

# Densifying *Lilong*: Micro-scale design strategy of S.O.F.T. redevelopment of the *shikumen* housing in urban Shanghai

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## ABSTRACT

*This paper examines theories of urbanisation and redevelopment in contemporary China. Reviewing the historical transformation of urban Shanghai, it argues that routine urban policies are insufficient for redeveloping the colonial urban context of traditional shikumen lilong housing. The paper identifies that a more humanistic, micro-scale design strategy – ‘S.O.F.T.’ guideline – from the perspective of architectural and interior design may help modernise and densify the interior residential efficiency in protected districts without interfering with external urban patterns. It is concerned with aspects of supplementary function, spatial optimisation and structural technique and secures the financing basis from stakeholders by transforming the design activity into cultural products of consumption. In this way, it encourages a grassroots manner of interior redevelopment especially for the districts where preservation ordinances often limit the potential gentrification of external urban fabrics and life patterns.*

## INTRODUCTION

A combination of spatial production, consumption, and cultural practices is one of the most influential features of contemporary urban theories.<sup>1</sup> Principles of privatisation in the economy and consumption of capital can be equally applied to the housing policies in contemporary China. Following this, the housing ownership scheme in Shanghai has undergone a tremendous change since the late 1980s. Juxtaposing it are the rising concerns about local cultural heritage protection as a strategy of city branding. Increasingly, studies address aspects that include macro-scale residential mobility, anthropological observation, and the effect of economic policy on urban lives. They focus on the redevelopment of *lilong* housing – a traditional type of residential architecture in the surrounding areas of Shanghai – yet few of them examine the issue from a perspective of design strategy, that is, with the eyes of architects and interior designers.

This paper, on the contrary, entertains a potential design strategy for redeveloping the *lilong* housing. It approaches the question by means of a micro-scale observation of its architecture,

structure and limited interior space in association with the urban patterns of residents' lives.<sup>2</sup> A micro-scale consideration has long and largely been overlooked due to several reasons as vast construction of commercial housing dominates the housing policies and becomes privileged in social, planning and economic studies. Thus traditional residential blocks often face the danger of cultural eradication because they are not protected by governmental conservation regulations;<sup>3</sup> the maximisation of land use for commercial needs has resulted in exceptions being given to the redevelopment plans for announced historical conservation sites and this, in turn, challenges local residents and drives them away to remote and jobless suburban areas.<sup>4</sup> Even with a better relocation plan, relocation may not succeed without systematic land acquisition and financial compensation under specific government regulations.<sup>5</sup> Further to this, there is little strategic research on architectural design to minimise this kind of relocation in practice.

We argue that *lilong* housing reflects various historical problems faced during the transformation of urban Shanghai. Its inability to provide adequate living space became critical, especially during the last two decades when high-density urbanisation was happening. The paper will elaborate on the design strategy of 'soft densification'. The case study, *0.8 Shikumen House* recently finished by the authors' studio team in the Yangshupu district, demonstrates an alternative way of rebuilding without large-scale relocation of *lilong* residents.<sup>6</sup> It amplifies four interrelated aspects of this special densification: supplementary functions in vertical and horizontal dimensions, optimisation of necessary living facilities, potential financing solutions and technical integration of structure for interior space.

## LITERATURE REVIEW: NEW URBAN POLICIES, OLD INTERIOR PROBLEMS

### Interior strategy in need

Since the first national conference on housing reform in 1988, China unleashed private initiatives, schemes by public bodies and a vision for better living quality.<sup>7</sup> Shanghai became a contested frontier of urban space dominated by both capitalist and post-

socialist incentives.<sup>8</sup> The government envisaged a commercial city that could reflect its former glory. Authorities were eager to redevelop central areas for potential incomes from land lease, a major source of local revenue.<sup>9</sup> It was, however, only after 1990 that the reforming policies accelerated the consumption of housing. After 1993, local real estate became available to foreign investments, and a deluge of money created a boom in domestic real estate.<sup>10</sup> This transition oversaw a confrontation between urban transformation and rising land prices.<sup>11</sup> Large numbers of traditional residences in the old industrial districts were cleared and replaced by new types of private, foreign-styled residential properties. There was a substantial improvement in the provision of housing floor areas; nonetheless this was not true for the old *lilong* districts (Table 1). To justify the housing policies in command, scholars paid attention to macro-scale residential mobility according to social capital and market equilibrium, etc.<sup>12</sup> Others examined individual responses to economic and societal changes.<sup>13</sup> However, it appears to anthropologist Non Arkaraprasertkul that the authoritative studies of urban economy and quantitative sociology as such prove insufficient to underpin the sustainability of housing and social patterns of local people.<sup>14</sup> The government has long struggled between two ends of urban life: inhabitant and income, living and leisure, culture and commerce.

On the other hand, we also see some insights from historical studies in the writings of architectural historians like Luo Xiaowei, Zheng Shiling, Cary Y. Liu, Lu Junhua et al., Feng Shaoting, D. Louise Morris and the Shanghai Academy of Society. Their contributions form a preliminary basis for our reading.<sup>16</sup> Among them, research done by Guan Qian, Huang Lei, Renee Y. Chow and especially Fan Wenbing, Non Arkaraprasertkul, and Chunlan Zhao briefly touches the topic of traditional housing as an architectural and urban solution.<sup>17</sup> However, interior design research is somewhat excluded from this circle of housing studies. One of the possible reasons may be that a majority of scholars share the opinion that urban policy is the way to solve *lilong* redevelopment. A common assumption may be that, if external urban qualities were not improved beforehand, interior design would contribute little to updating life patterns from within.

