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www.elsevier.com/locate/cities

doi:10.1016/j.cities.2006.12.001

Cities, Vol. 24, No. 3, p. 194–208, 2007

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0264-2751/\$ - see front matter

Socio-spatial impacts of property-led redevelopment on China's urban neighbourhoods

Shenjing He* and Fulong Wu

School of City and Regional Planning, Cardiff University, Cardiff CF10 3WA, United Kingdom

Received 22 June 2006; received in revised form 4 December 2006; accepted 8 December 2006

Available online 20 February 2007

To understand the socio-spatial impacts of property-led redevelopment on China's urban neighbourhoods, this study inquires into two influential redevelopment projects in Shanghai. The significance of this research lies in using first-hand data to indicate the new trends of urban change in the Chinese city. Through analysing the data from a 500-questionnaire survey, two different forms of socio-spatial changes under property-led redevelopment are identified. On the one hand, an extensive residential displacement occurs during redevelopment, a process of gentrification is emerging in China. On the other hand, to re-image the inner city and promote economic growth, urban redevelopment has led to changing urban function/land use in old neighbourhoods. As the local government legitimizes property-interest-centred reinvestment in the inner city, old neighbourhoods, which used to accommodate low-income residents, are now occupied by people with higher socioeconomic status or transferred to high-valued-added commercial land use. The exchange value of urban space is produced at the cost of old urban neighbourhoods' everyday use value.

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Keywords: Socio-spatial impacts, neighbourhood, property-led redevelopment, China, Shanghai

Introduction

A series of market-oriented transformations, e.g. institutional reform, land reform, and housing commodification, have stimulated extensive urban (re)development in the post-reform era (Yeh and Wu, 1996; Tang, 1997; Gaubatz, 1999; Wu, 2001a; Zhu, 2004). Attracting a huge amount of domestic and international capital, real estate development effectively solves the problem of financial deficiency in urban redevelopment, which has troubled the local government for a long period. With the capability of instantly promoting economic growth and effectively changing urban image, real estate development has thus acquired an irreplaceable place in the urban economy and provides the major driving force for urban redevelopment (Wu, 2001b; He and Wu, 2005; Hsing, 2005). Although alternative

redevelopment approaches have been advocated and experimented with (Wu, 2000; Fang, 2000; Wu and He, 2005), real estate development remains the dominant redevelopment approach, and can be termed "property-led redevelopment" (He and Wu, 2005). This redevelopment approach has been adopted as an effective strategy for re-imaging the city and promoting urban and economic growth. As a result, profound influence has been brought to the entire city, especially the old urban neighbourhoods in the inner city.

Although redevelopment generally improves urban appearance and the housing conditions of affected residents in physical terms, the socioeconomic outcomes of redevelopment are not always positive. The negative socioeconomic outcome of urban redevelopment has long been a contentious issue all over the world. Without allowing residents' participation in the redevelopment process, without offering them adequate compensation, without providing them with sufficient replacement housing,

*Corresponding author. E-mail: shenjing.he@gmail.com.

and without the possibility for them to return to the redeveloped area, urban renewal programmes have devastated the diversity and vibrancy of neighbourhoods (Jacobs, 1961; Hartman, 1964; Gans, 1967). It is estimated that by 1967 the federal bulldozer had bulldozed 404,000 housing units, most of which had previously been inhabited by low-income families and had been built over the course of nearly two decades (Friedland, 1983). Moreover, Halpern (1999) stated that during the urban renewal period in the US, only half of all the people who were displaced from their homes and neighbourhoods received an average relocation payment of US \$69 per family. The damage brought about by “bulldozer redevelopment” on cities’ historical-cultural contexts and thriving urban neighbourhoods is immeasurable (Jacobs, 1961; Hartman, 1971, 1980). Recent studies have also criticised neighbourhood demolition and the displacement of low-income residents in redevelopment projects, and advocated meaningful community participation and protecting the interests of low-income people (Keating, 2000; Patel et al., 2002).

In a period of booming urban redevelopment, tremendous demolition and relocation have been occurring in Chinese cities. It is estimated that from 1990 to 1998 Beijing demolished 4.2 million square metres of housing in the old city. Approximately 32,000 families, comprising about 100,000 people, have not been accommodated, although some have waited up to five years to move into a new house (Fang, 2000). From 1995 to 2004, more than 745 thousand households were relocated, and over 33 million square metres of housing were demolished in Shanghai (Shanghai Statistical Bureau, 2005). The scale of recent residential displacement in Shanghai is much larger than that of the urban renewal period in US cities. Scholars have showed their criticism of the negative socioeconomic outcomes of large-scale redevelopment (Leaf, 1995; Gaubatz, 1999; Fang, 2000; Zhang, 2002; Zhang and Fang, 2004). Rapid redevelopment and residential displacement have broken original residents’ social networks and deprived some of their life chances. Moreover, even if the current generation of relocated residents is enjoying better housing conditions, the next generation may suffer from drastic residential disparity between themselves and the better-off residents in the inner city (Leaf, 1995). It is argued that introduction of a real estate market has sharply increased neighbourhood inequality, within which urban redevelopment and suburbanisation are two powerful trends exacerbating these inequalities (Logan, 2005).

Apparently, it is of great significance to understand and learn from the socio-spatial consequences of China’s urban redevelopment. The urban neighbourhood is an appropriate scale to study the socio-spatial outcomes of redevelopment, since the neighbourhood has long been a key spatial scale in the government’s policy for urban redevelopment

and tackling social problems (Forrest and Kearns, 2001; Meegan and Mitchell, 2001). Meanwhile, although economic and demographic changes caused by redevelopment may operate at the regional or sub-regional level, the problems of change are typically more apparent at the neighbourhood level (Cameron, 2003). Despite the importance of neighbourhood in urban studies, there is no a precise and uniform definition for it. The exploration of the meaning of neighbourhood evolves from humanistic approach to instrumental approach to phenomenological approach (Kallus and Law-Yone, 1997). The humanistic approach views the neighbourhood as a universal human phenomenon (Mumford, 1961), which is based on the most fundamental human properties and defined by the identity of the people inhabiting it. The instrumental approach view neighbourhood as a planning tool, also a subsystem or a basic unit of the multiple and complex urban systems (Alexander, 1965). Partially resembling the humanistic arguments, the phenomenological approach portrays the neighbourhood as a continuous social structure, a cultural phenomenon, which fixes the sense of place in the urban collective memory (Rossi, 1984). As a dynamic and ever-evolving concept, the boundary of neighbourhood also could be perceived at different scales, e.g. the four scales of block face, defended neighbourhood, community of limited liability, and expanded community of limited liability (Suttles, 1972); or the three scales of home area, locality, and urban district or region (Kearns and Parkinson, 2001).

