principle of ChaXuGeju and the informal settling institutions, which mentioned in Chapter-2 (2.1) and Chapter-4 (4.4.3). The "three dimensions" is more important when observing the morphology of urban village and its informal rules.

The details of modification of the decomposing method are as following. The first and second level in Salat's method, "people and activities" and "network" are kept. The plot subdivision, land use and activity distribution of urban village is simpler than urban system. The components of "plot subdivisions", "topography and relief of the site", and "land use and activity distribution" are combined as one component in the new method – "plot subdivision and land use distribution". However, the component of "three dimensions" in Salat's method is refined into another three components for deep observation, such as "infrastructure", "solids of buildings", and "voids of open space".

Six components of urban village are: people and activities, network of roads and alleys, plot subdivision and land use distribution, infrastructure, solids of buildings, and voids of common space.

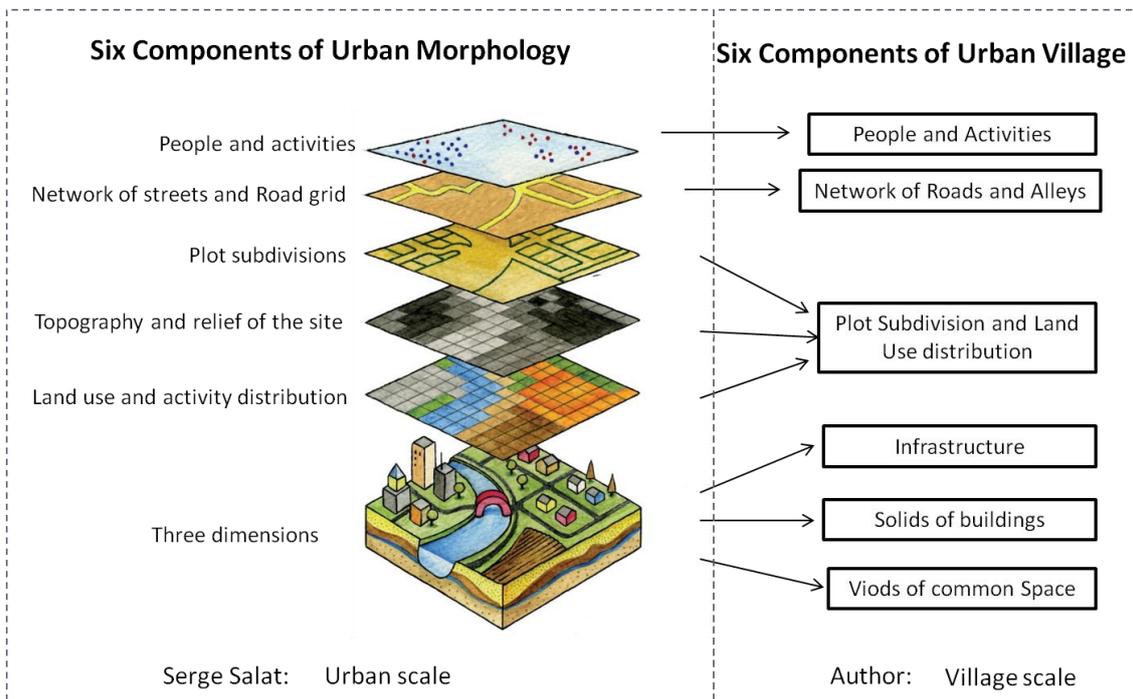


Fig. 40 Decomposing urban village as six components
 Source: developed by author based on Serge Salat's theory

5.2.2 People and Activities

1) Indigenous Villager and Floating People: Acquaintances and Strangers in Transitional Micro-society

Due to the household registration system of *Hukou*, the society of urban village is separated from the urban society. The indigenous villagers and the common citizen in the city are two different groups of people in the municipal administration system. Inside the urban village, the indigenous villager and the floating people are also different two groups in the village administration system.

Since the implementation of <Instructions about stopping the blind outflow of rural population to city > on Dec. 18th, 1957 and <Household Registration Ordinance of the People's Republic of China> on Jan. 9th, 1958, the freedom of rural population to move into city has been stopped. Chinese society has been isolated to two independent groups, rural population and urban population, labeled the "Agricultural *Hukou* (household)" and "Non-agricultural *Hukou* (household)". That household registration system of *Hukou*(户口) is an important symbol of China's dual urban-rural structure. Household registration system makes different identities of the population even they live in the same administrative jurisdiction of one city, rural resident, urban resident, and floating population who has no local household registration status of that city.

Therefore, the people live in urban village can divided in to tow groups, the indigenous villagers and the migrants. Although indigenous villagers are the people who originally live in the village, the number of migrant is gradually becoming bigger and bigger than the natives.

The migrants live in urban village in Shenzhen are overwhelming much more than the indigenous villagers, which accounts for 93% of the total population number. If the location is closer to central area of city, there would be greater the proportion of floating population in urban village. The people living in urban village are compounds of acquaintances and strangers. The micro-society of urban village is a combination with acquaintance society and stranger society. According to Ferdinand Tönnies’s sociological model of distinction between two types of social groups - community (Gemeinschaft) and society (Gesellschaft), urban village can be deemed as a coexistence of semi-community and semi-society. It is a transitional pattern of social space in the macro-society of China, from community to society.

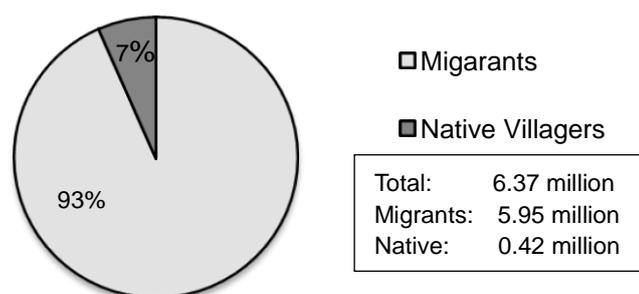


Fig. 41 the share of population in urban village in Shenzhen 2007
 Source: made by author based on literature reviews

According to the data of the share of population in urban village of Beijing in 2009, Haidian has the highest proportion (92.83%) of floating population. Fentai and Shijingshan are much lower than Hiandian, respectively occupying 73.02% and 64.10%.

Table - 18 the population in urban village in Beijing 2009

District	Urban Vil. Number	Resisted Population (×10, 000)	Floating Population (×10, 000)	Floating Population/ Total Population
Chaoyang (朝阳区)	135	31	104	77.03%
Haidian (海淀区)	25	8.5	110	92.83%
Fengtai(丰台区)	41	17	46	73.02%
Shijingshan(石景山区)	6	2.8	5	64.10%
Changping(昌平区)	18	2.2	16	87.91%
Daxing(大兴区)	2	0.8	0.5	38.46%
Total	227	62.3	281.5	81.88%

Source: Beijing Municipal Committee of Urban Planning, <report on the work of urban planning and implementing measures in the rural-urban transitional area of Beijing>2010.6.

2) Relationship of Co-residence of Indigenous Villagers and Migrants

Due to the household register system, the community of urban village is a dual structure community. As belongs to different administration system in terms of income distribution, employment, social status, health insurance, education, etc., psychologically, the indigenous villager and the migrants have different identification to each others. On one hand, the migrants always have their own social communication network with their fellowmen, classmates or colleagues, and migrants are easy to be friends of migrants. On the other hand, the indigenous villagers like to communicate with villagers. And most of the village community activities are only set for local villagers to participate. The villagers generally have less willing to have too many contacts with migrants. For the need of self-protection, they are on extra guard against the floating population, and sometimes even avoid contacting with migrants as possible as they can.

The relationship between villagers and migrants is just the relationship of landlord and tenant; basically there is no other substantive contact. Locals and outsiders are in their mutual economic benefits to maintain positive interdependence. Although floating people is dominant in the number of population, the locals stand absolute advantage in the economic and social structures of urban village. When refers to the impact of a large number of migrants into the village, indigenous villagers tend to show the contradictory state of mind. Considered from the economic point of view, they expect more people come into the village to rent their house. Meanwhile, they feel deeply anxious, uneasy and even indignant to the deteriorated, crowded and insecure living environment caused by a large number of immigrations.

Therefore, some villagers began to move out and buy real estate outside the village when they afford to do that. As the house rents from migrants and dividend from collective company of Sanjun, the villagers in Shipai Village (Guangzhou) become richer and richer. Most of indigenous villagers of Shipai Village now are not live inside the village but in the high rise collective houses around the village.

3) Informal Activity and Criminal activity in Urban Village

According to the field survey, urban village is the place where informal sector is most concentrating in the city. The main informal activities relating to the morphology of urban village are including illegal constructing and informal commerce. As illegal building was discussed in the previous chapters, here only refers to informal business.

As easy business environment as cheap house rent, market demand of low-end consumption, and loose management and regulation from the municipal government, there are many informal commercial activities in the urban village. When walking in the urban villages either in Beijing or Guangzhou and Shenzhen, atmosphere that full of vitality can be perceived as there are many outdoor fakers selling various snack food, daily goods or repair services. Of course, they do not be certificated any license to do this commercial transaction.

In the case of Guangzhou and Shenzhen, small-scale commercial activities are particularly active. Any daily goods and common foods can be bought inside the village as there are so many retail shops, small restaurant, barber shop, second-hand furniture stores and other neighborhood services. Both outdoor fakers and indoor small shops are mainly belongs to informal sectors. They spatially distributed both surround the boundary of the village and along the main roads inside the village. In some remote corners or along the secondary roads, there are even lots of indoor shops provide sexual trade or other illegal services.

Criminal activity is also one worrisome issue in urban village. In Shipai Village in Guangzhou, more than 30,000 surveillance cameras were installed to deal with the security problem, as the village space is so complex and dark that burglary cases occurred frequently. The highest amount of criminal cases can be up to more than 50 criminal cases per month. To install cameras so dense is an effort to eliminate the blind spot of public security. The village committee invested nearly 5 million RMB to install 164 cameras in the village. There are 38 on the roof, the rest of the installation at each main entrance of the village. In addition, there are 2,973 private houses in the village, all of them were installed the cameras by the villagers themselves. So there are nearly thirty thousand surveillance cameras in the whole village. After installing the security camera, the amount of criminal cases minus around 4 cases per month at the beginning, and from then on the public security environment is greatly improved. [China Public Security, 2010]

Fig. 42 Informal commercial activities in urban village of Beijing Guangzhou and Shenzhen



left-1. stall selling vegetables in Xiaocun, Beijing
 left-2. small restaurant in Qinghe, Beijing
 left-3. retail shops in Shipai, Guangzhou
 left-4. commercial road in Gangxia, Shenzhen

right -1. stall of baked sweet potato in Dayouzhuang,
 right -2. commercial road in Yimutian, Beijing
 right -3. commercial road in Longdong, Guangzhou
 right -4. commercial road in Xiasha, Shenzhen

Source: photographed by author in 2012.11

5.2.3 Network of Roads and Alleys

In the old area of the village, road network tends to be an irregular and complex status. While in new developed area in urban village, the network is always in a regular and simple way.

The network of roads in old area of the village has developed from traditional fabric that adapts to the nature and geographical environment. Although the traditional buildings were rebuilt as modern buildings of apartment, the network has almost been kept. It displays an irregular and complex pattern as the evolution of house rebuilding, merging or subdivision of the house site in different historical periods. Like plants grow in a natural way and record the past history, it has some main roads of 2 m - 3 m width as framework, from which grows many small irregular alleys, 1 m wide or less than that. That is the basic communication pattern of urban village. However, as the intensity of land utilization and the density of resident population are much higher than the ones when the traditional pattern was set many years ago, it becomes too crowded to be an efficient evacuation system to adapt the modern lifestyle, especially for fire control and firefighting.

If there is enough space to develop and loose regulation from the government, some villages would develop a new area beside the old village as new settlement. A new regular pattern grows from the old irregular pattern. In the case of Guangzhou and Shenzhen, most of the urban villages have two kinds of configuration patterns of road network, irregular fabrics and regular fabrics or grids. In order to adapt the modern travel mode of cars, the new developed roads are always set to be more than 3 m so that the automobile can pass it.

According to the field survey, it can be found in urban village that there are so many householders build some walls or fences to occupy the public road as private. That makes the snaky alleys interrupted or makes cyclic passage into the end type road. In the case of Yimuyuan in Beijing, the network originally should be in grid pattern. But as rebuilt again and again, the public road was occupied as private space. The accessibility is decreased. Some alleys are interrupted. The cyclic passage becomes end type road.

In a word, irregular is the basic character of the road network in most urban villages.



Fig. 43 Satellite Photo and Network of Roads and Alleys in Shipai, Guangzhou
Source of Network: John Zacharias, Yue Hu, & Quan Le Huang, Morphology and spatial dynamics of urban villages in Guangzhou's CBD, Urban Studies Research, Vol. 2013
Source of satellite picture: Google Earth



Fig. 44 Network of roads and alleys in Yimutian, Beijing
Source: made by author based on satellite photo from Google Earth



Fig. 45 Network of roads and alleys in Gangxia, Guangzhou
Source: made by author based on satellite photo from Google Earth

5.2.4 Plot Subdivision and Land Use Distribution

Land use in urban village is mix used. Influenced by modernism, the land use distribution in the common urban space in many China cities is also function oriented assignment pattern. Different functions of commercial district, office district and residential district are obviously separated in different area. However, in urban Village, the land use distribution is hybrid. Various functions such as residential, commercial and so on are mixed together.

The land in urban village is defined as two main types in the land administration system in China, such as construction land and agriculture land. Construction land includes village public facilities land, ZhaiJiDi(the homestead upon which peasants can build their private house), and retention land, which is authorized by the municipal government as compensate for acquiring the peasants' arable land and is often used as industrial land or commercial office space for collective economic development.

In some villages located in central areas of the city, the collective economic development land is commonly used to construct commercial building or office building, less used for industry to build factories, such as Shipai Village in Guangzhou and Huanggang in Shenzhen. On the contrast, in the case of interface zones of the main built up area and suburban area, there would be a lot of factories around the village in the collective economic development land, such as the Longdong Village in Guangzhou and Yangmei Village in Shenzhen.

In Beijing, Guangzhou and Shenzhen, urban villages have been included inside the urban planning administration system, and it is deemed as a place with the main function for residence. In the definition of the urban planning system, land use of urban village is mainly residential land for peasants' private houses. Every villager only can get one piece of land legally certificated by the government as homestead. But the wealthy villagers tend to have multiple homesteads. According to the government regulations it is illegal, but this phenomenon is very common in urban village.

Although the certificated homestead in the village is set to build homes for self living, there is no pure living space without commercial activities. On the contrary, in the location where people intensively flowing and has commercial value, the villagers usually open first floor of their house as commercial space, thereby forming a mixing space of commercial and residential mixed together. It is common in the commerce well developed region of the Pearl River Delta. In Guangzhou and Shenzhen, along the streets and alley in the village, there are amounts of different kind small shops. As the spontaneous conversion of some part of living space into commercial space in residential land, urban villages in Guangzhou and Shenzhen are full of life and full of popularity. They are more active than the modern communities with cool

atmosphere in the city.

In all, mix-use is a key characteristic of land use distribution of urban village. As less constrained from the municipal management of land resources and urban planning, the land use distribution and household subdivision in urban village is more free and flexible than other common urban space. And that is a main cause of chaotic living environment in some villages.

Table - 19 Land use composition of Shipai, Guangzhou

		1978		1990		2010	
Construction Land	Land Type	Area(Ha)	%	Area(Ha)	%	Area(Ha)	%
	Residence	21.6	6.1	26.2	8.2	31.1	71.0
	Industrial	3.9	1.2	10.7	3.3	0.8	1.8
	Public Facilities	0	0	33.0	10.2	0	0
	Commerce & Office	0	0	0	0	7.3	16.7
	Infra. & Road	15.2	4.3	34.4	10.6	0	0
	Education	0.8	0.2	0.8	0.2	1.6	3.6
	Vacant Lot	0	0	0.2	0.1	2.7	6.2
	Green land	0	0	0	0	0	0
	Unknown	6.9	1.9	6.4	2.0	0	0
Agriculture Land	Arable land	294.2	83.1	191.0	59.1	0	0
	Pond	11.4	3.2	20.4	6.3	0.3	0.7
Total		354.0	100	323.1	100	43.8	100

Source: Shujing LI, A study on the relevance of the regulation and spatial structure in formation process of urban village in Guangzhou China, J.Archit Plann, 2013(02), Vol.78 No.684,p.p.383-391.

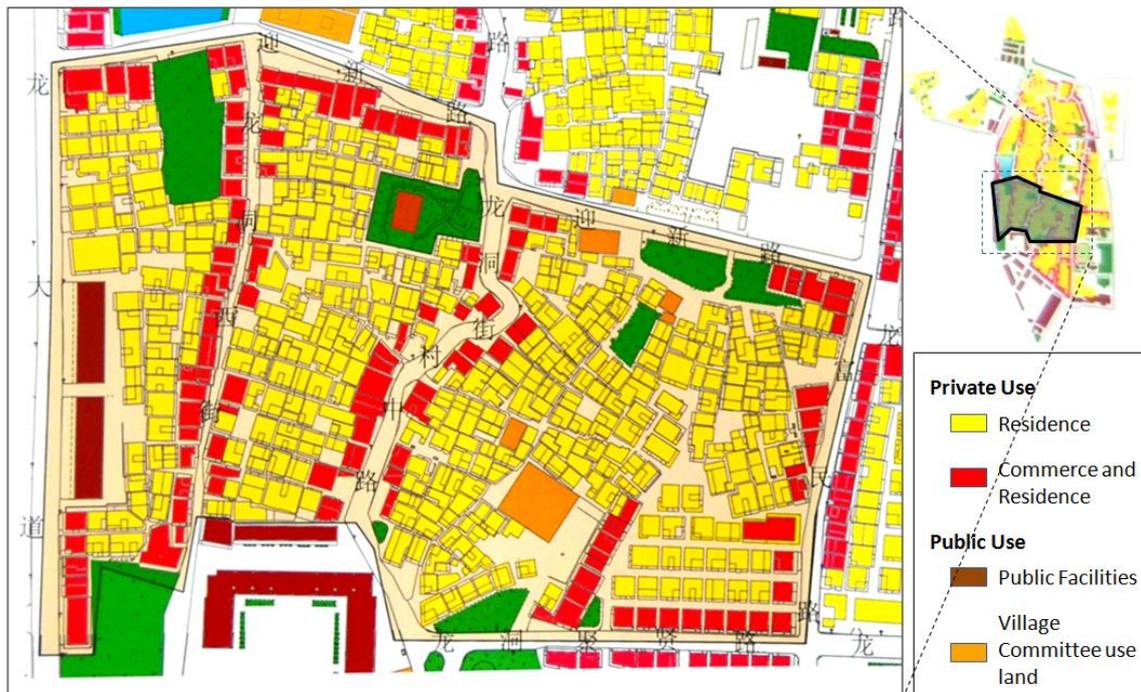


Fig. 46 Land use distribution of private use and public use in Longdong, Guangzhou
Source: Architectural Design Institute of Tianhe, Census Report of Status quo of Longdong,2006

5.2.5 Infrastructure

In most of urban villages, the step of infrastructure construction by the public administration of village committee or municipal government really drops out of the construction of villagers' private houses.

In the cases of Beijing and Guangzhou, many urban villages are lack of infrastructure or in a very poor state of infrastructure.

The systems of water supply, power supply and communication (telephone, internet & TV) inside urban village are the same with common urban space, but their network arrangements are dramatically in disorder. The cables of power and communication are interlaced and chaotically ridden on the wall of private houses or spanning across over the roads and alleys.

Of course in most China cities, it has gas pipeline network for cooking. But, the gas supply system in urban village is separated from urban gas pipeline network. According to the field survey, there is no gas pipeline network in all the urban villages in Beijing, Guangzhou and Shenzhen. Instead, they only have to use bottled Liquefied Petroleum Gas. Liquefied petroleum gas bottled in a sealed cylinder assigned to each household from the urban storage and distribution station. As a kind of family stove gas supply method, which originated in the early 1960s, bottled gas was first used in the refinery and several industrial cities in China, and now has become as main supply method in towns and village in most rural areas. It still keep using in urban village although which is spatially included in the city area. Thus, there are some retail shops selling bottled gas in the village to support the daily life of villagers and migrants.

About sanitation system, the drainages are almost arranged as open ditch way in primitive state, emitting unpleasant smell. Not to mention that there is sewage treatment plant in the village. In some poor urban villages, polluted water is cross flowing on the pavement of alleys, such as Yimutian in Beijing and Nantou in Shenzhen. But in some rich villages, open ditch in main roads was upgraded into sewer, especially in new developing area of the village, such as Huanggang and Futian in Shenzhen.

As alienated from urban administration system, the village committee is responsible for the cost of waste disposal in the village. In order to save expenditure of public administration, the garbage collection system in urban village is generally inefficient. As the increasing of migrants, the trash cans are too small to contain amounts of daily garbage. People only have to throw the garbage beside the garbage station. What is more, garbage could even be found on the road in most of villages. Except Shenzhen City, the garbage problem could be considered as the worst issue in most urban villages.



Fig. 47 Chaotically ridden cables in Shipai Vil.



Fig. 48 a porter of bottled gas in Shipai Vil.



Fig. 49 Garbage out of trash beside public toilet in Guajiatun, Beijing



Fig. 50 Infrastructure upgraded in Futian Vil. Shenzhen

Source: photographed by author in 2012



Fig. 51 No sewer in main road in Yimutian, Beijing



Fig. 52 Trash in Xiao Vil., Beijing



Fig. 53 Trash in Longdong, Guangzhou



Fig. 54 Well cleaned road in Dafen, Shenzhen



Fig. 56 Open ditch in gaps between houses although alley upgraded



Fig. 55 Sewage pipe and chaotic cables in Longdong, Guangzhou



Fig. 57 Municipal garbage collecting station in Guangxia, Shenzhen

Source: photographed by author in 2012

5.2.6 Solids of Buildings

The built environment status in urban village is different from the common urban space. Unlike the blocks in urban space which is under well planning and built in orders, urban village has evolved in a nature, free and spontaneous developing pattern.

As the influx of a large number of floating populations, private house of each villager family for self living is gradually evolving as rent house to provide low-rent shelter for the floating people. In old area of the village, traditional self-living house are rebuilt as rental house. In new planned area, the villagers also build their house as rental house. Urban village becomes a cheap rental housing market where intensively distributing amount of buildings for informal residence and commerce. On one hand, because of the land ownership system of Zhaijidi, each family could have a piece of private land to build detached house, one family one house. On the other hand, as the opportunities of jobs in the city, the migrants also bring the economic interest to the village. There is urgent demand of low-rental housing, but lack of formal supply from government, even ignored by decision makers in many cities' urbanization process. The shortage of low price rent house from formal housing supply market allows the possibility for the land owner in urban village to rebuild their house into rental apartment.

The quality of those rental apartments is depending on the economic development level of each village. The richer the villagers in urban village are, the higher quality of the rent house they can afford to. The economic development level of urban village in Beijing is much lower than Guangzhou and Shenzhen. In Beijing, most rent houses in the village is build in a simple way, and only has 2~4 floors. Some of them are brick structure, a small part of them are reinforced concrete frame structure. A few of them has small balcony with simple outrigger to support. In order to saving construction cost, the railing and stair are made from iron pipe, and outer wall is simple plastered as gray color. Even, some 1~2 floor houses are self-built, which look like temporary buildings. However, the urban villages in Luohu District and Futian District of Shenzhen City could be considered as in the highest economic development level in China. All of them are reinforced concrete frame structure. The outer walls are all pasted with ceramic tiles. They are 5~8 floors with higher quality. In Longgang District and Bao'an District out of the Special Economic Zones, there are lots of rental house with more than 10 floors.

The typical building composition of rental housing in urban village is independent apartment with bottom floor of commerce, top floor as owner occupied and several floors of rental units among them. In the location where has less accessibility, the first floor is also set to be rental units, too. The rental floor is always designed to several units of one room one hall with small bathroom and simple kitchen, to meet the needs of young floating people.



Fig. 59 Apartment with narrow balcony supported by simple angle iron tripod in Guajiatun



Fig. 58 Apartment with corrugated iron shacks in 5th floor in Guajiatun, Beijing

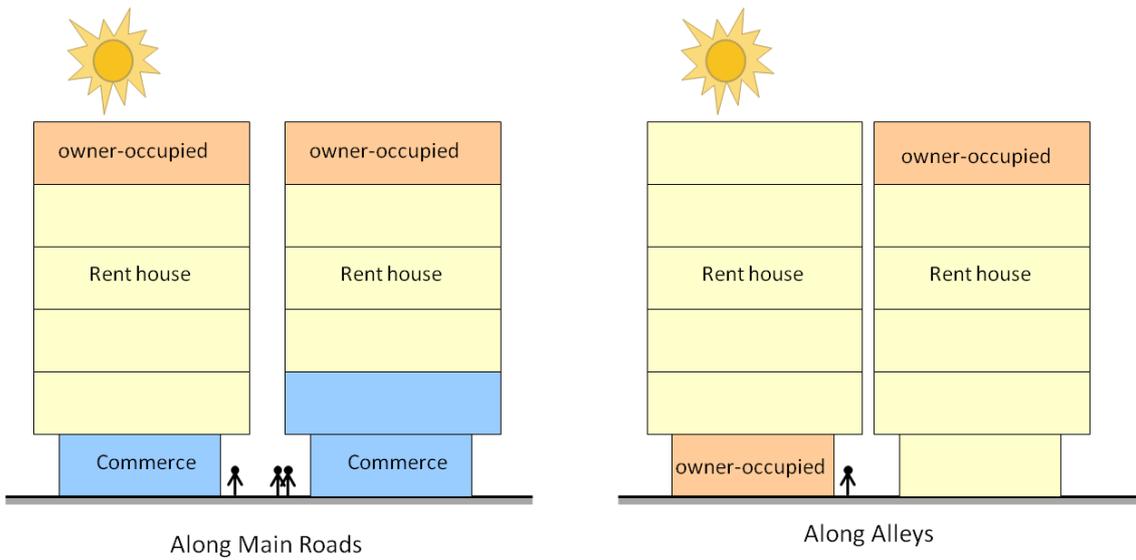


Fig. 60 Typical case of rent house in urban village
Source: drawn by author



Fig. 61 Rental house in urban village of Yimutian in Beijing
Source: Source: photographed by author in 2012



Fig. 62 Rental house built in 1990s, Longdong, Guangzhou



Fig. 63 Rental house built in 2000s, Longdong, Guangzhou



Fig. 64 Rental house built in 1990s, Shipai, Guangzhou

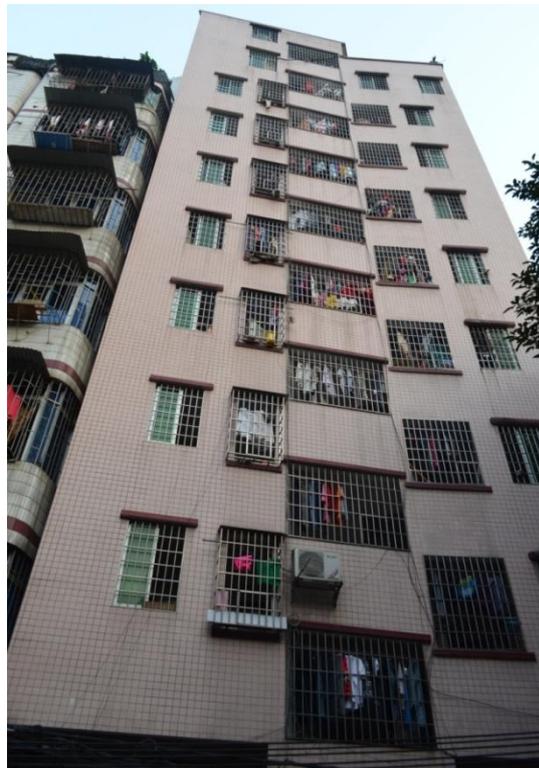


Fig. 65 Rental house built in 2000s, Shipai, Guangzhou

Source: photographed by author in 2012



Fig. 66 Rental house built in 1980s,
Huanhgang, Shenzhen



Fig. 67 Rental house built in 1990s,
Huanhgang, Shenzhen



Fig. 68 Rental house built in 2000s,
Huanhgang, Shenzhen



Fig. 69 Rental house built in 2000s,
Yangmei, Shenzhen

Source: photographed by author in 2012



Fig. 70 Floor plan of Building No.1, Ciqian 2nd Alley, Longdong, Guangzhou
 Source: Drawn by author based on investigation

5.2.7 Voids of Common Space

Voids of common space can be observed as two parts. One is block space, the public open space. Another is linear space, the common space of the road and alley.

In rural areas, outside the village is open space such as farmland and fish ponds. There is no need to set open space in a residential area. Basically, the spatial distribution of traditional village is the pattern that roadway plus residential plot. When traditional village is evolving as urban village, there comes naturally little public open space in the residential area. Especially in central area of the city, being squeezed by urban space, it is difficult to reserve open space in the village. That is why there is less open space inside the village in most of cases in Beijing. However, in southern China, generally there is a small square before the ancestral temple in the village.

According to the field survey, all the villages in Futian District, Shenzhen City have some ancestral temples located in the center of the old village areas. After transformation in 2005, most of the village filled the pool in front of the ancestral temple to make a plain, forming as a big central square, and built the stage for household leisure. The public space in those villages is almost the same with the public open space in ordinary urban communities. Although other places are crowned of rental houses, the front square of the ancestral hall is well kept as the center of the village by the villagers.

In terms of common space of road and alleys in the village, it is commonly occupied and compressed by the villagers' rental houses and the private belongings.

As out of the formal regulations, the buildings without formal architectural design process, always overhangs corridor, balcony or volumes beyond the common space of road and alleys in a greatest degree. In the old area of some villages in Guangzhou, the street is dark and damp, the ventilation and lighting is very poor, as the constantly increasing of the number of building storey. Above the second floor, the building overhangs beyond the alley by cantilever beam, leading the alley squeezed. Some of those places did not see any light during the day time, only have to illuminate by artificial light. Shipai Village in the center of Guangzhou is exactly such a typical case.

In the case of Beijing, because the building density in the urban village is now in a relatively low state, the common space of road there is more open than the case of Guangzhou. But, the common space of the road and alley is also occupied by private belongings.

The voids of common space in urban village are commonly occupied and compressed by the villagers' rental houses, while the open space in front of the ancestor hall is well reserved.



Fig. 72 Alley landscape in Xiaocun, Beijing
Source: photographed by author in 2012



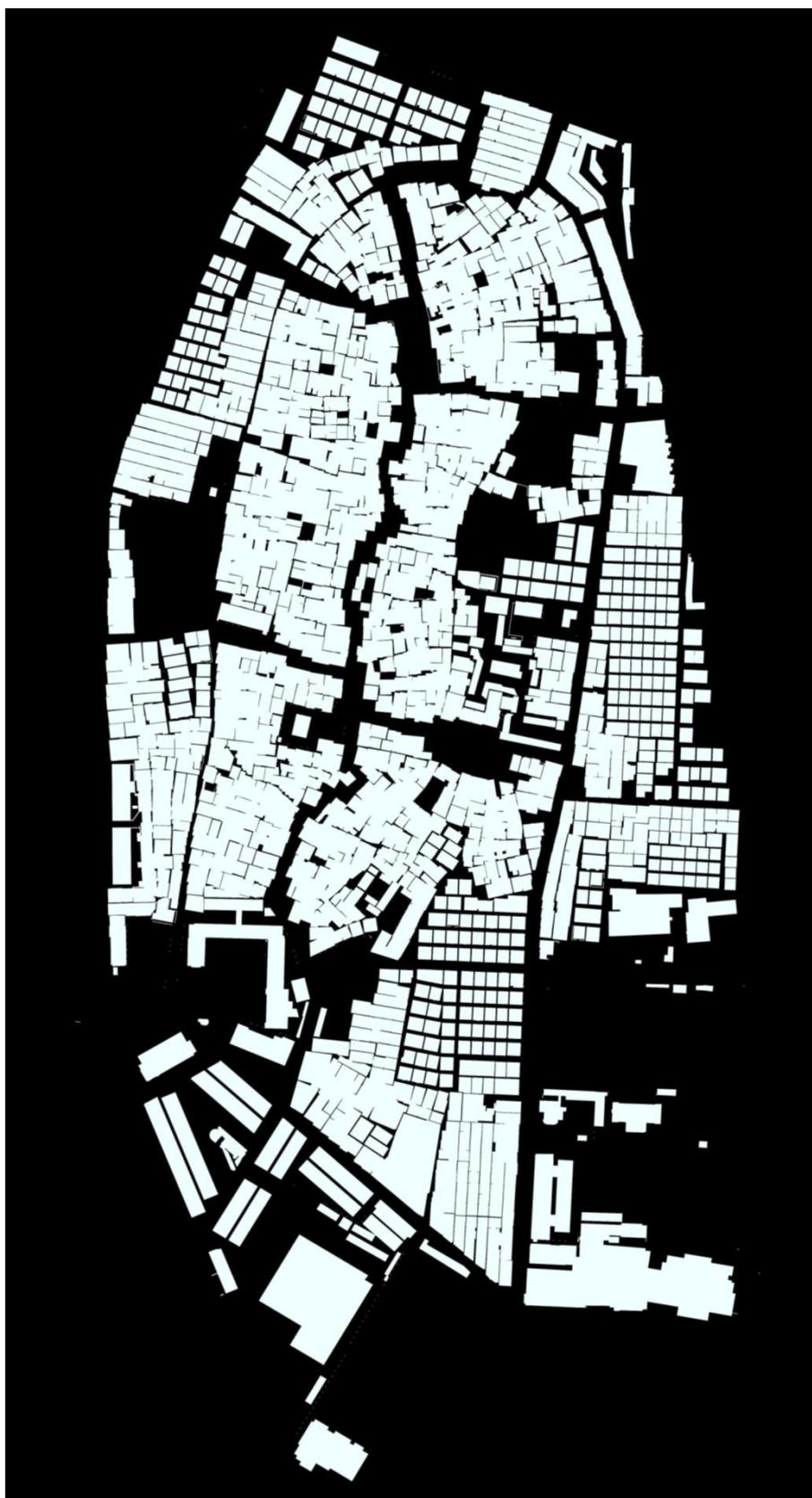
Fig. 71 Alley landscape in Guajiatun, Beijing
Source: photographed by author in 2012



Fig. 73 Streetscape of Shipai Village, Guangzhou
Source: photographed by author in 2012



Fig. 74 Alleys & open space in Shipai, Guangzhou
Source: made by author



*Fig. 75 Alleys being compressed by rental house in Longdong, Guangzhou.
Source: made by author*



Fig. 76 Alleys & open space in Longdong, Guangzhou
Source: made by author



Fig. 77 Ancestral hall in Shipai Vil., Guangzhou



Fig. 78 Pond in Shipai Vil., Guangzhou



Fig. 79 Open space in Shipai Vil., Guangzhou



Fig. 81 Outdoor stage in Longdong Vil.



Fig. 80 Sport plaza in Longdong Vil.



Fig. 82 Ancestral hall surrounded by rental house in Longdong Vil., Guangzhou

Source: photographed by author in 2012



Fig. 83 Street park in Shangsha Vil., Shenzhen



Fig. 84 Central street in Futian Vil., Shenzhen



Fig. 85 Central square in Huanggang Vil., Shenzhen



Fig. 86 Open space in Huanggang Vil., Shenzhen



Fig. 87 Stage in central square of Shangsha Vil.



Fig. 88 Temples in the center of Xiasha Vil. Shenzhen



Fig. 89 Central square in Xiasha Vil., Shenzhen
Source: photographed by author in 2012

5.3 Dynamic Aspect of the Morphology of Urban Village

5.3.1 Four Stage of Developing Process

The developing process of urban village can be defined as four stages: original stage (OS), outward expansion stage (ES), internal renewal stage (IS) and transformation stage (TS).

5.3.1.1 Original Stage (OS)

Before the arrival of urban expansion and urbanization, many rural villages generally maintain the social and spatial structure of traditional pattern. Agriculture is the main economic activity.

The same time, their distribution is combined with the local natural environment and climate characteristics. The village located in the hilly land is distributed free with the natural terrain. While the village located in the plain is distributed regular, as concentric layout of the ancestral temple.