Table 1: Percentage of different housing types in the City of Shanghai (one million square metres). The data for housing types in Shanghai is calculated from Shanghai Statistical Yearbook 2013.<sup>15</sup>

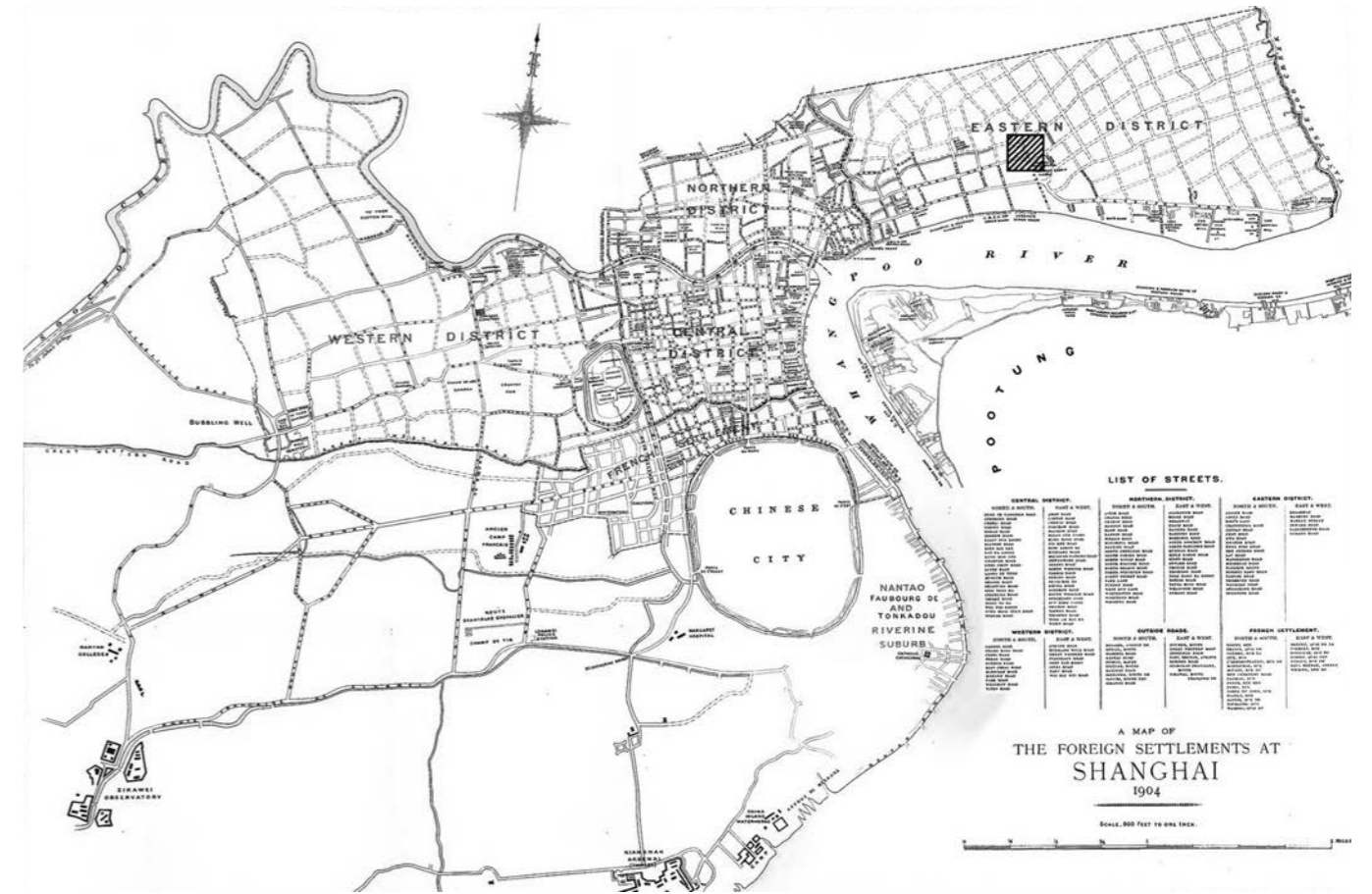
	2000	2010	2011	2012
<b>Housing</b>	208.65 (100%)	526.39 (100%)	550.77 (100%)	562.63 (100%)
Apartment / staff dwelling	181.45 (86.9%)	484.43 (92.0%)	502.61 (91.3%)	519.75 (92.4%)
Garden house	2.50 (1.2%)	20.64 (3.9%)	22.15 (4.0%)	17.08 (3.0%)
Terrace house			4.96 (0.9%)	10.52 (1.9%)
Improved lane house - <i>lilong</i>	4.28 (2.1%)	5.27 (1.0%)	5.25 (0.9%)	3.11 (0.5%)
Old lane house	18.96 (9.1%)	12.37 (2.4%)	12.22 (2.2%)	12.06 (2.2%)
Shanty	0.84 (0.4%)	0.29 (<0.1%)	0.29 (<0.1%)	0.11 (<0.1%)
Others	0.62 (0.3%)	3.39 (0.6%)	3.29 (0.6%)	

Production of urban space relies upon negotiations between the stakeholders: land-owners, investors, developers and consumers. For *lilong* residents, life patterns are not abstract variables in the equations of a mobile economy; they also have actual mental and physical connections and implications that fall within the concerns of architectural design. Therefore we cannot afford to overlook the potential of design to engage with this traditional housing, especially when problems like limits of finance, spatial inflexibility, and over-commercialisation make it a pressing issue in redeveloping urban Shanghai. An historical review will tell us that these are catalysts and by-products of urban change that reflect the imperfect living patterns of *lilong* housing itself since the very beginning of its design.

### IMPERFECT LILONG HOUSING

The compact nature of Shanghai's *lilong* housing derives from the emergence of the provision of housing to factory workers and immigrants in the nineteenth century – since the establishment of the International Settlement (Figure 1).<sup>18</sup> The whole development can briefly be divided into three stages:

the early *shikumen* house (1870s - 1910s), the late *shikumen* house (1910s - 1930s), and the new-style *lilong* house (1910s - 1940s). The first type comprises three bays in width and occupies an area roughly 10-13 metres by 16 metres. The situation changed in the early twentieth century when the unprecedented speed and density of urbanisation precluded this larger style. In pursuit of efficiency in land use and balanced distribution among working people, a new type of single-bay or two-bay structure was promoted, with supplementary strategies of construction to accommodate poorer families and maximise spatial function in accordance with tenants' incomes. A famous farce, *The Seventy-two Tenants*, attests to the common situation of a single *lilong* dwelling maybe housing 15 to 20 people. Later on, wealthier occupants required a new type of *lilong* – spacious and hygienic. It had good spatial orientation, and was equipped with front courtyards, semi-open green gardens, modern construction techniques and made of reinforced concrete. This third type was beyond the reach of the lower classes. In the *shikumen* houses, money, land, air and even supplies of water and electricity were still often in danger of deprivation due to the extremity of lot division and the imbalance of infrastructure.