Although urban redevelopment in China has become one of the topics receiving much attention from researchers, understanding of its socio-spatial outcomes, especially at the neighbourhood level, is still insufficient and fragmented. Therefore, this study aims to examine the socio-spatial outcomes of China’s property-led urban redevelopment at the neighbourhood level. Referring to the definition by Galster (2001, p. 2112), the neighbourhood can be viewed as “a bundle of spatially based attributes associated with clusters of residences, sometimes in conjunction with other land uses”, while dynamic characteristics of neighbourhood are determined by past and current flows of households and socio-economic resources into and out of the space. Therefore, there are no strictly defined spatial boundaries of neighbourhoods. This study chooses four sites with various sizes, each of them is defined by “a bundle of attributes”, i.e. similar structures and socio-economic profile. One of these four sites is no longer a “neighbourhood”, but it was evolving from a traditional inner city neighbourhood, through which we can examine changes in the neighbourhood after redevelopment. The rest of this paper is organized as following. There is, first, a brief discussion of Shanghai’s ongoing property-led redevelopment and the government’s role within it. Based on a 500-questionnaire survey conducted in

Shanghai, this study then illustrates the socio-spatial outcomes of urban redevelopment by contrasting two groups of sites before and after redevelopment. This study also identifies the dominant forces shaping the changes in neighbourhoods under property-led redevelopment.

Property-led redevelopment in Shanghai

The concept of property-led redevelopment refers to the state relying heavily on private property development to provide the driving force for urban regeneration (Turok, 1992). This redevelopment approach played a central role in the UK's urban policy during the 1980s and the early 1990s. It is characterized by removing supply-side constraints to attract private investment, and usually involves residential displacement (Imrie and Thomas, 1999). Under this policy, various forms of public support were provided to private investors during the urban redevelopment process (Healey, 1991). As a result, the public and private sectors formed an alliance within which property interests were the central element (Harding, 1992). Today, property-led redevelopment still plays a significant role in restructuring urban spaces and producing urban landscapes, in giving cities an identity, and even in place promotion (Deakin and Edwards, 1993; Imrie and Thomas, 1999). However, it has been pointed out that property-led redevelopment fails to consider the crucial issues of social integration, community participation, city competitiveness, and infrastructure investment (Turok, 1992). Property-led regeneration has also been criticized for its pure emphasis on short-term returns and physical improvement, which have little effects on urban economic and social regeneration (Adair et al., 1999; Berry and McGreal, 1995; Cameron and Doling, 1994; Jones and Watkins, 1996; Loftman and Nevill, 1995). The city has suffered from a number of adverse outcomes of property-led redevelopment, e.g. drastic competition among property developers, rising property prices, and lack of funds for social and environmental improvements (Healey et al., 1992).

In China, a series of market-oriented reforms, such as administrative and fiscal decentralization, land and housing reform, and profitable real estate development, are turning the long-neglected inner city into a hotspot of urban redevelopment (Leaf, 1995). In line with the institutional and political-economic transformations, the urban redevelopment approach has also experienced significant change in the post-reform era. With the increasing involvement of private enterprises, property development in the post-reform period significantly has facilitated urban redevelopment and transformed urban landscapes. Real estate development has provided the most important impetus to urban redevelopment and has significantly changed the redevelopment approach in China. Therefore, China's urban redevelop-

ment is largely grounded upon real estate development, which is comparable to property-led redevelopment in the UK in many respects (He and Wu, 2005). However, due to the particular political economic settings, the characteristics of property-led redevelopment in urban China differ from those of the West. In particular, the government, especially the local government, has a different role to play within property-led redevelopment. It is the government that opens up opportunities for property development and provides various types of support to accelerate the redevelopment process. In this sense, property-led redevelopment in China can be termed "state-sponsored property development". Nevertheless, the strategy of property-led redevelopment has been extensively employed by many Chinese cities and has brought about significant socio-spatial changes.

As the largest and the most advanced city in China, Shanghai is at the forefront of market-oriented reforms. The first steps of land and housing reform were initiated in Shanghai. Under the background of decentralization and marketization, the municipal government has managed to mobilize national and local forces to promote urban (re)development, among which property development has become the preferred form of capital accumulation and urban growth. The motivations of the local government to promote property-led redevelopment come from re-imagining the city and pursuing economic growth. Having a splendid history as an international trading port, Shanghai is eager to re-emerge as a global city through re-imagining not only the city appearance but also the institutions. Therefore, diminishing old and dilapidated urban areas, improving infrastructures and increasing green spaces have become the major tasks for the municipal government. Meanwhile, the local government also aims to create a pro-growth and business-friendly environment to attract private investment. Under this background, property-led redevelopment emerges as an effective approach to realize the local government's ambition, with its ability to produce instant physical changes and stimulate economic growth.

The local government has played an irreplaceable role in facilitating property-led redevelopment. On the one hand, emerging market forces have provided incentives for the private sector, particularly real estate developers, to participate in urban redevelopment practices. On the other, the local government has made great efforts to attract private investment and promote property-led redevelopment. For instance, the Shanghai municipal government launched a large-scale redevelopment scheme called "365 plan", which aimed to redevelop 365 ha old and dilapidated urban areas by 2000. In 2002, the municipal government further proposed a "new round urban redevelopment scheme". Within these redevelopment schemes, preferential policies, e.g.

partially exempting land leasing costs and administrative charges, have been provided to developers to facilitate redevelopment. During last two decades, demolition and relocation policy in Shanghai has also changed a lot. From on-site relocation to off-site relocation, from in-kind compensation to monetary compensation, from household size-based compensation method to floor area-based compensation method, the process of demolition and relocation has been gradually marketized. Evidence shows that the commodification of redevelopment process has favored property developers, and the interests of affected residents have been less concerned (Wu, 2004). With housing prices dramatically increasing after redevelopment, the inner city gradually denies access to the low-income groups. To make room for economic and urban growth, the property-led redevelopment has evacuated a vast volume of low-income residents from the central Shanghai to the urban fringe.