In Southern China, the climate is hot and humid. There is relatively narrow roadway, conducive to good ventilation and shading in summer, which determines the relative compact layout of the village.

In Northern China, the height of the sun is relatively low in winter. In order to get warm sunshine the winter, the village layout is stretch. The roadway in the village is relative wider than the one in Southern China.

In most of villages in Southern China, the occupants in the village are acquaintances having the same ancestors. As ancestor accounts the dominant position in the villagers' heart, the layout of the settlement is generally basing the location of ancestral temples. Simple social structure, the spatial structure directly shows the status of the grade distribution as the obvious influence of the consciousness of bloodline and the clan hierarchy.

The house in the village is self-living building with 1-2 storeys. The architectural style is generally a traditional style of pitched roof and brick building.



Fig. 90 Traditional house in Xiaocun, Beijing
Source: photographed by author in 2012

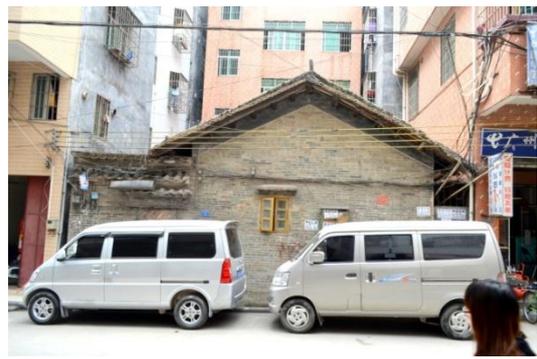


Fig. 91 Traditional house in Longdong, Guangzhou
Source: photographed by author in 2012



Fig. 92 Traditional village in suburban of Beijing
Source: from Google Earth 2013



Fig. 93 Traditional village in suburban of Jiayang City
Source: from Google Earth 2013

5.3.1.2 Outward Expansion Stage (ES)

When the village is included in the administrative and planning area of the city as urban expanding, the traditional village starts to evolve into urban village.

On one hand, the village committee can get some construction land for collective economic development if their collective owned farm land is requisitioned by the municipal government as urban land. In the case of Guangzhou, the ratio is about 8-10%. If 100 km² of collective owned land is requisitioned by the municipal government, the village committee can get 8-10 km² of construction land, which may be used to build factories or commercial office buildings. For example, from 1980s to 1990s, Shipai village in Guangzhou obtained 400 MU(26.6Hectares) of construction land for community's future economic development from the 4000 MU of land that requisitioned by the municipal government. That retention of construction land are used by the village committee to build commercial office buildings for rent, based on which Shipai village's collective economy is growing stronger and stronger. Thus, in the periphery of the old neighborhood of urban village, generally some factories or commercial office buildings would be built.

On the other hand, as the increase of population of the village, the village committee would also develop new residential area for the villagers, conversing agricultural land to new homestead. For example, as the following figure showed, during mid 1990s to 2000s, besides the collective owned commercial office buildings, four piece of new residential area around the old area of the village were developed in Longdong Village. From 2001 to 2002, more than 1000 rental houses was built within those two years.

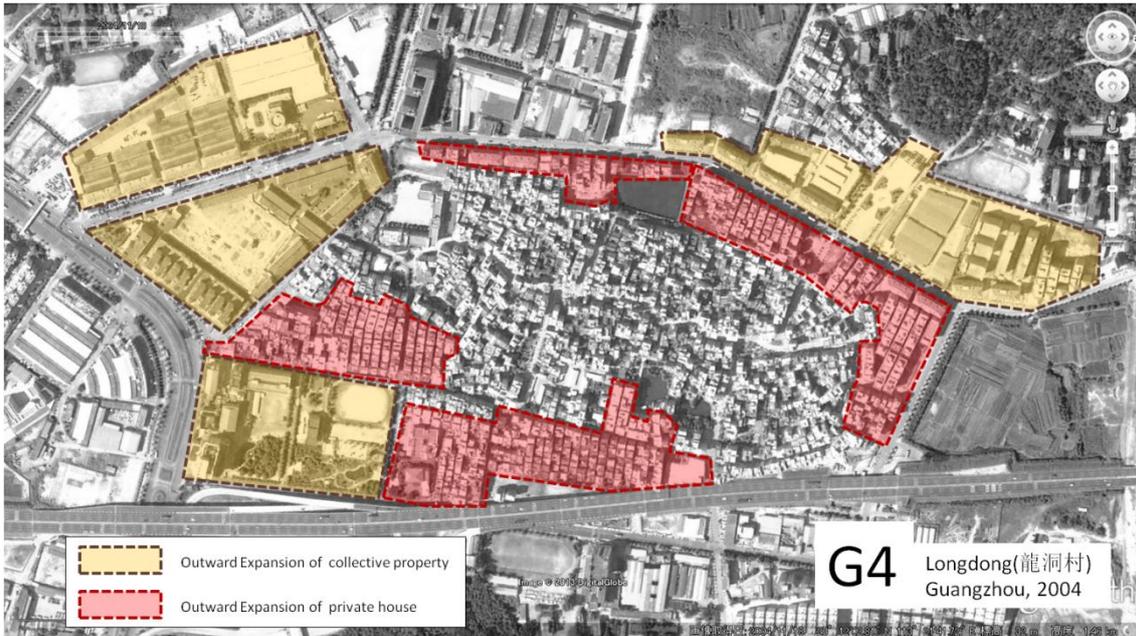


Fig. 94 Outward expansion of Longdong Vilage, Guangzhou
Source: made by author based on Google earth map

With the advent of urban sprawl, the built-up area of the village is gradually expanding outward, to build houses and compete for open space with the city. Although the possession of the land of the village is decreased, the built-up area of the village is expanded.

5.3.1.3 Internal Renewal Stage (IS)

Besides the outward expansion, internal renewal also occurs when traditional village gradually evolved as urban village. When all the arable land is filled by buildings, the villagers began to dismantle their traditional building which is fit for self-living, replacing them as rental houses with flat roof on the original homestead in the old area of the village.

Since the late 1980s, urban development in Guangzhou City attracted a large number of floating populations, and the floating population put forward huge demand for the low-rent housing market. The Shipai village became a veritable low-price rental housing market since that period of time. Losing farm land resources to the survival, the villagers devoted themselves

to a vigorous construction movement under the drive of economic rationality. From 1994 to 1998, the entire Shipai village became into a large construction site. Many villagers tend to pour all their family savings, including land acquisition compensation, borrowing by various means if insufficient, to reconstruct or renovate their self-living houses on the original homestead. Most of those houses were designed as rental units.

In another village in Guangzhou, Longdong village, some villagers' houses are rebuilt four times in a few decades. From the mud walls of straw roof rooms, to brick structure and tile roof house, and then to the self housing with 3-4 floors, and ultimately evolved into more than 5 floors rental houses with several dwelling units. With the increasing number of storey of construction and continued expansion of the volume of villagers' house, the plot coverage in the original region of the village is also increase. On the contrary, quality of the living environment is declining in the large degree.

The same rental house construction movement also occurred in Shenzhen City since 1980s. The self-living house was gradually rebuilt as multi-storeys rentalhouses.

Table - 20 building characteristics in different period in urban village in Shenzhen City

Period	Number of stories and characteristic of houses	Status of urban village
Before 1982	One storey house of self-occupation with court yard	Traditional village
1982-1989	2-3 stories rental house; unit distribution of 2 rooms 1 hall & 3rooms 1hall	Transitional state from Traditional village to urban village
	4-6 stories rental house start to appear; unit distribution of 1 rooms 1 hall	
1989-2004	4-6 stories rental house is dominant; 7-10 stories start to appear, some of them even exceed 10 stories	became typical urban village

Source: Wang Peng, *Research on the characteristics and evolution of residential morphology of Shenzhen City Village under the informal housing market*, Shenzhen Graduate School of Harbin Institute of Technology, Shenzhen, 2010, p.54

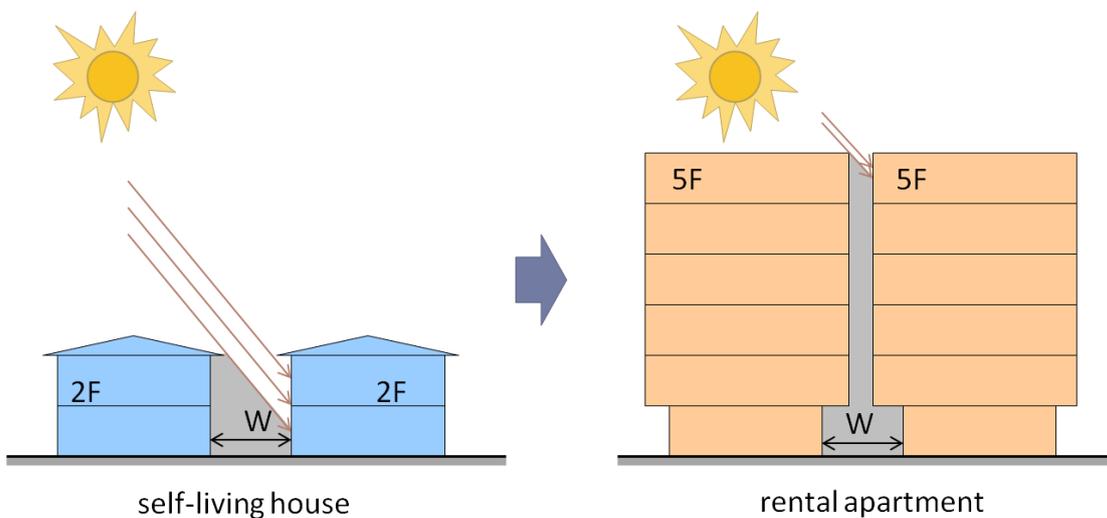


Fig. 95 Self-living house rebuilt as rental apartment in urban village

Source: made by author



Fig. 96 House rebuilding in Dayouzhuang, Beijing.



Fig. 97 House rebuilding in Longdong village-1



Fig. 98 House rebuilding in Longdong village-2



Fig. 99 House rebuilding in Longdong village-3



Fig. 100 House rebuilding in Longdong village-4



Fig. 101 House rebuilding in Longdong village-5

5.3.1.4 Integrated Transformation Stage (TS)

When the social environment and the spatial environment in urban villages seriously affected the healthy development of the city, the municipal government would start to try many ways to transform them. Their transformation methods generally include comprehensive improvement (Impro.) and overall reconstruction (Recon.). The fate arrived that urban village were forced to dismantle as the municipal government can no longer tolerate their chaos of appearance in urban landscape and their security threats.

Comprehensive improvement refers to the construction of the necessary municipal utilities, removal of illegal buildings or unreasonable constructions, through a variety of means to improve the living environment of the urban villages. Within the cases of the filed survey, Huangpu Village in Guangzhou City and most of urban villages in Futian District in Shenzhen City launched by the municipal government were implemented in that way of comprehensive improvement.

The overall reconstruction refers to totally change the architectural form of the village and to reconstruct its living environment by demolition of all the old buildings and rebuilding new ones. The transformation process is restricted to meet the standard of urban planning and construction. In principle, after the transformation, all the buildings in the village should obtain full property rights in accordance with the relevant provisions. Generally, the spatial pattern of the villages after transformation is basically the same as the general community in the city. (Research Group of Ministry of Construction of China, 2007) Within the cases of the field survey, Liede Village and Xian Village in Guangzhou, Dayouzhuang and Shiliuzhuang in Beijing was implemented that way of overall reconstruction.



Fig. 102 Liede before destroyed
Source: By Wu Lu, Xinhua News Agency, 2007.10.5



Fig. 103 Liede after transformation
Source: <http://static.panoramio.com/>

5.3.2 Physical Evolution Model

An evolution track of physical evolution of urban village in China can be summarized as following. In order to full fill the interest of surviving, the villagers compete with municipal government for the scare land resource and living space, both causing farmland becomes non-agricultural land. First outreach the available land for construction as possible as they can. When external space is already saturated, villagers began to rebuild their self-living houses as rental houses. When the city begins to interfere with the development of the village, the village would forced to enter the phase of being integrated transformed, either be overall demolished and replaced by real estate or being upgraded to improve infrastructure.

According to this general track of developing process, a physical evolution model was made. It is a rational and holistic model aiming at easy understanding of urban village in a simple way. In the real world, the developing process from traditional village to urban village is not a separately transition simply from one stage to another. When a village is outward expanding, there is internal renewal in a certain extent. Those two stages are not separate. Only when there is no space for external development, the villagers intensively turn to steering internal update. For one given village, it may not go through every stage. It may be a leap forward. Skip the second stage from the first stage, directly into the third stage and the fourth stage. Also, a traditional village may be directly replaced by the government before it developed as urban village such as route-4.

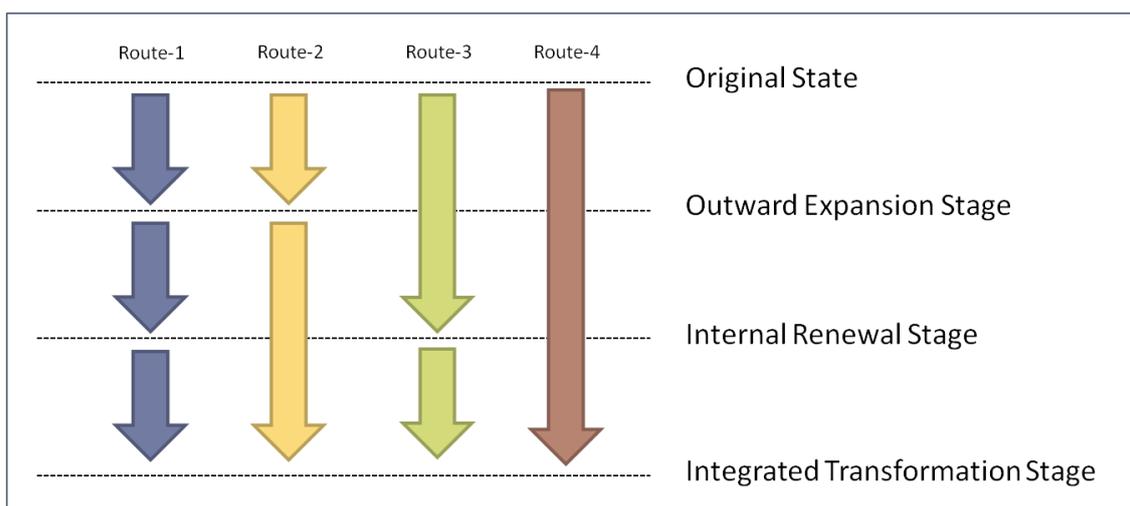


Fig. 104 Physical evolution model of urban village in four developing stages

Source: made by author

5.3.3 Applying the Evolution Model for Analysis

Applying the evolution model, 28 urban villages of the field survey in the study are analyzed in the table as following.

Table - 21 Physical evolutions of 28 Villages in the field survey

No.	Village	Route	Four Stage (by 2013.3)				
		1/2/3/4	OS	ES	IS	TS	
						Impro.	Recon.
B1	Bajia 八家	3	○	×	○	×	○
B2	Qinghe 清河	3	○	×	○	×	...
B3	Liulangzhuang 六郎庄	3	○	×	○	×	...
B4	Dayouzhuang 大有庄	3	○	×	○		
B5	Shaoziying 哨子营	3	○	×	○		
B6	Xiaojahe 肖家河	3	○	×	○	×	...
B7	Yimuyuan 一亩园	2	○	○	○		
B8	Guajiatun 挂甲屯	3	○	×	○		
B9	Shiliuzhuang 石榴庄	3	○	×	○	×	...
B10	Xiao Village 肖村	3	○	×	○		
G1	Liede Vil. 獭德村	1	○	○	○	○	○
G2	Xian Vil. 洗村	3	○	×	○	×	...
G3	Shipai Vil. 石牌村	3	○	○	○		
G4	Longdong Vil. 龍洞村	1	○	○	○	○	
G5	Huangpu Vil 黄浦村	2	○	×	○	○	
G6	Xiajiao Vil. 夏涑村	1	○	○	○		
G7	Lijiao Vil. 漑涑村	1	○	○	○	×	...
G8	Nanting Vil. 南亭村	1	○	○	○		
S1	Yangmei Vil. 杨美村	2	○	○			
S2	Dafen Vil. 大芬村	1	○	○	○	○	
S3	Gangxia Vil. 岗厦村	1	○	○	○	○	
S4	Futian Vil. 福田村	1	○	○	○	○	
S5	Huanhgang Vil. 皇岗村	1	○	○	○	○	
S6	Shangsha Vil. 上沙村	1	○	○	○	○	
S7	Xiasha Vil. 下沙村	1	○	○	○	○	
S8	Shixia Vil. 石厦村	1	○	○	○
S9	Shuiwei Vil. 水围村	1	○	○	○	○	
S10	Nantou Ancient Town 南头	3	○	×	○	...	
Remark	○ Completed × Skipped ... Undergoing						

Source: made by author

5.3.4 Analysis of Yimuyuan Village in Beijing (B7, 2000-2012)

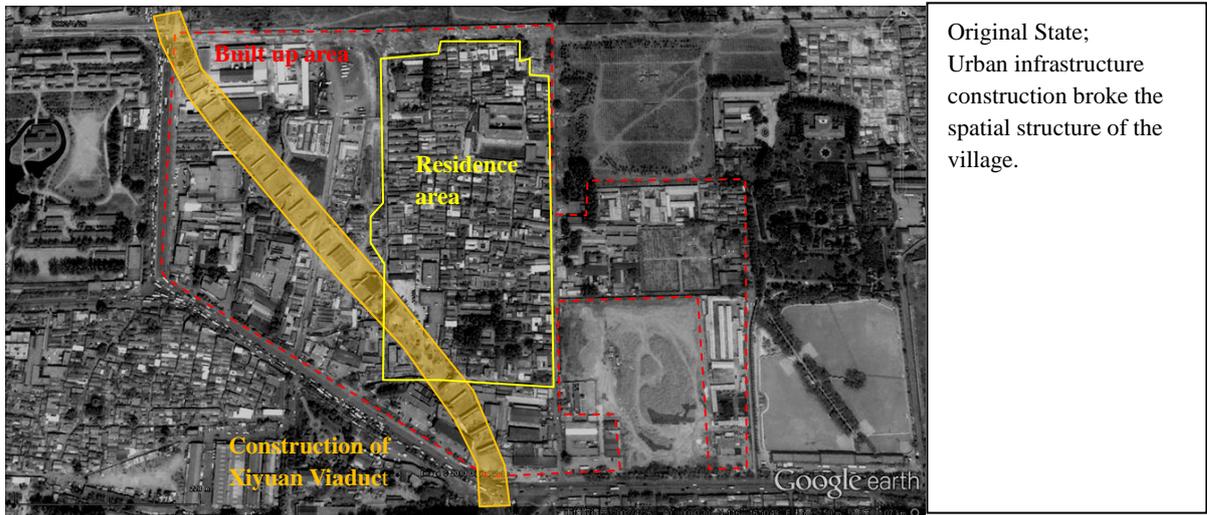
Yimuyuan Village is small village located in the northwest of Beijing between the Fourth Ring Road and Fifth Ring Road. The main settlement of the village is about 600 meters long form north to south, and about 230 meters wide from east to west, covering 0.12 km² area. There are 1907 persons of ingenious villagers and 3452 persons of floating people living in this village.

From the satellite photographs recorded by Google Earth, it can be seen that during the 12-year period from 2000 to 2012, the spatial structure of the village has undergone tremendous changes. The construction of urban infrastructure and facilities has broken the original spatial layout of the village. Expropriation of the village's collective land as national land for urban infrastructure by the municipal government of Beijing, the village also got compensation of some corresponding construction land that can be used for the village's economic development. After the construction of Xiyuan Viaduct (西苑橋) in Wanquan River Road (万泉河路) in 2002, a market hall was constructed on southeast land of the main built up area of the village in 2003. What's more, in 2005 the Xiyuan Station of Beijing Subway Line-4 began its construction. Since the Xiyuan Stations opened to in 2008, the residential in village has dramatically changed. Due to convenience in transportation, the villagers began to dismantle their own one or two storey private houses, constructing the tree to five floors low rent apartments to attract the low-income migrant workers, young people or students to live in. The sharp rise of the resident population density, but the construction of infrastructure in the village is seriously lagging behind. At present, the living environment there is significantly poor.

Fig. 105 the Overall Spatial Evolution of Yimuyuan, Beijing (2000-2012)



10/28/2001



04/26/2002

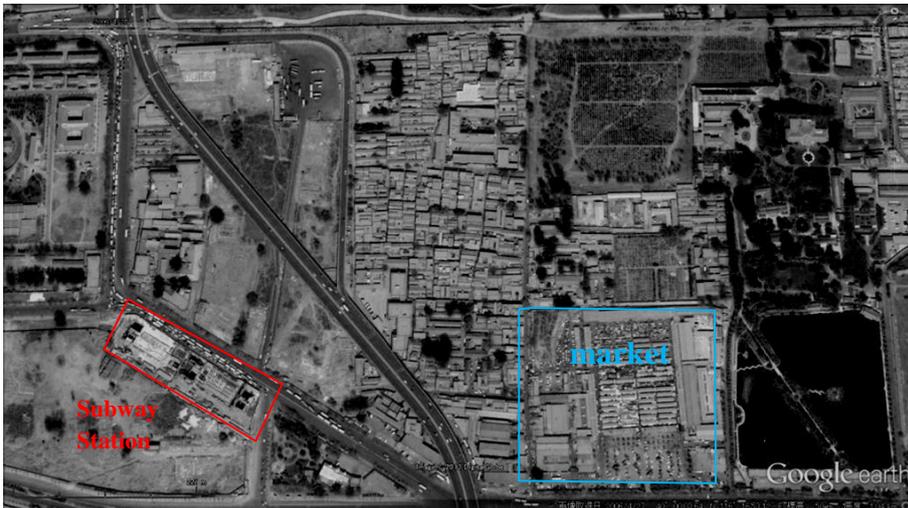


09/13/2003



Outward Expansion Stage;
Beijing Subway Line-4 began its construction

04/14/2005



Outward Expansion Stage;
Beijing Subway Line-4 began its construction

04/27/2006



Outward Expansion Stage;
Beijing Subway Line-4 began its construction;

02/09/2007



Internal Renewal Stage;
Beijing Subway Line-4
completed; bus station
under constructing;

06/28/2009



Internal Renewal Stage;
bus station completed;

11/08/2010



Internal Renewal Stage,
Almost houses in the
village are rebuilt.

09/15/2012

Fig. 106 Internal Spatial Evolution of Yimuyuan, Beijing (2000-2012)



Most of houses are traditional building with pitched roof

01/28/2001



Urban infrastructure constructing;
Plot merge,
Start to rebuild

04/26/2002



Urban infrastructure complete;
Most of houses still has pitched roof

10/24/2003



About 30% of houses became flat roof – rental houses.

08/18/2005



About 40% of houses became flat roof – rental houses.

05/15/2006



About 50% of houses became flat roof – rental houses.

02/09/2007



About 70% of houses became flat roof – rental houses.

06/28/2009



About 80% of houses became flat roof – rental houses.

10/08/2010



Near 100% are flat roof – rental houses.

09/15/2012

5.4 Case Study of Seven Typical Urban Villages in Guangzhou City

5.4.1 Liede Village (G1): an urban village be overall reconstructed

Liede(獵德), located at the verge of the Pearl River and also beside the city central axis of the city in CBD of Tianhe District, is a historic village with more than 930 years history. There were some historic records on it since Song Dynasty in 1080 (LI-Ying, 2011).

Before 1979, it almost maintained the spatial distribution of traditional village like other villages in rural area of China. All the houses in the village are one floor brick building with slope roof, between which is alley with 1~2 m width. After 1979 of economic reform policy, the predominant agricultural economy was broken by the first factory introduced into the village. Its economy started to develop rapidly. Many villagers began to rebuild their house into reinforced concrete frame structure buildings with two or three floors. And most of the houses extended a 70~80 cm wide balcony out to their household site. The alleys in the old region of the village started to be compressed at that time.

In 1994, as the population increased, tow pieces of new area in east and north-west beside the old village were distributed to new house site. As the urban expansion needs more land from the village, the city government converted the collective land into stated owned land and gave compensation to the villagers. Meanwhile, because more and more migrants from other city and rural area inflow the village, villagers utilize the compensation for losing the farm lands from the city government to rebuild their houses again as apartments with 5 or 6 floors. The construction of house in the village fell into a disorder state.

In 1999, in order to deal with that situation, the city government of Guangzhou stopped to certificate villagers in Liede village to build new house and allocate appropriation to upgrade the living environment in the village.

Until that time, the development of built up area of the village has reached its peak and stop to expand. The space structure of urban village of Liede was basically fixed at that time. All the villages were no longer farming and growing vegetables, but changed to grow rent houses in their farmland. Their income was mainly from the dividend of collective property based on the collective land exploitation and housing rent base on their private household site. (WEI-Lihua & YAN-Xiaopei, Sustainable urban-rural relation in rapid urbanization areas --Case of Transformation of "Urban Village" in Guangzhou, 2005). A previous study by Zheng Huihua (2002) showed that 74.8% of family's income comes from dividend and 25.1% from rent, based on 130 pieces of questionnaires in Liede Village. Among the questioned villagers, about 81% are unemployed due to lack of skill and become "objective surplus labor", which is confined as the person who is eager to be employed but has no skill. (ZHENG-Huihua & XIAO-Meiping, 2002) The rapid urban sprawl not only affects the spatial structure of the village, but also greatly affects the economic structure and life style of the villagers.



Fig. 107 Space structure of Liede village basically fixed in 2000

Source: made by author basing on photos from Google Earth

At the end of 2003, the autonomous village committee was reorganized as a community sub-district office of the municipal government, and a joint-stock company, Liede Economic Development Corporation, was established to represent the economic benefit of the villagers. From 2003 to 2007, Liede Sub-district Office and Liede Economic Development Corporation were continuing to explore the village planning of overall transformation as preparation of the Asia Game Guangzhou 2010. During that period, urban space outside the village has undergone enormous changes. Lots of urban public facilities, high-rise office buildings, high-rise residential buildings, parks and so on continued to fill all the vacancy lands surround the village.

In 2008, the urban village of Liede was razed to the ground and rebuilt from zero. With 2 years construction, in 2010 before the opening of Asia Game in October, it was totally replaced by an urban community of 37 neat and unified high rise residences with 26~40 floors, of which the plot ratio is 5.2, and site coverage is 28.1%.

At that point, an urban village, generated from a traditional village with a long history, was set to be death with a life time of 30 years as the rapid expansion of urban space. That transformation process of Liede village has deemed to be “Liede Style” in China, which aroused hot academic controversy in the field of transformation of urban village driven by the municipal government.

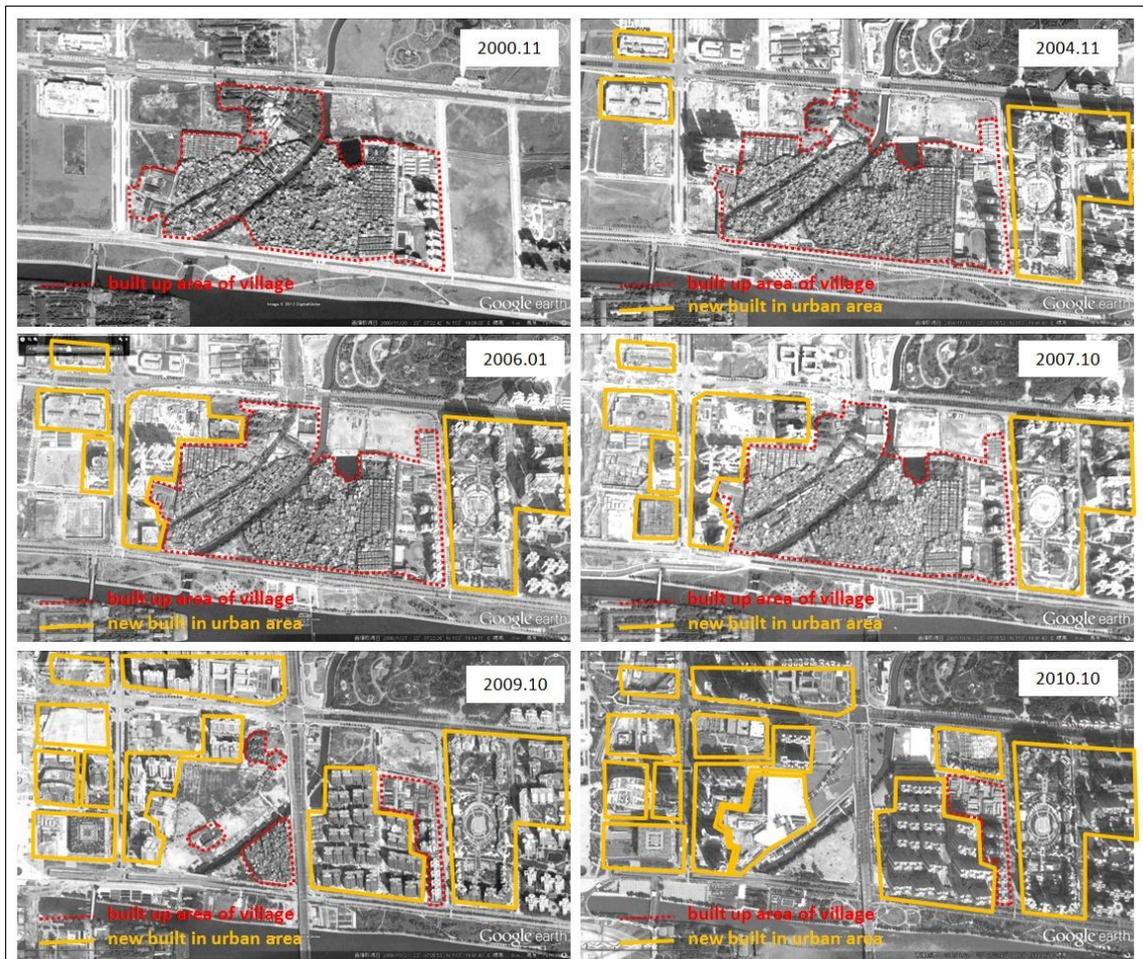


Fig. 108 Evolution of Liede from 2000 to 2010
Source: made by author basing on photos from Google Earth

5.4.2 Xiancun Village (G2): an urban village being demolished

Xiancun village is located in north of the Pearl River New City. Since the late 1990s, with the propulsion of constructing the Pearl River New City, the original built up area had been continually squeezed. As you can see from the satellite image, from 2000 to 2000, it built area is shrinking. By 2010, it was basically restricted in a box by urban road. And mainly built up area

ranges are: east to the Liede road, west to Xian village road, south to Jin Sui road, north to Huangpu Avenue, with a total land area of 184,900 m².

The transformation work of Xian village was started from 2008. This work was listed by the municipal government of Guangzhou as a key project in its agenda of the old urban area reconstruction, but has being trapped in the dilemma of demolition. *“On the morning of July 4, 2011, the construction workers and the security guards entered in the village and began to demolish the villagers’ house. As no completed preventive measures, the external walls of some house, in which some left-behind families are still living, are shocked to crack when their nearby houses were demolished”*. The village was surrounded by the slogans and the iron sheets. Most of private houses close to the road have been demolished. Xian village has more than 1800 houses (include village collective property), and there are still 506 private houses which did not have agreement for demolishment, involving more than 300 households. Because the rate of the villagers who has signed the remove agreements has less than 90%, the transformation work of Xiancun Village only can be proceeding intermittently. (ZHANG-Lang, 2012)

The transformation scheme of Xiancun Village has been confirmed and opened to public, but due to the demolition work not smoothly works, their implementation only has to be delayed. According to the approved transformation scheme, Xiancun Village has 162,800 m² of construction land. Total building area has about 1.07 million m², within which the rehabilitation area covers 0.62 million m², the village collective owned hotel covers an area of 0.03 million m², and commercial area covers 0.457 million m². The plot ratio is 7.4. On July 3rd, 2012, the detailed relocation planning of transformation of Xiancun Village was opened to public. Xiancun Village will be divided into four parts after demolition and reconstruction. Within the two plots near Huangpu West Road, it is proposed to build 24 high-rise collective residences, about 29, 32 and 33 floors, several comprehensive community centers, and one kindergarten. The residential buildings around the boundary of the village are for the indigenous villagers.

In order to promote transformation work, the collective economic organization of the village, Guangzhou Xiancun Village Industrial Co., LTD., invited POLY Real Estate Co., LTD. to participate in the transformation work. The cooperation mode is “the village collective economic organizations as the main body, gather funds for reconstruction through auction of the collective owned land”. In order to solve the problem of demolition, in November 2011, POLY plan to set aside 300 million RMB as a subsidy to encourage villagers to remove away as soon as possible. It firstly gave an amount of 1.024 billion Yuan as an assurance deposit. On July 4th, POLY Real Estate handed out nearly 150 million RMB once at a time as the yearly removing compensation to the villagers. But the villager still compliant the unfair treatment on the compensation in charged by village committee. They are still in the fight currently.



Fig. 110 On daytime but dark road in Xiancun



Fig. 109 Garbage dropped at dark roadside in Xiancun



Fig. 111 On daytime but need electric light in Xiancun



Fig. 112 Poster ask to resist crime in Xiancun



Fig. 113 Evolution of Xiancun from 2000 to 2010
Source: made by author basing on photos from Google Earth

5.4.3 Shipai Village (G3): an urban village still active in city center

Shipai Village located in the most prosperous area in Tianhe District, on the north of Huangpu Avenue, south of the crisscross of Tianhe road and Zhongshan Road, west of Shipai East Road, and east of Shipai West Road.

The current physical space form of Shipai village is due to motivation of economic efficiency of the villagers. They built high-density rental houses of five to six floors by themselves for gathering house rent. Roads are narrow and bend in the village. One house almost touches another on the other side of the road between them. Buildings are disorderly scattered here and there. Quite a lot of places are very damp and dirty. Some places have no sunshine almost over the whole year. And building safety there is a problem, architectural appearance having no aesthetic feeling, too. (WEN-Fenghua & LI-Lixun, 2004)

The evolution history of Shipai village's becoming an urban village is also from 30 years ago, after the reform and opening up. Before it become urban villages, Shipai village is a common agricultural village on the delta of the Pearl River, which was founded in 1273 (the southern song dynasty) and has a history of 740 years by now. Main surnames of the village are Chi (池), Dong (董), Pan (潘), Chen (陳), Xian (洗) and so on. To coincide with the implementation of the east movement strategy of Guangzhou City, land requisition in Shipai village began from 1980s, and ended in the mid 1990s. After Deng Xiaoping making his southern tour in 1992, the farmland outside village was quickly requested. The village's built-up area and the village's territory are basically overlapped by 1994. From then on, the village's economic style is turning to rental properties, and the agriculture industry is gradually substituted by service industry. As location advantages highlights, the villagers began to build low-rent houses on the original land, so it gradually became a settlement of the floating population.

Floating population living in Shipai has exceeded the number of local residents. (LAN-Yuyun & ZHANG-Ruli, Analysis of the causes of urban village - A case study of Shipai Village in Guangzhou, 2005) It is one of the most intensively developed urban villages in Guangzhou, with a population of 55,000, of which about 15% are original villagers. However this official Statistic is much less than the true numbers as a lot of people don't register to hold the Temporary Resident Permit. It is reported that there is nearly 100,000 people living inside about 3600 self-built apartments which covers about 0.6 km² lands. (JIANG-Lingfeng & Du-Chilong, 2012)

Throughout the development process of the Shipai village in the mid-90s, after the agricultural land was requisitioned, the village field is basically overlapped together with the newly built constructions. Its space structure was basically formed in the late 90s. From the satellite pictures, it can also be found that the main built up area from 2000 to 2010 has rarely changed. The changes are as following: the peripheral urban environment is continually being changed, urban infrastructure was continually improved, and high-rise apartments and office buildings are increasing.