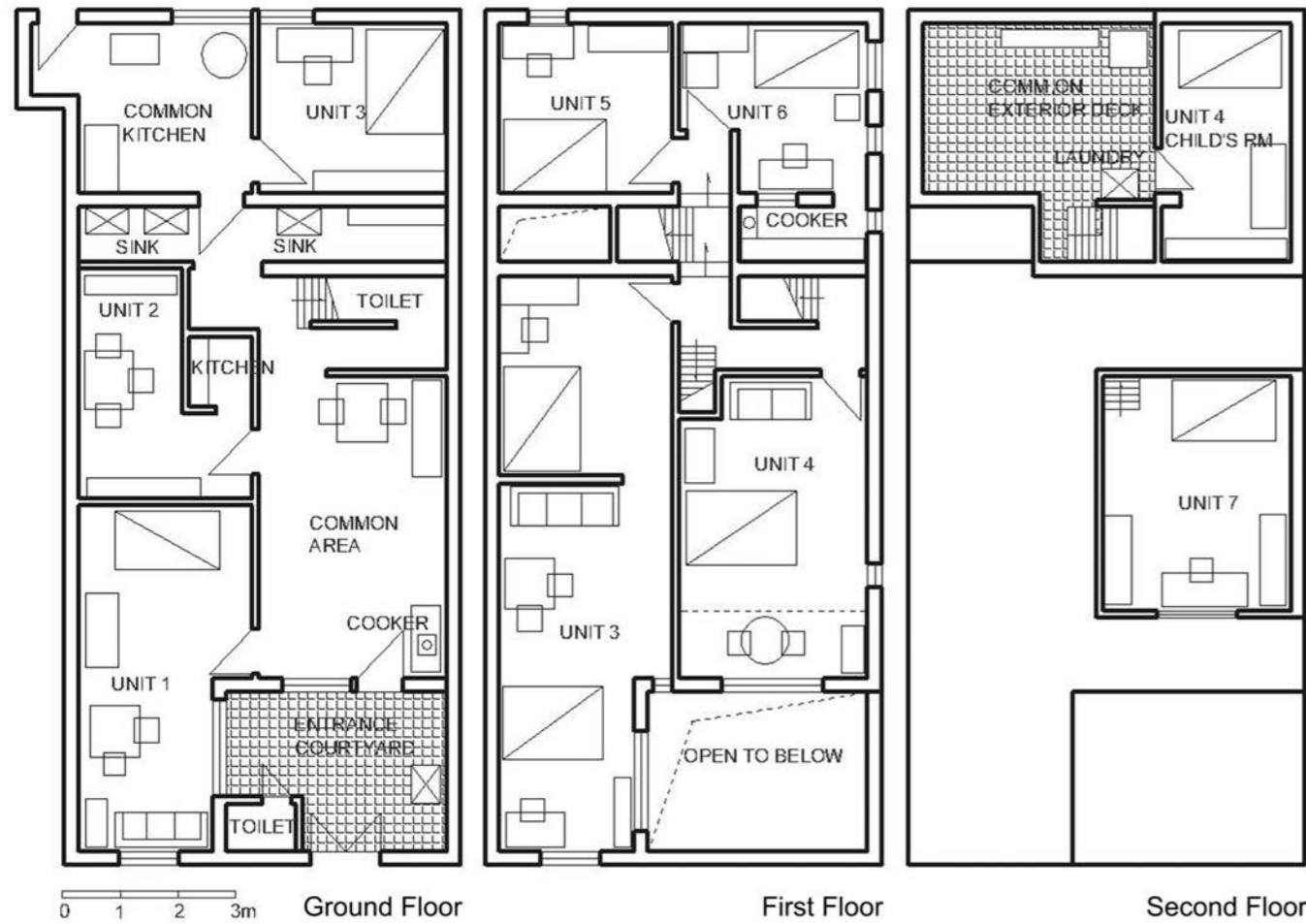


This was particularly true for the late *shikumen* house (Figure 2). To accommodate more families, an attic space was installed above the kitchen. Front gardens were also sacrificed for additional living space and bedrooms. Ground floor areas, both front and back living rooms (*qian ketang* and *hou ketang*), were converted to allow further subletting. On the first floor was a front bedroom (*qianfang*) and a back bedroom (*houfang*). A little room called *erceng ge* was inserted into the corner spaces between the floors and ceilings. Another little room called *sanceng ge* became a bonus on the 'new' second floor.<sup>19</sup> Overall,

the house was constructed using a brick-walling system. Unlike the disastrous slums of unstable freestanding wooden structures, *shikumen* houses at least used integrated brick and wooden systems, which were inexpensive but strong enough to hold the integrity of this three-storey structure.

Density became even higher through the mid-twentieth century.<sup>20</sup> According to a 1937 official statistical report by the Shanghai municipality, 86% of citizen families in the *lilong* housing areas of the International Settlement lived in a co-resident manner,<sup>21</sup> and

Above  
Figure 1: Map of the International Settlement in Shanghai, 1904. The shaded square - above right - shows the location of our project at Tangshan Street. Image: Virtual Cities Project, Lyon.



a single-bay *shikumen* house featured an average of 2.8 square metres per person. What is really intriguing is that, compared to the statistical data of other housing types, little changed in the recent round of large-scale urbanisation and residential provision.<sup>22</sup> From 2000 to 2012, the total housing floor area in Shanghai has increased to 562.63 million square metres, while only eight million square meters of *lilong* housing have been converted, renovated or demolished. To complete massive relocations in central areas often requires a formidable sum for compensation. As such, both foreign investors and local administration find it very difficult to redevelop *shikumen* houses into other multiple-use commercial, entertainment and cultural facilities.



Recent redevelopment projects like Xintiandi and Tianzifang (Figure 3) are believed to be successful cases of converting low-return *shikumen* residences into highly profitable public space.<sup>23</sup> Imitating the atmosphere of colonial architecture, decorating new alleys, bars and luxury centres with structural elements extracted from the surrounding areas are design strategies that offer nothing but pseudo-historical redevelopment.<sup>24</sup> Despite the context being preserved, the life patterns of 'three-bay' houses are largely interrupted by mass consumption and encroached on by shop houses and restaurants, providing little reference to the collective memory of culture. The minimisation

of impact of macro-scale redevelopment must be maintained in order to sustain the original urban culture in terms of design. Since 2012, the authors' design team took the lead in redeveloping a traditional *lilong* house in the Yangshupu District. It provides an opportunity to rethink the strategies of massive redevelopment and change. Revitalising the area does not simply mean keeping the community intact, but also following a sequence of design, financial and technical concerns to maintain its vitality by implementing the more humanistic approach of 'soft densification'.