Study areas and survey method

To investigate the socio-spatial impacts of urban redevelopment, this study focuses on two famous redevelopment projects in Shanghai: the *Zhongyuan LiangwanCheng* (also known as Brilliant City) project and the *XinTianDi* (meaning new heaven and earth) project. These two projects were chosen because both of them were underwritten by the property-led urban redevelopment approach, which has become the dominant redevelopment approach in current Shanghai. Although with different strategy and outcome, both projects have a central interest in property development, and involve large amounts of residential relocation. In order to understand the socio-spatial changes in old neighbourhoods, this research is designed to contrast two groups of study sites before and after redevelopment. Therefore, two old urban neighbourhoods, which have similar built environment and socioeconomic profiles to the pre-redevelopment sites of the two projects, were also chosen as study sites. *Figure 1* shows the location of the four study sites, and *Table 1* shows basic information about the two redevelopment projects.

At the end of 1997, the Putuo district government signed a contract with the COSCO (China Ocean Shipping Co.) Group to implement the *LiangwanCheng* (LWC hereafter) project. As part of the "365 plan" proposed by the Shanghai municipality, the LWC project received various types of support from the local government, e.g. enjoying preferential policies and a partial exemption from land acquisition fees (personal communication, 31st March 2004). Initiated in 1998 and developed in four phases, this project has become one of the bestsellers in Shanghai's housing market since 1999. *ShenjiaZhai* (SJZ hereafter) is a dilapidated urban neighbourhood located north of Shanghai rail sta-

tion and to the east of LWC. As recorded in the *Putuo District History*, SJZ has similar physical conditions and social composition to the pre-redevelopment LWC (Putuo District History Editorial Board, 1994).

Directly triggered by real estate interests, the *XinTianDi* (XTD hereafter) project was financed by the Shui On Group, a Hong Kong-based property developer. Again, this project was strongly supported by the government, e.g. local government helped to accelerate the demolition and relocation process (personal communication, 17th February 2004). XTD is part of a large-scale property-led redevelopment project called *Taipingqiao*. This project successfully redeveloped the old-fashioned *lilong* (alleys) neighbourhoods into one of the most popular commercial and recreational districts in Shanghai by fitting a modern lifestyle into the preserved old houses. *JingAnLi* (JAL hereafter) is an old-fashioned *lilong* neighbourhood in the Taipingqiao area. Documented by the survey report prior to the implementation of the XTD project, SJZ's built environment and social composition are comparable to the pre-redevelopment XTD (Luo, 2002).

Questionnaires were conducted during a field trip in Shanghai in 2004. The survey tried to cover roughly 3–8% of the households at each site. A total of 500 questionnaires were distributed to the four sites: 200 in LWC (about 6500 households in total), 100 in SJZ (about 1200 household in total), 100 in XTD, and 100 in JAL (about 1500 households in total). Two versions of the questionnaire were designed for different respondents in this survey, using pre-coded questions. Questionnaire A was distributed to the heads of households in the three residential areas, i.e. LWC, SJZ and JAL. This questionnaire is composed of three parts. The first part is about basic information on the socio-economic status of the head of household, including age, gender, education, *hukou* (household registration), occupation, income, etc. The second part is about the respondent's experience and opinions regarding redevelopment and relocation. The third part of the questionnaire is about respondents' housing conditions, including housing floor area, housing quality, housing facilities, housing tenure, assessment of the neighbourhood, etc. Questionnaire B was distributed to consumers in XTD because residents have been absent since the former urban neighbourhood was displaced by a multi-purpose district. This questionnaire is composed of two sections. The first section is about the basic personal information of the respondents, including age, gender, education, *hukou*, occupation, income, etc. The second section is about respondents' opinions of XTD. Questions related to respondents' purpose and frequency of visiting XTD, their impression and evaluation of XTD, etc. In this study, both consumers in XTD and residents in the other three neighbourhoods are regarded as the occupants or

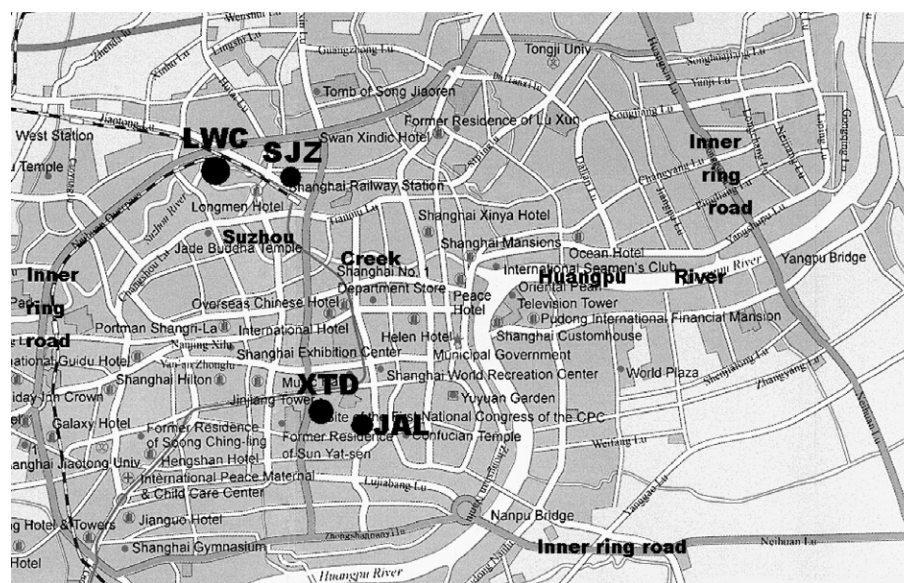


Figure 1 Location of the four study sites.

Table 1 Basic information about LWC project and XTD project

	LWC	XTD
Redevelopment type	Residential redevelopment	Commercial redevelopment
Motivations/objectives	Urban re-imagining, property interest	Revenue raising, urban re-imagining, property interest
Period	1998–present	1999–2001
Area	49.5 ha	3.17 ha
Location	Putuo district	Luwan district
Land provision	Land leasing through negotiation, partial exemption of land use fee	Land leasing through negotiation
Investment	6.498 billion RMB, private investment plus government subsidy	About 600 million RMB, private investment
Relocation method	Off-site: in-kind compensation	Off-site: partially in-kind, partially monetary compensation
Relocated work units and households	274 work units and 10,500 households	82 work units and 2101 households

Source: personal communication, 17th February 2004; 31st March 2004.

“users” of urban space. The questionnaire is designed to compare the built environment and socio-economic characteristics of the old and new occupants before and after redevelopment. Therefore comparing XTD and SJZ will show the changing urban function and the changing users of urban space after urban redevelopment.