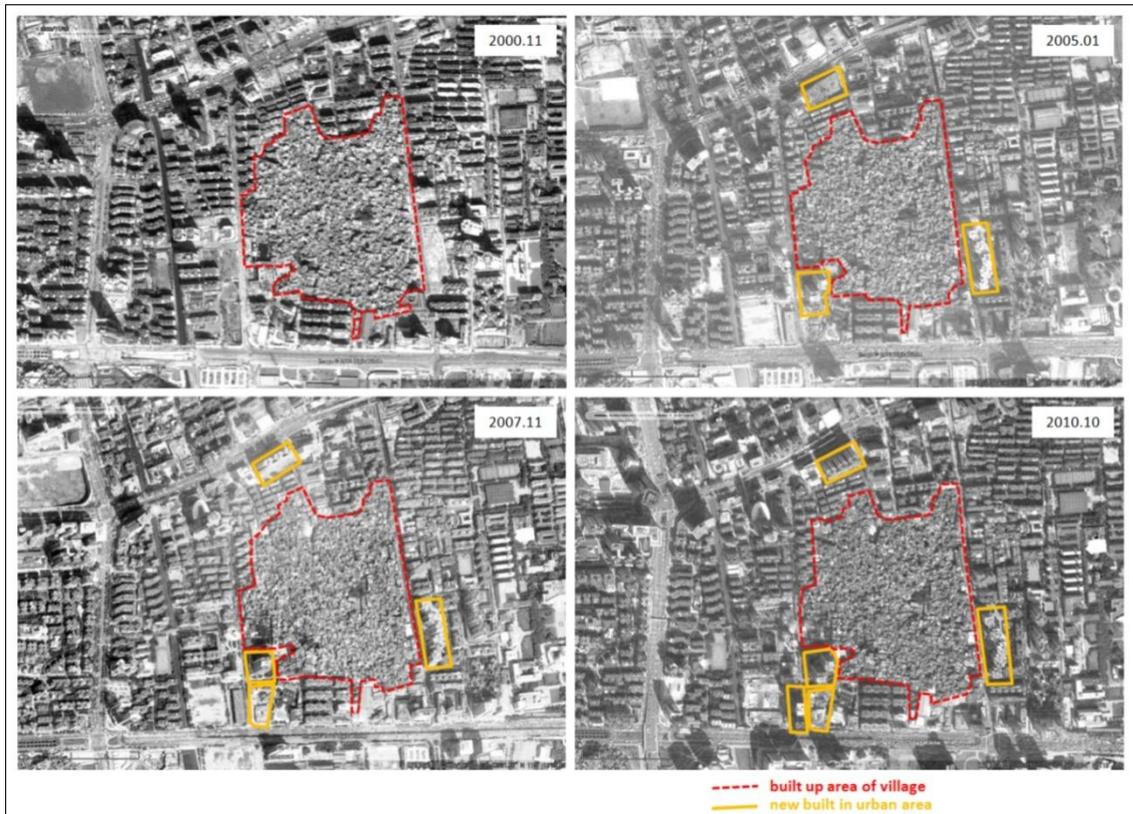


Fig. 114 Evolution of Shipai from 2000 to 2010

Source: made by author basing on photos from Google Earth

The growing collective economy based on the land resources, is the condition for Shipai village to survive through the years of strong pressure of urbanization. That is, for non-agricultural village, the land is their most valuable resource. In the process of great quantities of village's farmland being requisitioned into urban construction land, villages obtain some compensation for land expropriation according to the provisions of the policy at that time, and most of the money was kept in the village collective. Furthermore, village often kept some retention of lands after land expropriation. Considering the farmers' needs for the future production and living, according to the relevant provisions, villages can get retention of around 10% of the land expropriation for the future economic development. Thanks to the retention

policy, Shipai village leaves about 400 MU of land from the more than 4000 MU of land expropriation in total for community's future economic development. This retention of land fueled the village public economic development for Shipai village afterwards. Shipai village's collective economy is growing on that basis.

In 1987, the original company, named Joint Company of Agriculture, Industry, and Business of Shipai village, was changed its name to the Economic Development Company. The company's fixed assets reached more than 5 Million RMB, and the total revenue was more than 14 Million RMB at that time. By the year 2003, Sanjun Company, which was restructured on the base of the village original collective economy, occupied 250,000 m² of rental property, beside more than 100,000 m² which are under construction. The company's total value of the fixed assets reached 840 Million RMB, and the total revenue reached 200 million RMB. Within only 13 years, the collective economy increases the total value of the fixed assets more than 160 times. In 2006, Sanjun group's revenue is 302.79 million RMB. Following by the growth collective economic, the villagers' share out of profits is also increasing, and the individual economy is also growing at the same time. According to statistics of 2004, each villager, even if don't do any work, could get at least 6000 RMB per year, which is from the share out of profits.

Table - 22 Summary population and economic data on Shipai village

Total population of Shipai village (2000)	51,100
Permanent village resident population (2000)	9,181
Land area of ancestral inhabited village	0.76 km ²
Number of buildings in inhabited village	3,656
Rental units	11,492
Mean height of buildings in stores	5.06
Density (floor-area ratio) of inhabited village	4.97
Total floor space of inhabited village	3.2 m m ²
Number of street-level commercial outlets	1,228
Commercial services for the local population	766
Property-based revenues to Sanjun Group (2004)	45 m USD
Property-based revenues to Sanjun Group (2001)	24 m USD
Property revenue as % of total revenue (2001)	37.1
Average annual growth rate in income for Sanjun 1985–2001	19%
GDP Tianhe district (2010)	29.6 b USD
Service sector as % of GDP of village (2001)	64.8

Sources: Tianhe district (2010), National Economy and Social Development Statistics Bulletin, and Guangzhou Planning Bureau

5.4.4 Longdong (G4): an urban village vividly developing in urban fringe

Longdong village is located in the northeast part of Tianhe District, nearby the south China Botanical Garden, with Guangshan road, south China speed line, and Beijing-Zhuhai expressway respectively across through the south or east of the village.

The village was built from southern song dynasty, which has a population of 7800 people, cultivated land area of 2300 MU (about 153.3 Ha), forest area of 4000 MU (about 266.7 Ha). The built up region covers an area of about 380,000 m², total construction area of 660,000 square meters, including the villagers' residential construction area of 580,000 m², the village collective property housing construction area of 80,000 m². The building density is 50.7%, and plot rate is 1.74. The land adjacent Guangshan road was set for economic development, and the central and northern parts are set for residential development for villagers (HE-Yu, 2004).

Longdong Village vigorously propelled the transformation and construction of village infrastructures during 2000 to 2005. There was a large scale of infrastructure and private rental houses construction. The village landscape had changed a lot at that time. The space structure and road network of the village which we can see now was formed at that period of time. Fumin Road is the north-south main road, and Yinfu Road and Yinxin Road connecting more than 50 alleys in the village. In 2004 the village built Longdong East Street which is a north-south throughout the central village. The newly built road network greatly eliminates the hidden trouble that the fire channel was not smooth.

Looking from satellite image, during 2004 to 2010, the outline of main built up area of the village is basically not changed. But it can obviously observe that the houses in the village are in constantly updating. The shadow in the picture of 2004 obviously indicated the height of the house is largely different, because the villagers began to dismantle the old houses of 1-2 floors and reconstruct buildings of 5-6 floors at that time. The shadows were shrinking in 2006. In 2009, there was basically no shadow left, because the internal reconstruction has been basically completed. New commercial buildings, facilities and factories, etc. gradually appeared on the collective land for economic development, which is outside residential area of the village. The built up area of the whole village is continuously growing.

Longdong started to evolve as urban village nearly 10 years later than Shipai. The pattern of old area and new built area in the village can be clearly distinguished from the built up area now. It keeps the almost characteristics in the different stage of the evolution from traditional village to urban village. Longdong Village is a good case for the study of morphological evolution of urban village.



Fig. 115 Location of Longdong village in Guangzhou City
Source: made by author based on the Baidu map



Fig. 116 Main built up area of residence of Longdong Village
Source: made by author based on photo from Google Earth



Fig. 118 Satellite photograph of Longdong Village, Guangzhou, 2010.
Source: from Google Earth 2012



Fig. 119 Map of Longdong, Guangzhou, 2007.
Source: from Committee of Longdong Village



Fig. 120 Evolution of Longdong from 2004 to 2010
 Source: made by author basing on photos from Google Earth

5.4.5 Lijiao Village (G6) in Central Axis of the City

Lijiao Village originally created in southern song dynasty, has been 800 years of history, which has remained 13 ancestral halls, among these halls, the Wei's ancestral temple was built during Wanli 43th year of Ming dynasty (in the year of 1615), is an important cultural relic protection unit of Guangzhou. Lijiao village covers an area of 4.39 km², which is the largest urban village in HaiZhu District. Lijiao village has a population about 43,000 persons, including about 13,000 persons of local population, and about 30,000 persons of floating population.

Lijiao Village also has the common features of China's villages, the main problems are:

- 1) Chaotic management confusion and poor public security.

Because urban villages are different from cities in many aspects such as the land system, household registration system, the social security system and so on, it is difficult for municipal government to manage them efficiently. At the same time, house rent in Lijiao Village is lower, only a third of cost compared with the surrounding neighborhood house in urban land. Large amounts of floating people can live in the village by paying low rent. The result is that the social composition in village is becoming so complex that criminal activity frequently occurs.

2) Large number of illegal construction

As urban sprawl, land value sharply increases. Compared to the general commercial housing in urban land, the villagers don't have to pay high costs to buy the land, and only need to pay for the basic cost for the construction. Driven by the interests of low investment and high returns, the villagers often break through urban planning management system, to new build illegal houses, or illegal expansion and rebuilding. The plot ratio in village has increased dramatically. Lijiao Village has a total number of 5354 house at present, of which 39 rooms are approved. In addition, most of the houses are the add layers and expansions. It exacerbated the deterioration of the living environment in the village.

3) Infrastructure woefully inadequate

The categories of public facilities in Lijiao Village are relatively complete, such as one middle school, one elementary school, one kindergarten, one nursery, one nursing home, one community center, one institute, one meat & vegetable market. But besides the indigenous villagers, there are large amounts of floating population, who also share those facilities. The quantities and capacity of public service facilities cannot meet the increasing demand. The municipal infrastructures of Lijiao Village also need to be improved, such as voltage shortage, sewage emissions and other issues. Roads and facilities for fire control are still insufficient, which leads to potential safety hazard.

4) Bad living environment

Lijiao Village was inhabited by a large number of floating people who are often of low education quality, and have no identification to the village. Their health consciousness is poorer, littering phenomenon is relatively common. The inefficient environmental management, inadequate sewage pipeline, lacking of governance of the river, and insufficiency of other municipal facilities, lead to the deterioration of living environment.

About 2000, the spatial structure of Lijiao Village has basically been shaped. The periphery of residential area located collective factories Outside the factories are land which are requisitioned and waiting for development. With the urban infrastructures spreading to the south, the lands for factories outside of the residential building are gradually eroded by the urban development. Lijiao Village station of Guangzhou subway (Metro Line 3) started in 2005, which caused the new demolition of houses near the station. On the northeast of the village, factories were substituted by the Rome Home Estate. During 2000 to 2010, the outside contour lines of the residential areas are almost the same as the original one, only with some areas being slightly expanded outward. But factory area is shrinking, which is replaced by urban

infrastructure, commercial and residential buildings, as a result the existing vacant space is gradually filled.

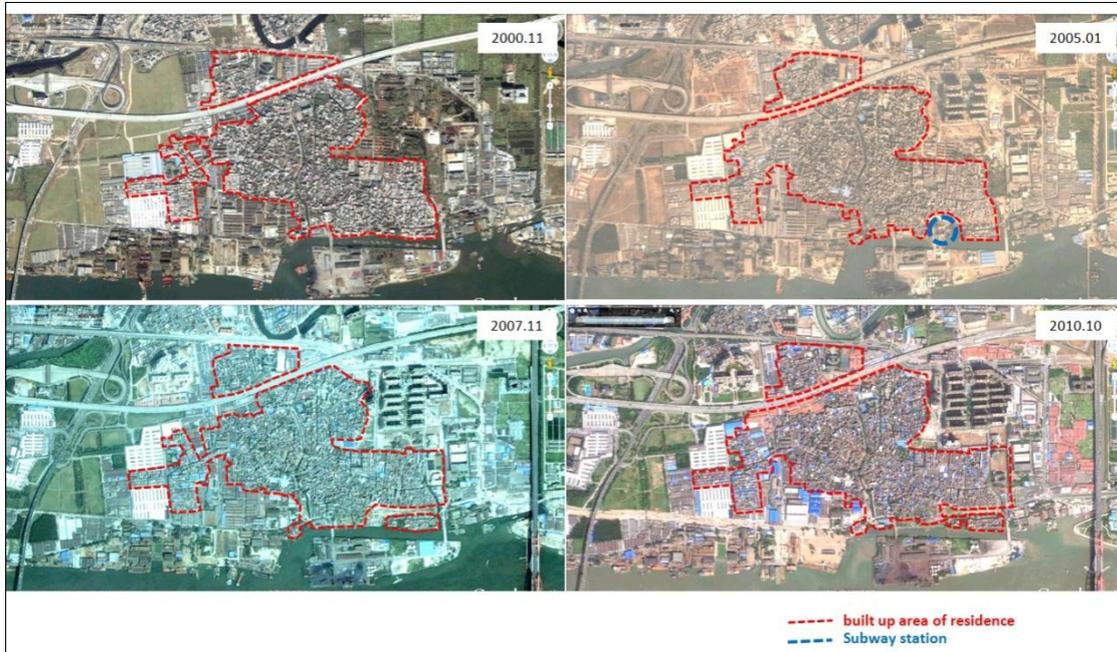


Fig. 121 Evolution of Lijiao from 2000 to 2010
 Source: made by author basing on photos from Google Earth

5.4.6 Xiajiao Village (G7) in Central Axis of the City

Xiajiao Village is located in central part of Shajiao island, Panyu District, with an area of 1450 MU, north to the pearl river and Haizhu District on the opposite side of the river, existing 551 villager households, 1937 people, temporary residents of about 2500 people, whose GDP is 33.75 million Yuan in 2007, including the industrial output value 3.5 million Yuan, village collective economy income 7.56 million Yuan. And the villagers are most engaged in the greening seedlings and flower planting.

Owing to separated away from Guangzhou city by the Pearl River, Xiajiao Village was still seen as a traditional villages before the year of 2000. About 2005, Xiajiao Village was beginning to evolve as urban village as the construction of Xiajiao Village station on the metro line three and Xinguang Bridge. The villagers' built up area was extending outward at the same time, accompanied by the constantly updating and rebuilding in the village. The collective economy was established on the land for developing. And many plants and commercial wholesale malls were booming after the expropriation of agricultural land by the municipal government. As a result, the entire village is constantly expanding.

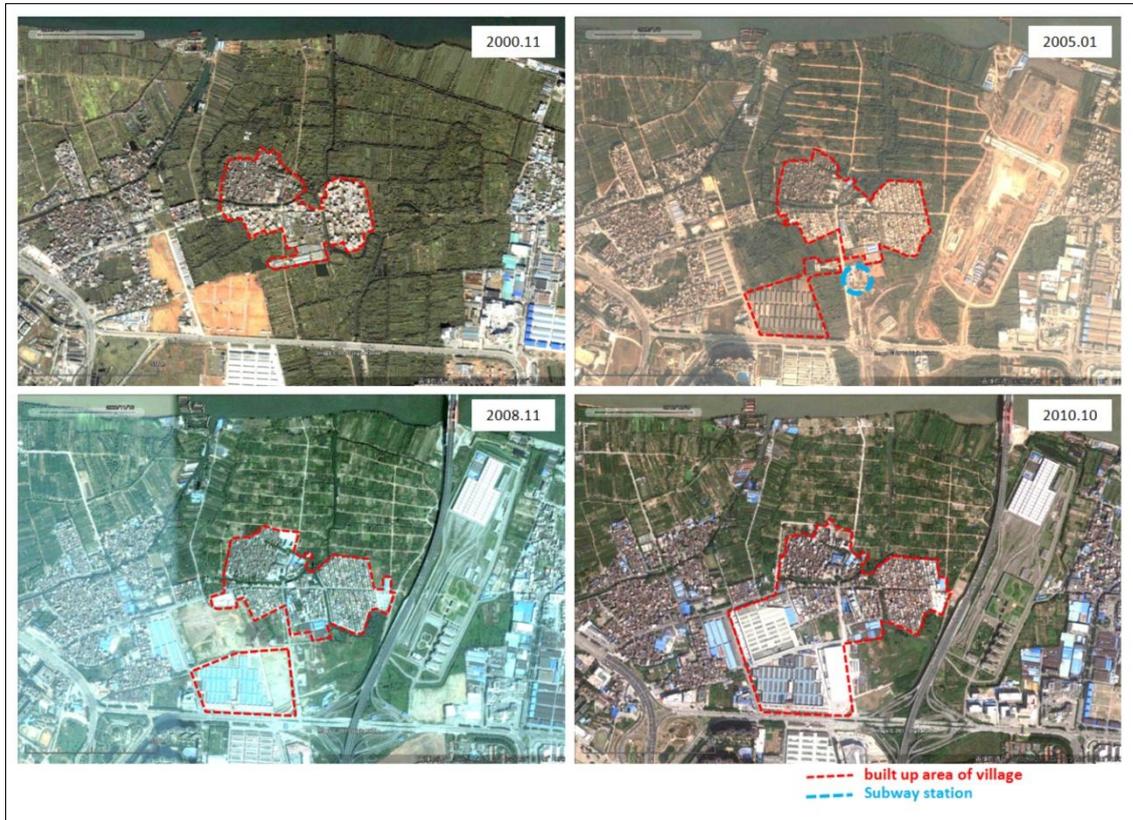


Fig. 122 Evolution of Xiajiao from 2000 to 2010
 Source: made by author basing on photos from Google Earth

5.4.7 Nating Village (G8) in Guangzhou Higher Education Mage Center

Luckily, Nating is well protected since the construction of the University City of Guangzhou in Yingzhou Island after 2004. Nating Village is located in the little Guwei Island, Panyu District, on the southwest corner of the Guangzhou Universities Town. The Guangzhou Universities Town started construction in 2003, which came into use in 2005. The town currently has 10 colleges and universities in it, and lives about 160000 people including teachers and students. According to detailed planning of the Universities Town, four traditional villages have been preserved such as Begang village, Nating village, Beiting village and Huishi and so on, with a total area of 116.7 m², a total population of about 13300 people. (CHEN-Junquan, 2005)

Before the higher education mega city started to construction, most the villagers' houses were built before 1990s. Most houses are of brick structure, slope roof with 1-2 floors. The traditional pattern of the village has been well reserved. And inside the village alleys are narrow, mostly less than 3.5 meters, and part of the roads are still the dirt road. And public facilities of

education, health care, fire control are serious lack of. At the beginning of the construction of the higher education mega city, driven by economic interests, the villagers began to pull down the old houses and to rebuild new rental housing on the original homestead. As the increasing of the villagers' income, there are the more and more cases of new building and rebuilding are, but many are illegal expansion and addition.

Because of the construction of higher education mega city, Nanting Village quickly became an urban village. Agricultural lands in the village have all been expropriated, the rest are only left for the living function and development of collective economy. The original economic structure based on agriculture is broken and just at the crossroads of survival. Great changes have been taken place in the Nanting Village following by the constantly promoting of the external urban construction from 2004 to 2010, even if the village is being limited by state owned land. Villagers gradually dismantled the original 1-2 floors brick houses, and built as rental house with 5-6 floors on the original homestead. The outlines of the built up area are constantly being extended outward.

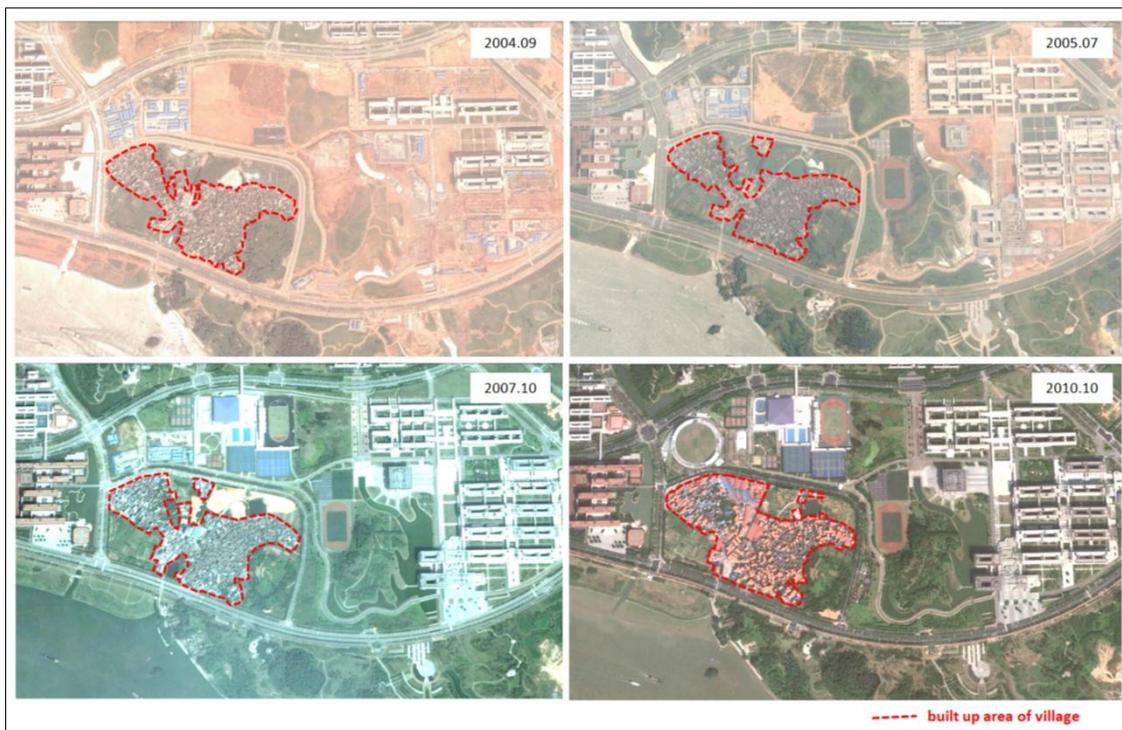


Fig. 123 Evolution of Nanting from 2004 to 2010
 Source: made by author basing on photos from Google Earth

5.4.8 Case Study Summary and Discussion

The Pearl River New Town used to be on the outskirts of Tianhe District in 1990s, but now it has become the central area of the new city. The urban villages in the central area (Liede, Shipai and Xiancun Village) were explored early, starting in the 1980s, and villages' shapes are basically fixed in the 1990s.

Liede Village has been completely ended its history of being an urban village for its special position. Xiancun Village is ready to transform and just under removing now. Shipai has been listed as a requisitioned object for a long time, but it is still a mature urban village with typical spatial characteristics of urban villages because of its powerful economy.

The villages far from the center of the city are also gradually expanded as the investment of the road infrastructure and public transportation by municipal government.

Due to the central axis of Guangzhou extends to the south from the Tianhe District to the Haizhu District, Haizhu District rapidly developed during the 2000s. Because Metro line 3 extends from Lijiao to Xiajiao along the urban central axis, Lijiao Village also began to face demolition and transformation. And drain Xiajiao Village and Lijiao Village are on the opposite sides of the river. Due to the constructions of Xiajiao Village Station of the metro line 3 and Xinguang Bridge, Xiajiao also began to develop during 2000 to 2010, and the built up area expanded unceasingly.

The development of Longdong Village is due to the gateway construction of south China expressway at Longdong, the expansion of Tianyuan Road, and the increasing bus lines such as 28th road, 39th road, 30th road, 84th.

Nanting Village's development is due to the construction of Universities Town of Guangzhou. Because villages have more land resources to develop, so the village's built up areas rapidly expand abroad.

These villages are becoming urban villages based on low-rent income all due to the rapid expansion of cities made villagers lost their lands which ago has been predominantly agricultural lands of the traditional villages. They are gradually forced to transform the agriculture land into low-cost rental houses which is densely scattering in urban villages, and the rent is gradually becoming one source of the most important income for the villagers.

Compare the satellite photos taken on different date, spatial developing process of those seven villages from 2000 - 2010 can be summarized as 3 types: expansion, mutual infiltration and compressed. Some of them are compressed by urban space, such as Liede, Xiancun and

Shipai in the new central region of the city. Liede Village with more than 800 years history is totally replaced by high rise residential before the opening of Asia Game Guangzhou 2010. The built up area of Xiancun had been narrowed as the development of Zhujiang New Town. It is also set to reconstruction and now is being demolished. Shipai was narrowed before during 1990s and has struggled to be reconstruction by the government from 2000 to 2010. Because there are many scholars holding opposing views against replacement, its future has not been determined. Longdong and Xiajiao are expanding on their farmland before the wave of urban expansion comes. Luckily, Nanting in Yingzhou Island is overall preserved when the construction of the Guangzhou Higher education Mage Center started in 2004, but it also expanded its outline of built up area to occupy the space inside the delimitation of boundary given by the government's planning.

Table - 23 Three types of spatial developing pattern of 7 urban villages in Guangzhou

3 Type	Expansion	Mutual infiltration	Compressed
Graph			
Case	Longdong(龍洞), Nanting(南亭), Xiajiao(夏滘)	Lijiao(漚滘)	Liede(猎德), Xiancun(洗村), Shipai(石牌)

Source : made by author

5.5 Chapter Summary and Findings

A theoretical outline of the morphology of urban village has been drawn in this chapter. The morphology of urban village is examined as two aspect, static aspect and dynamic aspect. First, in static aspect, urban village is decomposing as the six components. Second, in dynamic aspect, urban village is divided as the four stages of the developing process.

According to this observation method, the social-physical character and developing process of urban village in Beijing, Guangzhou and Shenzhen were illustrated by the graphic data and numeral data both from the field survey and other relevant literatures. The findings of this chapter are summarized as following.

1) Social-physical character of urban village in Beijing, Guangzhou and Shenzhen

Via the decomposing method, which developed by author basing on Salat's theory, there are six basic characters summarized as following corresponding to the six components of urban village:

First, the people in urban village are including the group of indigenous villagers and the group of floating people. The indigenous villagers play a dominant role in urban village. All the rental houses are constructed by indigenous villagers, not by the floating people. The activities of illegal construction and informal business in urban village are quite active.

Second, the road network in the old area of the village has always been reserved and tends to be irregular and complex, while it is regular planned as a simple grid pattern in new developed area. No matter the irregular pattern or regular pattern, the road network is accessible from the entrance of the village to each private house.

Third, the basic definition of land use in urban village is residential land. Actually, as a community, residence and commerce are efficiently mixed together providing convenience for daily life and leading the vivid atmosphere of daily life.

Fourth, alienated from urban administration system, the infrastructure construction in the villages is in charged by the village itself, and it always lags behind the common urban spaces.

Fifth, the buildings in urban village are gradual evolving from private self-living houses into multi-storey rental houses. In old area, traditional self-living house are rebuilt as rental house. In new planned area, the villagers also build their house as rental house. Urban village becomes low-cost rental housing settlement for floating people.

Sixth, the common space of road and alley in urban village are commonly occupied and compressed by the villagers' rental houses and private belongs. In the case of Guangzhou and

Shenzhen, the open space in front of the ancestor hall is well reserved although the other places in the village are crowded with rental house.

2) Common developing process of urban village in Beijing, Guangzhou and Shenzhen

As the rapid urban sprawl, many traditional villages in suburbs are forced to become urban village. The farm land of the village is deprived by the municipal government. As no land for agriculture, villagers utilized the compensation from the government, including money and constructible land, to build rental houses to earn their lives, while shielding the floating people from the other rural area.

Villagers seize the time to expand their field of actual possession, before the arrival of official urban development. Although the total amount of their territory becomes less and less squeezing by urban space, the built-up area of the settlement always gradually expands outward, not only factories and commercial facilities, but also plenty of private rental houses. That phenomenon is more obvious for the villages located in the outskirts of the city.

Besides outward expansion, the internal renewal also occurs inside the village. Small size self-living houses were gradually rebuilt as big volumes of rental houses. The plot coverage and floor area ratio of the village dramatically rise.

After the official urban development comes, the municipal governments pay more attention on those villages as their deteriorating living environment and security problem. Then most of urban villages are forced to face the fate to be transformed by the government. Most of cases in Shenzhen have already been upgraded to improve the infrastructure, financial supported by the municipal government. On the contrary, most of cases in Beijing have been demolishing or had reconstructed as commercial high-rise collective house.

3) Morphological evolution of urban village is a construction process of rental houses

Based on the findings of social-physical character and developing process of urban village, both the static aspect and dynamic aspect of the morphology of urban village mentioned above, it can be found that rental house is the focus. No matter outward expansion or internal renewal, it is the behavioral result of rental houses construction made by each individual of villager guiding by the informal settling institutions. From this study, it can confirm that the construction process of rental house has most impact on the morphological evolution of urban village. Leaving aside the spatial structure of the whole village to observe in its components, it could be considered that the essence of the morphological evolution of urban village is actually a construction process of rental houses implemented by each individual of indigenous villager.

CHAPTER-6

INFORMAL RULES AND MORPHOLOGICAL EVOLUTION OF RENTAL HOUSE IN URBAN VILLAGE

6.1 Chapter Introduction

As the previous chapter found, the evolution of urban village from traditional village to informal settlement is actually a construction process of rental house made by each individuals. From the microscopic point of view, the morphological evolution of the whole village can be observed as a developing process of rental houses. Urban village is composed by those basic units of rental houses, which are the indigenous villagers’ visible behavioral results, representing the villagers’ social relationship. And what the specific invisible informal rules exist behind those visible results is the focus of this chapter.

6.1.1 Morphological Composition of Rental House and Informal Settling Institutions

The morphological composition of rental house here is observed as three aspects, the land occupation of rental house (LO), the architectural form of rental house (AF), and the gray space of rental house (GS). LO and AF refer to the constructing process, GS refer to operation stage.

As the findings in chapter-4 discussed, there are some informal settling institutions exist in urban village, such as (A)the tradition of inhabiting with consanguinity and territorial relationship, (B)the custom of ambiguous boundary between common space and private space, (C)the tradition of self-building and construction team, and (D)the mentality of “FaBuZeZhong” and conformity. When focus on the specific composing units of urban village, the relationship between those informal settling institutions and the morphology of rental house are illustrated in the table as following.

Table - 24 Relationship between morphological composition of rental house and informal settling institutions

		Informal Settling Institutions			
		A	B	C	D
		Consanguinity & Territorial Relationship	Ambiguity of Boundary between Public and Private	Self-building & Construction Team	Mentality of “FaBuZeZhong” and conformity
Morphological Composition of Rental Houses	Land Occupation	○	○	○	○
	Architectural Form	○	○	○	○
	Gray Space	△	○	×	○
Remark		○ correlated, △ basically correlated, × uncorrelated			

Source: made by author

On one hand, as the indigenous villagers are the owners of rental houses who do dominate the constructing process, the villagers’ consciousness, all of those four informal settling institutions, would be projected onto the physical entity of rental houses. That is to say, the land occupation and architectural form of rental house are related to all the informal institutions.

On the other hand, when the rental house enters the operation stage, of course, the effect of construction tradition (C) is over. But, in the operation stage of rental house, because the floating people enters as the new actor, both of indigenous villagers and floating people are become the actors who would leave visible physical results. The villagers and tenants of floating people becomes a new group with territorial relationship. Both of them comply with the informal rules to use the gray area of ambiguous space in front of each rental house.

6.1.2 Specific Informal Rules Deducing from the Visible Behavioral Results

Corresponding to the three morphological composition of rental house mentioned above, more specific informal rules were deduced in details from the villagers’ visible behavioral results. They were classified as three categories, such as land using rules, construction rules, and operational rules. Those specific rules and their visible behavioral results are showed in the table as following. The illegal or informal land occupation are tacitly approve by the informal rules such as “one family not only can hold one homestead”, “home stead boundary extend little by little when rebuilding” and “entrance steps can extend outside the boundary of homestead”. The most obvious characteristic of the architecture form of rental houses is that most of them are heavy boxes with light foot, which is attributed to the informal overhanging rules. Another characteristic of rental house is that most of them are higher than the official standards constrained, and have different kind of addition on the top of each building. That is attributed to the informal vertical expansion rules. The custom of ambiguous boundary between common space and private space of Chinese people also leads the chaotic situation that public behavior result and private behavior result are mixed together in the voids of space around rental houses. The following sections would verify them by the graphic analysis and numeral evidences.

Table - 25 Informal rules and its corresponding visible results

Informal Rules		Results	
Land using rules	one family not only one homestead	illegal land occupation	
	site extension when rebuilding	informal land occupation	
	entrance steps extending outside homestead	informal land occupation	
Construction rules	overhanging	reserve accessing space in the alley	most of rental houses are heavy box with light foot, outline of floor plan out offsetting from second floor
		overhangs beyond the common land	
		overhangs as wide and high as possible	
	vertical expansion	the later constructing the higher can build	most of rental house are illegal building, much higher than the official standards constrained
		build loft or implicit floor	
		adding on the top of existing house	
Operational rules	private in public: gray area can utilized as private owned	business intruding to common space	
	public on private: public facilities can set on private walls	street lamp, cables, signal transfer set on private walls	

Source: made by author

6.2 Land Occupation and Informal Land Using Rules

6.2.1 One Family Not Only One Homestead

The policy of “One family only one homestead” (一户一宅) is made by the central government in 1998 to control the peasants’ housing construction and to protect arable land resources.

Rural homestead in China is called as ZhaiJiDi(宅基地). ZhaiJiDi is the land that rural farmers or individuals take to use as a residential site in the collective-owned land. According to the provisions of in case of selling or lending the house, the application for new homestead could not be approved. And the land that peasants use to build houses and courtyard could not exceed the standards prescribed by the local government of Provinces, Autonomous Regions or Municipalities.

<The land administration law of the People's Republic of China (amendment2004)> has the following relating provisions:

*Article 62: **One rural family can own one piece of land for building private house**, with the area not exceeding the standards provided for by Provinces, Autonomous Regions and Municipalities.⁶*

Each local government’s regulation on housing land size is different. For Example:

In Beijing City, <Beijing’s Implementation of the Land Administration Law of the People's Republic of China>(1999.6.1) includes the following requirements⁷ :

*Article 40: Standards for villagers' housing plots, in peri-urban areas and suburban areas with more people and less land, **each household shall not exceed 0.25 Mu(approximately 166.67m²), and the other household shall not exceed 0.3 Mu(approximately 200m²)**. District government or county government should formulate the specific criteria and standards. When the original homestead exceeds the prescribed limits, the excess part should be gradually adjusted in accordance with the township (town) village construction planning.*

However, in Guangdong Province (Guangzhou City and Shenzhen City are governed by Guangdong Province), <Guangdong’s implementation of the Land Administration Law of the

6. The land administration law of the People’s Republic of China (amendment), http://www.gov.cn/banshi/2005-05/26/content_989.htm

7. [http:// Beijing’s implementation of the Land Administration Law of the People's Republic of China,1999, in Chinese, www.chinasus.org/policy/local/20090929/54127-4.shtml](http://www.chinasus.org/policy/local/20090929/54127-4.shtml)

People's Republic of China >(2000.1.8) includes the following requirements⁸ :

Article 36: ***One rural household can only own a homestead***; the area of newly approved plot is performed according to the following criteria: ***less than 80 m² in plain areas and suburban areas; less than 120 m² in hilly area; less than 150 m² in mountainous area.*** Areas where conditions permit should take full advantage of the wasteland as a homestead, and to promote farmer apartment-style housing.

“One family can only have one homestead” is the national regulation. The size of each homestead is determined by the local government according their local situations. However, those regulations do not properly implemented by the local government and the village committee, off course do not been well complied with by the rural householder. Just like the “One-Child policy” which started to implement in 1979, many families have more than one child in rural area, as they can pay a fine to have the second child. Villagers can hold the second homestead by pay money to the government. The flowing figure shows the average number of houses that each family holds in urban village of Futian District, Shenzhen. We can see that the families in every village hold more than one house. In the Shamei Village and the Shuiwei village, the average number is more than 3. That is to say, “One family not only can have one homestead” is one acquiescent rule for the villagers in urban village of Futian District in Shenzhen City.

