

Dilemma Between Density and Quality

The demographic history of Sinan Road area

Zhu, Kaiyi

DOI

[10.7480/iphs.2018.1.2681](https://doi.org/10.7480/iphs.2018.1.2681)

Publication date

2018

Document Version

Final published version

Published in

Proceedings of the 18th International Planning History Society Conference

Citation (APA)

Zhu, K. (2018). Dilemma Between Density and Quality: The demographic history of Sinan Road area . In *Proceedings of the 18th International Planning History Society Conference: Yokohama 2018: Looking at the World History of Planning* (pp. 202-208). (Proceedings International Planning History Society; Vol. 18, No. 1). Delft University of Technology. <https://doi.org/10.7480/iphs.2018.1.2681>

Important note

To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.



DRAWN UP UNDER THE PATRONAGE
OF H. E. THE MINISTER OF FRANCE IN JAPAN
BY M^r CLIPET.

YOKOHAMA

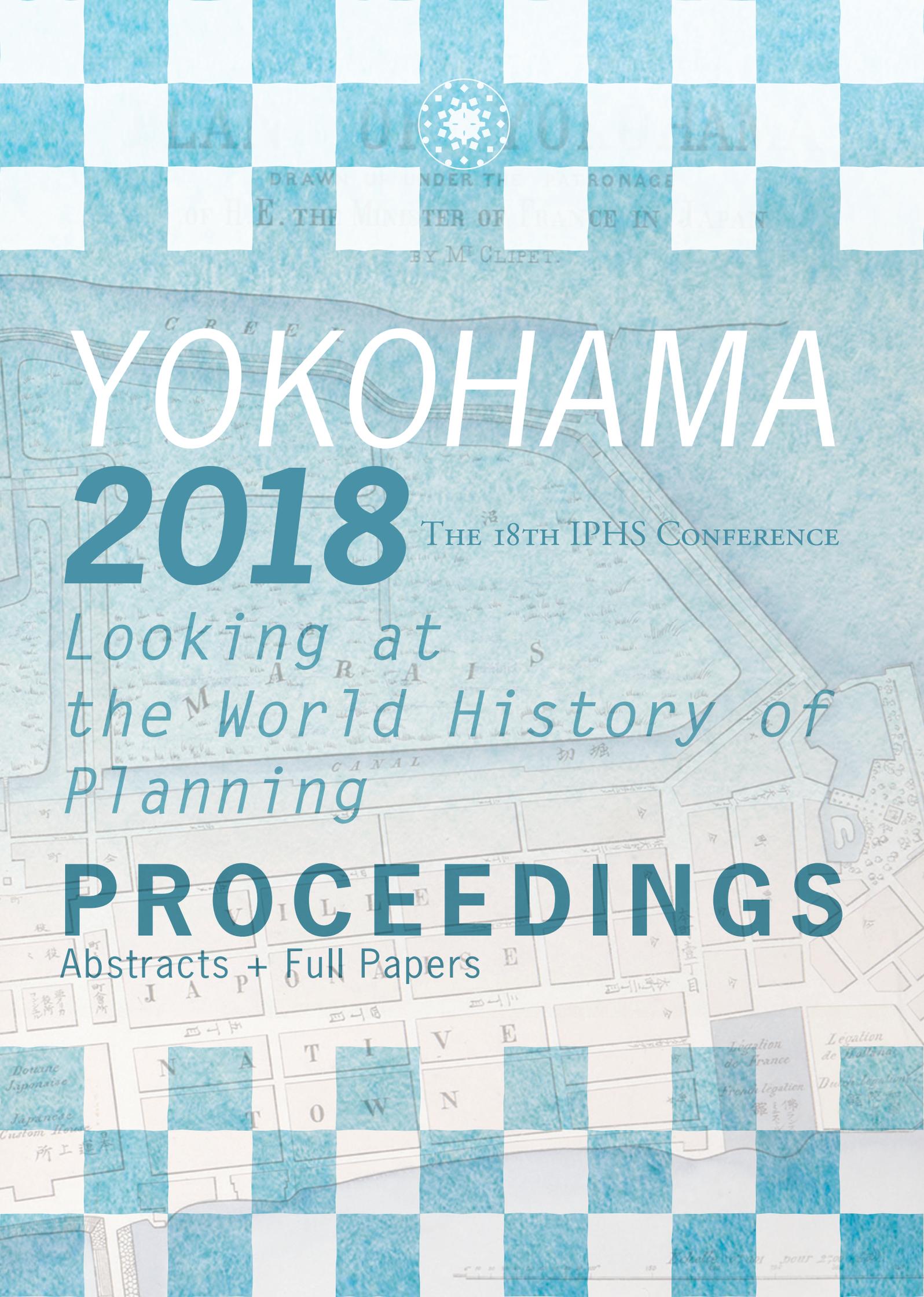
2018

THE 18TH IPHS CONFERENCE

*Looking at
the World History of
Planning*

PROCEEDINGS

Abstracts + Full Papers





Dilemma Between Density and Quality: The Demographic History of Sinan Road Area

Zhu Kaiyi *

* PhD Candidate, Department of Architecture, K.Zhu-1@tudelft.nl

This paper investigates the unique urban planning history and demographic changes in Sinan Road (also named as Rue Massenet) Area of Shanghai and the socioeconomic impacts on local inhabitants' living quality led by formal and informal planning dynamics. Examining both tangible and intangible characteristics of this area under five different historical phases, this paper indicates that population density and urban quality cannot always be positively or negatively related. Urban quality can reach the maximum value when area population of concentrated density stays in an ideal state, although, as a result of the qualitative variates, such state (peak value) is in suspense. Through analysing the overarching strategic plan of different periods, it also argues that urban quality is not merely dominated by or directly related to density but more by the population's social demands and their initial interaction with a specific area, active or passive involvement.

Keywords: population density, Sinan Road area, historic district, social demands, urban transformation, living quality

Introduction