In this survey, several measures were undertaken to increase the accuracy of the survey results and guarantee randomness. Before conducting the survey, we visited the residents’ committees/management offices of the four sites to learn basic information about the sites and obtain their agreement and support to distribute questionnaires to residents/consumers. Since residents’ committees in China play an important part in managing local communities, their support greatly increased respondents’ willingness to answer questions. In order to guarantee randomness, questionnaires were distrib-

uted along the streets at a fixed interval of 10 or 15 households. In XTD, questionnaires were randomly distributed to consumers at various locations including restaurants, coffee bars, shops, cinemas, etc. All questionnaires were distributed at weekends or in the evenings to ensure the accessibility of target responders. To ensure the accuracy and validity of the survey, the investigators helped the responders to fill in the questionnaires by asking and explaining the questions to them.

Lwc project: a process of gentrification

Changing built environment

Through analysing the survey data, this study compares the built environment and socioeconomic profiles in pre-redevelopment and post-redevelopment sites, and identifies the socio-spatial changes

Table 2 Built environment in the two neighbourhoods of SJZ and LWC

	SJZ	LWC
Building style	Dilapidated low-rise houses/crude houses	High-rise modern condominiums
Average floor area ^a (m ² /person)	10.21	35.04
Housing facilities (percentage of ownership)		
Living room	19.0	100
Bedroom	71.0	100
Kitchen	56.0	100
Toilet	22.0	100
Bathroom	11.0	100
Air conditioner	47.0	99.5
Gas	17.0	100
Broadband	8.0	72.5
Change of housing conditions in 10 years (percentage)		
Greatly improved	0	47.7
Slightly improved	12.0	48.2
No change	76.0	4.1
Deteriorated	9.0	0
Seriously deteriorated	3.0	0

^aRefers to the actual dwelling area.

in old neighbourhoods caused by urban redevelopment. First of all, this study examines the changing built environment of the old urban neighbourhood in the LWC project. Once an old and dilapidated housing estate similar to SJZ, LWC has now been redeveloped into modern high-rise apartments. As *Table 2* shows, the contrasts between the built environments in the two neighbourhoods are evident. In terms of building style, SJZ is littered with dilapidated low-rise and crude houses, while LWC consists of high-rise modern buildings (see *Figure 2*). Referring to the average housing floor area of Shanghai at the end of 2004, which was 14.8 square metres per capita, SJZ is below the average, while LWC is far above the average. Less than one-third of households in SJZ possess living rooms, toilets and bathrooms, etc., which are necessary facilities, in their own houses. In LWC, besides the basic facilities, most houses have other modern facilities, such as air conditioning, gas and broadband. The majority of respondents in SJZ reported that their housing conditions have not improved during the last 10 years. On the contrary, most respondents in LWC reported that their housing conditions have improved within the last 10 years.

The survey findings suggest signs of residential stratification. The shabby housing conditions in SJZ indicate that the problems of housing shortage and deterioration are still very severe in Shanghai, even after extensive urban redevelopment has been implemented. Although resolving housing problems in dilapidated areas is still claimed to be one of the objectives of urban redevelopment in Shanghai, the demands of housing improvement for the lowest income groups are overwhelmed by the demands of

revenue generation and profit-making through real estate development.

Changing socioeconomic profile

In this section, a logistic regression analysis is applied to examine whether redevelopment is associated with changes in various socioeconomic characteristics. Please note that the logistic regression is not intended to model the choices of residents regarding living in different neighbourhoods. Rather, it is used to suggest the probability associated with the neighbourhood, regardless of whether this results from residents' active choices or another passive selection process. The advantage of using logistic regression lies in its control of multiple variables. In this analysis, redevelopment status is the dependent variable. The value of post-redevelopment equals one, while the value of pre-redevelopment equals zero. Six independent variables representing the socioeconomic profiles of respondents are selected for this analysis.

- (1) Age: 1 = under 18 years old; 2 = 18 to 40 years old; 3 = 41 to 64 years old; 4 = above 65 years old.
- (2) Education level: 1 = primary school and below; 2 = junior secondary school; 3 = high school; 4 = college/university; 5 = postgraduate.
- (3) Occupation (roughly divided into two categories due to the difficulty of classification): 0 = professional/managerial (includes government officer, managerial personnel, technical personnel, teacher or medical care personnel, etc.); 1 = working class/unemployed (includes worker, clerk, housewife, retired, unemployed, laid-off, etc.)
- (4) Working sector: 0 = public sector (includes governmental or Chinese Communist Party organization; educational, medical or scientific research organization; state-owned enterprise; collective enterprise); 1 = private sector (includes foreign company or joint venture; private enterprise; self-employed, etc.). Usually, people working in state-owned and collective enterprises receive lower pay than foreign and private enterprises, and may face the risk of being laid-off.
- (5) Annual family income: 1 = below 20,000 RMB; 2 = 20,000–50,000 RMB; 3 = 50,000–100,000 RMB; 4 = 100,000–200,000 RMB; 5 = 200,000–400,000 RMB; 6 = above 400,000 RMB.
- (6) Housing tenure: 1 = public rental (includes housing allocated by government and work units); 2 = private rental; 3 = inherited private housing; 4 = affordable housing/purchased with housing subsidy; 5 = commodity housing. As the value increases, housing tenure changes from public-owned to private-owned, or, in other words, the respondent's ability to access commodity housing ownership increases.



A



B

Figure 2 The great contrast between SJZ and LWC (author's copy right). (A) Dilapidated low-rise houses in SJZ, (B) modern high-rise condominiums in LWC.

The analysis results are shown in *Table 3*. The table shows that in the case of the LWC project, education level, occupation, working sector, family annual income and housing tenure are five variables related to the redevelopment status of the neighbourhood. Education level is positively related to

redevelopment status, which means respondents in the redeveloped site have a higher probability of having a higher educational level. Occupation is negatively related to redevelopment status, which means residents in the post-redevelopment neighbourhood are more likely to be professional or man-

Table 3 Logistic regression of redevelopment status (pre-redevelopment and post-redevelopment) on respondents' socio-economic profiles – LWC vs. SJZ (post-redevelopment = 1, pre-redevelopment = 0)

	LWC vs. SJZ	
	B	SE
Age	-0.208	0.639
Education level	0.961**	0.361
Occupation	-1.699*	0.680
Working sector	2.248**	0.819
Family annual income	2.017**	0.437
Housing tenure	1.754**	0.276
Constant	-12.375**	3.203
Model χ^2	292.122**	–
2LL	88.158	–
Number of cases	300	–

*Significant at 0.05 level.