SOFT DENSIFICATION: A CASE STUDY OF 0.8 SHIKUMEN HOUSE

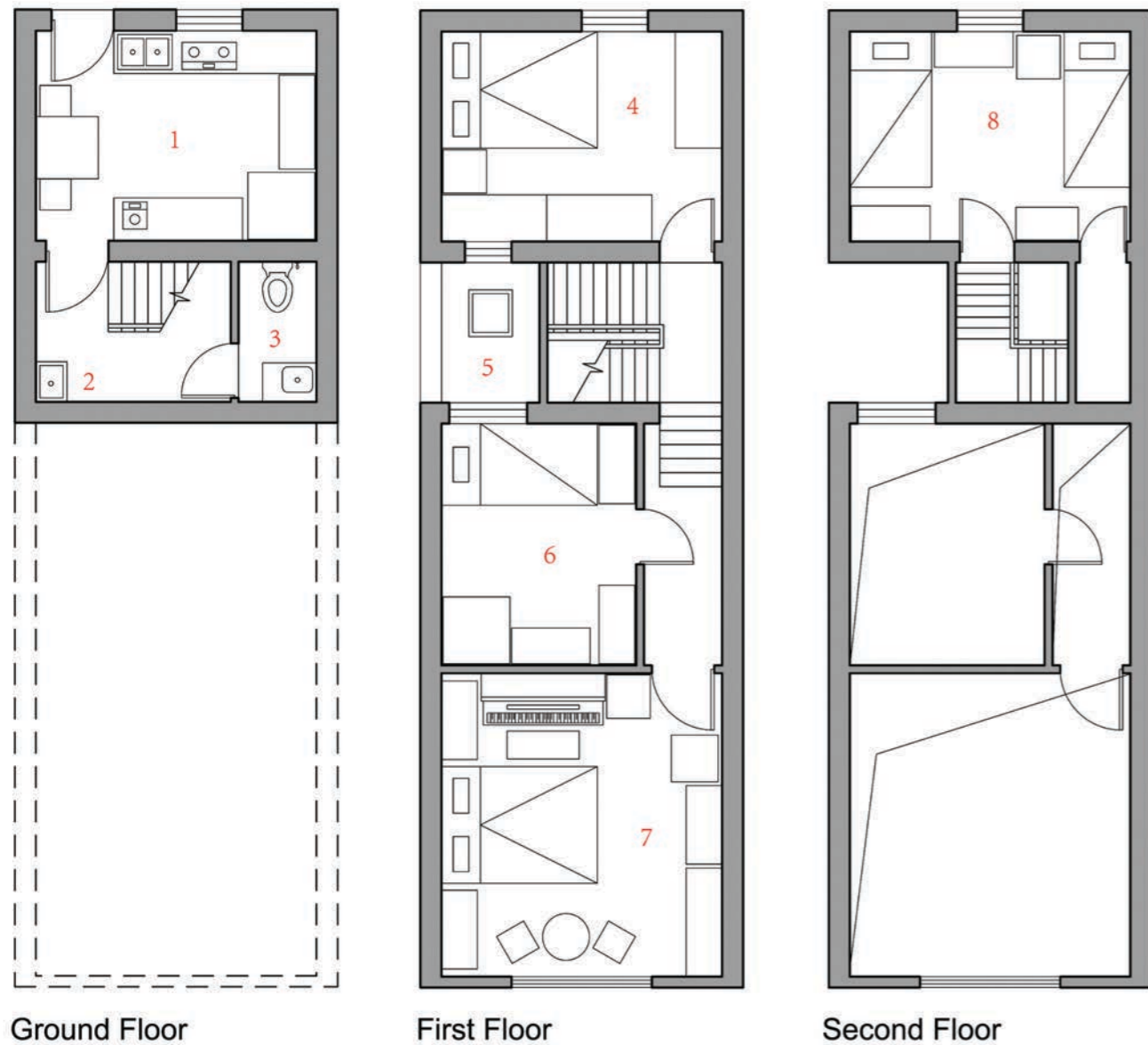
The project is the consequence of an invitation to participate in a TV program organised by the Shanghai Media Group (SMG). SMG set up a project called *Mengxiang gaizaojia* (*Dream Redeveloper*), targeting house reconstruction for a group of selected citizens who live in extremely poor conditions. The program manager invited architects and designers to redesign dilapidated dwellings into comfortable houses. Our design studio was invited to lead one of the projects located in Tangshan Street (Figure 1). Typically, this project had only a limited budget and a tight time schedule. Its subject was one of the late *shikumen* houses in this area built around the 1930s, where low-quality architecture sits alongside a high-density population and extremely poor living conditions. Its marginalised location restricts financial investment, but the governmental planning guideline of the surrounding Tilanqiao Historic Reserve – ensuring its untouchable status – ridiculously forbids any external housing improvements, mega-construction or demolition. The whole district of Tangshan Street is thus an impregnable fortress for any normal redevelopment plans, denying any attempt to solve the micro-housing problem from a planning or economic perspective. Yet it offers us a precious opportunity to see the potential of redevelopment from within; that is, to make an architectural and interior upgrade without changing the macro-scale housing patterns and overall historical atmosphere in the protected district. Multiplication becomes an advantage. It contributes a potential paradigm for similar

Opposite  
Figure 2: A typical layout of the *lilong* housing. Image: drawn by the authors.

Above  
Figure 3: Tianzifang district after commercial redevelopment. Top: Billboards of shop houses covering the façade of old buildings. Below: Sign to keep tourists out of the corner gate of a residence. Photographs: Authors.

redevelopment cases where to challenge statutory planning is not an option. We can simply apply the strategy of interior design to other locations, while altering its feasibility case-by-case. Our bottom-up philosophy avoids changing external features, including heights, façade materials and boundaries. It aims not to build bigger or higher. It seeks to densify the functional variety within the frame of the main structure by optimising structural distribution and spatial uses. Ideally, it costs much less than demolition and improves the urban qualities of the community. The case for the project is Mr Ge's family house, a dwelling that

accommodates up to six family members of three generations. Unusual for a *lilong* house, this building has been stripped of a living room on the ground floor, which was sub-divided to other tenants long ago. We therefore call the project *0.8 Shikumen House*. Basically, a gross floor area of 90 square metres of the house lies in chaos, while only 60 square metres of it is available for living activities. A kitchen combined with dining room is on the ground floor (Figure 4). Four bedrooms are spread over the floors above. A common room is missing, slating the scarce allowance of space and facilities. Stairs of more than



seventy degrees are too steep for the elders (Figures 5 and 6), and there is only one cramped restroom, hidden on the ground floor: even to find your way there appears to be a truly 'marvellous' achievement. Spatial efficiency is compromised by the disastrous placement and shortage of storage space. Due to yearly deterioration, the unstable combined brick-wood system requires urgent reconstruction.