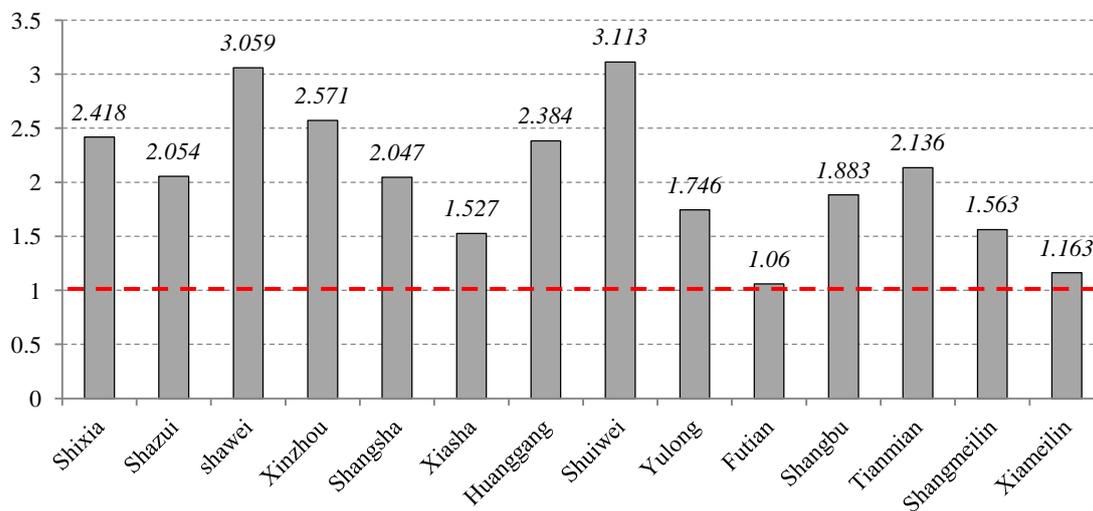


Fig. 124 Average number of houses each family holding in urban village of Futian District, Shenzhen

Source: Shenzhen city planning and land committee

8. <Guangdong's implementation of the Land Administration Law of the People's Republic of China (2000.1.8)>, in Chinese, http://www.mlr.gov.cn/zwgk/flfg/dfllfg/200804/t20080414_101039.htm

6.2.2 Site Extension When Rebuilt in Old Area of the Village

In old area of the village, villagers expand the boundary of the house site little by little to the alley space when they rebuilt their house. In that way, the old alleys, 1-2 meters width at the very beginning, are getting narrower and narrower by the constantly push from both sides.

On one hand, the municipal government would never be able to have an eye on a few tens of centimeters construction overstepping the building site. Actually, the municipal government do not has the right to control the construction affair in collective own land, as there is no laws as basement. On the other hand, the village committee with only a few staffs also has enough power to manage that. So it depends only on the villagers' ethical constraint to obey the common rules. Driven by economic interests, and since there is no formal written regulations to constrain, some villagers break the common rules to expand the site to get more rental building area. Under the social psychology of conformity, if one villager expanded to occupy the alley successfully and without punishment, the others would all follow his way.

Thus, a new common sense generates in urban village that: “when rebuilding on old site, the common land of alley can be occupied little by little, some days it can become private land”, as an old lady who live in JuYuanLi in Longdong Village said. During the field survey, she told me sadly that “this alley, JuYuanLi, was so much wider few decades ago, than the situation you can see now. Every one expand the wall to alley, it becomes narrow and narrow.”

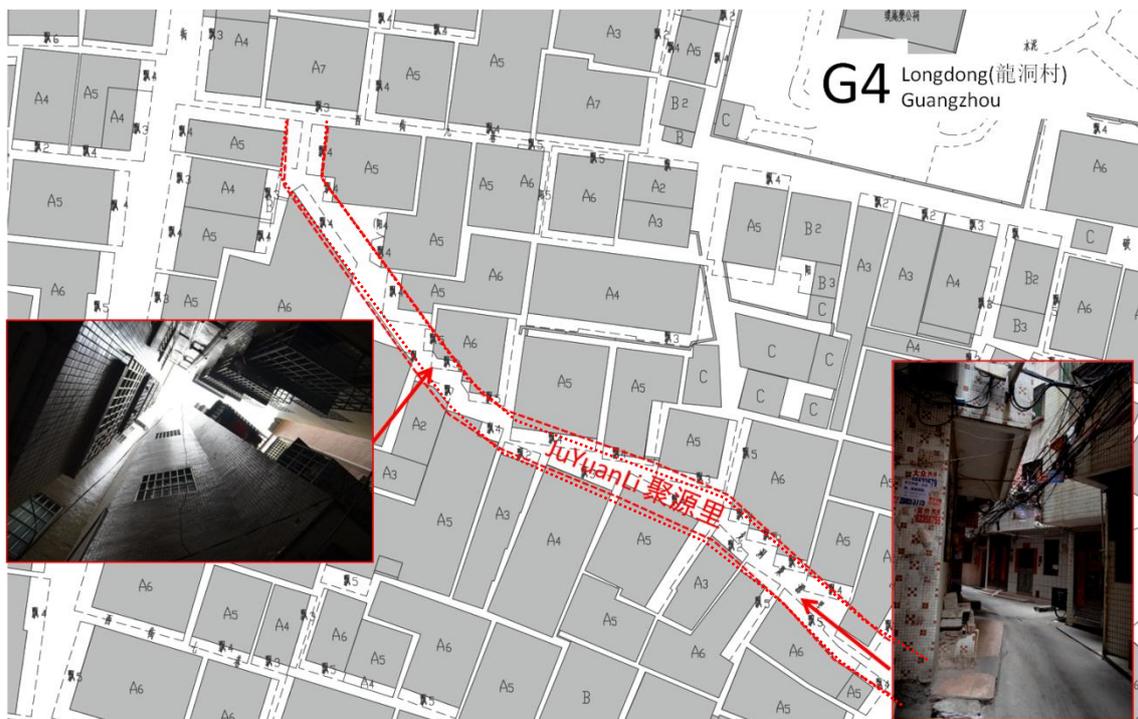


Fig. 125 JuYuanLi Old alley in Longdong become narrower and narrower after rebuilding
Source: map provided by Longdong Villagers' Committee

In the other old area in West Street of Longdong Village, we can also see that the boundaries of the old alleys was eroded both side by the houses after they are rebuilt as concrete rental apartments. The walls of the buildings in both side of the alley are no long in a line as they were planned to be in the ancient time.



Fig. 126 Both sides of Old alleys be occupied in Longdong Village
Source: map provided by Longdong Villagers' Committee

6.2.3 Entrance Steps Extending Outside the Homestead

There is another phenomenon. In the village, all the steps of house entrance are built outside the site boundary. In most cases in Longdong Village, the entrance step is no longer the ordinary size about 1-2 m for the function of accessing, it is made as long step along the front side of the homestead, which can be deemed as the extension of homestead. It plays a role of symbolic meaning of private territory, more than the functional role for accessing. What is more, some villagers even pave symbolic private material on the surface of parts of or the whole area of the alley in the front of the house. The following cases are all from Longdong Village. Setting the entrance steps extending outside the boundary in the front area in their homesteads may be the pre-step for them to extend the homestead boundary in the next rebuilding time.

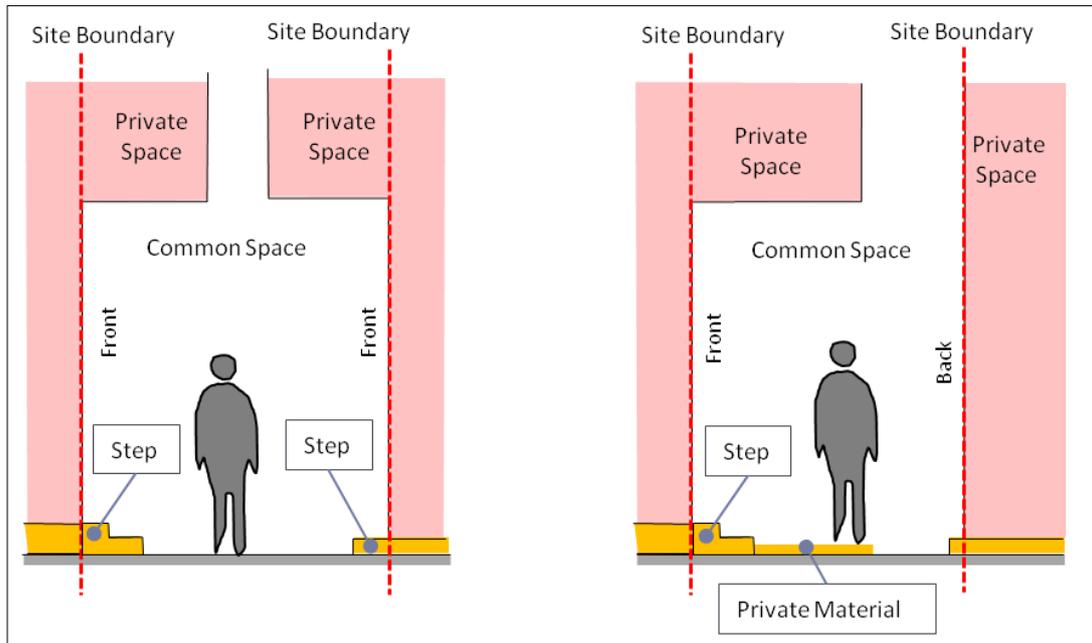
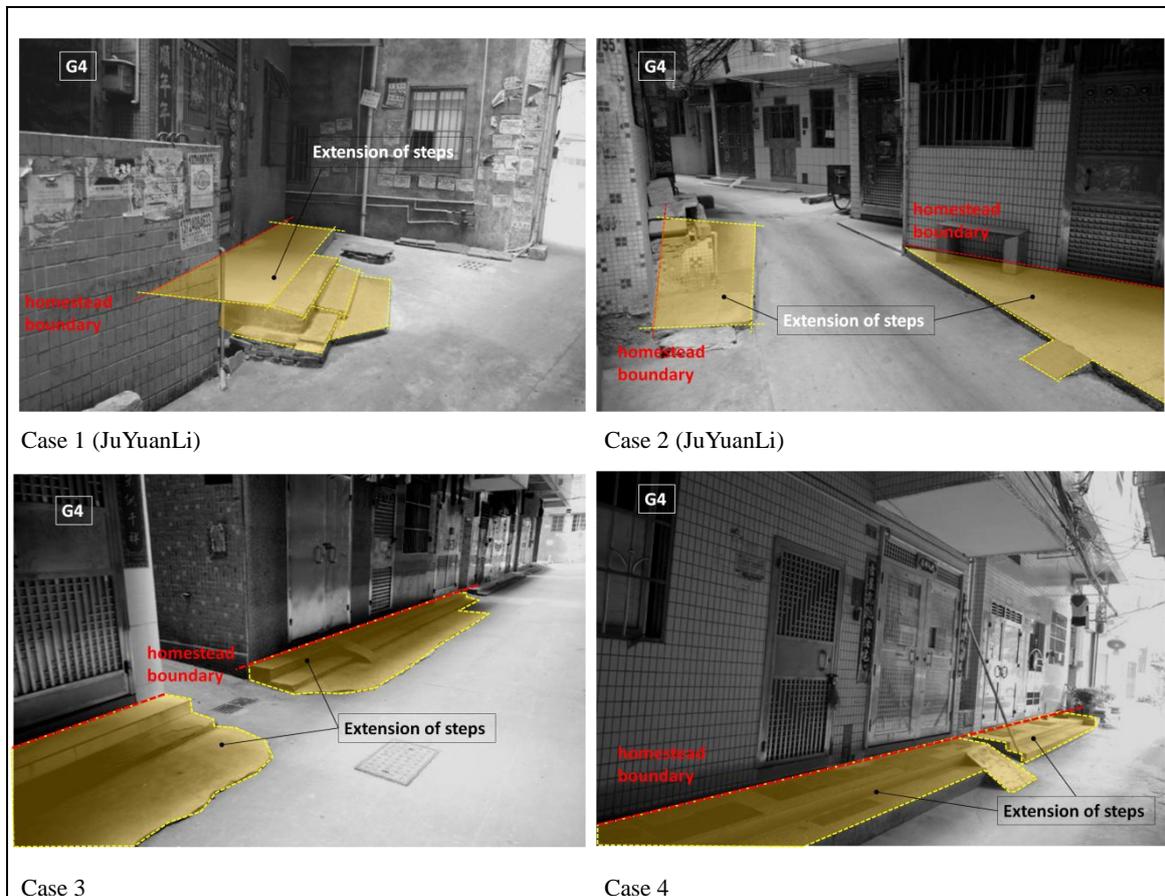
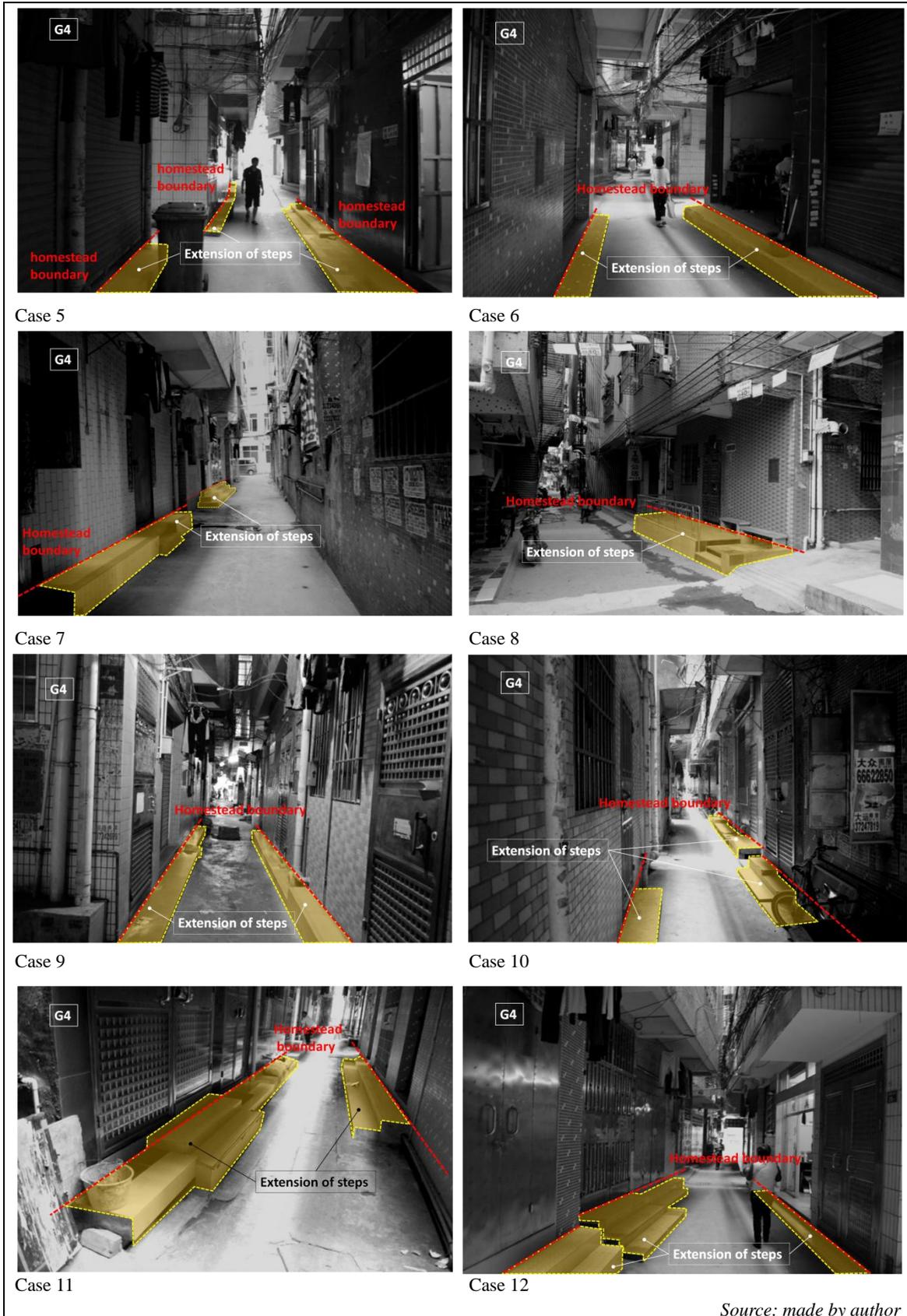


Fig. 127 Entrance steps extending outside the boundary in the front area in the homestead
Source: made by author

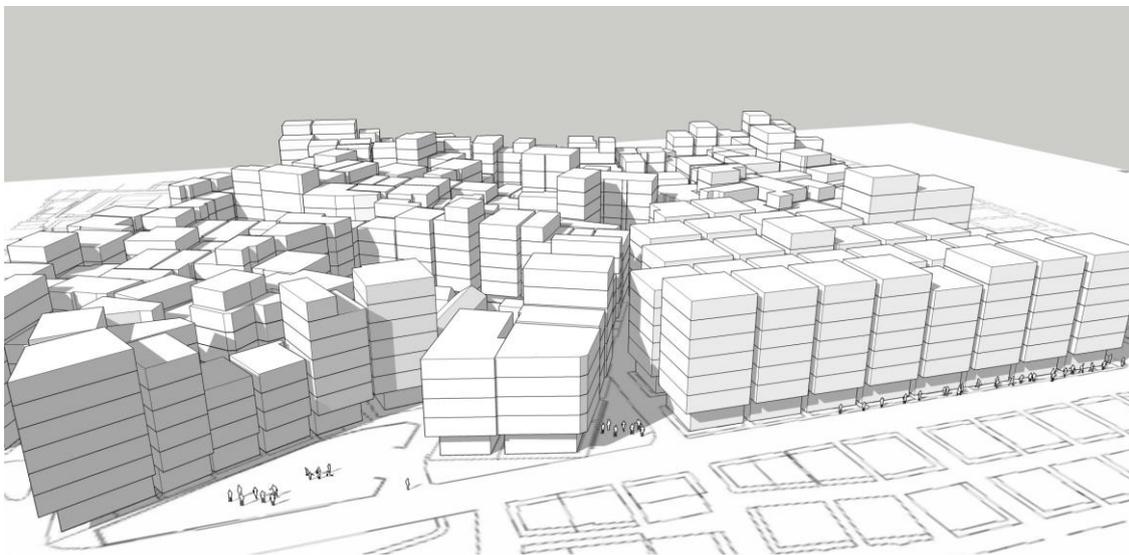
Fig. 128 Cases of the entrance steps extending in Longdong Village, Guangzhou





6.3 Architectural Forms and Informal Construction Rules

In order to get as much rental area as possible, the villagers would always try to full fill the land of their homestead when rebuild houses, and expand to any possible direction. And most of the buildings in urban village are function and usable building area oriented other than aesthetic oriented. The significant feature of private house in urban village is that they are always a heavy box with a light foot. The buildings in urban village are like a lot of fat men stand on tiptoe squeezed in the crowd car of the train in rush hour. In urban village, they are not built according to the formal regulations such us <Code for design of civil buildings> and other local codes, but according to the informal overhanging rules and rules of gradual vertical expansion.



*Fig. 129 rental house as heavy box with light foot (the case of CSLV)
Source: made by author*

6.3.1 Overhanging Rules

6.3.1.1 Improvement of Construction Technology without Formal Constraints

The extension of private buildings is associating with the improvement of construction technology of the villagers' local construction team. The building structure is getting tougher these days so the load capacity it could bear is increasing.

Before the 1979, reinforced concrete frame structure was seldom used in private houses in the rural area. Many houses are made of brick structure with concrete board, the brick wall bearing the load and cement board stretching out. The cement board could not pick out too much, nor could entities of building be built upon it. The stretching out part could only be used as a balcony. After entering the 1980s, reinforced concrete frame structure became more and more popular in rural areas in Guangdong Province. The load capacity of the cantilever beam

also gradually increased, which makes it possible to build brick wall and building volumes upon the cantilevered beams. That technology makes it possible for the new built house to overhang any protrusions. However, new regulations to constraint it have not been established.

The construction project in urban area on the state-owned land is directly administrated by the urban planning section of the municipal government. There is a concept of “constructing red line” on the building site like western urban administration system. According to the official regulation <Code for design of civil buildings GB50352-2005>, building and its accessories are not allowed to exceed the red line of the building site.

The building protrusions which are not allowed to exceed the red line are including:

Underground parts: infrastructure like soil retaining piles and soil retaining wall, basements, septic tanks, etc.

Ground parts: entrance hall or corridor, balcony, stair, steps, ramps, flower bed, fences, drainage ditch, lighting well.⁹

However, those constraints are effective only on the state-own land, which the urban planning sector is able to administrate and control. In case of collective-owned land in rural area, there is no clear formal regulation to control. In the village, there is no concept of such “red line”. The land in the village belongs to all the villagers as a whole. Land boundary and conditions for Public facilities in the village is determined by the village committee. The land for private house construction is also demarcated by the village committee and named as “ZhaiJiDi”(Homestead). Until now, there are no specific formal regulations to control the private house construction on ZhaiJiDi in details. In other words, there is no formal rule to constrain whether the villagers could build their house overhanging the homestead boundary or not.

⁹. MOHURD, <Code for design of civil buildings GB50352-2005>, China Building Industry Press, 2005.

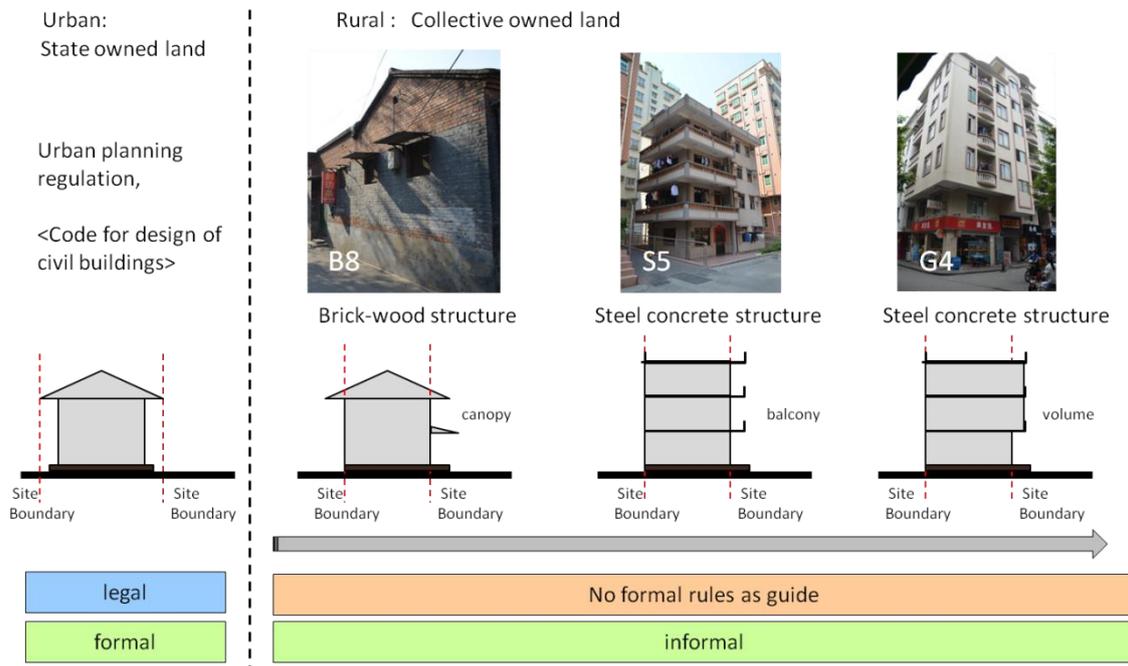


Fig. 130 Evolution of overhanging of building construction in rural area
Source: made by author

Due to the lack of formal rules to control overhanging, and the technological support of the development of the rural construction team, a new custom of overhanging start to evolve in a spontaneous way with the villagers’ pursuit of benefit from larger rental space. Therefore, overhanging to alleys since the second floor has gradually become the new custom for private housing construction in rural area. A new box style of rental housing stretching out from the second floor appears in rural area. They also are called “peasants’ house(農民房)” with a little derogatory attitude by citizens.

In regard to the part above the second floor of a building, whether in the new or old area of the village, the house is allowed to overhang to public space by cantilever beam. The length to extend depends on the overhanging length of the neighbors and the possible public space around the homestead. Most of the buildings stretch 0.5-1.5 meters out, some even reach above 2 meters. New building would always extend more than old building. Farther it extend, the greater profit villager can get. This is the direct reason why urban village are the high density and leading strong crowded feeling.

As the prominent economic development, this phenomenon is prevalent in almost villages in Guangdong Province in China. In the past decade, the phenomenon of overhanging corridor and volume also appeared in some urban village in Beijing.



Fig. 131 Overhanging by cement board in Xiajiao, Guangzhou



Fig. 132 Overhanging as corridor in Yimutian, Beijing



Fig. 134 Overhanging volumes in Shipai, Guangzhou



Fig. 133 Overhanging volumes in Shixia, Shenzhen

Source: photographed by author in 2012

In Shipai Village, the famous urban village in central area of Guangzhou City, every building overhangs volumes beyond the old alleys. It has extremely poor day lighting because it is rebuilt on the old site of traditional pattern.

In Longdong Village, another urban village in fringe area of Guangzhou City, all the villagers' private houses are overhanging to the alleys both in the old and new area of the village (Fig.139). The situation in the old village is the same with Shipai Village, extremely dark and crowded. But in the new developing area of the village, the road and the distance between each neighboring building are planned much wider to adapt the new overhanging custom.

Fig 140 is the first floor plan of the buildings of the whole village. The road network is clear. Even the small alleys can be clearly recognized. In Fig.142, the red parts are the overhanging part of the houses. We can see that they covered the public space of the road network. In old area of the village, the alley can not be clearly recognized any more. The houses are almost paste together as a bigger block (Fig.141). The closer scope of the overhanging are showed in from the Fig-136 to Fig-138.

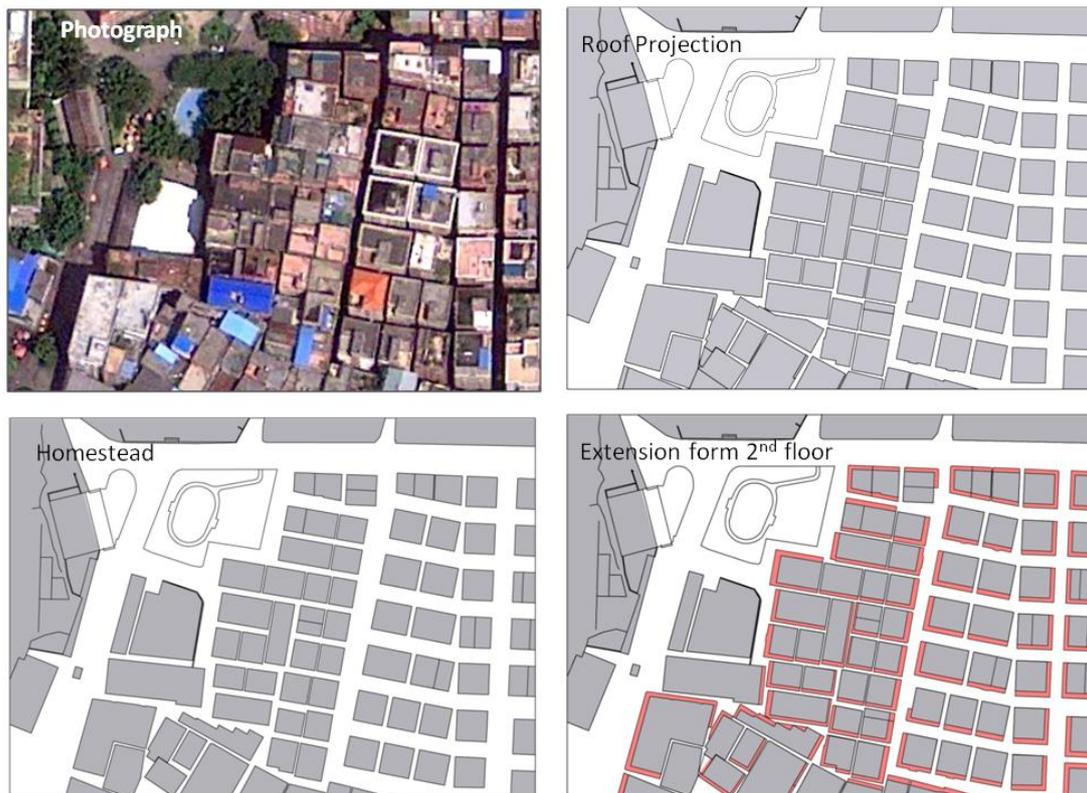


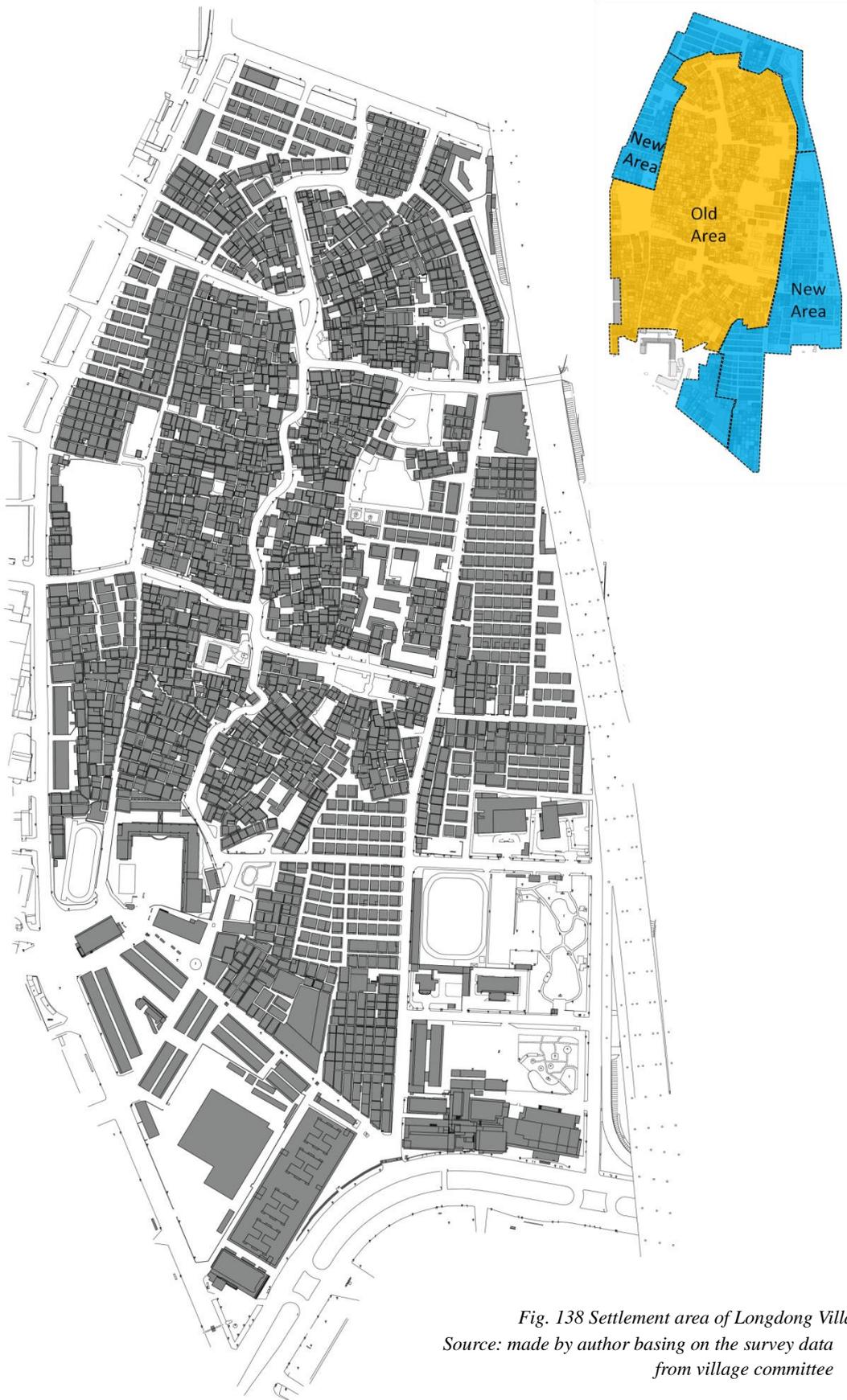
Fig. 135 Horizontal preemption in Longdong Village, Guangzhou
Source: Made by author



*Fig. 136 Partial enlarged satellite photograph of Longdong Village
Source: from Google Earth*



*Fig. 137 Partial enlarged drawing of horizontal preemption of Longdong Village
Source: made by author*



*Fig. 138 Settlement area of Longdong Village
Source: made by author basing on the survey data
from village committee*

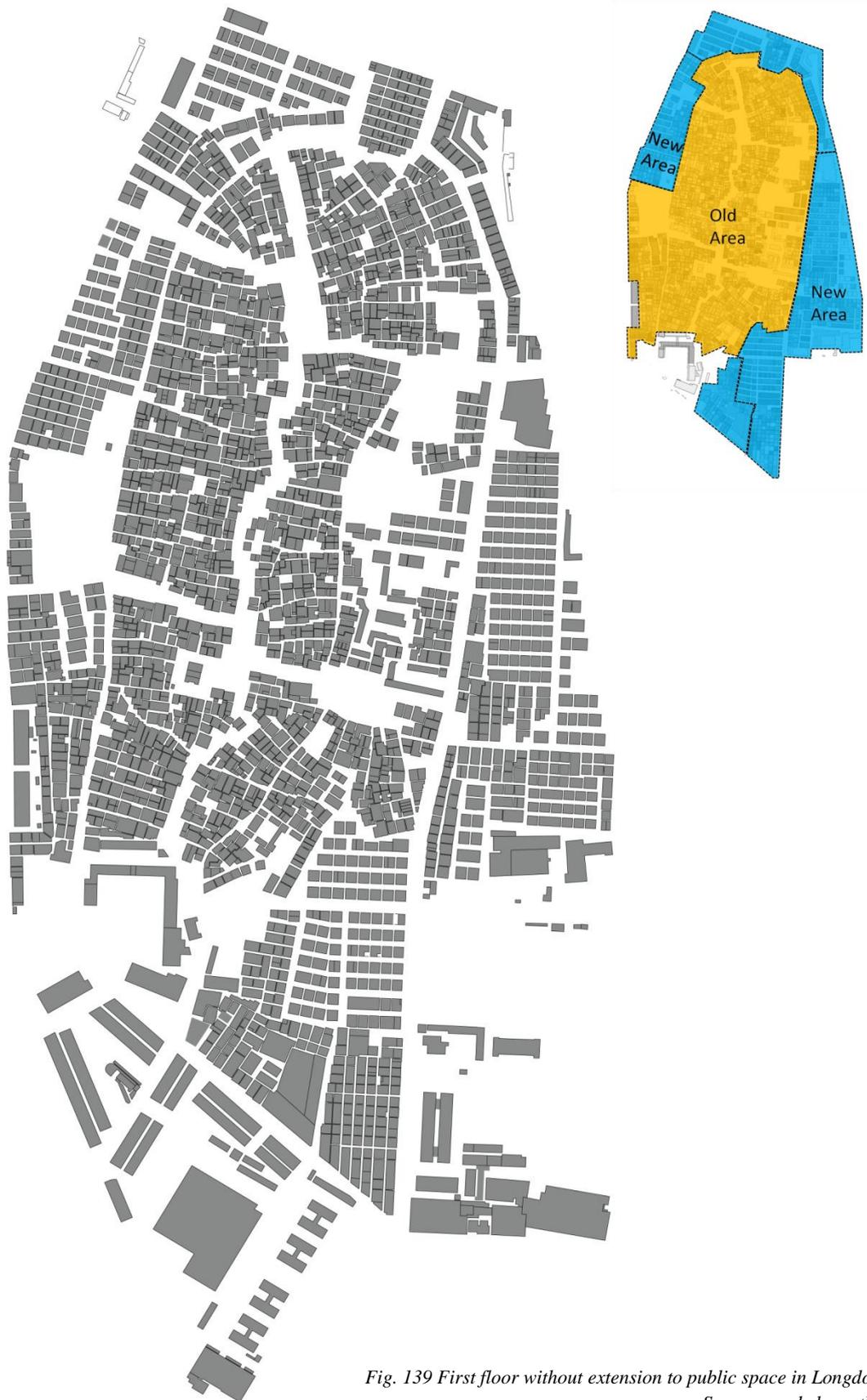


Fig. 139 First floor without extension to public space in Longdong
Source: made by author