**Significant at 0.01 level.

agerial personnel. The coefficient of the working sector variable is positive, which means residents of redeveloped neighbourhood tend to work in the private sector. Both family annual income and housing tenure are closely associated with redevelopment status, and the coefficients are both positive. This means that in the redeveloped neighbourhood, family annual income tends to be higher, and residents have a higher probability of owning commodity housing. Age does not have a significant connection with redevelopment status, possibly because the continuous data (people's actual age rather than categories of age range) are not available. The logistic regression analysis suggests that residents in the redevelopment site tend to have higher socioeconomic status, particularly in terms of income and home ownership, while residents living in the pre-redevelopment site tend to be less advantaged in terms of socioeconomic status. It can be inferred that within the LWC redevelopment project, residents with higher socioeconomic status have displaced residents with lower status after redevelopment. This is the inevitable result of the property-led redevelopment approach. As the built environment improved after redevelopment, housing prices in the redeveloped LWC significantly increased. Only a limited number of original residents could afford the new houses, even after they were offered a discounted price by the developer. The percentage of residents returning to their original neighbourhoods was extremely low, since the redevelopment project was led by the property interest, with less attention being paid to the interests of original residents.

Table 4 compares residents' mobility of relocation and income change in the two neighbourhoods, in terms of *hukou* (household registration) status, relocation experience, willingness to be a long-term resident, changes of housing conditions and family income. The *hukou* of the majority of residents in SJZ belong to the local street office, while the resi-

dents in LWC are from diverse origins, e.g. other street offices in Shanghai or outside Shanghai. The majority of respondents in LWC have relocation experience within the last 10 years, while respondents in SJZ rarely experienced relocation. Accordingly, respondents in SJZ show a stronger attachment to their neighbourhood. The number of people who prefer to live in the neighbourhood for the long term in SJZ doubles that in LWC. In contrast to SJZ, in which most respondents reported no change of or even deteriorated housing conditions, the majority in LWC have managed to improve their housing conditions. Similarly, much less respondents in SJZ reported a significantly increased income than in LWC. With a high concentration of local people characterized by less relocation experience, preference for long-term residence, and less improvement to housing conditions and income, SJZ represents the typical old urban neighbourhood in Shanghai. Compared with the pre-redevelopment neighbourhood, SJZ, residents in the post-redevelopment neighbourhood, LWC, have greater mobility of relocation and income change.

Table 5 shows the housing ownership in the two neighbourhoods. SJZ has a comparatively high proportion of privately owned housing, however, of which the majority are inherited private housing. There are also 10% labelled as "commodity housing", which refers to houses sold by original residents to outsiders. The average estimated value of inherited private housing in SJZ is around 250,000 RMB. In LWC, 93% of houses are commodity housing. The average housing cost among respondents is 4252 RMB per square metre. Actually, in 2004, the highest housing price in LWC exceeded 13,000 RMB per square metre. This means that the value of an average inherited private house in SJZ only

Table 4 Respondents' residential and income mobility (unit: percentage)

	SJZ	LWC
Household registration status belongs to		
Local street office	95.0	65.0
Other street offices in Shanghai	3.0	25.5
Urban household outside Shanghai	2.0	7.5
Rural household outside Shanghai	0	2.0
Hong Kong, Macao, or Taiwan	0	0
Overseas	0	0
Relocation within the last 10 years	13.0	78.01 ^a
Prefer to reside for long term	83.0	40.3
Change of housing conditions in 10 years		
Greatly improved	0	47.7
Slightly improved	12.0	48.2
No change	76.0	4.1
Deteriorated	9.0	0
Seriously deteriorated	3.0	0
Significant income change happened in 10 years	29.0	54.0
Of which income significantly increases	46.4	86.6

^aOf which 73.4% have moved once, 20.8% have moved twice, some people have even moved 5 times.

Table 5 Housing ownership in SJZ and LWC (unit: percentage, unless specified)

	SJZ	LWC
Housing tenure		
<i>Government/work units owned</i>	29.0	1.5
Of which		
Allocated by government	21.0	0
Allocated by work units	8.0	1.5
<i>Privately owned</i>	70.0	94.0
Of which		
Inherited private housing	56.0	0
Purchase with subsidy	4.0	1.0
Commodity housing	10.0	93.0
<i>Private rental</i>	1.0	4.5
Average housing prices (estimated)	250,000 RMB/ property	4252 RMB/m ²
Owns more than one property	4.0	25.5

equals that of 19 square metres in LWC, which is only the size of a kitchen in a luxury apartment. Furthermore, there are only 4% of respondents in SJZ owning second or more than two properties, while in LWC more than one-quarter of respondents own more than one property. Obviously, compared with SJZ, LWC has a higher percentage of commodity housing ownership, higher housing prices and a higher percentage of second/more property ownership.

Residential displacement: a process of gentrification

In the first stage of LWC project, two hundred and seventy-four work units and 10,500 households were relocated. In kind compensation was adopted as the major method of compensation. Most residents were relocated to the peripheries of Putuo district, or Baoshan district and Jiading district, which are located at the north-west corner of Shanghai metropolitan area (personal communication, 31st March 2004). Since the housing price in the redeveloped neighbourhood was hardly affordable to original residents, the returning rate was extremely low. Indeed, housing conditions for original residents were improved in physical terms after redevelopment, however, their social needs, employment status, and intentions to move back had rarely been concerned. A simple and rough approach of displacement was adopted. As illustrated in above analysis, there are great contrasts in the built environment and residents' socioeconomic profiles before and after redevelopment. Evidently, the redevelopment project of LWC involved built environment improvement and residential displacement, which is comparable to the gentrification process in developed Western countries. The redevelopment outcome shows that the improvement of the built environment was not based on the interests of the local neighbourhood. Rather, it witnessed the local government's efforts to re-image the city and developers' pursuit of

property interests. According to Grier and Grier (1978, 8), displacement happens:

“when any household is forced to move from its residence by conditions which affect the dwelling or its immediate surroundings and; 1. Are beyond the household's reasonable ability to control or prevent; 2. Occur despite the household having met all previously imposed conditions of occupancy; and 3. Make continued occupancy by that household impossible, hazardous, or unaffordable.”