Opposite  
Figure 4: Plans before renovation.  
Legend: 1. Combined kitchen and dining room. 2. Corridor. 3. Restroom. 4. Bedroom. 5. Roof with skylight. 6. Bedroom. 7. Bedroom for the elders. 8. Bedroom for the elders.  
Images: Drawn by the authors.



Above left  
Figure 5: Steep stairs before reconstruction.  
All photographs taken by the authors unless further indicated.  
Above right  
Figure 6: Chaotic interior.

Table 2: Function analysis before and after renovation. By the authors.

	Bedroom	Living room	Dining Room	Kitchen	Sanitation
Before	4 (6 pers.)	0	1 (combined usage)	1 (combined usage)	1
After	4 (6 pers.)	1 (two-level shared space)	2 (ground fl. for combined usage & 2 <sup>nd</sup> fl. exclusively for the elders)	2 (ground fl. for combined usage & 2 <sup>nd</sup> fl. exclusively for the elders)	2 (2 <sup>nd</sup> fl. exclusively for the elders)

## STRATEGIES OF ARCHITECTURAL DESIGN AND THE PROCESS OF RECONSTRUCTION

A key task of renovation was to introduce more spaces to the compound within: that is, to softly densify the house without interfering with the guidelines of urban design or the lives of neighbours. In the meantime, we had to address the needs of both common usage and privacy (Table 2). Top priorities included a first-floor living room and top-floor facilities for the elders. The restroom, dining area and kitchenette offered horizontal convenience for their daily activities. All of the interior spatial expansion relied on the systematic compartmentalisation in both vertical and horizontal dimensions during the process of re-examining and calculating the immovable load-bearing walls. Solutions needed to address practical problems case by case, especially when official statutory guidelines seem not to be applicable. The whole project had three phases. In Phase I, after removing the floor panels of Room 6, we discovered a mezzanine space of 1.2 metres high, adding the full clearance of that part to 5.1 metres. It was then possible to split this height horizontally and vertically: that is, a passage way and a comfortable private room of 2.4 metres high on the lower level, and an upper attic for dining area and kitchenette attached to the elders' bedroom (Figure 7 a, b). In Phase II, Room 7 is subject to expansion. While converted into a new living room, it still has enough space between the ceiling and pitched-roof panels to hold an upper bedroom for the elders. It maintains a minimum height of 1.6 to 2.2 metres. This treatment does not meet with the official guidelines for constructing new residential buildings and is seldom used in renovation projects in reserve districts. However, it does provide a tailor-made design for the elders, whose body heights are less than 1.5 metres. Meanwhile, this elders' bedroom and the living room below shared an 'interior courtyard' marked out by a cantilevered structure (Figure 8). This two-level space, with bright south-facing windows, optimises the inner airflow using the stack-effect principle. It also enhances the visual effects, relieving the dullness of the space.

In Phase III, the interior design aims at the optimisation of circulation using staircases. By adding more steps and extending zigzag shapes, new staircases ascend with angles of less than 45



Above top left  
Figure 7: a) Kitchenette. b) Dining area on the top floor.

Above bottom left  
Figure 8: Cantilevered space in the living room.



Above top right  
Figure 9: a) Stairs on the ground floor.  
b) Staircase with reduced gradient and handrails

Above bottom right  
Figure 10: New plywood structures for the staircase

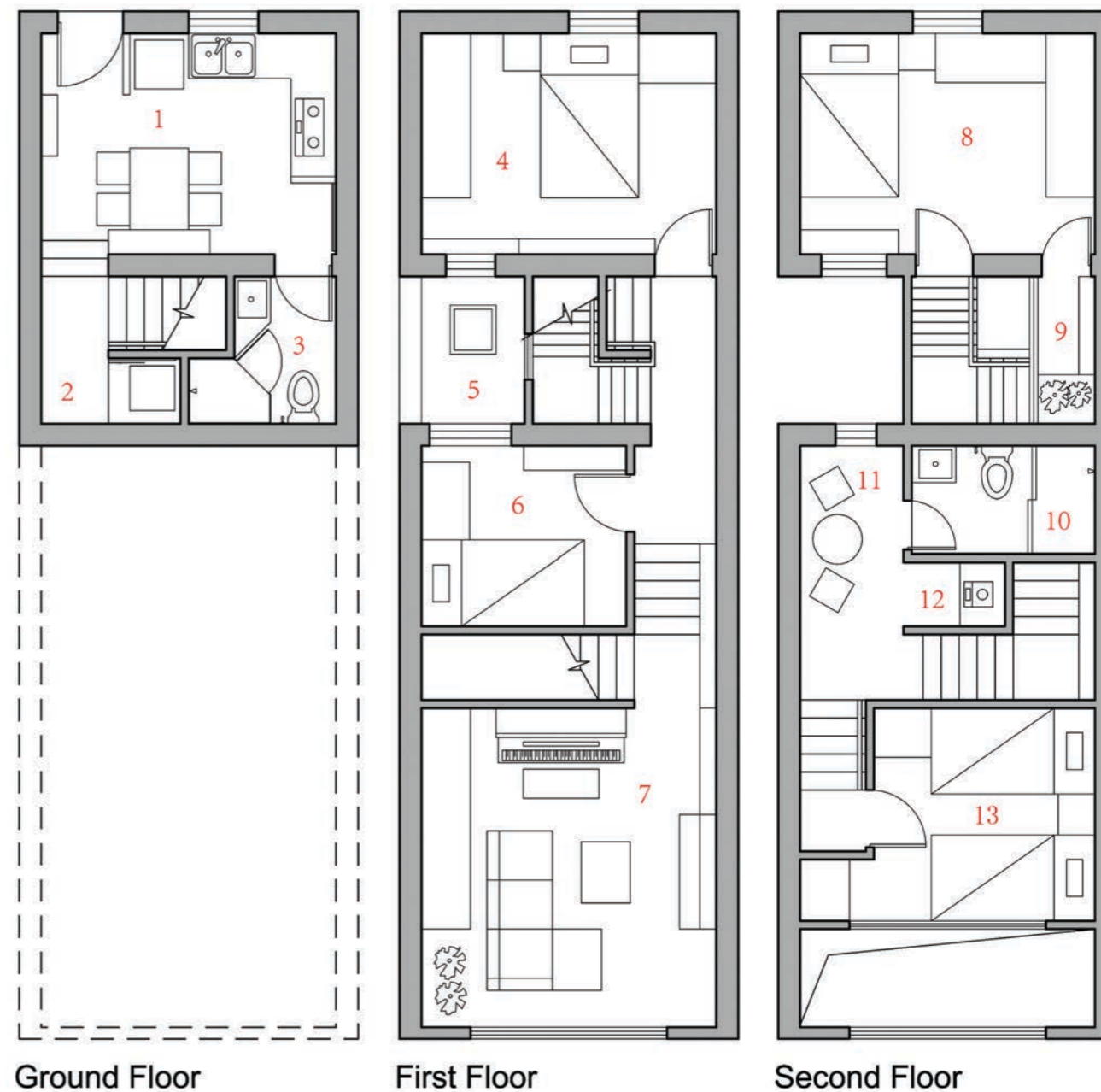
degrees, avoiding uncomfortable steepness and giving clearer interior flow along the corridor space (Figure 9 a, b and 10). This method squeezes staircases into central areas and thus gives more space for the ground-floor dining room. It allows room for a new bathroom and semi-detached laundry. Handrails are fixed at a height of 78cm along corridors as well as in bathrooms (Figure 11). The geometries of sheer white panels and contrasting decorations in the corridors further enhance interior qualities, symbolising the modern spirits of the Ge