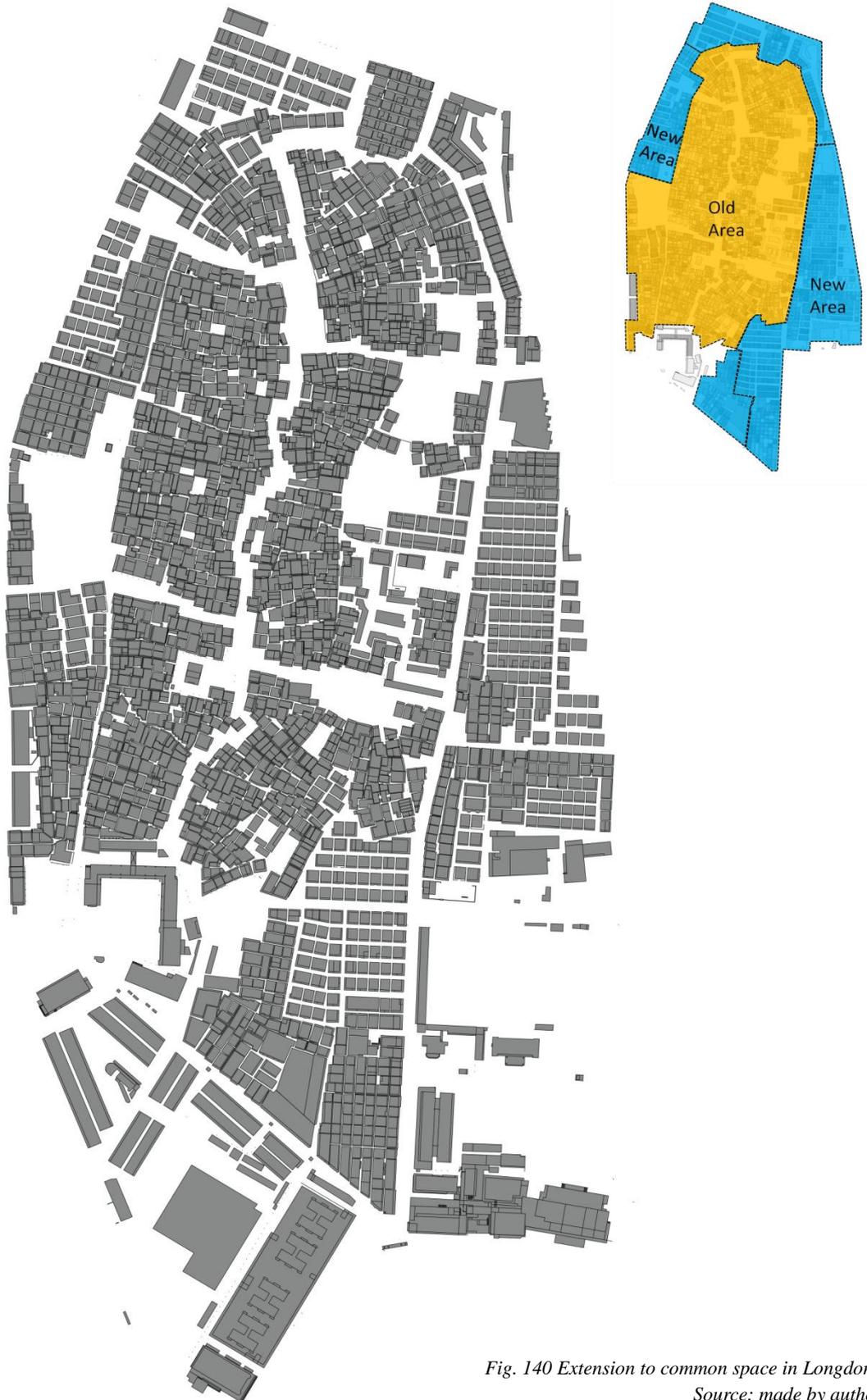
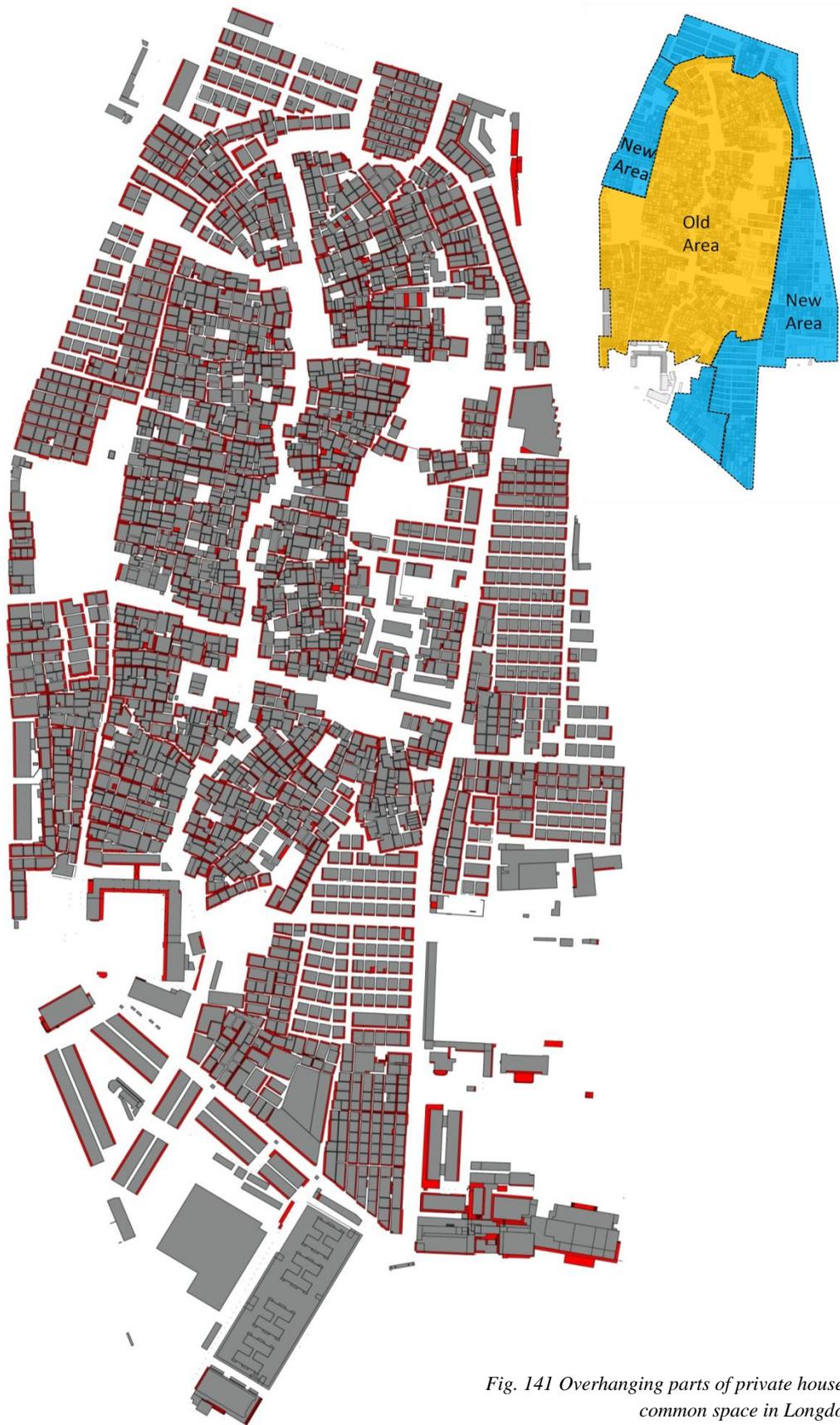


Fig. 140 Extension to common space in Longdong
Source: made by author



*Fig. 141 Overhanging parts of private house to common space in Longdong
Source: made by author*

6.3.1.2 Three Aspects of the Details of Overhanging Rules

Here take Longdong Village as a typical case to analyze and illustrate the overhanging rules in urban village in details. As the scale of the whole village is too large for analysis, here take the block in central south of Longdong Village (CSLV for short in the following text) as a sample for illustration.

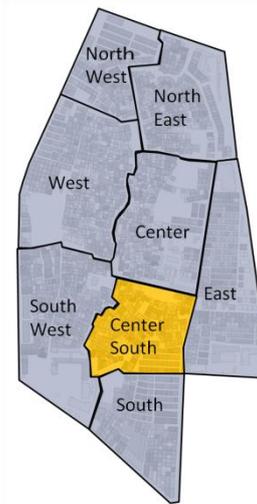
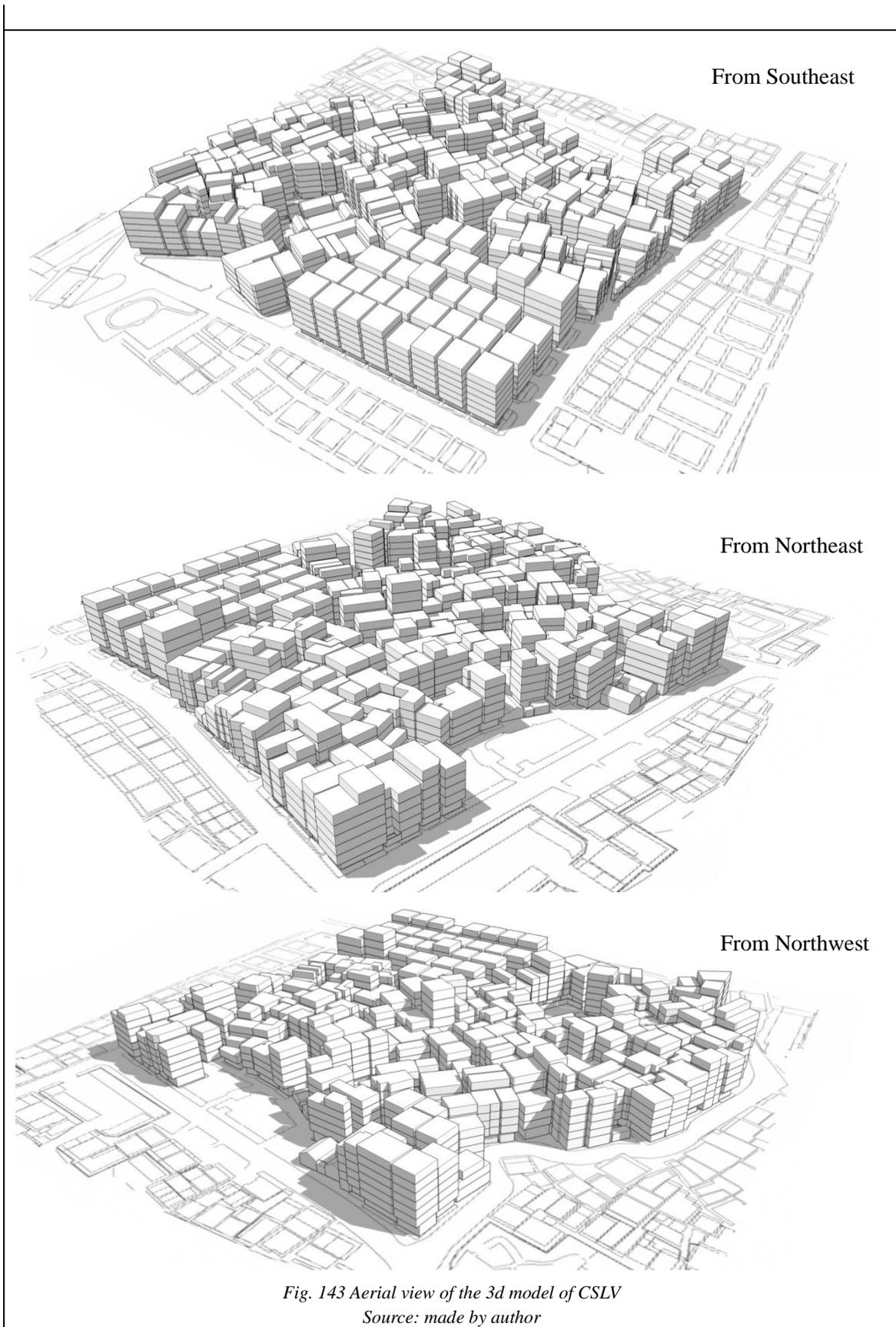


Fig. 142 Map of CSLV the block in central south of Longdong Village
 Source: made by author basing on survey data



CSLV can be divided as two parts, old area and new area. It has 256 cases of private houses. Old area has 221 cases, which are divided as five zones (a, b, c, d and e), and each building is named as “zone+number” (a1, a2, a3...b1, b2 ...e1, e2...). In new area, there are 35 cases, which are named as “n+number” (n1, n2, n3...).



Fig. 144 Numbering each private house in CSLV
Source: Made by author

According to the exactly ownership of land property, three kinds of land are defined in this study. Common land refers to the land owned all of the villagers as a whole, an abstract concept ownership, such as the roads, alleys and blanks between each private homestead. Public land refers to the land which is exactly owned by one organization and has boundaries separated from the common space, although it is also collective owned by all the villagers or a group of villagers in the village, such as the ancestor hall, school, hospital, park and so on. Private land is the each family's homestead of ZaiJiDi, which is exactly privately controlled by villagers although its official ownership is also collective owned according to the law.



Fig. 145 Three types of land property in CSLV
Source: made by author

1) Minimally Reserve Some Space on the Common Road

In people's headroom space (about 2.2 M high), it should stay out of the roadway, to ensure the alleys' basic function of accessing. Therefore, the accessibility of the road network in the village is less influenced by the activity of overhanging. Even in old area of the village, the road network is well kept although the private houses are rebuilt many times. But there is some end-type alleys fenced with walls as private space. Some villagers build walls or fences to cut the common road as private, making the alleys interrupted.

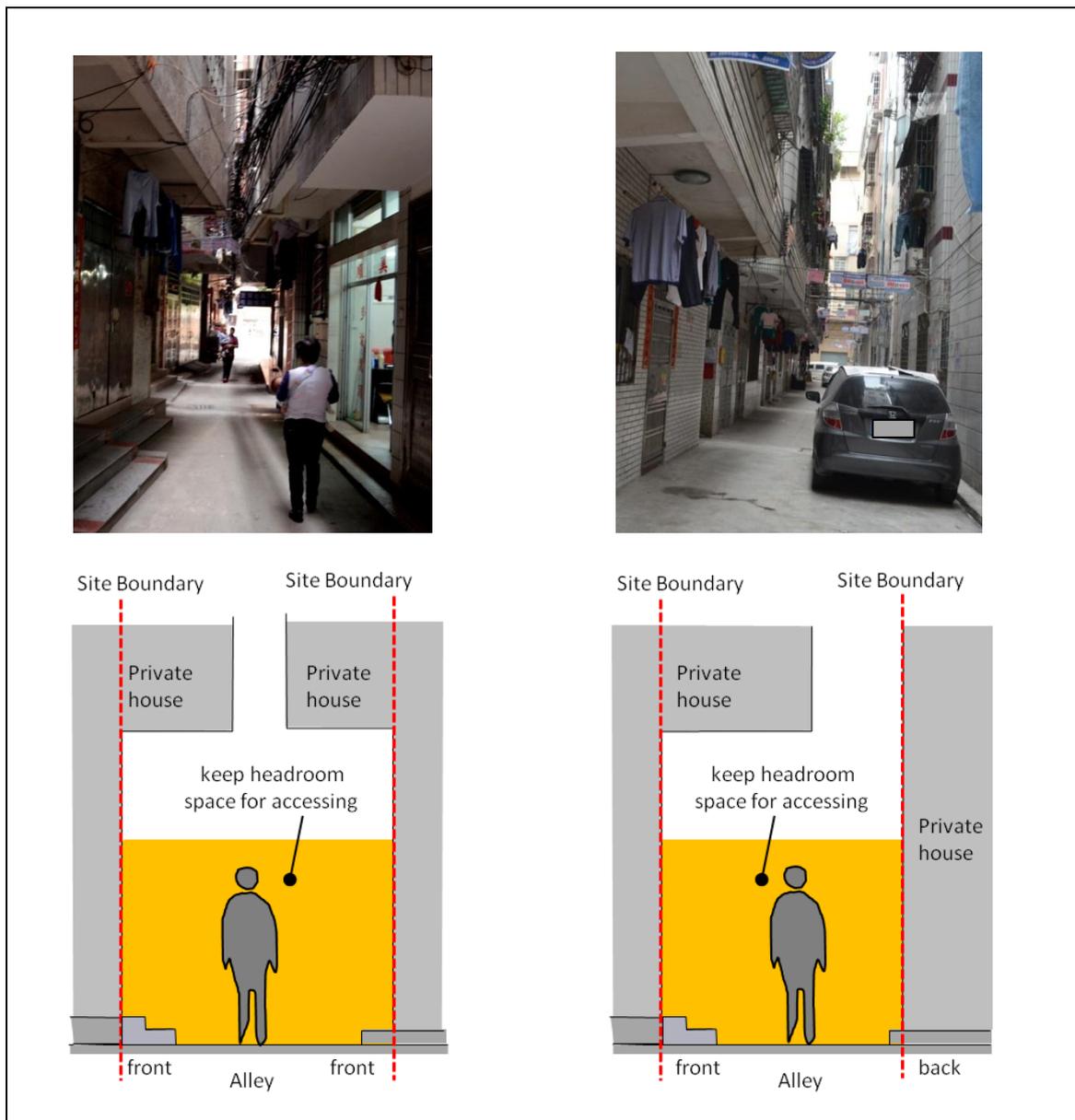


Fig. 146 Keep headroom space for accessing in the village
Source: made by author



Fig. 147 Aerial view of the 3d model of CSLV from southwest
Source: Made by author



Fig. 148 Accessibility analysis of CSLV
Source: Made by author

By comparison, we can find that although the overhanging volumes occupy most of common space above the alleys, the head room space for accessing is still kept by the villagers.



Fig. 149 Comparison of the horizontal cross-section of 2m high and 5m high in CSLV
Source: Made by author



Fig. 150 Alleys interrupted by private additions
Source: Made by author

2) Direction of Overhanging

Basically, every house is allowed to overhang to the common space in its front. Whether it can overhang to other directions depends on whether there is enough space around its homestead to be occupied.

In old area of the village, it is complex and diversified. The front sides of houses are disordered. The common space around each building is different. As long as there are alleys around the homestead, it can overhang into them in any possible direction. However, as the houses on the old alleys are face to face, both sides of the houses are sharing to overhang to the old alley. In case that both the front and back of the homestead are alleys, it can overhang to both front and back.



Fig. 151 Overhanging in old area of Longdong Village -I
Source: made by author





Fig. 152 Overhanging in old area around Big Ancestor Hall of Fan in Longdong Village
Source: made by author



In new area of the village, the sites are always planned in a regular pattern. Each household can overhangs beyond the roadway in its front side. Overhanging is generally one-direction to the south. It is basically not allowed to overhangs into roadway on the backside, because it is the other household's psychological territory. In each new block, the houses in the most northern row can overhang to both north and south sides if there is road in the north. In each block, the house around the boundary of the block can overhang to the common road.



Fig. 153 Overhanging in new area of Longdong Village -1
 Source: made by author



Fig. 154 Overhanging in new area of Longdong Village -2
Source: made by author

In this study, five types of overhanging are defined as following.

A Type: one side overhanging, in the front.

B Type: tow side overhanging, both in the front and back.

C Type: tow side overhanging, in the front and on left or right.

D Type: three side overhanging, in the front, on left and right.

E Type: four side overhanging, front, back, left and right.

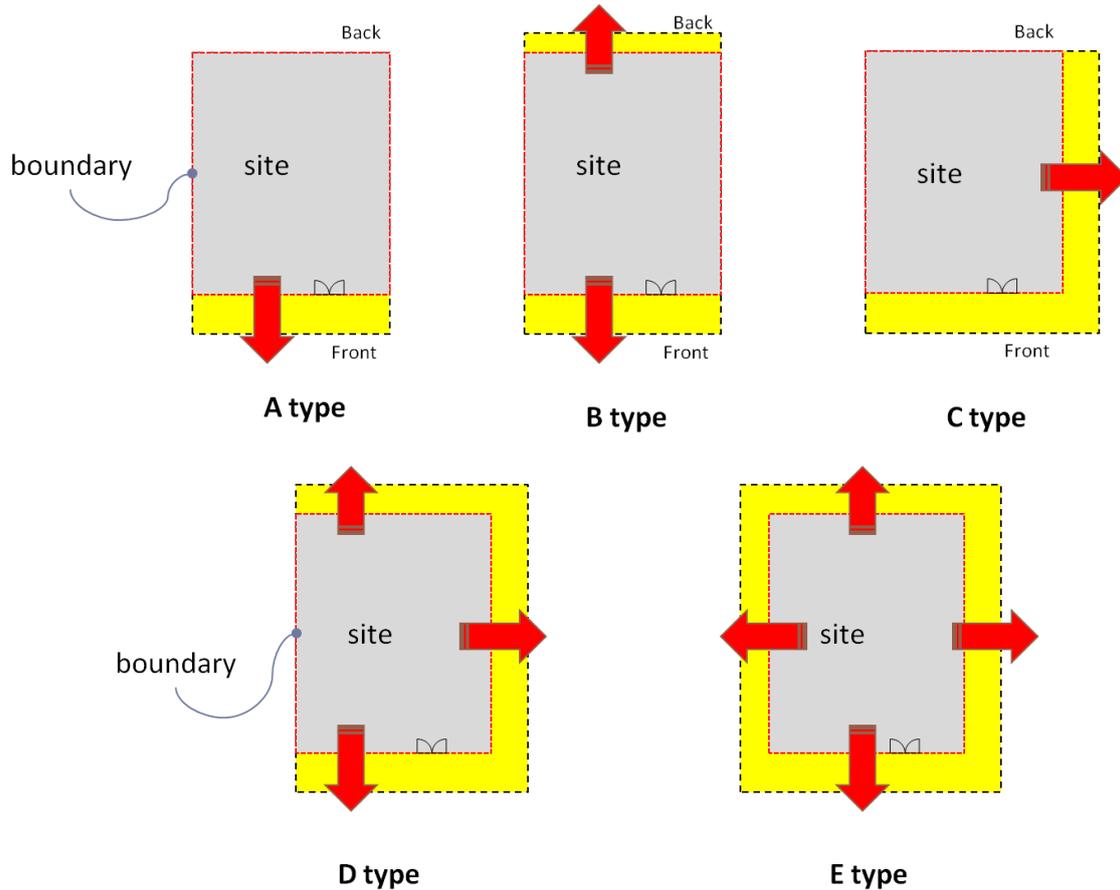


Fig. 155 Overhanging Types
Source: Made by author

The SCLV is analyzed as the following figure showed. Among the 256 cases, 25 cases are not overhanging to any direction, because they are un-rebuilt traditional old building less than three floors, such as the case of a34, b20 and e29. Or even they are rebuilt but there is no space to overhang around the home stead, such as the case of a6, c44, and e15. And there are 3 typical cases (E Type) that overhang to four directions, such as the case of a16, a17 and d13.

Overhanging in front is the main right for each householder. Besides the front side of the house, the householder can overhang to other direction if the condition around the homestead is possible.



Fig. 156 Distribution of overhanging type in CSLV
Source: made by author

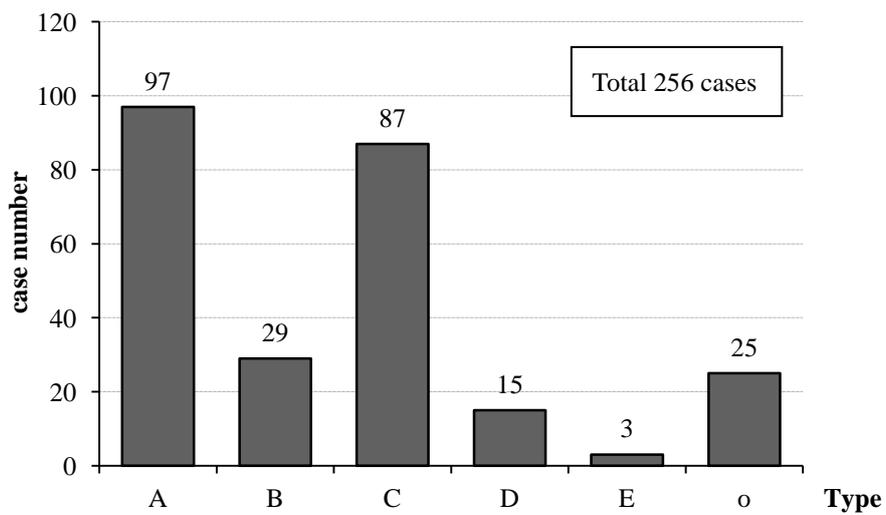
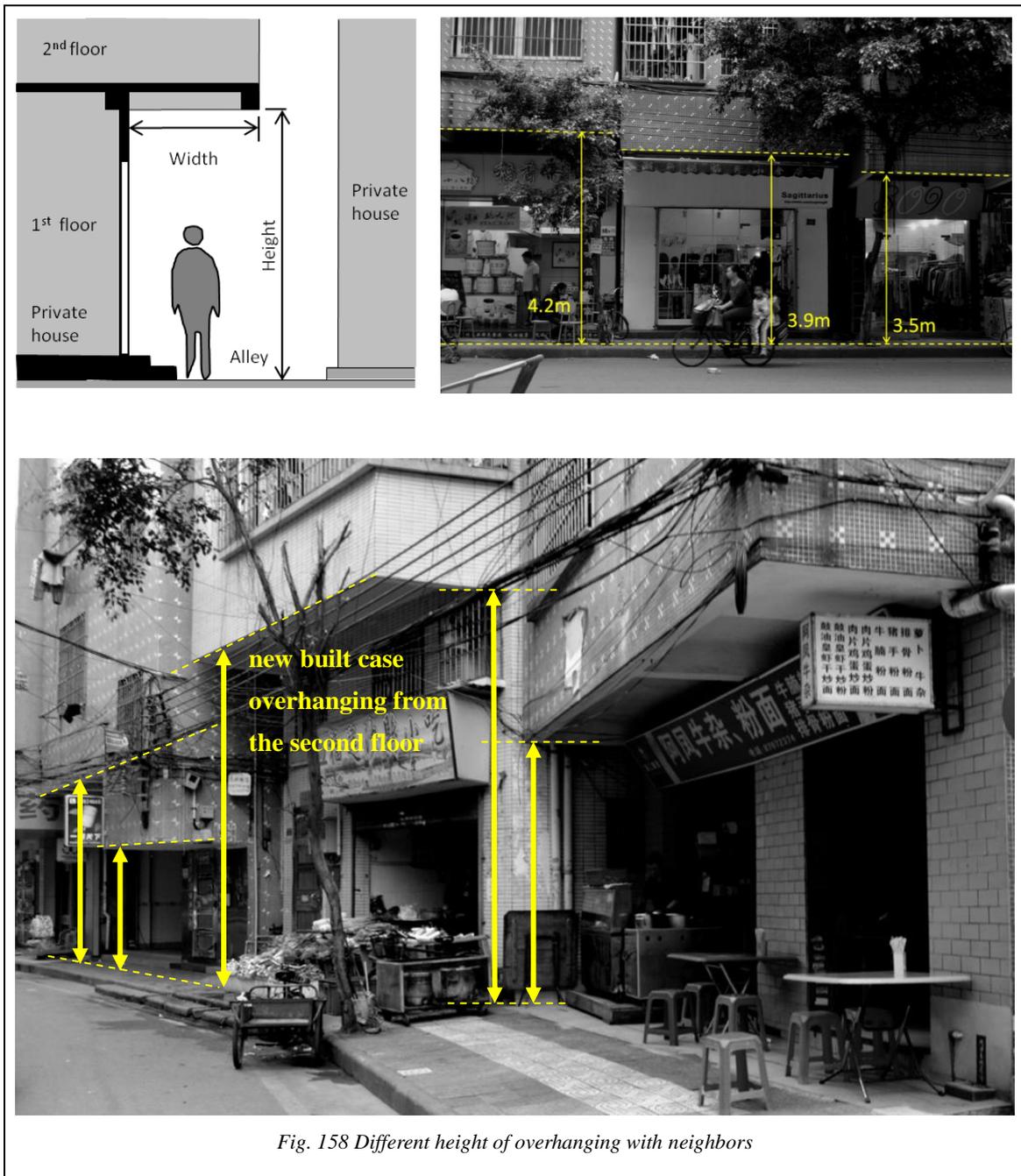


Fig. 157 Case number of different overhanging type in CSLV
Source: made by author

3) Height and Width of Overhanging

The height of overhanging is determined by the height of floor plate above the first floor. Generally, the height from ground to the floor plate above the first floor, subtracting the height of the cantilever, is the height of overhanging of that building to the alley. Its minimum is about 2.2 meters to keep people to go across. And it becomes higher and higher as the height of floor plate above the first floor increasing gradually. Recently, some new built cases overhanging from the second floor.



The width of overhanging is determined by the possible space around the homestead. As the situation in old area and new area of the village are different, here also takes the typical case of CSLV as illustration to discuss the rules in old area and new area.

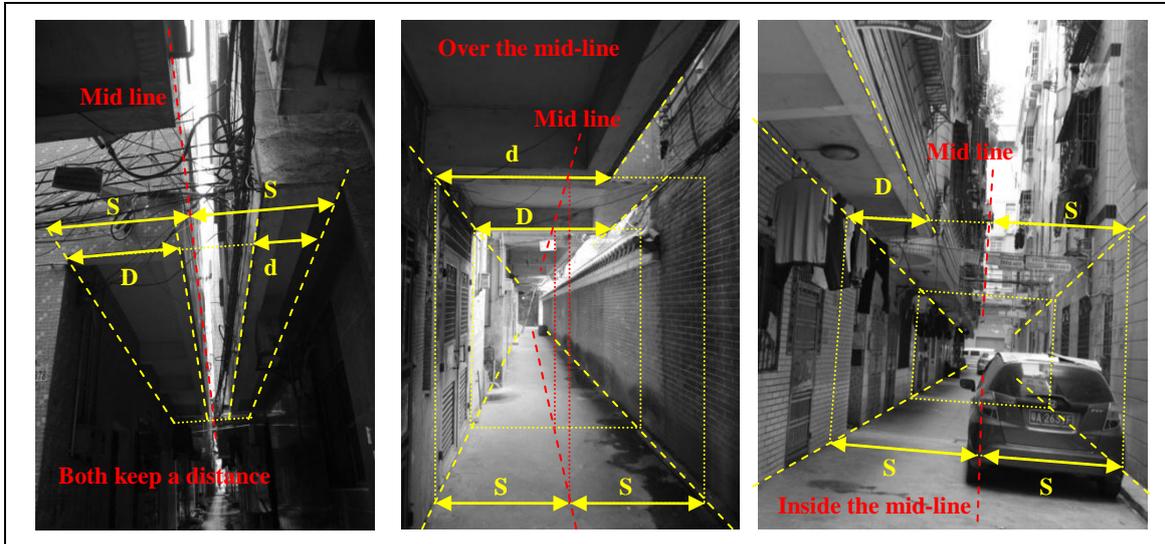


Fig. 159 Different relationship the overhanging boundary and the mid-line

Source: made by author



Fig. 160 the boundary of overhanging and the mid-line between homestead in CSLV

Source: made by author

● In Old Area

In old area of the village, the width of overhanging of each private house is in the state of great diversity. As the houses are continuously updated and rebuilt, the adjacent two houses are always built in different time. The new built one usually overhangs higher and wider than the old one. When overhang to cover the alley, most of them would keep little space rather than totally occupy it. When two houses are share the same common space of alley, both of them will keep little space away from the mid-line of the alley. Beyond the people headroom space, should leave at least one line of space to see the sky, even just a little bit.

We can see that the mid-line between each private homestead take an important role on overhanging if they share the common space. Most of them keep a certain distance apart from the mid-line. But in the situation between private property and common property, the mid-line does not work. We can see that all the cases around the common property of ancestor hall overhang cross the mid-line to get as much space as possible. The width of overhanging of each building even in the same row is different, as the size of the alley is not in a fixed width. The new built ones would overhang wider than the earlier built ones. In the row from a11 to a16, the cases a13 and a14 which built in the late 1990s overhang narrower than the other cases in this row. The latest case a16 is the widest one with 2 m overhanging in front and right side, as there is abundant public space surround it.

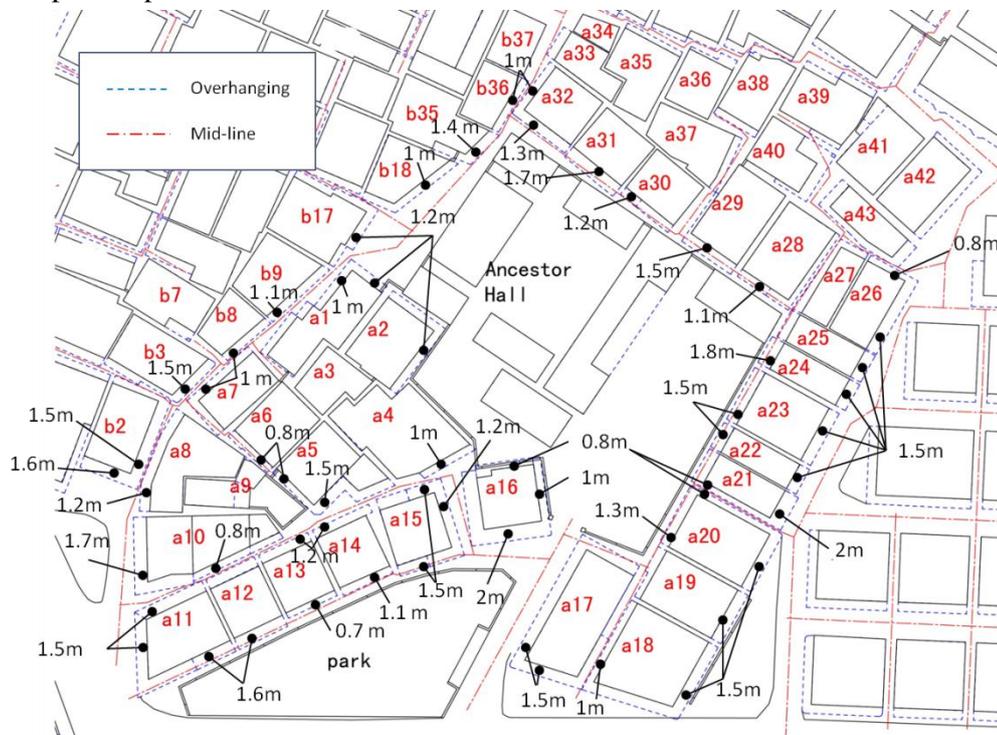


Fig. 161 Width of overhanging in a-zone of SCLV
Source: made by author

● In New Area

In new area of the village, if the constructing time is basically the same, they will overhang on the same height and width, basically consistent with their neighboring buildings. But there are cases that new built one usually overhangs higher and wider than the old one, too.

In the case of CSLV, the new developed area (n1~n30) is basically overhanging in regular size. Most of them overhang 1.2 m wide to the alleys in their front, no overhanging in their back side. Although there is 1.5 m wide space between the houses in the same row, they don't overhang to that space. On the west boundary of this block, n1, n9, n17 and n24 also overhang 1.2 m wide in their right side. But, on the east boundary of this block, n8, n16 and n23 are overhangs 1.6 m wide on their left side to the street - Fumin Road. Different from the common cases in this new developed block, the case n29 and n30 are as a group overhanging the same width – 1.5 m. The case n28 is special in this block. Its volume is much larger than others, and overhangs wider than the ordinary case in this block. It overhangs 1.5 m in south and north, and 2 m in east.



Fig. 162 Width of overhanging in n-zone of CSLV
Source: made by author

The overhanging size of each direction of each building (front, left, right and back) in CSLV is sorted in this study. The data would be attached in the appendix in the end of this thesis. Among the 256 cases, most of the case overhangs in its front from 1m~1.5m. There are 42 cases overhang 1m, 49 cases overhang 1.2 m, and 39 cases overhang 1.5 m. In those 256 cases, there are 66.6% of private houses overhanging in their front from 1m~1.5m wide.

The case numbers of overhanging in other direction are showed in fig.165. We can see that the range of 0.5~1.6m is the popular width when overhangs.