In this case, displacement occurs because the redeveloped residential area has become unaffordable to the original residents, with housing and the built environment being improved and commercialized after redevelopment. Dramatically increasing housing prices have prevented them from moving back, and under property-led redevelopment no efforts have been made to help them return to their original neighbourhood. The redeveloped neighbourhood with an improved built environment is thus occupied by residents who can afford commodity housing in the housing market. Initiated by the local government's intention to diminish the shabby residential area, the LWC redevelopment project finally turned into a property-led redevelopment. With the direct and indirect support of the local government, the developer has managed to evacuate the original low-income residents, and developed upscale commodity housing to attract higher income groups and make a profit. No matter whether intentionally or passively, residents with higher socioeconomic status have invaded the redeveloped inner city neighbourhoods and displaced residents with lower socioeconomic status. This project has effectively re-imaged the notorious shabby housing estate and remade it into a popular residential area for affluent households. The LWC redevelopment project actually involved a process of residential displacement, and represents a gentrification trend within Shanghai's property-led redevelopment.

XTD redevelopment: urban functional transformation

Changing built environment

Before redevelopment, XTD consisted of two blocks of old-fashioned *lilong* neighbourhoods, which were similar to JAL. In these neighbourhoods, six to seven or even more than 10 families share a two- to three-storey building, without private kitchens or sanitary facilities. The public spaces, even the corridors, staircases and balconies, are occupied by tenants to extend their housing space. *Table 6* shows some of the characteristics of the built environment in JAL. The average residential floor area per capita in JAL is much lower than the average level for Shanghai, while the minimum is only 2.33 square metres. These houses in JAL can barely be called “home”, since

most of them have no separated living room, no private kitchens, no private toilets, and no bathrooms. Furthermore, the majority of respondents reported that their housing conditions have hardly been changed, and some have even been deteriorated.

In XTD, some of the *shikumen* houses (typical Shanghai-style houses) were restored, and selected buildings were reconstructed with the original bricks and tiles based on the old design drawings. The rest of them have been totally rebuilt into modern buildings, with only the symbols of *shikumen* at the entrances of preserved alleys. All of the restored and reconstructed old buildings have the latest modern facilities installed, such as modern mechanical and electrical systems, escalators and concealed optical-fibre, for various recreational, commercial, dining and retail purposes. Although the *lilong* structure was preserved, the exteriors and interiors of the buildings have been significantly refurbished or reconstructed. People in XTD enjoy various modern services while at the same time immersing themselves in a historic and traditional cultural atmosphere.

XTD redevelopment targets fashionable and high-quality commercial and recreational establishments in favour of local elitist consumption demands, while endowing the site with the identity of “old Shanghai” to make it a destination for tourism and high-end consumption. *Table 7* shows the details of classified stores in XTD. Compared with the average price level in Shanghai, most of the stores and services in XTD are relatively expensive. Their targeted consumers are middle- to high-income groups, expatriates and foreigners. To cater to the affluent class, various events held in XTD, such as beer festival, beauty competition, fashion show, jewellery show and auction, live concert and performance, all have to be something exotic, fashionable, fancy and eye-catching. As the advertisement on the homepage suggests, XTD offers “a stylish, luxury and westernised life experience” (source: <http://www.xintiandi.com>, last accessed 05 February 2006).

Table 6 Built environment in JAL (unit: percentage)

Building styles	Old-fashioned <i>shikumen</i> houses
Average floor area ^a (m ² /person)	9.97
Housing facilities	
Living room	29.0
Bedroom	54.0
Kitchen	39.0
Toilet	9.0
Bathroom	5.0
Change of housing conditions in 10 years	
Greatly improved	1.0
Slightly improved	13.0
No change	73.0
Deteriorated	10.0
Seriously deteriorated	0

^aRefers to the actual dwelling area.

Table 7 Classified stores in XTD

Categories	Details	Price (compared with average level)
Restaurants	Chinese cuisine	Expensive
	Southeast Asian cuisine	Expensive
	American and Continental cuisine	Expensive
	Café and teahouse	Medium to expensive
	Desserts	Medium to expensive
Bar and entertainment	Entertainment complex	Medium to expensive
	Cinema	Medium
	Bar	Medium to expensive
Fashion shops	Home furnishings	Expensive
	Clothing/jewellery boutiques	Expensive
	Gift shop	Expensive
Hotel/club	Serviced apartments	Expensive
	Membership club	Expensive
Gym/Salon	Yoga centre	Medium to expensive
	Gym and spa club	Medium to expensive
	Hair-styling salon	Expensive
Art/antique shops	Antique and craft shop	Expensive
	Fine Arts Gallery	Expensive
	Open house	Medium
	<i>shikumen</i> museum	
Services	Italic business service centre	Expensive
	English training centre	Medium to expensive

Source: XinTianDi website: <http://www.xintiandi.com>, last accessed 05 February 2006.

As shown in *Table 8* and *Figure 3*, the contrast between JAL and XTD illustrates that both built environment and urban function have been greatly transformed after redevelopment. Aiming at transferring the historical and cultural heritage into economic outcomes, the traditional *lilong* neighbourhood has been redeveloped into a multi-purpose district. Therefore, the urban function of this area has been thoroughly transformed. The pre-redevelopment neighbourhood of XTD was once home to thousands of middle- to low-income residents allocated by the local government. It represents the typical Shanghai *lilong* lifestyle: shared kitchens, lacking necessary sanitary facilities, overcrowded rooms, drying washing hanging in the doorway. Although they experienced severe decline for a long period after the 1920s, the old-fashioned *lilong* neighbourhoods are still thriving and accommodate a diverse population. In XTD, the old neighbourhood has been redeveloped into a “new heaven and earth” for leisure, shopping and tourism. More

Table 8 Changing built environment and urban function in XTD project

	JAL	XTD
Building style	Overcrowded old <i>shikumen</i> houses	Preserved and reconstructed <i>shikumen</i> houses
Interior facilities	Shabby interior and lacking private kitchen and sanitary facility	Refurnished with the latest modern facilities for recreational and commercial purposes
<i>Lilong</i>	<i>Lilong</i> as the extension of interior housing space due to insufficient living space	Beautifying the preserved <i>lilong</i> to create a nostalgic atmosphere
Occupiers	Accommodating local middle- to low-income families	Attracting local elites, expatriates and tourists
Urban function	Offering public-owned low-rent houses as welfare treatment	Providing commercial services and producing profits
Property ownership	Mostly owned by local government/work units (98%)	Owned by Shui On Group

significantly, this area has been transformed from a place offering welfare housing to residents into a place that provides high-quality commercial services and aims to generate profits.

Changing socioeconomic profile

Table 9 shows the great contrast in socioeconomic characteristics between the different occupants of the two sites JAL and XTD in terms of the respondents' age, education level, *hukou* status, occupation, working sector and annual family income.