A major achievement during the redevelopment was to run the project in a 'self-funding' manner. With the support of SMG, the whole process of design and construction was transformed into a TV program, a contemporary media product subject to mass consumption by the spectators. Architects, interior designers, materials suppliers and tradespeople offered free support and manpower during the various stages. Their efforts, in return, would be compensated by advertisements broadcast free on the TV program in the series. Materials suppliers deserved special emphasis in the show, having donated a large amount of structural materials such as wood and dry-walling systems. It required budget checking by different stakeholders and, above all, a mutually negotiated agreement. In this case, the TV program offered RMB 8,000 (US\$1,200) for the show's production. The clients spent around RMB 30,000 (US\$4,500) on interior decoration to their idiosyncratic tastes and needs. The total budget of the whole construction was successfully kept to less than RMB 300,000 (US\$45,000), which means the clients needed to contribute less than 10% of the cost, and in return, got a new house of 120 square metres with high-quality design and facilities.

This mode of financing redevelopment by extracting funds from different bodies can be successful only in relation to a one-off,

family's new life patterns. Figures 12 and 13 show a diagram of the design strategy. The architectural expansion creates an increase in the gross floor area to 117.6 square metres, adding 27.6 square metres of new space and three more storage areas. The 7.9-metre-high exterior framework remains unchanged and thus indicates no severe interference to the existing urban fabric and neighbourhood.



Opposite left  
Figure 11: Bathroom for the handicapped.

Opposite right  
Figure 12: Spatial densification by reconstruction (upper row, before renovation; lower row, after renovation).

Above  
Figure 13: Plans after renovation.  
Legend: 1. Kitchen/dining room. 2. Laundry. 3. Toilet. 4. Bedroom. 5. Roof with skylight. 6. Bedroom. 7. Living room. 8. Bedroom for the elderly. 9. Terrace. 10. Toilet. 11. Dining area. 12. Kitchenette. 13. Bedroom for the elderly.

micro-scale project. We have to accept that to redevelop the whole Tangshan area is beyond the capacity of the SMG TV program. When more and more people were inspired by the show to write letters to the media group for help, participants had to be creative to secure adequate funds in the long term, either from new tradespeople and suppliers or to devise more fascinating design shows as consumable cultural products. Admittedly, this temporary relational system of mutual benefits is unstable and difficult to maintain. However, it gives us an example of transforming the symbolic values of housing design to find public 'resources'. There is a rising concern about the redevelopment of *lilong* housing in public reviews, and the SMG decided to repeat this redevelopment mode in its following seasons of *Dream Redeveloper*. Two years of the program has succeeded in transforming old houses for nearly thirty families. All the stakeholders, including architects and interior designers, felt happy as the media referred to them as 'humanist designers in this materialist society'.

#### GUIDELINE S.O.F.T. : REFLECTIONS ON THE REDEVELOPMENT OF URBAN SHANGHAI

In this paper we challenge the socio-economic theories of contemporary urbanisation in Shanghai. The modern *lilong* housing reflects the problematic residues of its nineteenth-century colonial urban context. While a plethora of modernist urban policies are failing to sustain micro-scale urban patterns with more humanistic concerns, the potentials of architectural and interior design strategies are still overlooked, especially when in the face of the urgency of redeveloping traditional residential areas.

We argue that a matrix of design guidelines so-called 'S.O.F.T.' is necessary for updating *lilong* housing as in the case of the *0.8 Shikumen House*. It is 'soft' due to multiple human concerns in the dilapidated residential areas. It seeks to transform extreme living conditions into comfortable and enjoyable environments with lower costs and less interference to the external urban fabric. We must see that it is not a solid framework that can be readily applied to any other districts. It takes advantage of discreet flexibility to ice-break the routine governmental ordinances of preservation on a case-by-case basis.

The letter 'S' stands for supplementary functions. These are primarily crucial for such redevelopment – it demands optimising attributes like spatial efficiency, simplicity of circulation and enhancement of structural systems. The design philosophy of 'O' for optimisation can be further reflected by better consultancy and exact control over the procedure of redevelopment. For us, the task became very stressful when structural consultants failed to shrink the dimensions of load-bearing structures to 15cm in thickness, making impossible the proposed insertion of additional steps or partition walls. We needed a balance between function, structure and availability of space, and to stick to the budget according to financial resources which the letter 'F' mainly concerns. *Lilong*-housing redevelopment is different from other types of urbanisation in that the preservation ordinance denies any possibility of rebuilding it into a high-density urban area with commercial

interests. Without either governmental or private funding, self-fundraising is the only option for local residents. SMG's brilliant liaison between architects and materials suppliers can be taken as an ideal model of mass-media co-operation. It transformed the design activity into the 'social event' of a TV program. Social media, commonly believed to be the accomplice of the 'bad' capitalist urbanisation, takes an ironically good role in financing this experiment, helping to make a new house that the residents could not otherwise afford. On the other hand, participating designers and suppliers received compensation by means of a 'solid showroom' and free TV advertising. This grassroots mode of finance, in other words, saves governmental resources being spent on redevelopment and gentrification schemes. By taking gradual steps and negotiating, it avoids the usual consequences of demonstration and conflict during actions of relocation, and thus sustains large-scale urban revitalisation in the long run. The fourth concern emphasized by the letter 'T' is about the appropriateness of technical materials and load-bearing structures to be used. It does not simply mean to consider those regular techniques of preserving historical buildings. Beyond that, convenience, expenditure, time and even sound pollution during the transportation and installation of materials may have severe potential impacts, not only on the integrity of structures themselves but also on the neighbourhood and greater urban life. A mental attitude of tenderness and softness may also determine the qualities of future life.