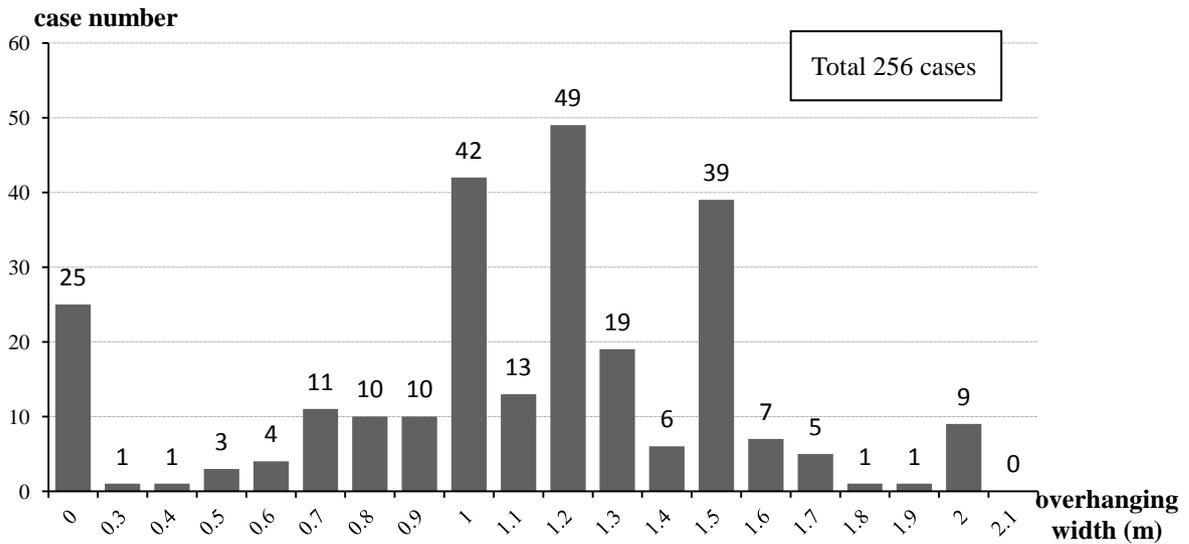


Fig. 163 Case numbers of overhanging width of front direction in CSLV

Source: made by author according to the survey map from Tianhe Sub-bureau of Guangzhou Municipality

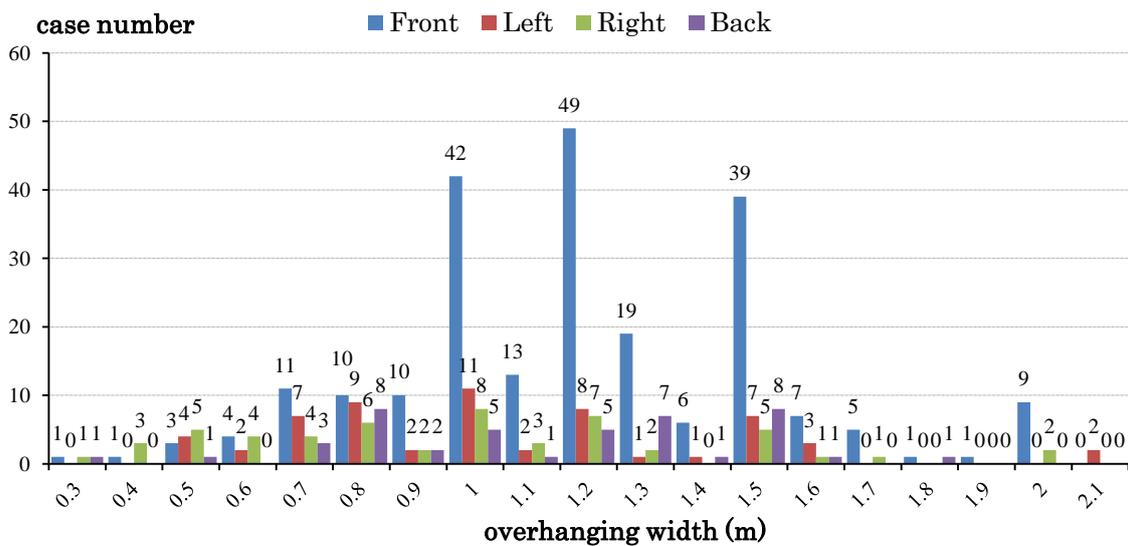


Fig. 164 Case numbers of overhanging width in four directions in CSLV

Source: made by author according to the survey map from Tianhe Sub-bureau of Guangzhou Municipality

6.3.2 Vertical Expansion Rules

6.3.2.1 Tacit Approval of the Illegal Vertical Expansion both by Village Committee and Municipal Government

Development in the vertical direction is another way for the villagers to chase the economic benefits. The more layers, the more rentable area there is. Thus the villagers can get more profits. However, most of the private houses in urban village violate the formal regulations made by the municipal government. The administrating power of the municipal government is too weak to enter the village to enforce the implementation of formal regulation. The villagers' autonomy committee is the real administrating power in urban village. The villagers' illegal activities to build more layers exceeding the prescribed number by formal regulation are tacitly agreed both by the villagers' autonomy committee and the municipal government.

Among the villagers, there is a common sense that formal regulation made by the municipal government can be broken little by little. The prescribed number of floors can be ignored. The villagers know that after hand out the penalties, the illegal part of the building can be admitted by the government. According to the < *Interim provision for urbanization of rural villages in Shenzhen Special Economic Zone* > implemented in 1992, the standard for penalty of illegal private house is 600RMB/m². But, the price of rental house at that time is 28RMB/ m². It means that Less than two years, the villagers can recover the costs of penalty (WANG-Peng, 2010). That is to say, villagers can use money to buy illegal part as legal one. When the possible income from illegal part is greater than the penalty, it is a good deal to do that.

In addition, in the case of demolition and reconstruction, villagers can get more compensation if they build more building areas. According to the official rules of < *Housing Demolition Management Regulations* > and < *Regulations of the Housing Levy and Compensation for Buildings on State-owned Land* >, the illegal construction is not given any compensation. However, in order to appease the villagers' emotions and resistance against the land acquisition, the municipal government also violates the provisions of the formal regulation to give the villagers compensation. For instant, in the case of reconstruction of Liede (猎德) in Guangzhou City in 2010, besides the compensation for properties of the illegal part of each private house, the municipal government also pay the villagers 1000RMB/m² as the compensation for building materials fee of the illegal part from four floors. For some other urban villages, such as Tan Village(谭村) and Datansha Village(大坦沙), the reconstruction compensation is all in accordance with that standard of 1000RMB/m² (LI-Sizhe, 2012). So the villagers have such a psychological expectations, that built more will not lose when get the compensation of demolition.

In Shenzhen city, the legal number of layers of private house in village was raised from 2 layers to 5 layers from 1982 to 2001, as the municipal government continued to issue the new policies.

As stipulated in the village housing construction provisions of *<Interim Provisions of the land for construction of the Shenzhen Special Economic Zone>* in 1982, the area of each homestead could not exceed 80 m². The house is stipulated no more 2 floors.

However, according to 1986 *<Notice on Further Strengthening the Rural Planning of Shenzhen Special Economic Zone>*, in case of the household that less than three people, the building area shall not exceed 150 m²; for the household that more than three people, the building area shall not exceed 240 m². That means the standard was raised to 3 floors.

In 2001, the *<Regulation dealing with the Illegal Private Housing for Shenzhen Special Economic Zone >* was issued that the illegal private house no more than 480 m² could be out of the penalty. That is to say, the government gave up the former standard of 240 m², and indirectly raised the standard of construction area. Since then, the number of 480 m² basically becomes a new standard for defining the illegal construction in urban villages. The total floor area 480 m² divided by the homestead area 100m² is 5 floors. Thus, the five-stories building standard was officially accepted in Shenzhen City.

This is the result of the continuous compromise of the municipal government when facing the mass phenomenon of illegal construction.

In urban village, the fact is always more serious than the regulation that stipulated by the government. In Funtian District of Shenzhen City, 52.95% of the houses in urban village have 7~9 floors. That is to say, private houses with 7~9 floors are common in urban village of the central area of the city.

Table - 26 Distribution of houses with different storey in urban village in Shenzhen 2007

Distict	1~3 Floors(%)	4~6 Floors(%)	7-9 Floors(%)	10-12 Floors(%)	>12 Floors(%)
Futian	7.99	32.94	52.95	4.55	1.58
Luohu	35.32	33.09	28.91	2.49	0.19
Yantian	90.94	38.63	0.34	0.00	0.10
Nanshan	33.51	39.25	25.23	1.85	0.15
Baoan	66.90	23.87	8.77	0.44	0.02
Longgang	56.91	33.59	8.87	0.61	0.02
Total	57.51	9.60	11.99	0.81	0.09

Source: Wang Peng, *Research on the characteristics and evolution of residential morphology of Shenzhen City Village under the informal housing market*, Shenzhen Graduate School of Harbin Institute of Technology, Shenzhen, 2010, p.50

In Guangzhou City, although the floor number of private house in urban village required by the municipal government has still been 3.5 floors since 1980s, it is a common phenomenon that private rental houses with more than 5 floors can be seen anywhere in the village. Either in Shipai Village in the city center or Longdong Village in the fringe area, the villagers are continuing to build more layers over 5 floors. The maximum number of layers has reached 9 floors according the field survey in 2013.

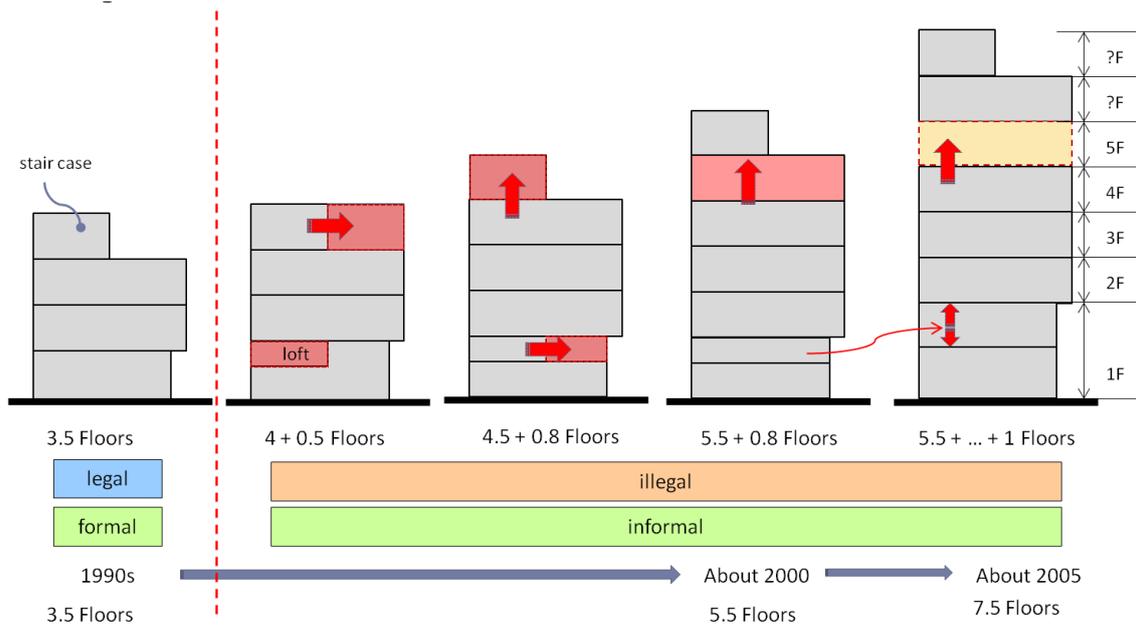


Fig. 165 Increasing number of floors of rental house in urban village in Guangzhou
Source: made by author

Under the tacit approval by local government, the cadres of the village committee lead a collective illegal action to break the formal regulation and raise the informal standard of the floor numbers step by step. In the past decade, when villagers demolish their self-living old houses to rebuild as rental houses, they are tending to build more to break the village recognized standard of five layers. The result is that the average floor number of the building in village is raised little by little. It is like a competition who can build higher. The higher the building, the later it built. The floor area ratio of urban villages has also been raised gradually.

The following data show the information of the floor numbers of the villagers' houses in some villages in Guangzhou City and Shenzhen City, where the economy developed earlier than other places in China and the villagers in those two cities are afford to the cost of housing construction. Generally, the cases in Shenzhen are higher than in Guangzhou.

1) Xiasha Village(下沙村), Shenzhen

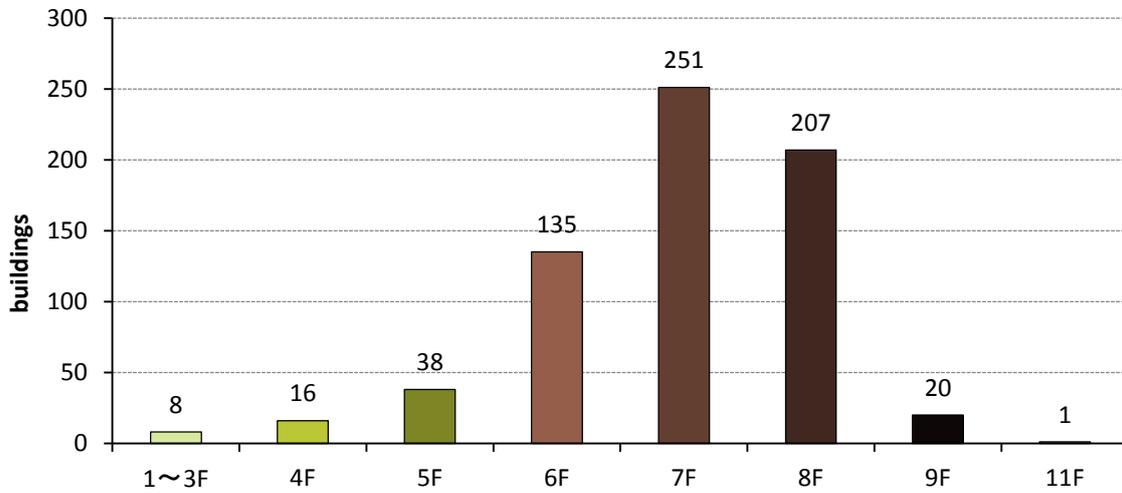


Fig. 166 the numbers of rental houses with different floors in Xiasha, Shenzhen

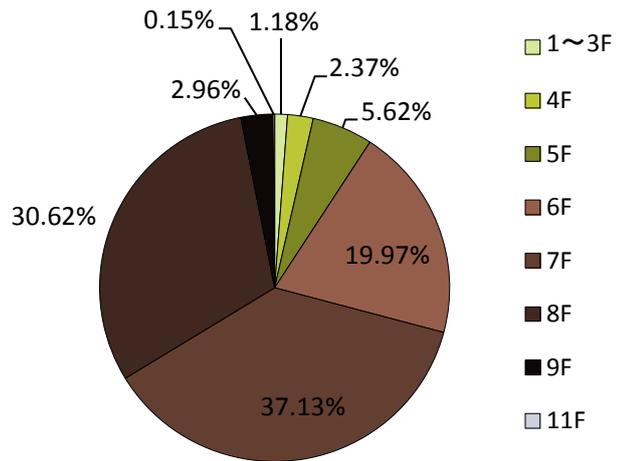


Fig. 167 the ratio of rental houses with different floors in Xiasha, Shenzhen

Table - 27 Rental houses with different floors in Xiasha, Shenzhen

Area	1~3F	4F	5F	6F	7F	8F	9F	11F	Total
North	1	4	15	39	64	57	4	0	184
South	0	3	11	37	53	28	5	0	137
West	5	4	8	34	71	27	4	1	154
East	2	5	4	25	63	95	7	0	201
Sum	8	16	38	135	251	207	20	1	676
Ratio	1.18%	2.37%	5.62%	19.97%	37.13%	30.62%	2.96%	0.15%	100.00%

Source: made by author basing on the digital survey map provide by Mr. JD CHEN



*Fig. 168 Classification map of rental houses of different floors in Xiasha Village, Shenzhen
Source: made by author basing on the digital survey map provide by Mr. JD CHEN*

2) Longdong Village(龍洞村), Guangzhou

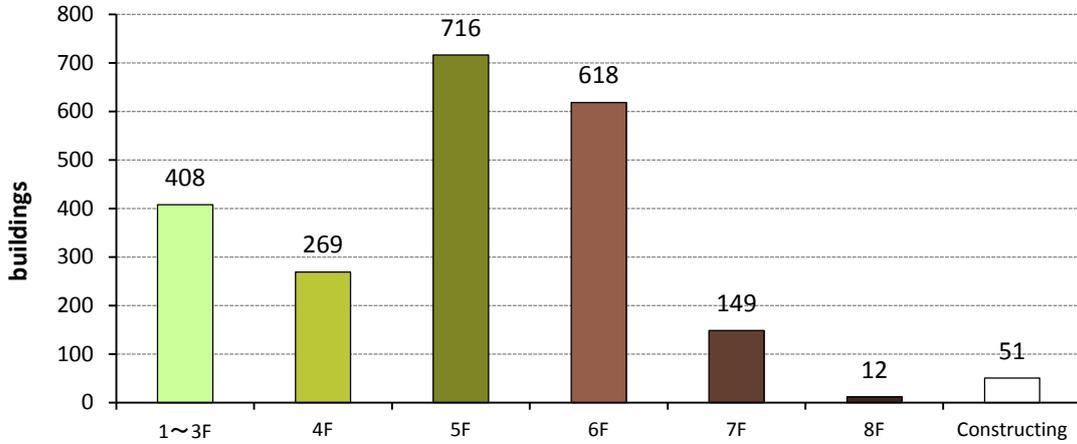


Fig. 169 the number of rental houses of different floors in Longdong Village, Guangzhou

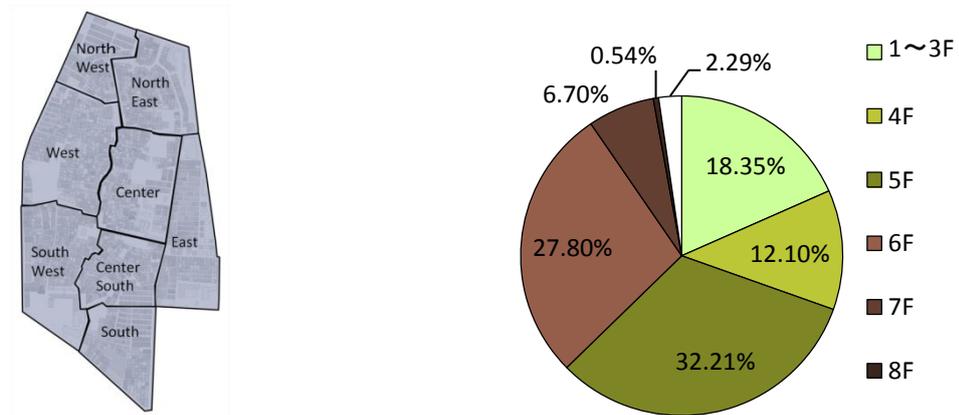


Fig. 170 the ratio of rental houses of different floors in Longdong Village, Guangzhou

Table - 28 Rental houses of different floors in Longdong Village, Guangzhou, 2008

Area	1~3F	4F	5F	6F	7F	8F	Constructing	Total
Northwest	17	15	46	53	9	0	1	141
Northeast	57	55	92	87	14	2	2	309
West	120	38	170	100	11	0	18	457
Center	92	32	71	77	23	1	15	311
East	18	43	89	81	10	0	12	253
Southwest	39	35	103	86	12	7	1	283
Center South	46	34	86	70	27	1	2	266
South	19	17	59	64	43	1	0	203
Sum	408	269	716	618	149	12	51	2223
Ratio	18.35%	12.10%	32.21%	27.80%	6.70%	0.54%	2.29%	100.00%

Source: Made by author basing on the survey map from Tianhe Sub-bureau of land resources and housing management of Guangzhou Municipality

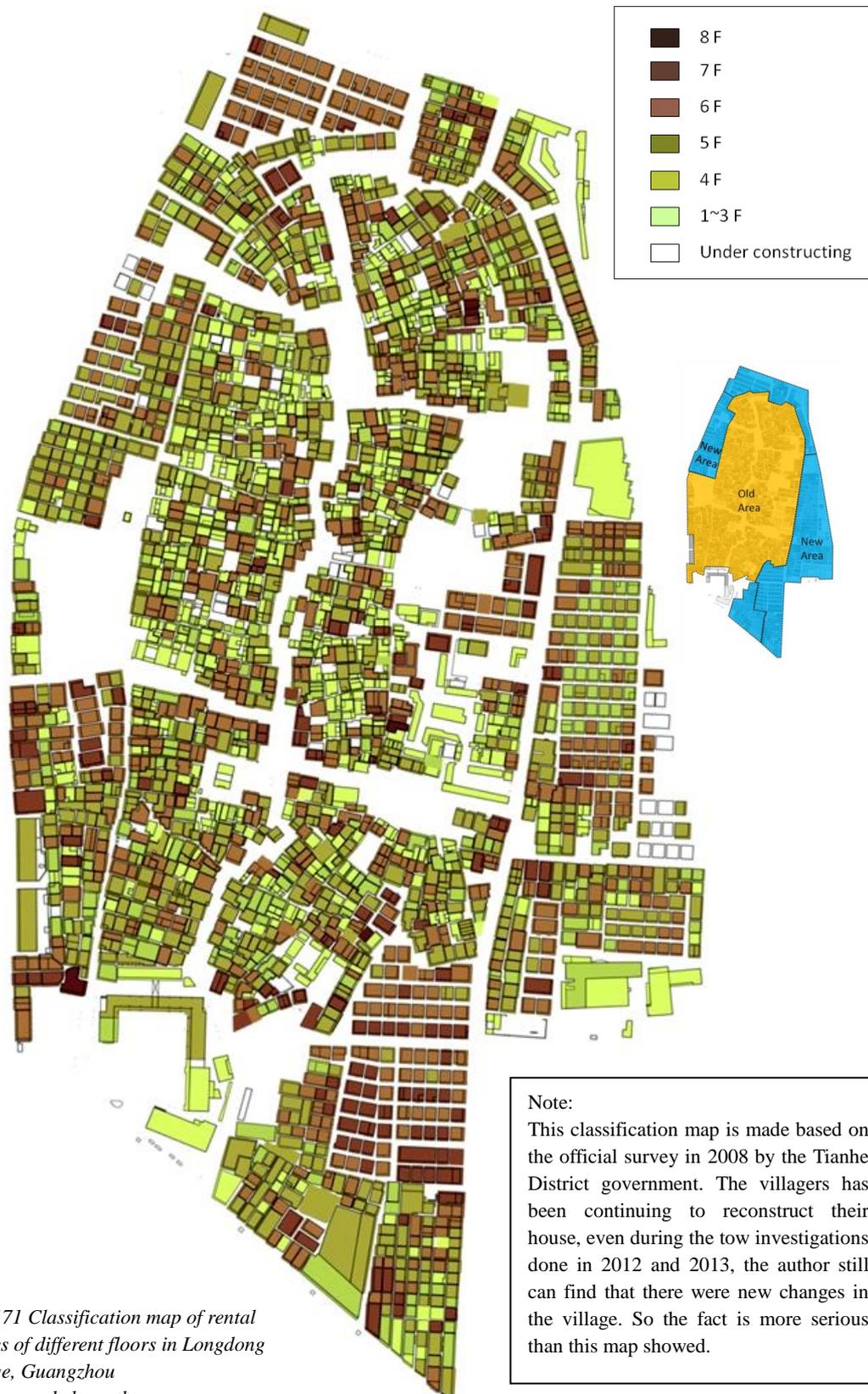


Fig. 171 Classification map of rental houses of different floors in Longdong Village, Guangzhou
 Source: made by author

3) Changban Village(長漣村), Guangzhou

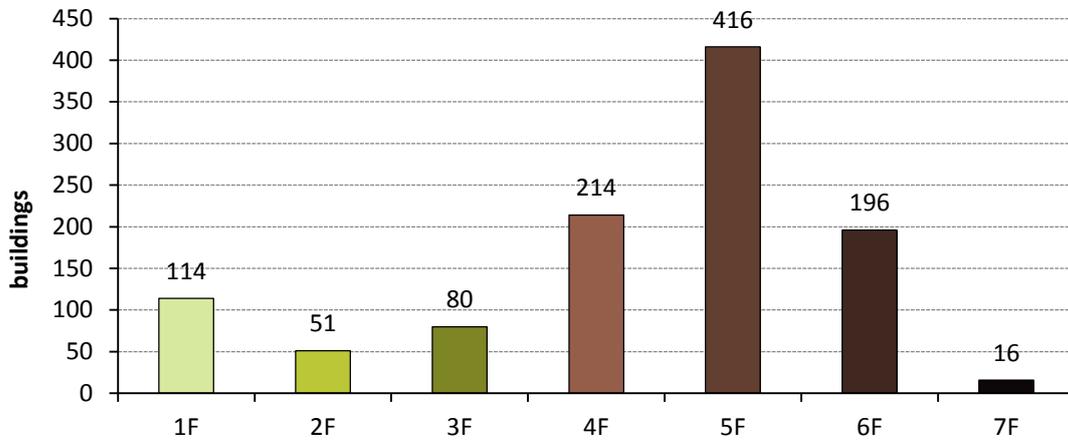


Fig. 172 the number of rental houses of different floors in in Changban Village, Guangzhou

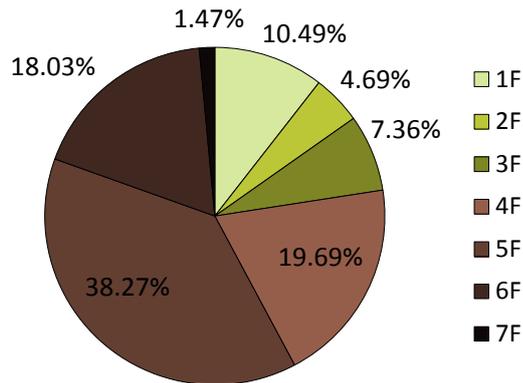


Fig. 173 the ratio of rental houses of different floors in in Changban Village, Guangzhou

Table - 29 the number of rental houses of different floors in in Changban Village, Guangzhou

Area	1F	2F	3F	4F	5F	6F	7F	Total
South	75	25	40	89	210	124	13	576
North	23	24	23	62	104	40	2	278
East	9	0	9	31	37	13	0	99
West	7	2	8	32	65	19	1	134
Sum	114	51	80	214	416	196	16	1087
Ratio	10.49%	4.69%	7.36%	19.69%	38.27%	18.03%	1.47%	100.00%

Note: In this village, there are 452 cases planned regular according to formal regulation in the new area. Those 1087 cases are all in the old area of the village.

Source: Made by author basing on the survey map from Tianhe Sub-bureau of land resources and housing management of Guangzhou Municipality

6.3.2.2 Details of the Vertical Expansion Rules

In order to pursue economic interests, the villagers try their best to find different ways to obtain building area from the airspace above their territories.

1) The Higher House the Later It Built

The construction of villagers' rental houses is like a competition. During the hot rebuilding period of private house, the later the villager rebuilt their house into rental apartment, the more numbers of floors they will build. It is like the updating of IT production. Step by step from iPhone3, to iPhone4 to iPhone5, the new advanced vision would be announced after a separated period of time. Here also take Longdong as a typical case to illustrate this characteristic of building construction in urban village. And actually, the situation is also popular in other rural area in China.

It is difficult to make clear in which year each private house is exactly built in the village. However, the period of years or the order of before and after, can be judged from the appearance of the building, new or old, the style and material of the tiles, windows, anti-theft meshes and so on, because there are different popular and cost-effective building materials in different periods.



Fig. 174 Traditional house before 1970s in Xiajiao Village, Guangzhou



Fig. 175 Self-living tow-floors concrete house built in 1980s in Longdong Village, Guangzhou



Fig. 176 Self-living 3.5-floors house built in 1990s in Lijiao Village, Guangzhou



Fig. 177 Rental house with 6.5 floors built in 2000s in Longdong Village, Guangzhou

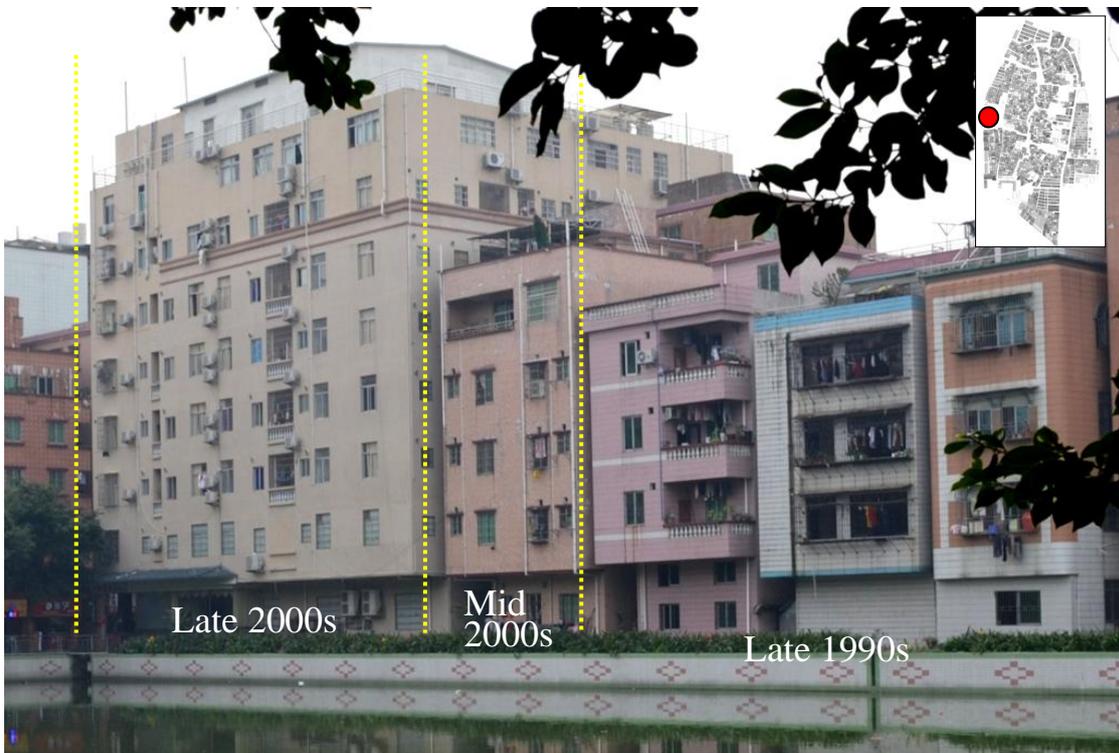


Fig. 178 Rental house built in different times in Longdong Village, Guangzhou
Source: by author in 2012

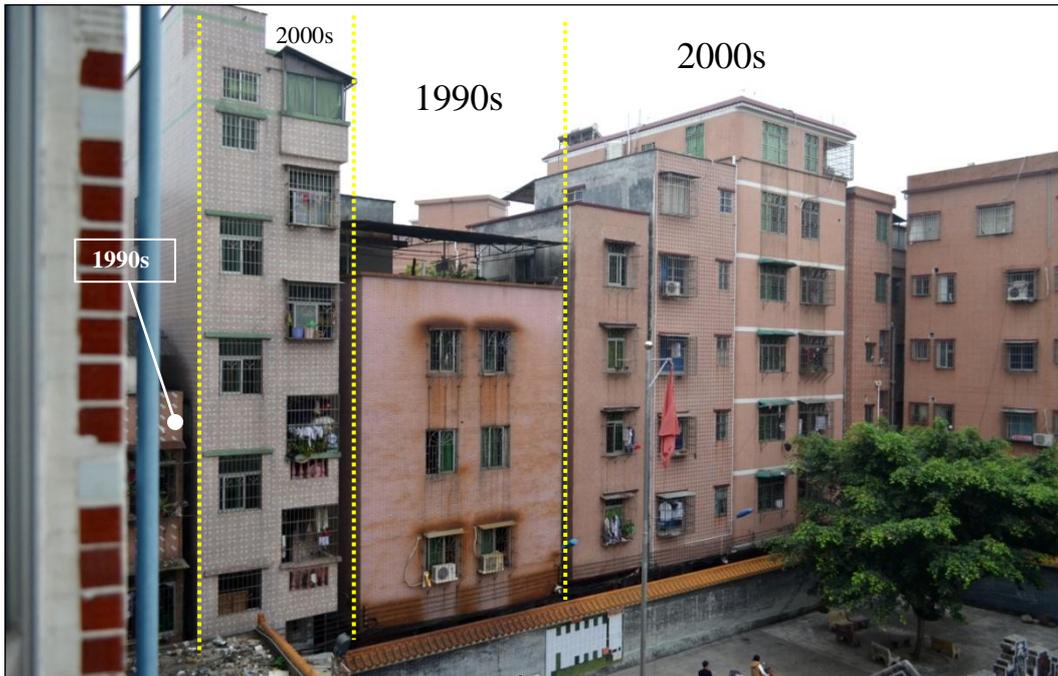
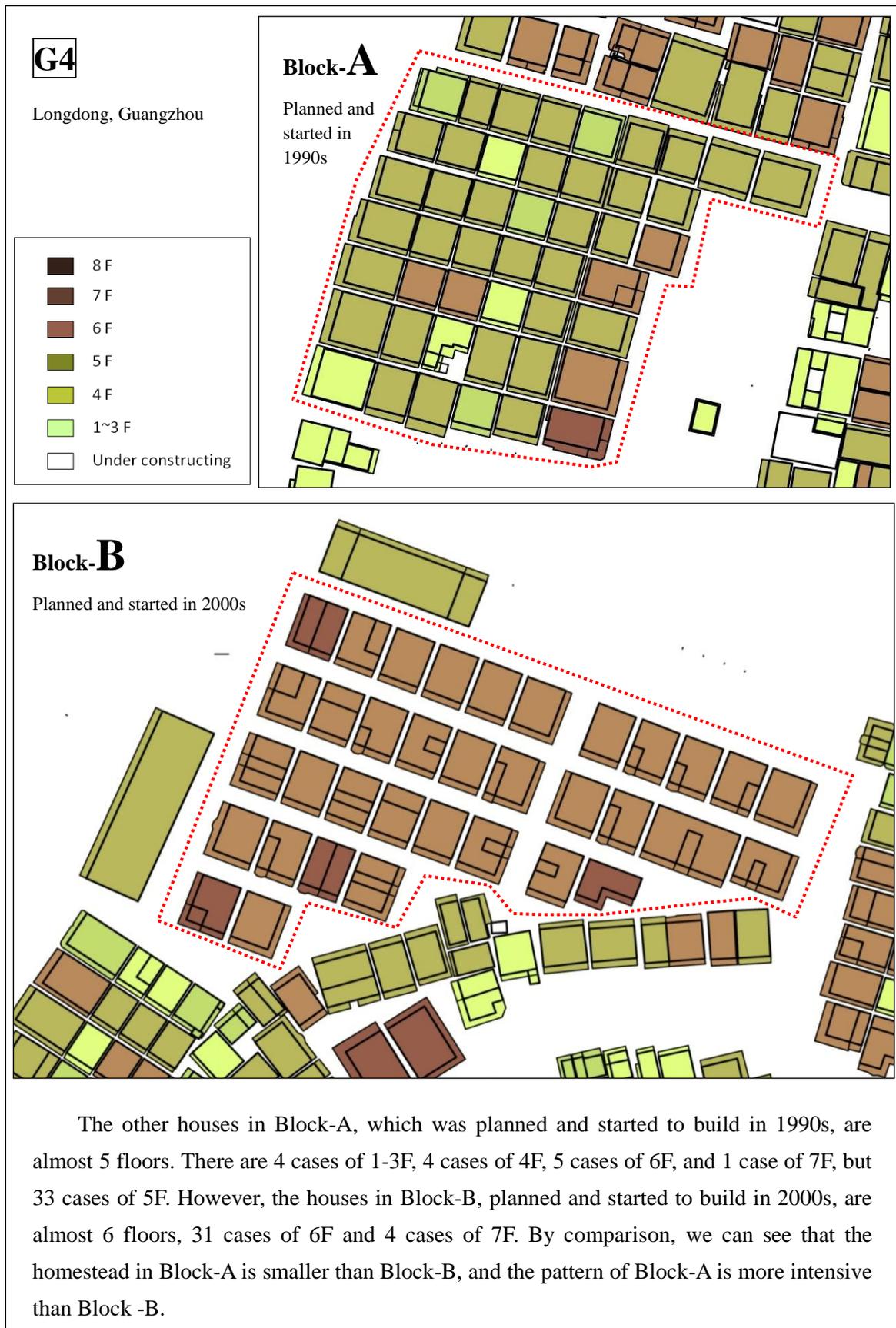


Fig. 179 Classification map of rental houses of different floors in CSLV
Source: made by author

Fig. 180 Comparison of two new developing block in Longdong village



2) From Loft to Implicit Floor

In 1990s, it formed a trend in rural area of Guangdong Province that the first floor in the private houses, which are along the main road and can be opened as stores or restaurants, was always built as about 4.2m high, and a loft is added in the first floor. In those small scale private houses, the loft increases more rental areas for commercial activity, and creates a high space to adapt different types of commerce. Gradually, that trend had evolved. The loft becomes an implicit floor in 2000s. At the beginning, the same with the loft, the implicit floor is about 2.1m high. But the height of it continues to increase to the common standard of floor height- about 3 m. Thus, the appearance of villagers' houses that overhanging from first floor has evolved as overhanging form second floor. The informal standard of acceptable floor number has changed from 5 floors to 6 floors. This is one way for the villagers to achieve the vertical expansion step by step.