Apparently, the randomly selected respondents in XTD have a younger age structure than that in JAL. This suggests that the redeveloped XTD area attracts many more young people than does JAL. As for level of education, the majority of respondents in JAL are

poorly educated, with only 13.1% are at college or university level. In contrast, most respondents in XTD have higher levels of education: 63% are college- or university-educated, and 15% are actually educated to master's level and beyond. In terms of *hukou* status, respondents in JAL are 100% local, while in XTD the majority are from outside Shanghai, e.g. other cities in China and other countries.

XTD has much more professional/managerial respondents than JAL. Most consumers in XTD have "decent" jobs e.g. manager, architect, engineer, teacher, etc. The percentages of people working in the public sector and the private sector are also different for the two sites: 67% of respondents in JAL work in the public sector, of whom most work in state-owned and collective enterprises. In XTD, 53% of respondents work in the private



Figure 3 The great contrast between JAL and XTD (author's copy right). (A) Shabby home in the dilapidated shikumen lilong, (B) trendy restaurant in the refurbished shikumen lilong.

Table 9 Socioeconomic characteristics of respondents in JAL and XTD (unit: percentage)

	JAL	XTD
Age		
18–40	19	87
40–65	55	12
Above 65	26	1
Educational level		
College/university and beyond	13.1	78
Hukou status		
Local	100	29
Outside Shanghai	0	71
Occupation		
Professional/managerial	26	72
Working sector		
Public sector	67	15
Private sector	18	53
Others	15	32
Annual family income		
<20,000RMB	40.0	0
20,000–50,000 RMB	55.0	33
50,000–100,000 RMB	5.0	20
100,000–200,000 RMB	0	12
>200,000 RMB	0	35

sector, e.g. foreign companies, joint ventures, and private companies. Annual family income is another important indicator. In JAL, most respondents' annual family income is under 50,000 RMB. In great contrast, in XTD 67% of respondents' annual family incomes are above 50,000 RMB, and noticeably, 35% earn over 200,000 RMB.

In general, the contrasts in the socioeconomic characteristics of respondents in the two sites are evident. In order to find out which socioeconomic variables have close association with redevelopment status, a logistic regression analysis is also applied in the case of XTD. The dependent variable and independent variables are same as in the case of LWC (please refer to the previous section on the LWC project), except for the variable of housing tenure. The variable housing tenure is not used here, because XTD has been redeveloped into a multi-purpose district, which makes comparing housing tenure before and after redevelopment impossible. The logistic regression analysis results are shown in *Table 10*. In the XTD project, education level, working sector, and family income are three indicators highly relevant to redevelopment status. Similar to the case of LWC, education level has a strong positive relation with redevelopment status, which means the consumers in XTD tend to have a higher education level than residents in JAL. At the same time, working sector is also positively related to redevelopment status, which means that compared with JAL, XTD has a higher proportion of people working in the private sector, such as foreign companies, joint ventures and private enterprises. Again, family annual income is highly related to redevelopment status, and the coefficient is positive. This suggests that people in

Table 10 Logistic regression of redevelopment status (pre-redevelopment and post-redevelopment) on respondents' socioeconomic profiles – XTD vs. SJZ (post-redevelopment = 1, pre-redevelopment = 0)

	XTD vs. SJZ	
	B	SE
Age	–0.140	0.378
Education level	1.275**	0.370
Occupation	–0.713	0.562
Working sector	1.430*	0.572
Family annual income	2.162**	0.498
Constant	–8.997**	2.295
Model χ^2	170.395**	–
2LL	104.091	–
Number of cases	200	–

* Significant at 0.05 level.

** Significant at 0.01 level.

the redeveloped XTD also tend to have a higher annual income than residents in the pre-redevelopment neighbourhood, SJZ. Age does not have a salient correlation with redevelopment status for the same reason as in the case of LWC, nor does occupation, possibly because the simplified category fails to precisely reflect respondents' occupation in both XTD and JAL. Nevertheless, the result of the regression analysis suggests that the redeveloped XTD attracts and serves people with higher socioeconomic status than the original lower income groups.

Transformation of urban function: pursuing exchange value at the cost of use value

Differently from the socio-spatial changes in the LWC project, the XTD project involves the functional change of urban space. The transformation of urban function not only includes the changing built environment, which is the physical function, but also includes the changing profiles of people receiving the services, which is the socioeconomic function. JAL, the pre-redevelopment old-fashioned *lilong* neighbourhood, accommodates local middle- to low-income groups, while XTD, the post-redevelopment high-end mixed-purpose district, attracts consumers with higher socioeconomic status, e.g. “the white-collar”, local business elites, tourists and expatriates. By transferring the old inner city neighbourhood into high-quality commercial and recreational land use, XTD was changed from a traditional low-income urban neighbourhood to a place that exclusively serves high profile consumers and visitors.

The XTD redevelopment project is an example of property-led redevelopment in Shanghai that involves the process of urban functional transformation. Rather than concentrating on local residents' interests, XTD was a property-interest-centred redevelopment project. The XTD project evacuated the original residents to make room for profit-making property development by transforming the old neighbourhood into a multi-purpose district. Similar to the

LWC project, residential relocation in the XTD project was implemented under the support of local government. Since the local government and developers intended to accelerate the redevelopment project, most of residents were relocated to resettlement houses in the suburb of Pudong New Area (located at the south-east of Shanghai). Being offered comparatively spacious resettlement housing, the relocation of 1950 households was accomplished within only half a year. However, this seemingly preferential one-off compensation did not really address the comprehensive needs of low-income residents. Within interviews with relocated households, a few people reported that they lost their jobs and became poorer after relocation, due to the exceeding commuting costs, lack of opportunities for small business, no access to social welfare and social network (personal communication, 2nd April, 2004).

From the political economy perspective, urban space has two main functions. First, urban space has a use value, which is regarded as a human necessity for habitation and everyday use. Second, it has an exchange value, which is regarded as a commodity, generating revenues (Logan and Molotch, 1987). The research finding suggests that in the XTD redevelopment project, to pursue the global-oriented exchange value of urban spaces, the everyday use value of the local-oriented neighbourhood has been sacrificed. This project successfully converted the deteriorating old-fashioned *lilong* neighbourhood, which represents the transitional lifestyle of low-income groups, into a stylish multi-purpose commercial and recreational complex, which represents a new lifestyle fancied by the emerging new affluence. More importantly, the XTD project illustrates the local government's endeavours to re-image the city in a way which favours the wealthy people and capital inflows. Underwritten by state-sponsored property development, the redevelopment project is focusing on the state and the developer's desire for capital accumulation through transforming the urban function, while the interests of original residents have been made secondary to the imperative of economic and urban growth.