The Shanghai municipality is faced with harsh situations of urban redevelopment and revitalisation. While it is usual to eradicate traditional urban fabrics in exchange for commercial profit, poor families like Mr Ge's can still have the chance to continue their old ways of life by means of this S.O.F.T. design strategy. The fact that this project recently won the prize for Social Equality in the *WA Chinese Architecture Awards* means it is not just a one-off lucky shot. It is only the beginning of this new-media-aware mode of redevelopment that explores mutual benefits for stakeholders, in projects that are challenged by both rigid authoritarian ordinances of preservation and limited finance. This flexible strategy has succeeded in changing various types of residence in the urban area, including alley-corner houses, urban flats, shop houses and even a dilapidated water tower. There should be more financing options in the future under the booming influence of the creative industries. For example, resources can be found via websites, online game shows, sales of digital products, as long as the creative community becomes the new driving force in renovating old houses into small SoHo-like workspaces at home. We have to be creative. It is the only way that long-established families in the *shikumen* houses can enjoy the micro-scale but diversified affinity of their alleys in a humanistic way.

#### NOTES

1. For exemplary theories of urban policy and consumption, see Philip Cook, "Modernity, Postmodernity and the City," *Theory, Culture & Society* 5 (1988): 475-493; Mike Featherstone, *Consumer Culture and Postmodernism* (London: Sage, 1991); Sharon Zukin, "The Postmodern Debate over Urban Form," *Theory, Culture & Society* 5 (1988): 431-446.
2. *Lilong*, as a single word in Chinese, means not only the physical body of housing architecture in Shanghai, but also its atmosphere of neighbourhood and other subjective qualities of life. Scholar Chunlan Zhao summarises the different

meanings of *lilong* as: 1) the physical forms of three major housing subtypes being organised along small alleys typical of Shanghai, most of which were constructed since the late nineteenth century; 2) the community being built, based on this kind of neighbourhood; 3) a particular kind of living style formed by this dwelling space. See Chunlan Zhao, "From *Shikumen* to New-style: a rereading of *lilong* housing in modern Shanghai," *The Journal of Architecture* 9, no. 1 (2004): 49-76.

3. You-Ren Yang and Chih-Hui Chang, "An Urban Regeneration Regime in China: a case study of urban redevelopment in Shanghai's Taipingqiao area," *Urban Studies* 44 (9) (2007): 1809-1826. There are two typical ways of redeveloping *lilong* housing: first, under the protection of the National Priority Protected Sites and the Municipal Level Heritage Conservation regulations; second, reconstruction and replacement by commercial or entertainment buildings like the areas of Xintiandi and Tianzifang.

4. Yonglie Ye, *Shangpinfang dazhan [The Battle of the Housing Market]* (Shanghai: Fudan University Press, 1997), 195-208.

5. Xuefei Ren, *Building Globalization: Transnational Architecture Production in Urban China* (Chicago: University of Chicago Press, 2011).

6. The design team also published a paper in the Chinese Architectural Journal. See Chunfang Dong, Kexuan Li and Huanhuan Wang, "Kongjian geming: guanyu 0.8 dong shikumen zhuzhai gaizao de sikao [Spatial Revolution: On Renovating 0.8 Shikumen House]", *Jianzhu Xuebao [Architectural Journal]* (2) (2014): 101-105. An online version of the publication can also be found via the link: <http://www.douban.com/note/274802148/>, written by Dong Chunfang, the leader of the team. Another short essay of anthropological observation of this project in the preliminary stage can be found at: <http://www.douban.com/note/264735297/>, also written by Dong. However, the structure and content of those writings emphasise detailed aspects of architectural design, which differ from the broader concerns of urban design and planning, history and economy addressed in this paper.

7. Ya Ping Wang and Alan Murie, "Commercial housing development in urban China," *Urban Studies* 36 (9) (1999): 1475-1494; Li Zhang and Ahiwa Ong, "Introduction: Privatizing China," in *Privatizing China – Socialism from Afar*, eds. Li Zhang and Ahiwa Ong (Ithaca and London: Cornell University Press, 2008).

8. Michael Burawoy and Katherine Verdery, "Introduction," in *Uncertain Transition: Ethnographies of Change in the Postsocialist World*, eds. Michael Burawoy and Katherine Verdery (New York, Lanham: Rowman and Littlefield, 1999), 1-18; Deborah Davis and Hanlong Lu, "Property in Transition: Conflicts over Ownership in Post-Socialist Shanghai," *European Journal of Sociology* 44 (1) (2003): 77-99. Isabelle Thireau and Wang Hangsheng, eds., *Disputes au village chinois. Formes du juste et recompositions locales des espaces normatifs [Disputes in a Chinese Village. Local Forms of Justice and Reconstructions of Normative Situations]* (Paris: Éditions de la Maison des sciences de l'homme, 2001).

9. Si-ming Li and Youqin Huang, "Urban Housing in China: market transition, housing mobility and neighborhood change," *Housing Studies* 21 (5) (2006): 613-623.

10. Youqin Huang, "A Room of One's Own: housing consumption and residential crowding in transitional urban China," *Environment and Planning A* 35 (2003): 591-614; John Logan, ed., *The New Chinese City: Globalization and Market Reform* (Oxford: Blackwell, 2002); Zhigang Tang, *The Urban Housing Market in a Transitional Economy: Shanghai as a Case Study*. PhD thesis submitted to the Department of Geography, Indiana University, 2006; Fulong Wu, "Housing provision under globalization: a case study of Shanghai," *Environment and Planning A* 33 (2001): 1741-1764.