Fig. 181 Evolution from loft to implicit floor
Source: made by author



Fig. 182 Cases of the extruded implicit floor above 1st floor in Longdong Village, Guangzhou
Source: by author in 2013

3) Addition on the Existing House

Another way of the villagers to achieve the vertical expansion is adding temporary iron shed or new concrete structure volume on the top of their existing houses.

In Beijing, the addition of steel board shed on the top of the building is popular, which is made by light steel structure and color-coated steel sandwich board, the same with the temporary prefabricated house on the construction site or disaster area. In Chinese, it is called as Caigangbanfang (彩鋼板房). As its cheap cost and convenience for fabricating, it has gradually become popular in the past decade, especially in rural area. Not only popular in China, those kind of light steel productions are even exported to other developing countries in Africa, South Asia and East Europe. Those kinds of low cost building materials and technology make it easy to fabricate temporary addition on the top of private houses in urban village.



Fig. 183 Light steel structure of Caibanfang
Source: <http://www.jnrx.jqw.com/productShow-3049609.htm>



Fig. 184 Temporary prefabricated house
Source: <http://www.jnrx.jqw.com/productShow-3031885.htm>

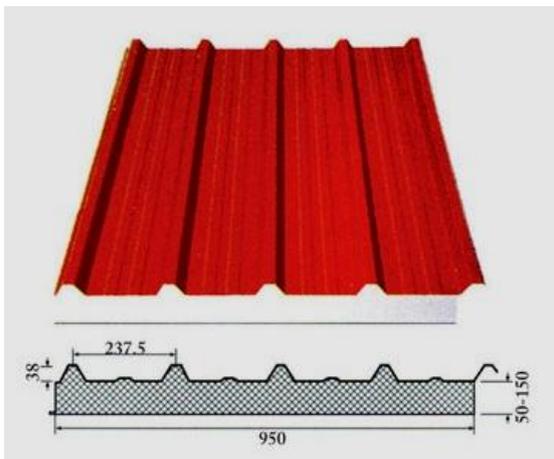
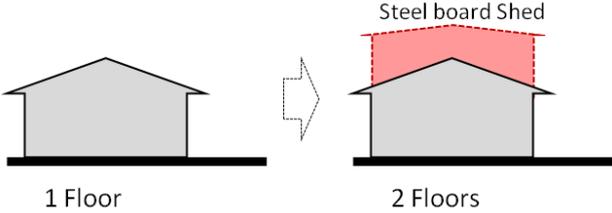
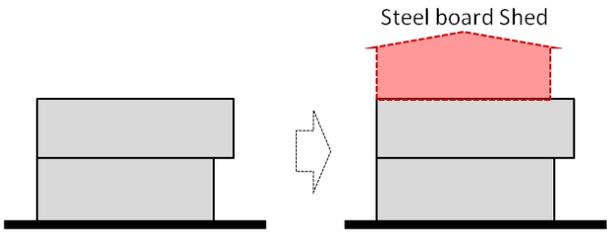
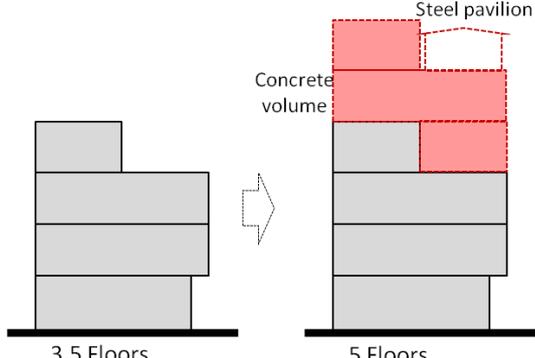
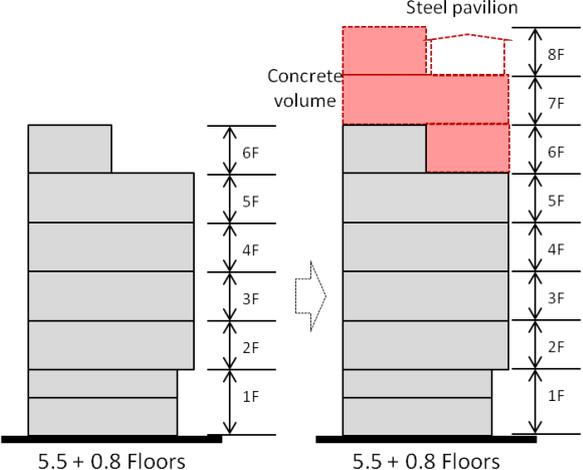


Fig. 185 Color-coated steel sandwich board
Source: http://image.made-in-china.com/2f0j00lCTaqHnz_hsrS/Color-Coated-Steel-Sandwich-Board.jpg



Fig. 186 Color coated steel board
Source: http://image.made-in-china.com/2f0j00OeaTkmn_bAKzS/Color-Coated-Steel-Board.jpg

Table - 30 Different types of addition on the existing house in urban village

Region	Key information	Figure
<p>Beijing 北京市</p>	<ul style="list-style-type: none"> As the weather in Beijing is quite cold in winter, most the additions are volumes of enclosed space. Living space or Sun room The legal floors number of peasant house in rural area is only 2 floors. Generally, the economic power of villagers in Beijing is weaker than those in Guangzhou City and Shenzhen City in Guangdong Province. Not affording the cost to totally rebuild the house as concrete frame structure house, some villagers add temporary steal board shed. 	 <p>1 Floor → 2 Floors</p>
		 <p>2 Floors → 3 Floors</p>
<p>Guangdong 广东省</p>	<ul style="list-style-type: none"> As the weather in Guangdong is warm in winter and quite hot in summer, the additions are not only volumes of enclosed space to live, but also the opening steel pavilion for thermal insulation and laundry space. Generally, the economic power of villagers in Guangdong Province is stronger than those in Beijing City. The legal floors number of peasant house in rural area is 3.5 floors. When the 5 floors became the common number among the surrounding, villagers add volumes of concrete frame structure and brick wall on their existing 3.5 floors houses. For the villager who has already rebuilt the houses as 5.5 floors, when 8 becomes the new common number, they also add more floors, 2 or 3, on their existing 5.5-floors houses. 	 <p>3.5 Floors → 5 Floors</p>
		 <p>5.5 + 0.8 Floors → 5.5 + 0.8 Floors</p>

Source: made by author

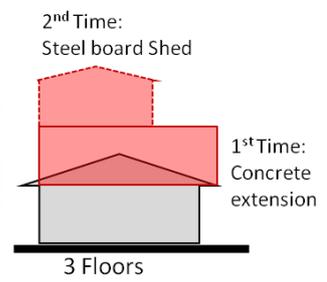


Fig. 187 Case of addition on existing house in Liulangzhuang, Beijing
Source: by author in 2012

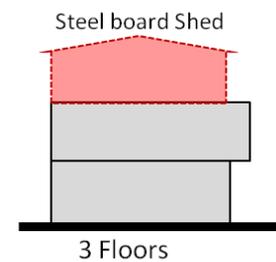


Fig. 188 Case of addition on existing house in Shaoziying, Beijing
Source: by author in 2012



Fig. 189 Cases of addition on existing house in Xiao Cun and Gajiatun, Beijing
Source: by author in 2012

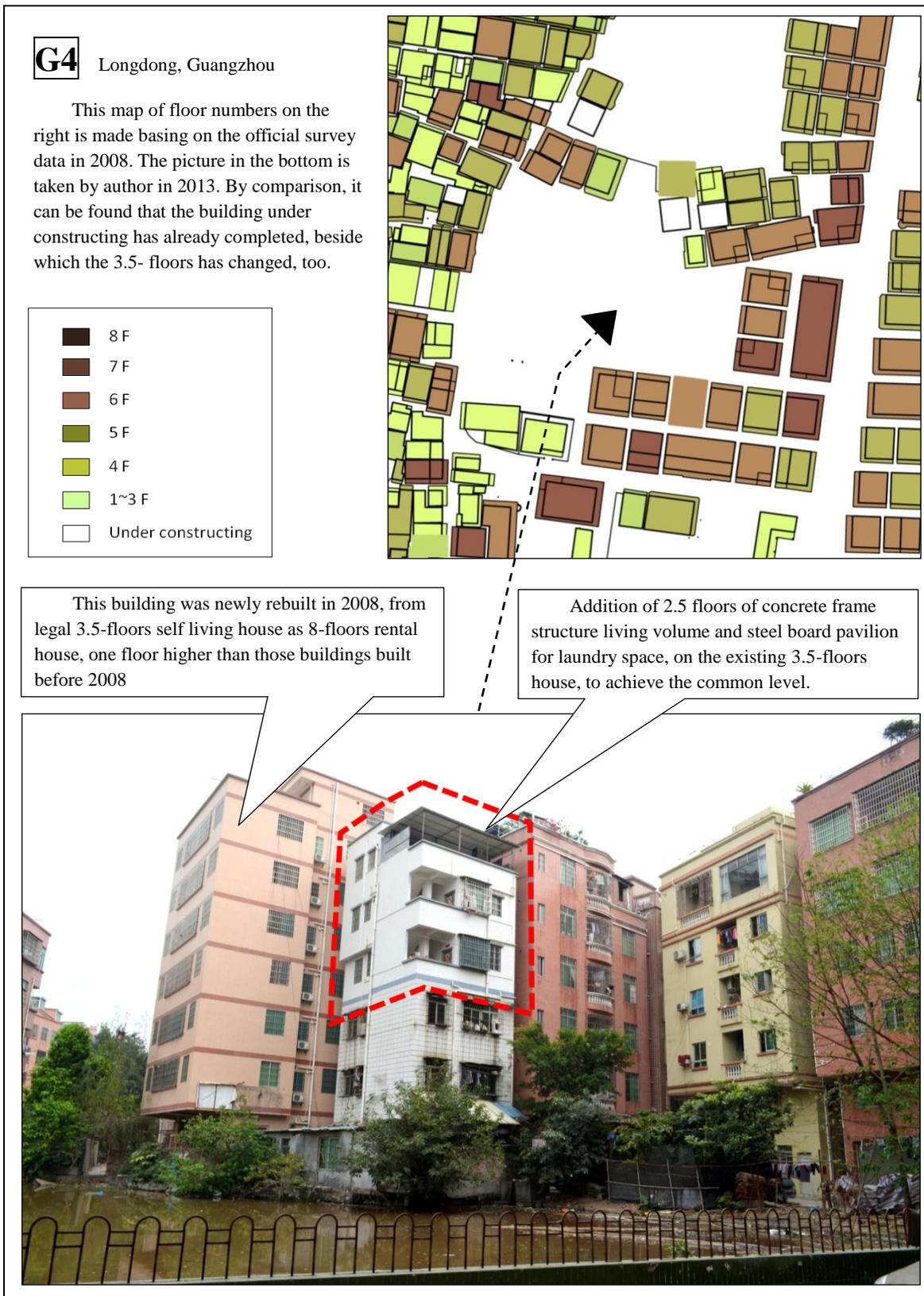


Fig. 190 Case of extension of existing building (1990s) from 3.5 floors to 5.5 floors
Source: by author in 2013



Fig. 191 Addition on the top of the building still under constructing in Longdong Village, Guangzhou
Source: by author 2012.11



Fig. 192 Addition on the top of the rental house in Shipai Village, Guangzhou
 Source: by author in 2013

S3 Gangxia Village(岗厦), Shenzhen City

A mature urban village in the central area of the city. On the top of most of private houses, there are both additions of steel board roof pavilions and concrete volumes.

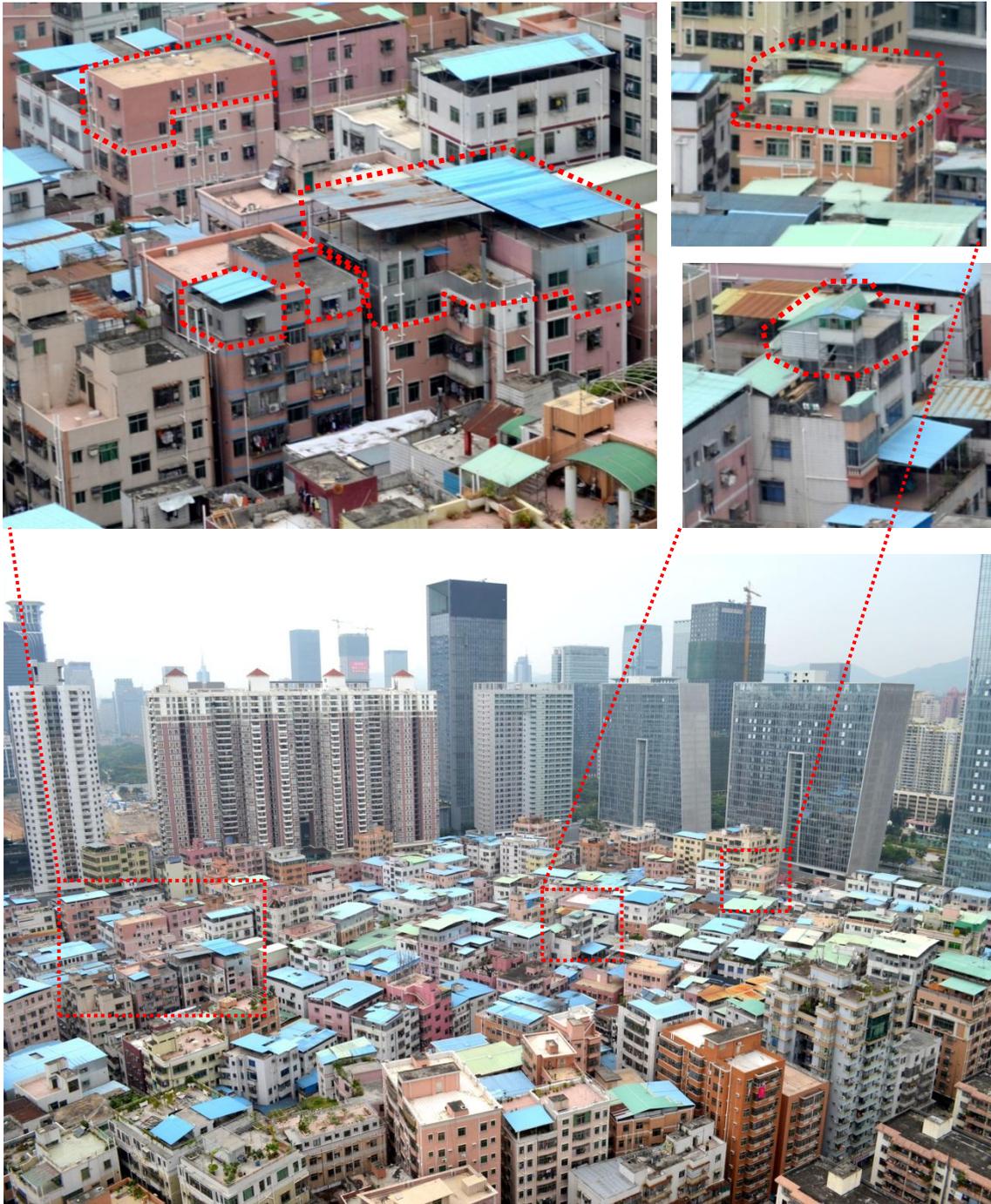


Fig. 193 Addition on the top of the rental house in Gangxia Village, Shenzhen
Source: by author in 2012

6.4 Gray Space and Informal Operational Rules

The common space around the homestead in the village is not only occupied by the villagers through their construction behaviors, but also occupied by the tenants of the floating people in the operational stage after the construction stage. The tenants' living behavior tends to spill into the common space in the front of each house. As those spilling of living behaviors from each private space, the streetscape in urban village is crowded and cluttered, but full of vitality.

6.4.1 Gray Area in Common Space in Front of Each Private House

In the front of each private homestead, there is a gray area of ambiguous space between the private space and the common space.

The first ambiguity of that gray area is that it is utilized as private owned, but it is actually the common properties. The gray area seems to be affiliated to each private homestead. The private behavior results are extended into that area. It is also an exclusive area that except the tenant or house owner who is directly occupying the private space along that area, other individual does not have the right to use it.

The second ambiguity is that there is no clear boundary of this space. It is elastic. Its range is unclear. However, from the behavior results of the actors in the village, it can be found that, psychologically, there are three lines to determine the boundary of that gray area to limit the private behavior. First is the step line, the external line of extending steps. Second is the overhanging line, the boundary of overhanging volume. Third is the sidewalk line, the boundary of side walk to the roadway. The size of the gray area is not clearly defined by one precise rule, but depends on the individual judgment and the tolerance of the neighbors.

That ambiguous space could be one physical manifestation for the custom that traditional Chinese people could not make clear the exact boundary between public and private affairs.

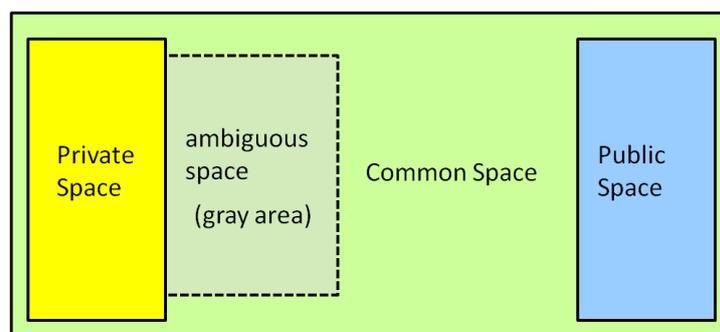


Fig. 194 Gray area of ambiguous space for private activity in common space
Source: made by author

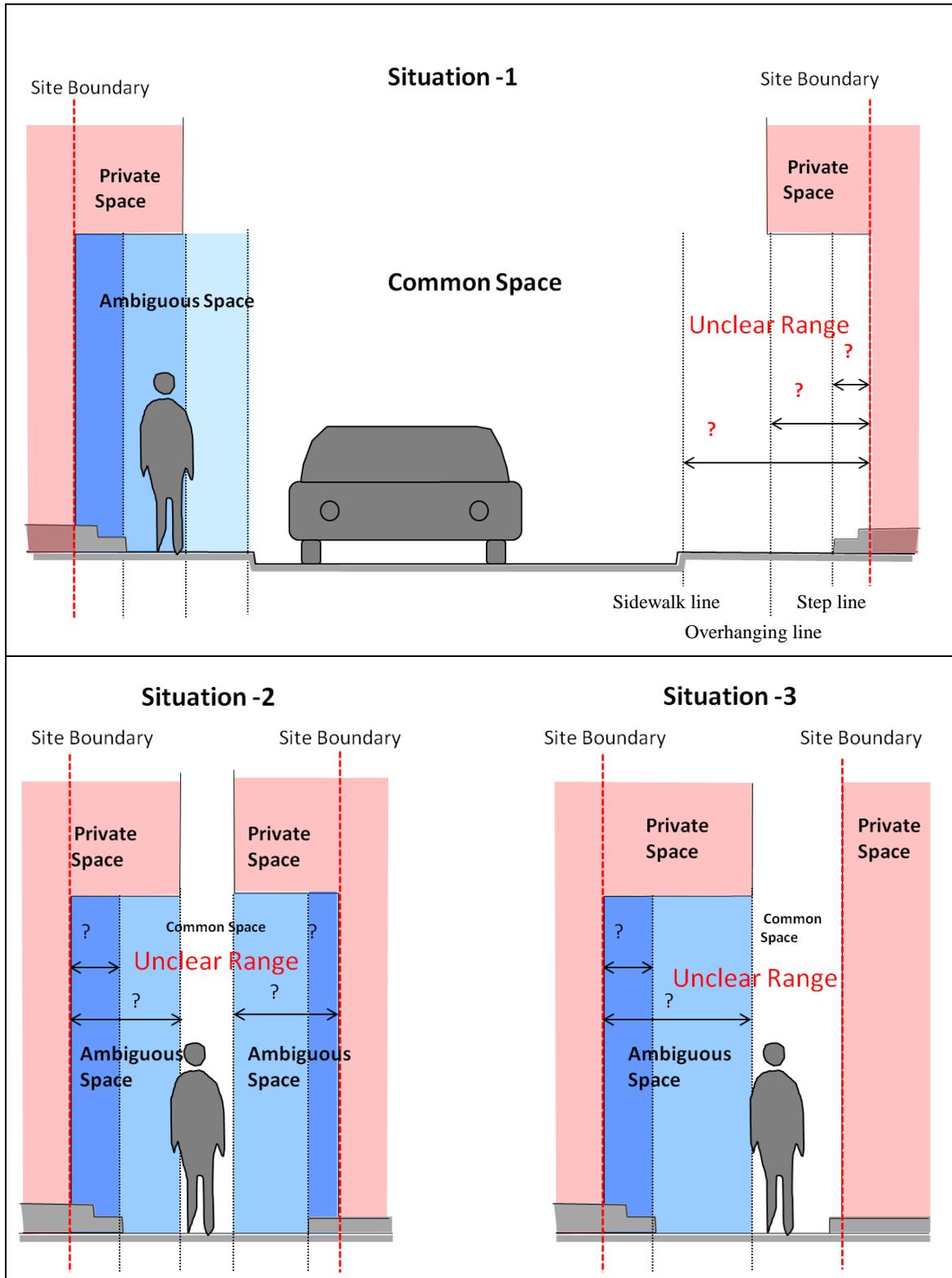


Fig. 195 Unclear range of the ambiguous space in front of each private homestead

Source: made by author

6.4.2 Activities in the Gray Area of Ambiguous Space

The phenomenon that private behaviors occupy common space, of course, can be found in ordinary common space in the city. However, the phenomenon that private behaviors overflow into the gray area of ambiguous space is more serious in urban village than in the city.

Along main roads in the village, which has relatively good accessibility and concentrate large flow of people, there are many small retail shops, restaurant, book shop, barber shop, repair shop, second-hand furniture stores and other shops providing daily life goods and services. The private behavior of each tenant in those areas is much more active. Their behavior results are more obvious for observation.

Here take Longdong Village as a case to study the overflow of private behavior results into the common space. Discuss the ambiguous constrain in the gray area between private space and the common by analyzing the behavior result of each tenant.

Private belongings for business are almost laid in the gray area to increase the usable business area and to achieve the advertising effect to attract possible clients' attention.

The belongings are included as followings:

- 1) on the ground: counter, shelves, temporary support, goods, refrigerator, showcase, tables and chairs, standing advertisement board and so on;
- 2) above the ground: hanging advertisement board, canopy and so on.

The positional relationship between the belongings and three possible psychological constrain line is analyzed case by case.

According to the observation and analysis, it can be found that there is no specific and unified standard for limiting the range of private behavior. It is determined by the necessity of the business actives of the shop owner. But, any way, the tenant holds the right to utilize the gray area of ambiguous space in the common space, although which is not officially approved.

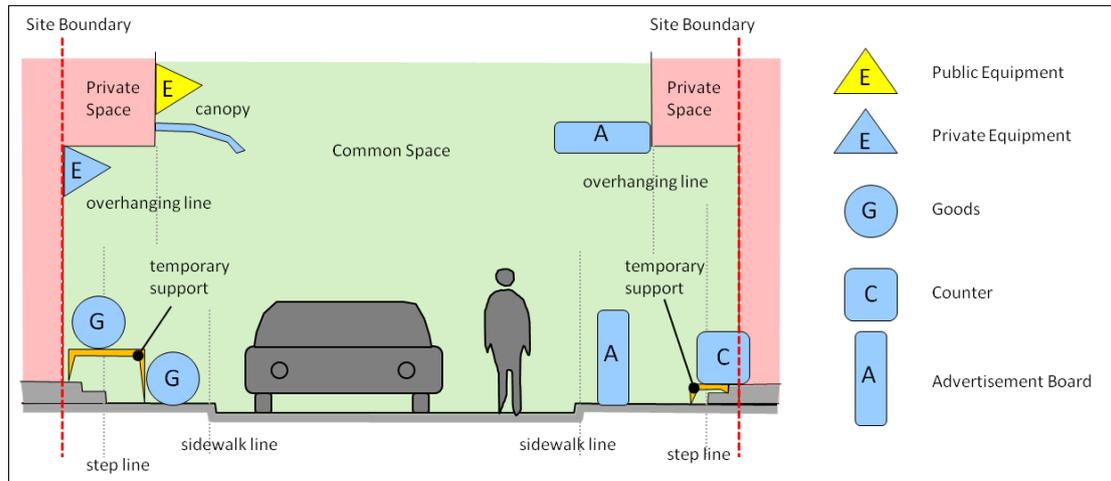


Fig. 196 Activities in ambiguous space in commercial space
Source: made by author



Fig. 197 Streetscape of commerce in Longdong Village

Source: made by author

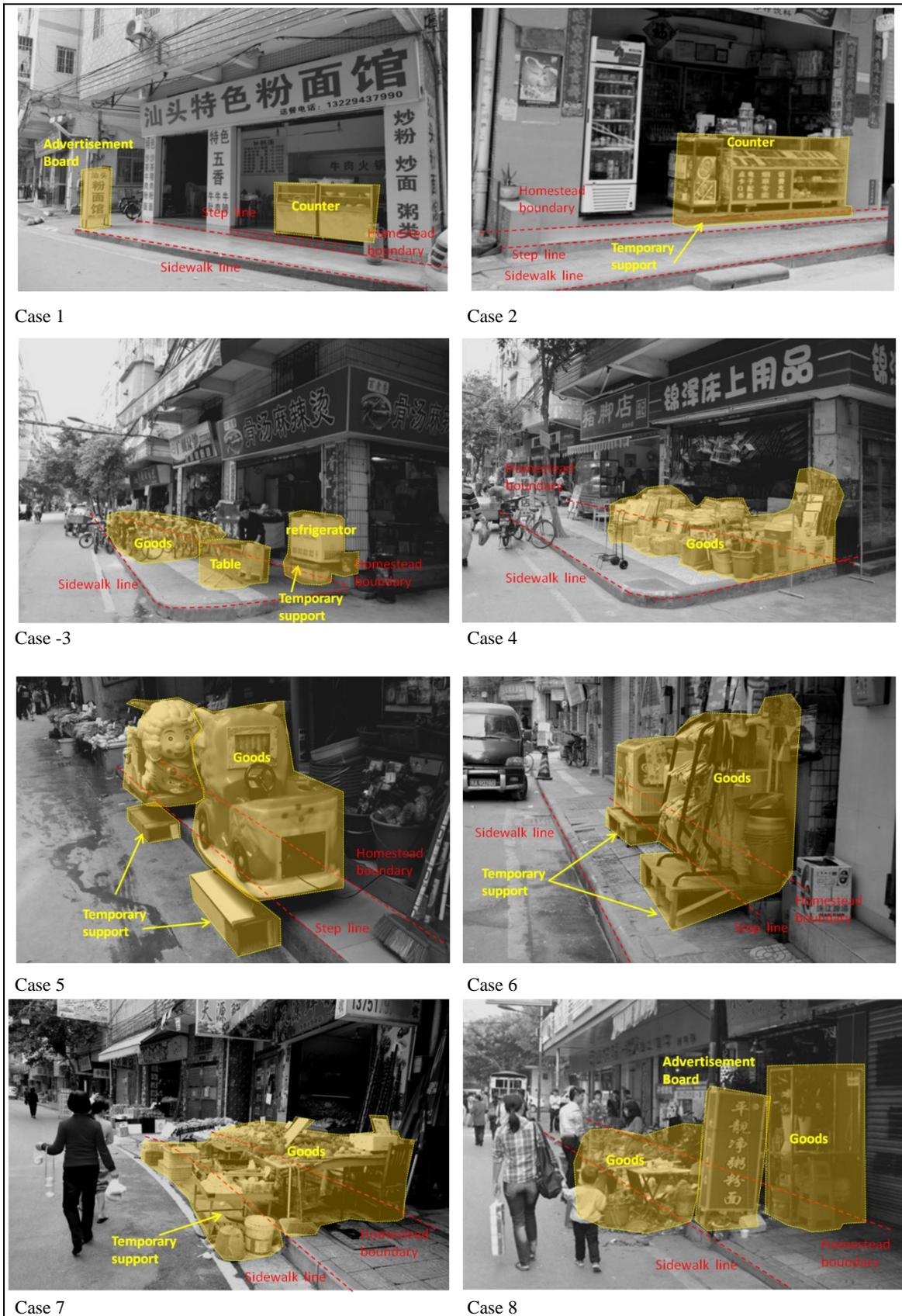


Fig. 198 Eight cases of activities in the gray space in front of each house

6.5 Chapter Summary and Findings

In microscopic point of view, the morphological evolution of urban village can be deemed as the developing process of rental house, which is dominated by the indigenous villagers in urban village under their informal settling institutions and the guidance of specific informal rules.

This chapter has illustrated the morphological evolution of rental houses in urban village. It is an evolution that the self-living private houses less than 3 storeys are gradually expands both on horizontal direction and vertical direction and become as multi-layers even high-rise rental apartment. On one hand, the horizontal expansion of overhanging could be considered as informal because there is no clear formal regulation as constraint. On the other hand, the vertical expansion is illegal behavior as the municipal government of each city has its own technical indicators to control the floor number of villagers' house. However, as "the law cannot be used to punish the majority", illegal behavior of vertical expansion becomes a tacit approved phenomenon in urban village.

1) Informal rules are the actualized and effective rules in urban village

Within the government's formal regulations, the villagers' houses are supposed as private house with 2~3 lays for self-living inside the boundary of their homestead. Their appearance should have been the supposing image as the following figure showed. However, the truth is totally different. Most of them are horizontally and vertically expanding to the possible space around them. The volume of each house is much bigger than the formal regulation constrained. Informal rules, which are beneficial to each individual of the villagers, are the actual regulations that be implemented in urban villages. That is to say, instead of the formal regulations, informal rules are the actualized and effective rules in urban village.

2) Tacit Approval on Occupation of Common Land and Common Space inside the Village

As rapid urban sprawl, the value of the land and space in urban village has been dramatically increased when the government gradually increases the investment on urban infrastructure construction around the village. Villagers have been devoting themselves to the informal or illegal construction of rental houses. They also scramble to occupy or utilize the common land and space in the village, which can be directly converted as private economic benefit. The morphological evolution of rental house is a developing process that every individual villager gradually occupies their common land and space in the village under the informal rules that win most of the villager's acquiescence and compliance. The villager committee holds acquiesce to the phenomenon of overhanging and gradual increasing floor

numbers. Facing those widespread informal and illegal behaviors, the municipal government only can make tacit approval, too.

3) A set of specific informal rules as guidance for housing construction in the village

Therefore, a set of specific informal rules is spontaneously evolving as the guidance for housing construction in the village. The specific informal rules are identified by graphic analysis and numeral evidences of rental houses in urban villages in Beijing, Guangzhou and Shenzhen. Those specific rules are actually the behavior guidance for the villagers to solve the social interaction problem – how to deal with the common land and space in the village. What kind of role does each of them play in the academic context of urban village study is also described as following. Within the list of specific informal rules, No.1, 4, 7 and 9 are previously studied phenomenon that has been confirmed by this study and identified as part of the framework of informal rules. The rest of other specific informal rules are first discussed and indentified by author in this study.

Table - 31 the role of specific informal rules in the academic context

No.	Category	Informal Rules	Role in academic context
1	Land using rule	One family not only can hold one homestead, just like the “one child policy in China”, one family not only can have one child. There is flexible method to pass by the constraint	△
2	Land using rule	When rebuilding on old homestead, the common land of alley around the homestead can be occupied little by little. Some days it can become private land.	○
3	Land using rule	The entrance steps of the house can build extending outside homestead into the alley.	○
4	Overhanging rule	When overhanging, the accessing space in the alley should be reserved. But there is some end-type alleys fenced with walls as private space.	△
5	Overhanging rule	Every house is allowed to overhang in its front to the common space. Whether it can overhang to other directions depends on whether there is enough space which not yet occupied.	○
6	Overhanging rule	When two houses are share the same common space of alley, both of them should keep little space away from the mid-line of the alley. When the common space affiliated to one family, it can overhang as wide as possible.	○
7	Vertical expansion rule	The higher house the later it built. Ignoring the formal regulation, villagers can build more higher than the one who build earlier.	△
8	Vertical expansion rule	Villagers used to build a loft in the first floor to increase more commercial areas. Recently, there is a new trend to build implicit floor above first floor instead the loft.	○
9	Vertical expansion rule	Villagers used to adding temporary iron shed or new concrete structure volume on the top of their existing houses.	△
10	Operational rule	Private in public: gray area in front of each house can be utilized as private owned, gray area is affiliated to each homestead.	○
11	Operational rule	Public on private: public facilities of the village can set on private walls of the villagers rental house	○
Remark		○ first discussed and indentified by author in this study; △previously studied phenomenon that has been confirmed by this study and identified as part of the framework of informal rules.	