Conclusions: reconfiguring old neighbourhoods under property-led redevelopment

Since the late 1990s, urban redevelopment has relied heavily on the real estate market to provide its driving force. Property-led redevelopment thus prevails in the whole country, in particular in developed coastal cities such as Shanghai. Under mushrooming large-scale urban redevelopment, urban neighbourhoods in the inner city are experiencing tremendous transformation. The great contrast between pre-redevelopment neighbourhoods and redevelopment neighbourhoods can be seen not only in the built environment, but also in the socioeconomic profiles of residents/users. Based on first-hand data acquired

from field work in Shanghai, this study traces the socio-spatial changes within two redevelopment projects, LWC and XTD, which are both underwritten by real estate development, although with different incentives and outcomes.

Comparison between the two pairs of study sites suggests that urban redevelopment has changed urban neighbourhoods both physically and socioeconomically. The changes in the built environment are tremendous in terms of increasing housing area and housing quality, improved infrastructure and basic facilities, changing building styles and living environment. More importantly, the changing socioeconomic profiles of occupiers are also remarkable. Lacking redevelopment, old neighbourhoods in the inner city have concentrated low quality and dilapidated houses, and residents with lower socioeconomic status. These residents have been marginalized in a rapidly changing society, and are trapped in their dilapidated neighbourhoods. In contrast, the redeveloped neighbourhoods accommodate people with higher socioeconomic profiles and social mobility. The ongoing redevelopment is actually a movement of growth-seeking and city re-imagining through property development. To promote economic development and beautify urban appearance, the local government legitimizes the demolition of old urban neighbourhoods and the construction of high-value-added properties, regardless of the real needs of low-income residents. The private sector follows up the opportunities and forms alliances with the local government to facilitate property-interest-centred redevelopment. As a result, property-led redevelopment has become the dominant urban redevelopment approach in Shanghai.

The socio-spatial changes are different in LWC and XTD. The former resulted in a process of residential displacement, while the latter saw not only displacement but also the functional transformation of urban space. The two cases represent different forms of socio-spatial change in old neighbourhoods resulting from property-led redevelopment. As *Figure 4* shows, route A represents the socio-spatial changes summarized from the LWC project, while route B represents the other form of socio-spatial changes, summarized from the XTD project. Within route A, residential displacement becomes an inevitable outcome accompanying the property-led redevelopment process, as the local government and developer aim to extract exchange-value while beautifying the dilapidated urban area to produce a modern image. A process of gentrification emerges, with affluent residents displacing low-income residents in the redeveloped inner city. Within route B, there is a significant transformation of urban function, which involves not only change of land use but also change in the users of urban space. For instance, in the XTD project, a multi-purpose commercial district that serves the consumption demands of high-income groups has replaced the old-fashioned neighbourhood

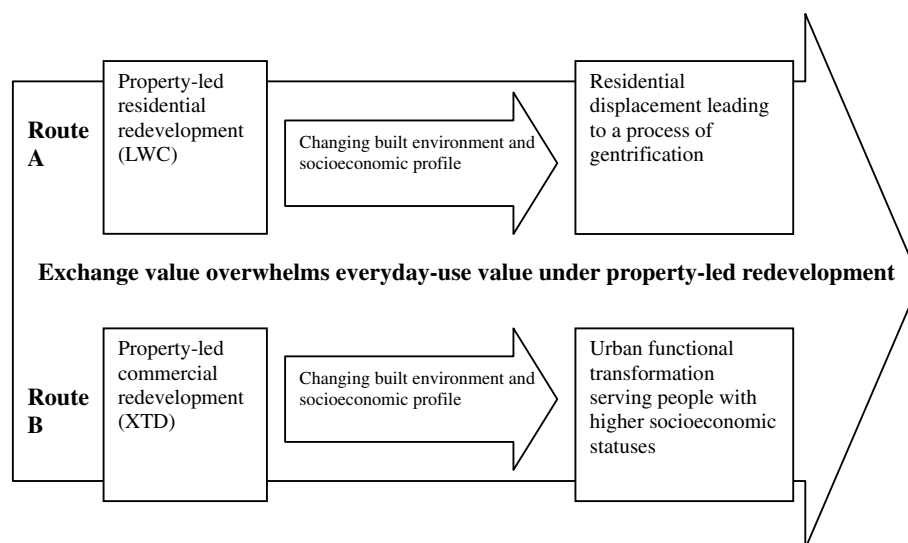


Figure 4 Different forms of socio-spatial changes under property-led urban redevelopment.

which accommodated low-income residents. This project also symbolizes the local government's attempt to create an internationalized and attractive image to global capital. Although the LWC project and the XTD project represent different forms of socio-spatial change in China, they share the common characteristics of evacuating the original low-income residents and developing high-value-added property. In both cases, the demand for pursuing exchange value overwhelms the demand for maintaining the everyday use value of old urban neighbourhoods. Within both path A and path B, residents do not have the capability to influence the institutional actors and promote the stability of their neighbourhoods. The external institutional actors, i.e. the local government and private developers, rather than the social needs of the urban neighbourhoods, are the dominant forces shaping the socio-spatial changes in neighbourhoods.

Since the late 1990s, in order to solve the problem of financial deficiency, the local government has justified property-led redevelopment and demolished old and dilapidated neighbourhoods to make way for capital circulation. Numerous old neighbourhoods have been replaced by renovated or newly developed residential complexes. Meanwhile, to promote economic growth through developing tertiary industry, a number of old urban neighbourhoods are being commercialized. Higher-income households are then attracted to these newly redeveloped residential complexes or commercial/recreational districts. There are two recognizable forms of urban change, gentrification and urban functional transformation. Although it was not the primary intention of the local government, redevelopment in LWC turned out to be a process of gentrification. In the XTD project, the local government successfully attracted rein-

vestment in the old urban neighbourhoods by approving the commercial development of the old-fashioned *lilong* neighbourhoods, under the rhetoric of historical and cultural preservation. The XTD project involved a process of evacuating low-income residents and the transformation of urban function.

This is preliminary research, which reveals the trends of socio-spatial changes in old urban neighbourhoods under property-led redevelopment. Future research should further map out the geographic extent of gentrification and changing urban land use in Chinese cities by using detailed census data and longitudinal data when they become available.

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