11. Piper Gaubatz, "China's Urban Transformation: Patterns and Processes of Morphological Change in Beijing, Shanghai and Guangzhou," *Urban Studies* 36 (9) (1999): 1495-1522; Fulong Wu and Anthony Gar-On Yeh, "Urban spatial structure in a transitional economy: the case of Guangzhou, China," *Journal of the American Planning Association* 65 (4) (1999): 377-395; Sun Sheng Han, "Shanghai between state and market in urban transformation," *Urban Studies* 37 (11) (2000): 2091-2112.

12. Gina W.F. Lai and Yat-ming Siu, "Residential Mobility and Social Capital in Urban Shanghai," *Asian Journal of Social Science* 34 (4) (2006): 573-599; Si-ming Li, "Housing Tenure and Residential Mobility in Urban China: analysis of survey data," *Urban Affairs Review* 38 (2003): 510-534; Aimin Chen, "China urban housing reform: price-rent ratio and market equilibrium," *Urban Studies* 19 (1996): 17-31; Fulong Wu, "Changes in the Structure of Public Housing Provision in Urban China," *Urban Studies* 33 (1996): 1601-1627.

13. Huang, "A Room of One's Own," *Environment and Planning*; Youqin Huang and William A.V. Clark, "Housing

Tenure Choice in Transitional Urban China: a multilevel analysis," *Urban Studies* 39 (2002): 7-32.

14. Non Arkaraprasertkul, "Urbanization and Housing: Socio-spatial Conflicts Over Urban Space in Contemporary Shanghai," in *Aspects of Urbanization in China*, ed. Gregory Bracken (Amsterdam: Amsterdam University Press, 2012).

15. Website <http://www.stats-sh.gov.cn/tjnj/nj13.htm?d1=2013tjnj/C1103.htm>. (Accessed: 13 October 2014)

16. Xiaowei Luo and Jiang Wu, eds., *Shanghai Longtang* (Shanghai: Shanghai Renmin Meishu Chubanshe, 1998); S. L. Zheng, *Shanghai chengshi de gengxin yu gaizao [The Urban Redevelopment of Shanghai]* (Shanghai: Tongji University Press, 1996); Junhua Lue, Peter G. Rowe and Jie Zhang, *Modern Urban Housing in China 1840-2000* (Munich: Prestel, 2001); Shaoting Feng, *Shikumen: Shanghai tese minju yu longtang fengqing [Shikumen, the Traditional Residence and Alley of Shanghai]* (Shanghai: Shanghai Renmin Meishu Chubanshe, 2009); D. Louise Morris, *Community or Commodity? A Study of Lilong Housing in Shanghai* (Vancouver: University of British Columbia, 1994); Shanghai Academy of Social Sciences (Research Institute of Economy), *Shanghai penghuqu de bianqian [The Transformation of Shanty Houses in Shanghai]* (Shanghai: Shanghai Renmin Meishu Chubanshe, 1962).

17. Guan Qian, *Lilong Housing: a traditional settlement form*. Masters dissertation submitted to the School of Architecture, McGill University, 1996; Lei Huang, *Housing Development in the Context of the Modernization, Urbanization and Conservation of Chinese Traditional Cities: Beijing, Shanghai and Suzhou* (Cambridge, MA: Harvard University Press, 2000); Renee Chow, "In a Field of Party Walls: Drawing Shanghai's Lilong," *Journal of the Society of Architectural Historians* 73 (1) (2014): 16-27; Wen Bing Fan, *Shanghai lilong de baohu yu gengxin [The Conservation and Renewal of Lilong Housing in Shanghai]*. (Shanghai: Shanghai Science & Technology Press, 2004); Non Arkaraprasertkul, "Towards Modern Urban Housing: Redefining Shanghai's Lilong," *Journal of Urbanism: International Research on Placemaking and Urban Sustainability* 2 (1) (2009): 11-29.

18. The expansion of foreign settlements in Shanghai led to the urbanisation of surrounding areas like Zhabei to the north and Nandao to the south. The district of Yangshupu to the east was the consequence of the development of several foreign factories and municipal facilities along the lower Huangpu River. Therefore, the residential buildings in this area were new, compared to those in the old Chinese walled city, the international settlement and the French concession.

19. Zhao, "From *Shikumen* to New-style," 59-60. Also see Chow, "In a Field of Party Walls," 16-27; Hanchao Lu, *Beyond the Neon Lights: everyday Shanghai in the early twentieth century* (Berkeley, California: University of California Press, 1999). Also see Lue et al., *Modern Urban Housing*, 64.

20. For a briefing on the urban development and architecture of Shanghai, see Cary Liu, "Encountering the Dilemma of Change in the Architectural and Urban History of Shanghai," *Journal of the Society of Architectural Historians* 73 (1) (2014): 118-136. During the three decades from the 1950s to 1980s, nearly 22 million square metres of housing was constructed and the contemporary population grew from 5.3 million to nearly 7 million, but the average living space per person was still very low, reaching about 5.4 square metres per capita. See Shanghai Statistics Bureau, *Shanghai Statistical Yearbook 1986* (Beijing: China Statistics Press, 1986). 18; 412.

21. "Report of the Housing Committee, 1936-1937," in *Municipal Gazette of the Council for the Foreign Settlement of Shanghai*, 30 (1953): 98.

22. Xiaoming Wang, "From Architecture to Advertising – the changes in Shanghai's urban space over the last 15 years," trans. Liu Yang, *Inter-Asia Cultural Studies* 11 (1) (2010): 21-44. Wang summarises the change of residential districts in Shanghai: first, there was a large process of re-distribution of local industrial facilities out of residential areas; second, most of the public spaces were de-politicised, replaced very quickly by constructions of purely commercial and urban purpose. According to the Shanghai statistical report, by 2005 the commercial real estate in the city was nearly 3 million square metres, which was 2.6 square metres per capita. This is more than double Hong Kong's 1.2 square metres per capita. Meanwhile, the total floor area of office buildings in Shanghai is 4 million square metres. See Shanghai Statistics Bureau, *Shanghai Statistical Yearbook 2005*. (Beijing: China Statistics Press, 2005).

23. Shui On Groups, "Shanghai Xintiandi," <http://www.shuion.com/eng/sol/pptdev/xin.asp> (accessed October 10, 2014).

24. Qim Kwang Yang, "Xinjiapo jianzhushi zai zhongguo youshi buzai [Singaporean architects triumph China no more]", interviewed by Zaobao.com in March 2011. Website: <http://www.zaobao.com/finance/people/story20110327-33989> (accessed October 28, 2014).