Source: made by author

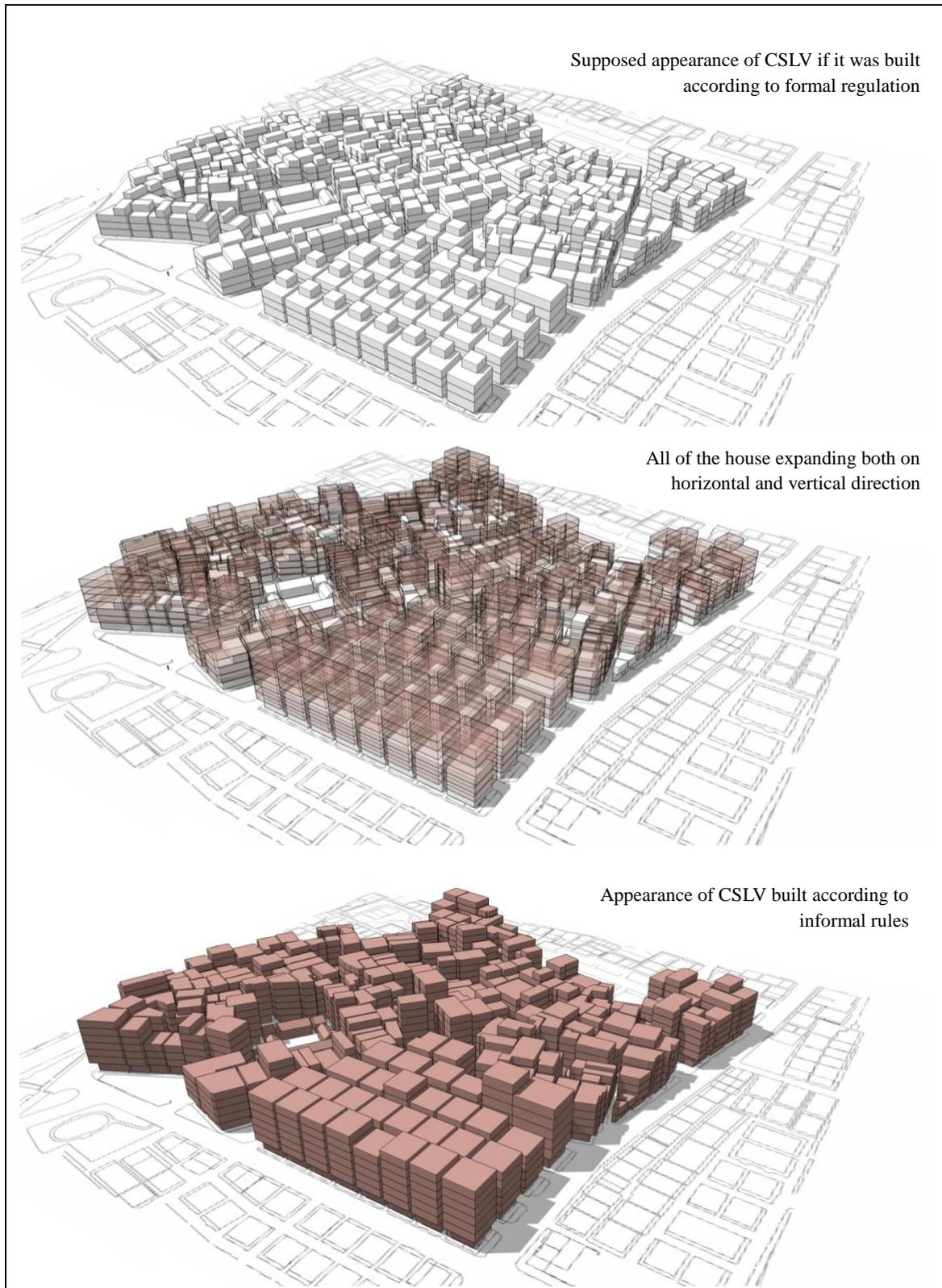


Fig. 199 Comparison of the appearance of CSLV built under formal regulation and informal rules

Source: made by author

CHAPTER-7

CONCLUSION

Urban village, informal settlement in China, is considered as urban cancer by most of municipal government. From the research scope of village scale and building scale, this study is aimed at making clear the social characteristic and physical-spatial characteristic of urban villages, uncovering the informal institutions that support the land and property development in urban village, and specific informal rules that influence the architectural appearance and streetscape in urban village by examining their developing process. In the following sections, the conclusions of the study will be put forward.

7.1 Conclusions of the Study

The findings of the study are concluded in those aspects: social characteristics of urban village, physical-spatial characteristics of urban village, informal settling institutions and specific rules in urban village.

7.1.1 Social Characteristics of Urban Village

Urban village is the independent sub-society with common interests in the city.

Like traditional village, urban village in China is also a clan-village society established upon consanguinity(血緣) and territorial relation(地緣), which is the basement of the social organization principal of ChaXuGeju(差序格局). The elastic character of interpersonal relationship still remains, and elastic boundary between private(私) and public(公) is also reserved. Villagers are still holding dual-identifications, their core family and the clan-village. The tradition of “GongSiBuFen”(公私不分) and “NeiWaiYouBie”(内外有別) are still the main behavior logic for the indigenous villagers. However, as the development of market oriented economy in China, the behavior logic of villagers has become benefit oriented.

The villagers’ consciousness is the dominating consciousness in urban village. According to the land tenure system in China, villagers legally hold the ownership of the land in urban village, which is independent from the urban land. Although the floating people and villagers are co-residents in urban village, and their number are much more than the indigenous villagers, they do not dominate the society in urban village. The land and property development in urban village is dominated by indigenous villagers, rather than by floating people. Indigenous villagers play a decisive role on the housing construction process.

As a different stakeholder from municipal government, the village committee represents the villagers’ common interest. It covers the illegal construction in the village, which brings economic benefits for each villager. Thus, the informal rules are possible to effect in the village.

7.1.2 Physical-spatial Characteristics of Urban Village

A theoretical outline to decomposing the morphological composition of urban village has been drawn to observe the social-physical structure and character of urban village, and its spatial developing process. The morphological characteristics of rental house in urban village are illustrated both by graphic evidence and numeral evidence. The physical-spatial characteristic of urban village in Beijing, Guangzhou, and Shenzhen can be summaries as following.

1) High-density 高密度

Plot coverage and floor area ratio of urban village are becoming higher and higher when more residential building area are gradually increased to shield more floating people. In the case of Beijing, the common land and space of alley is always occupied by addition of hovel beside the private house. In Guangzhou and Shenzhen, the voids of common space in urban village are commonly occupied and compressed by the overhanging of villagers' private house.

2) Spontaneity 自發性

Due to the urgent demand of residence for floating people while lack of residence for the low income group officially provided by the government, the each individual of villagers in urban village spontaneously rebuild their private self-living house as multi-storey rental house. In some cases of Guangzhou and Shenzhen, the villagers' new residential area around the old village is always spontaneously set by the village committee in a grid pattern. The spontaneous growing process of the village can be obviously observed by comparing the new pattern and the old pattern.

3) Accessibility 可達性

As the spontaneous developing process, the road network in old area of urban village has always been reserved. In the old area of the village, network tends to be irregular and complex, while regularly planned as a simple grid pattern in new developed area. The accessible routes from the entrance of the village to each private house are well kept. It is an organic pattern. The land use in urban village is actually mixed with residence and commerce. Commercial activities always aggregate in the main line of the network, which provide a convenient route from residence and commerce.

4) Centrality 中心性

In Guangzhou and Shenzhen, the structure of urban village appears as a mono-centric or multi-centric pattern. The centers are the ancestor halls in the village. Although most of vacant

place in the village are filled with high-dense rental house, the open space in front of the ancestor hall is always well reserved. That is the physical-space corresponding to the kinship of the indigenous villagers.

5) Expansivity 膨脹性

According to the discussion and illustration in chapter-6, expansivity mainly represents at the ambiguous boundary between common space and private space. More specifically, it represents at the overhanging volume of each private house beyond the common land of the alley, the vertical expansion of private house to occupy the common airspace of the village, and the gray area of ambiguous space in the common space in front of each private house.

7.1.3 Informal Settling Institutions and Specific Informal Rules in Urban village

Based on literature survey and field survey in Beijing, Guangzhou and Shenzhen, four informal settling institutions and eleven specific informal rules, which influence the morphological evolution of urban village, especially the morphological evolution of rental house in urban village, have been deduced, and then identified by the facts of the graphic analysis and numeral evidences in this study. Details of those four informal settling institutions and eleven specific informal rules of urban village were summarized as the following table showed.

Table - 32 Four informal settling institutions of urban village

Informal Settling Institutions	
(A)	the tradition of inhabiting with consanguinity and territorial relationship
(B)	the custom of ambiguous boundary between common space and private space
(C)	the tradition of self-building and construction team
(D)	the mentality of “FaBuZeZhong” and conformity

Source: made by author

Table - 33 Eleven specific informal rules

Category		Specific Informal Rules
Land using rules		No.1: One family not only one homestead
		No.2: Site extension when rebuilding
		No.3: Entrance steps extending outside homestead
Construction rules	Overhanging	No.4: Reserve accessing space in the alley
		No.5: Overhangs beyond the common land
		No.6: Overhangs as wide and high as possible
	Vertical Expansion	No.7: The later constructing the higher can build
		No.8: Build loft or implicit floor
		No.9: Addition the top of existing house
Operational rules		No.10: Private in public - gray area can utilized as private owned
		No.11: Public on private - public facilities can set on private walls

Source: made by author

The cases of rental housed in urban village of Beijing, Guangzhou and Shenzhen in this study are the evidences to prove that instead of the formal regulations, the informal rules are the really effect rules in the real world in urban village. The relevant formal regulations in Guangzhou and Shenzhen are too generic and rough to give effective constraint to the villagers' constructing behavior. In terms of the land and property development in urban village, especially in terms of the construction of rental house, informal rules are the dominating and real efficient institutions as the behavior guidance for the indigenous villagers.

7.2 Implications of the Study

7.2.1 Uncertainty of Boundary (境界線の不確実性)

In the society which is organized by the principle of “ChaXuGeju” (差序格局, differential mode of association), people’s behavior logic is elastic. The boundary between private(私) and public(公) is relative, even say ambiguous, attributing to the complex consanguinity and territorial relationship. Within the scope of the clan-village, the affairs of the whole village are public sphere for each villager’s core family. But, within the scope of the city, the affairs of the whole village are private sphere for the villagers. The boundary of private and public is determined by the scope of one specific affair. Specifically, in the case of urban village, for the municipal government, the common land in the village is private property of the villagers. But, for the villager’s core family, the common land and space is public property that is dominated by all the villagers as a whole. It is difficult to make clear the common land and space in the village is private sphere or public sphere. The boundary of public and private is uncertain.

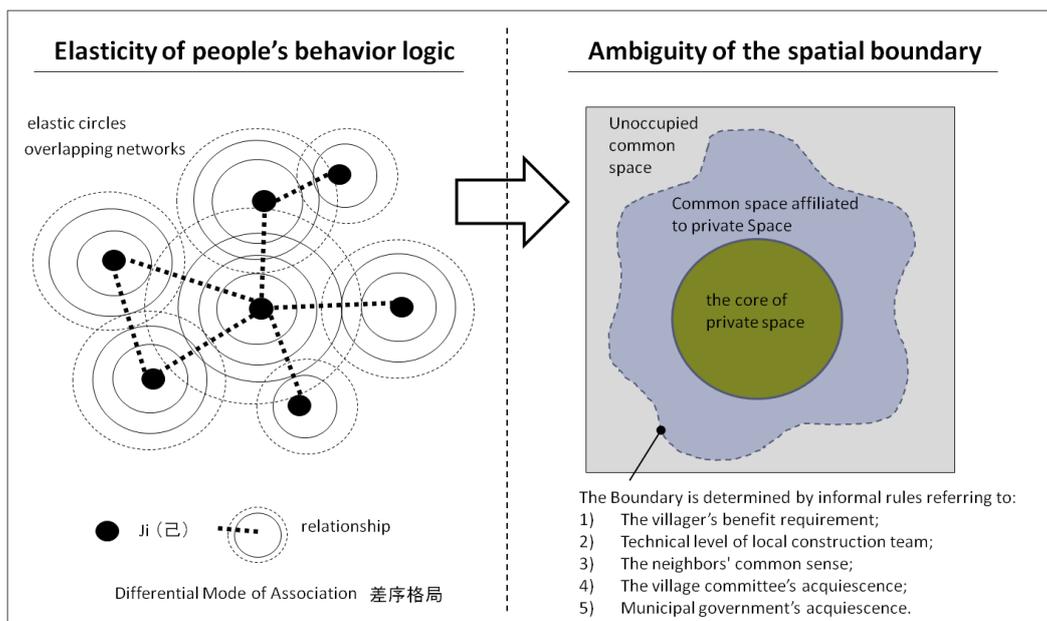


Fig. 200 Elasticity of people's behavior logic and ambiguity of the spatial boundary

Source: made by author

For the physical perspective, the expansivity of the boundary of rental house in urban village is the visible behavior result made by the villagers guide by the informal settling institution of “the custom of ambiguous boundary between common space and private space”. Zhao-Xiaofeng has considered that “for the villagers, when facing the choice of public interest and private interest, the private interest is prior for each individual of villager.” In terms of rental house, the benefit-oriented behavior logic of the maximization of private interest guides each villager to occupy the common space as private. The evolution of architectural form of rental house in urban village is the manifestation, which is built as a heavy box with light foot that horizontally overhangs to the common space and vertically extends to the common airspace of the village. And, the gray space around the rental house is another manifestation, in which private activities are active both by the villagers and tenants.

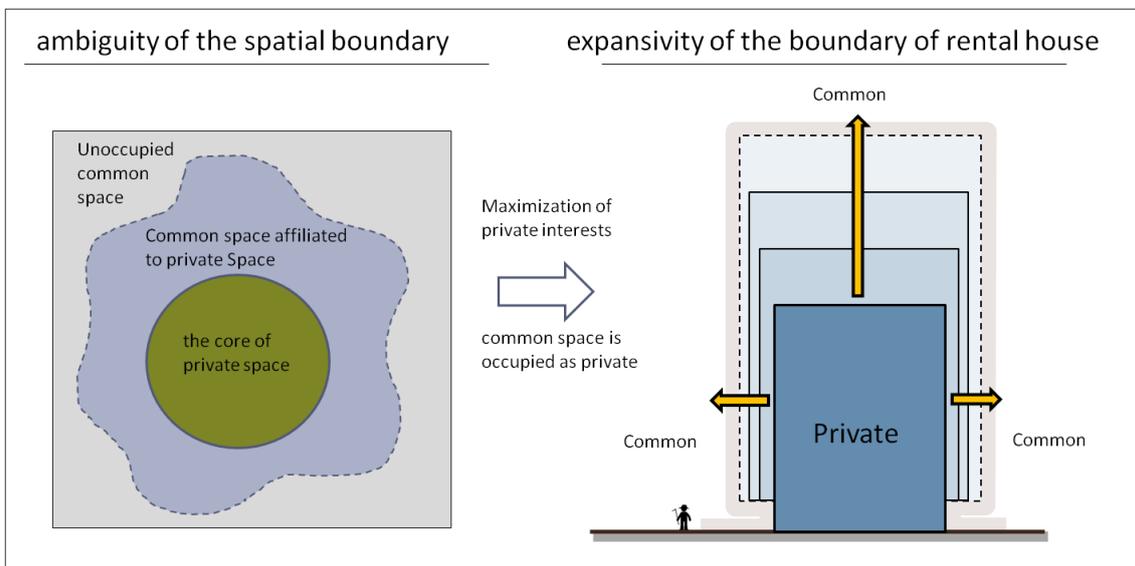


Fig. 201 Ambiguity of the spatial boundary and the expansivity of the boundary of rental house

Source: made by author

Comparing the elasticity of socio-cultural institutions and the ambiguous physical fact in urban village, it could be found that they are similar. The boundary between public (common) and private are ambiguous and elastic. The author’s physical space study could be a specific support to FEI’s theory of “ChaXuGeju” (差序格局). It could be considered that the physical-spatial fact in urban village made by each individual of villager is attributed to the elasticity of the informal institutions.

7.2.2 Illegal Construction Defined by the Inappropriate Formal Regulations (不適當な公式規則によって定義される違法建設)

From this study, it can be implied the fact that the formal regulations are ignoring the

villagers' benefit anticipation, ignoring the increasing value of the villagers' land. Due to the independent land tenure system in China, the construction activity on the collective own land is constrained by one universal standard made by each municipal government. No matter where the village located in the city, the building area and floor numbers of the villager's house are one universal standard, such as 280 m²/household and 3.5 storeys in Guangzhou, and 480 m²/household and 4 storeys in Shenzhen. According to those formal regulations, basically, all the rental houses in urban village in Guangzhou and Shenzhen are defined as illegal building. There is no responding to the true value of the land in the city. That is why the formal regulations fail to be behavior guidance for the land and property development in urban village. The spontaneously evolving informal rules become the effective behavior guidance for the villagers. From this point of view, the illegal construction of rental houses in urban village is defined by the inappropriate formal regulations.

The maneuverability of the institutions either formal or informal is much important to determine its efficiency. Basing on the evolutionary game theory, LUO Changhan had studied on the informal institutions in China. LUO consider that the effective institutions are those that are actually used by people during the competition process of the game, and it does not matter whether they are formal or informal. In the case of urban village, the effective institutions are the eleven specific informal rules mentioned above. For the villagers, that is their appropriate regulations.

LUO also considered that *“we should not put hopes in qualities and self-restraint of the players in the game, but should gradually regulate the game environment and interactive mode by utilizing the institution. If the standard of formal rules is set too high, it should be lowered down the expectation to the players and develop practical standards; if it is the problem raised by implementation and monitoring mechanism of formal institutions, some support mechanisms should be established; if it is lack of relevant formal rules, formal provision should be made by referring the informal rules which are actually be used by people in the game. (LUO-Changhan, 2006)”*

The author considered that the standard of the formal regulations to control the land and property development in urban village are set too strict to be implemented. It is inappropriate regulations. They should be lowered down referring to the villagers benefit demands.

7.2.3 “Tragedy of the Commons” in Urban Village (城中村における「共有地の悲劇」)

The New Economists believe that rational economic men always pursue their maximized effectiveness within certain constraints. Garrett Hardin had ever proposed a concept of *“tragedy of the commons”*. The tragedy of the commons develops in this way. *“Picture a pasture open to*

all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons.” It leads to the results that *“freedom in a commons brings ruin to all”*. (Hardin, 1968)

In the case of urban village, as FEI said, *“Facing the elastic boundary of public and private, traditional Chinese people tend to expand their private boundary toward the public direction of to get as much rights as possible. When responding to obligations, people tend to be narrow down personal boundaries as small as possible towards the private direction.”* (FEI-Xiaotong, 2008) Originally, the rules should clearly constrain both the rights and obligations. But, the informal rules, which are recognized and complied by the villagers in this study, are actually unequal rules of rights and obligations. People all get as more benefits as possible but evade obligations, resulting at the sacrifice of the common interest in the village. The result is that the roadway space and airspace of the village, as common resources, are occupied as private to get economic benefits.

The phenomenon that rental houses in urban village overhang and vertical expand to common space as possible as they can, could be considered as another “tragedy of the commons”. It could be attributed to the unclear property right of the common land in urban village, the freedom to occupy common land and space in the village. Freedom for each villager to occupy common space under the informal rules brings ruin to all the villagers. The plot coverage and floor area ratio of the village is increasing higher and higher, while the quality of living environment is getting worse and worse.

7.3 Suggestion for Decision Maker

Basing the discussion above, the author tries to propose some suggestions as following:

1) The plot coverage and floor area ration of each urban village should be remade according to the integrated urban planning framework, rather than giving a same standard for all the villages. The standard to control the height of rental house should be reconsidered. Property tax of the private house in urban village is recommended to be made and incorporated into the tax system in the city to control the villagers’ construction behavior.

2) Relevant formal regulations in details should be developed to regularize the residential construction activities on ZhaiJiDi on the collective-owned land as quickly as possible, referring to the informal rules in urban village.

3) The property right of the common land in urban village should be defined clear. The right and obligations about how to deal with the common land and space in the village should be clearly defined by each village committee. The overhanging phenomenon should be regularized by the village committee responding to the villagers’ common integrated benefit.

7.4 Future Study

7.4.1. How to Develop Appropriate Regulations for Construction on ZhaiJiDi

At present, there are few formal regulations to provide details of guidance and constraint on the villagers' housing construction on ZhaiJiDi (homestead of villager on collective owned land). How to develop appropriate regulations for the housing construction on ZhaiJiDi is an urgent issue for decision makers, as the rapid urbanization in rural area in China. This study has proved that the formal regulations now are too rough and inappropriate to implement. There are effective informal regulations in the village. How to use those informal regulations as reference to develop formal regulation is a valuable research topic for the future study.

7.4.2 Construction without Architect in Rural Area in China

Most of rental houses in urban village are building category without licensed architect, who received western architectural education system. They are built by craftsman holding the grass root building technology and experiences. The self-construction process is the folk building method in most rural area in China. It develops vividly in a natural and spontaneous way out of the regulated official system. Its operation mechanism and works are quite interesting. Since it can survive and developed in an advantage level in urban village, especially in the economic well developing city of Shenzhen, there must be some reasons for its existence. Those are deserved to do research in the future study.

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APPENDIX

1. Formal Regulations Related to Urban Village

1.1 The land administration law of the People's Republic of China (amendment)

Article 8: Land in urban districts shall be owned by the State. Land in the rural areas and suburban areas, except otherwise provided for by the State, shall be collectively owned by peasants including land for building houses, land and hills allowed to be retained by peasants.

Article 62: One rural household can own one piece of land for building house, with the area not exceeding the standards provided for by provinces, autonomous regions and municipalities. Construction of rural houses should conform to the general plans for the utilization of land of townships (towns) and the original land occupied by houses and open spaces of villages should be used as much as possible for building houses.

The use of land for building houses should be examined by the township (town) people's governments and approved by the county people's governments. Whereas occupation of agricultural land is involved the examination and approval procedure provided for in Article 44 of this law is required.

The application for housing land after selling or leasing houses shall not be approved.

1.2 Urban and Rural Planning Law of the People's Republic of China

Article 18 A township or village planning shall proceed from the actual situation of the rural district, respect the will of the villagers and embody local and rural features.

A township or village planning shall include: the coverage of the planning area, the layout of the land used and the construction requirements for dwelling houses, roads, water supply, drainage, power supply, garbage collection, livestock and poultry feeding plants, service facilities for the production and livelihood in rural areas, and public welfare establishments, and the specific arrangements on protecting farmland as well as other natural resources and historical cultural heritages and preventing and alleviating disasters, etc. A village planning shall also include the overall arrangement for the development of all villages within this administrative region.

Article 22 The people's government of a township or town shall take charge of establishing the township or village planning, and shall file such planning with the people's government at the next higher level for examination and approval. A village planning shall be consented to by

the villagers' meeting or the villagers' representative meeting before it is filed for examination and approval.

Article 41 To build facilities needed by township and village enterprises, village public utilities or public welfare establishments within a township or village planning area, the construction entity or individual shall file an application with the people's government of the township or town, which shall submit the application to the competent department of urban and rural planning of the people's government of the city or county for issuing a planning permit for rural construction.

The planning administrative measures for building villagers' residential houses in the original house sites within a township or village planning area shall be formulated by each province, autonomous region or municipality directly under the Central Government on its own.

When building premises needed by township and village enterprises, rural common facilities or public welfare establishments within a township or village planning area, no farm land may be used therefor. Where it is really necessary to use farm land, the competent department of urban and rural planning under the people's government of the city or county may issue the planning permit for rural construction after the construction entity or individual handles the examining and approving formalities for changing the purpose of farm land in accordance with the relevant provisions of the Land Administration Law of the People's Republic of China.

The construction entity or individual may not handle the examining and approving formalities for land use until he obtains the planning permit for rural construction.

2. the Overhanging and Floors Numeral Data of Rental Houses in CSLV

No.	Name	Overhanging Type	Overhanging Size (m)				Numbers of Floors
			Front	Left	Right	Back	
1	a1	A	1	0	1.2	0	4
2	a2	C	1.2	1.2	0	0	5
3	a3	o	0	0	0	0	4
4	a4	A	1	0	0	0	Constructing
5	a5	C	1.5	0.8	0	0	7
6	a6	A	0.9	0	0	0	5
7	a7	C	1	1.2	0	0	6
8	a8	A	1.2	0	0	0	6
9	a9	o	0	0	0	0	2
10	a10	C	1.7	0.9	0	0	7
11	a11	D	1.6	0	1.5	1.5	7
12	a12	B	1.6	0	0	1.3	6
13	a13	B	0.7	0	0	1.2	4
14	a14	B	1.1	0	0	1.2	4
15	a15	D	1.5	1.2	0	1.5	7
16	a16	E	2	1	2	0.8	7
17	a17	E	1.5	1.5	1.5	1.4	5
18	a18	D	1.5	0	1.5	1	5
19	a19	B	1.5	0	0	1.3	5
20	a20	C	1.5	0.8	0	1.3	7
21	a21	C	2	0	0.7	1.5	5
22	a22	B	1.5	0	0	1.5	5
23	a23	B	1.5	0	0	1.5	4
24	a24	B	1.5	0	0	1.8	6
25	a25	B	1.5	0	0	1.3	3
26	a26	C	1.5	0.8	0	0	5
27	a27	C	0.8	0.7	0	0	5
28	a28	C	1.1	0.7	0	0	6
29	a29	C	1.5	0	0.4	0	6
30	a30	A	1.2	0	0	0	7
31	a31	A	1.7	0	0	0	6
32	a32	C	1.3	0	1	0	5
33	a33	A	1.2	0	0	0	6
34	a34	o	0	0	0	0	1
35	a35	A	0.7	0	0	0	5
36	a36	A	0.8	0	0	0	6
37	a37	A	1	0	0	0	6
38	a38	A	1	0	0	0	3
39	a39	B	1	0	0	0.7	6
40	a40	D	1.5	2.1	0.5	0	5
41	a41	A	1.2	0	0	0	8
42	a42	C	1	0.7	0	0	2
43	a43	D	1.5	0	0.8	1.3	5

44	b1	D	1.2	1	0	1	7
45	b2	D	1.5	0.8	1.6	0	5
46	b3	C	1.5	0	0.8	0	3
47	b4	A	1.1	0	0	0	5
48	b5	B	1.1	0	0	0.8	4
49	b6	A	0.8	0	0	0	4
50	b7	A	1.3	0	0	0	5
51	b8	A	1	0	0	0	4
52	b9	A	1.1	0	0	0	4
53	b10	C	0.9	1.2	0	0	5
54	b11	C	0.9	0	0.7	0	4
55	b12	C	1.4	1	0	0	5
56	b13	A	0.8	0	0	0	6
57	b14	A	1.2	0	0	0	4
58	b15	C	0.8	0.8	0	0	5
59	b16	A	0.8	0	0	0	5
60	b17	C	0.9	0	1.1	0	5
61	b18	C	1	0	1	0	6
62	b19	A	1	0	0	0	5
63	b20	o	0	0	0	0	2
64	b21	A	1	0	0	0	4
65	b22	C	1.3	1.2	0	0	2
66	b23	A	1	0	0	0	5
67	b24	C	1.3	0.7	0	0	5
68	b25	A	1.2	0	0	0	5
69	b26	C	1.5	1.3	0	0	5
70	b27	A	1.3	0	0	0	5
71	b28	A	0.8	0	0	0	4
72	b29	A	1.2	0	0	0	4
73	b30	A	1	0	0	0	4
74	b31	o	0	0	0	0	1
75	b32	A	1	0	0	0	3
76	b33	C	1.1	0	1.5	0	4
77	b34	o	0	0	0	0	1
78	b35	C	1.4	0	1	0	6
79	b36	A	1	0	0	0	5
80	b37	o	0	0	0	0	1
81	c1	A	1.3	0	0	0	6
82	c2	C	1.2	0	0	0	5
83	c3	o	0	0	0	0	1
84	c4	C	1	0.5	0	0	4
85	c5	A	1.3	0	0	0	7
86	c6	o	0	0	0	0	1
87	c7	C	1	0.8	0	0	5
88	c8	o	0	0	0	0	3
89	c9	A	1.5	0	0	0	6

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90	c10	A	1.2	0	0	0	6
91	c11	B	1	0	0	0.7	4
92	c12	B	0.5	0	0	0.8	6
93	c13	C	1	0	0.8	0	5
94	c14	A	0.7	0	0	0	6
95	c15	A	1.3	0	0	0	6
96	c16	C	1	0	0.7	0	1
97	c17	C	1.2	0.5	0	0	4
98	c18	A	0.9	0	0	0	3
99	c19	A	1	0	0	0	3
100	c20	B	0.7	0	0	0.8	6
101	c21	B	0.7	0	0	0.8	6
102	c22	C	0.9	0	0.5	0	5
103	c23	C	0.9	9	1.3	0	5
104	c24	B	1.1	0.5	0	0	3
105	c25	C	1.3	0.8	0	0	5
106	c26	C	1.2	0	0.4	0	5
107	c27	B	0.9	0	0	0.7	3
108	c28	B	1.3	0	0	0.9	6
109	c29	C	1.3	0	1	0	5
110	c30	A	1.3	0	0	0	3
111	c31	C	1.3	0	0.6	0	6
112	c32	A	0.8	0	0	0	5
113	c33	A	1.1	0	0	0	5
114	c34	A	1.2	0	0	0	6
115	c35	A	1	0	0	0	2
116	c36	A	0.7	0	0	0	3
117	c37	C	1.6	0	0.9	0	5
118	c38	A	1.6	0	0	0	5
119	c39	C	1.6	0	0.6	0	3
120	c40	C	1.6	1.5	0	0	6
121	c41	o	0	0	0	0	4
122	c42	A	0.7	0	0	0	5
123	c43	A	1.1	0	0	0	7
124	c44	o	0	0	0		6
125	c45	C	1.2	1.5	0	0	6
126	c46	C	0.8	1	0	0	2
127	c47	C	1.5	1.1	0	0	5
128	c48	A	1	0	0	0	5
129	c49	A	1.2	0	0	0	2
130	c50	C	1.3	0	0.5	0	6
131	c51	B	1.5	0	0	1	7
132	c52	B	1.5	0	0	1	7
133	c53	B	1.5	0	0	1.2	5
134	d1	C	1	0.8	0	0	5
135	d2	A	0.9	0	0	0	5

136	d3	A	0.7	0	0	0	4
137	d4	o	0	0	0	0	1
138	d5	o	0	0	0	0	C
139	d6	C	1	1	0	0	5
140	d7	C	1	0.7	0	0	5
141	d8	B	0.8	0	0	0.8	5
142	d9	D	1.1	0.8	0.7	0	5
143	d10	A	1	0	0	0	4
144	d11	B	1.2	0	0	0.9	4
145	d12	B	1	0	0	1	2
146	d13	E	1.1	1.1	1.1	1.1	2
147	d14	A	1.6	0	0	0	4
148	d15	D	0.6	0	0.8	1.5	6
149	d16	B	0.6	0	0	1.6	6
150	d17	B	0.6	0	0	1.5	6
151	d18	o	0	0	0	0	C
152	d19	o	0	0	0	0	1
153	d20	C	1	1.5	0	0	6
154	d21	o	0	0	0	0	1
155	d22	C	1.7	0.9	0	0	6
156	d23	C	0.7	1	0	0	1
157	d24	o	0	0	0	0	2
158	d25	A	1	0	0	0	7
159	d26	A	2	0	0	0	5
160	d27	A	1.2	0	0	0	6
161	d28	o	0	0	0	0	6
162	d29	o	0	0	0	0	1
163	d30	C	1.4	0	0.8	0	4
164	d31	A	0.6	0	0	0	3
165	d32	C	1	0	0	0	6
166	d33	C	0.7	0	0.9	0	3
167	d34	B	1.5	0	0	1.2	5
168	d35	B	1.5	0	0	0.8	4
169	d36	C	1.5	1.5	0	0.3	5
170	e1	C	1.5	1.4	0	0	5
171	e2	A	1.5	0	0	0	5
172	e3	A	1.5	0	0	0	5
173	e4	D	1.5	1.5	0.6	0	5
174	e5	C	2	0.7	0	0	5
175	e6	A	0.7	0	0	0	6
176	e7	A	0.4	0	0	0	6
177	e8	A	1.1	0	0	0	1
178	e9	C	1.3	0	1	0	5
179	e10	A	1.3	0	0	0	5
180	e11	C	1.3	0.6	0	0	5
181	e12	A	1	0	0	0	3

182	e13	o	0	0	0	0	1
183	e14	o	0	0	0	0	1
184	e15	o	0	0	0	0	7
185	e16	A	0.3	0	0	0	5
186	e17	A	1	0	0	0	6
187	e18	A	0.5	0	0	0	5
188	e19	A	1.3	0	0	0	5
189	e20	C	1.5	0	0.6	0	4
190	e21	A	1	0	0	0	5
191	e22	C	1.1	0	0.4	0	6
192	e23	A	1	0	0	0	5
193	e24	A	0.9	0	0	0	4
194	e25	o	0	0	0	0	5
195	e26	A	1	0	0	0	4
196	e27	C	2	1	0	0	1
197	e28	C	1	0	1	0	3
198	e29	o	0	0	0	0	4
199	e30	A	1	0	0	0	5
200	e31	C	1	0	0.5	0	5
201	e32	A	0.5	0	0	0	5
202	e33	C	1.5	0.7	0	0	4
203	e34	A	1.5	0	0	0	5
204	e35	C	1.5	0	0.8	0	5
205	e36	A	1.5	0	0	0	5
206	e37	C	2	0	2	0	7
207	e38	A	1.4	0	0	0	6
208	e39	C	1.3	0	1.1	0	5
209	e40	A	1.2	0	0	0	4
210	e41	A	1.2	0	0	0	5
211	e42	D	1.2	0.6	0	0.5	4
212	e43	C	1.2	0	1.2	0	5
213	e44	C	1	1	0	0	3
214	e45	D	1.2	1	0	1.2	7
215	e46	C	1.8	1	0	0	6
216	e47	C	1.9	0	0.5	0	6
217	e48	D	1.5	1	0	1.3	6
218	e49	B	1.4	0	0	1.3	5
219	e50	B	1.4	0	0	0.8	4
220	e51	C	1	0	1	0	1
221	e52	D	1	0.5	0.3	0	1
222	n1	C	1.2	0	1.2	0	7
223	n2	A	1.2	0	0	0	7
224	n3	A	1.2	0	0	0	7
225	n4	A	1.2	0	0	0	7
226	n5	A	1.2	0	0	0	6
227	n6	A	1.2	0	0	0	7

228	n7	A	1.2	0	0	0	7
229	n8	C	1.2	1.6	0	0	7
230	n9	C	1.2	0	1.2	0	6
231	n10	A	1.2	0	0	0	6
232	n11	A	1.2	0	0	0	6
233	n12	A	1.2	0	0	0	6
234	n13	A	1.2	0	0	0	6
235	n14	A	1.2	0	0	0	6
236	n15	A	1.2	0	0	0	6
237	n16	C	1.2	1.6	0	0	6
238	n17	C	1.2	0	1.2	0	6
239	n18	A	1.2	0	0	0	6
240	n19	A	1.2	0	0	0	7
241	n20	A	1.2	0	0	0	6
242	n21	A	1.2	0	0	0	6
243	n22	A	1.2	0	0	0	5
244	n23	C	1.2	1.6	0	0	5
245	n24	C	1.2	0	1.2	0	5
246	n25	C	1.2	1.2	0	0	6
247	n26	C	1.2	0	1.2	0	6
248	n27	A	1.5	0	0	0	6
249	n28	D	1.5	2.1	0	1.5	7
250	n29	C	1.5	0	1.5	0	6
251	n30	C	1.5	1.5	0	0	6
252	n31	C	2	0	1.3	0	7
253	n32	C	2	1.2	0	0	6
254	n33	C	1.7	0	1.7	0	7
255	n34	C	1.7	1.2	0	0	5
256	n35	C	2	0	1	0	7

GLOSSARY

Chinese Pinyin	Chinese Character	English
ChaXuGeJu	差序格局	differential mode of association
ChengZhongCun	城中村	urban village
DiYuan	地緣	territorial relationship
FaBuZeZhong	法不責衆	laws cannot be used to punish the majority
GongJuXingQuanCengGeJu	工具性圈層格局	instrumental Multi-layered Structure
GongSiBuFen	公私不分	public and private are mixed
HeXinJiaTing	核心家庭	core family
HuKou	戶口	household
Ji	己	self, family-oriented self
LiuDongRenKou	流動人口	floating population
MU	畝	Land measurement, equal to 0.0667 hectares
NeiWaiYouBie	內外有別	there are differences between inner and outer
RuJiaoLunLi	儒教倫理	confucius Ethics
TuanTiGeJu	团体格局	organizational mode of association
XuYuan	血緣	consanguinity, kinship
ZhaiJiDi	宅基地	homestead of peasant in rural area
ZongZu	宗族	clan; lineage group

RESEARCH ACTIVITIES LIST

研究活動リスト

学生証番号	37-107338
氏名	呉 道彪 (ゴ ドウヒョウ、WU Daobiao)
博士論文題目	<p>A Study on the Relationship between Informal Rules and Morphological Evolution of Urban Village in China</p> <p>中国の「城中村」におけるインフォーマルルールと形態変化の関連性に関する研究</p>

1. 査読付き論文 (筆頭著者)

なし

2. 査読付き論文 (筆頭著者以外)

なし

3. 査読無し論文 (国際会議発表論文含む) (筆頭著者)

1) WU Daobiao. Localization of Sustainability: A Survey on Architectural Design Strategy of Green Building in China. 日本建築学会大会学術講演梗概集. 2012.

2) 呉 道彪. 野城 智也. 周 允耀. 廖 昱嘉, 現在の中国におけるエコシティ等の開発に関する規制と政策, 日本建築学会大会学術講演梗概集. 2013.

4. 査読無し論文 (国際会議発表論文含む) (筆頭著者以外)

なし

5. その他 (研究活動を示すもの)

野城 智也、呉 道彪、周 允耀、廖 昱嘉と都市再生機構技術研究所、「アジア急成長国における住宅・都市の動向と実態調査」、2012年4月～2013年4月。