The saturation of urban construction in contemporary Chinese metropolises has forced planners to face the inevitable strategy of optimizing housing stock. As a city where urban heritage practices happen frequently, municipal construction and housing departments of Shanghai jointly issued a series of implementation opinions in 1999, to improve and monitor pilot preservation and reconstruction projects of historic buildings and blocks of this city. This turning point has brought a more comprehensive platform of expression in the context of market economy, while enabling multiple values of urban heritage to be fully discovered by varied stakeholders in a new era. Sinan Road area is an important component of Hengshan-Fuxing Historic Area, which was designated as one of the twelve *Areas with Historical Cultural Features* (历史文化风貌区) in 2003 by Shanghai municipality. This paper examines formal and informal urban transformation in Sinan Road area throughout the history, investigating the dilemma between population density and space experiencing quality within this area.

Sinan Road was initially built in 1914 from farmlands and ponds and named after Jules Massenet as Rue Massenet Road. Reaching Huaihai Middle Road (Xiafei Road) on the north and Taikang Road (Jiaxiyi Road) to the south, it is one of the most distinctive roads in the Shanghai French Concession with its richness in historical and cultural features. The whole historic area was largely developed between the 1910s and 1930s. Interested in the integrity of its legacies and the diversity of architectural features, scholars analyse regarding this area have revealed under the following points: Shao Yong and Ruan Yisan focus on the utilization and redevelopment criteria of urban heritage protection by considering their public and social interest, and besides, flexibility in the formulation of heritage protection policies and operational mechanisms by local government in the background of market economy¹; Mou Zhenyu's study of land use and development process of modern Shanghai²; in Wei Min's research, from the perspective of urban planning, the thesis discusses the main objects and approaches in heritage protection practice under the principle of integrated conservation, with proposing specific proposals for forward progress³. Nevertheless, the inadequacy of research is that the most previous studies are always tending to split the past and present status of Sinan Road area, without connecting different stages of development as whole and exploring its changes as a consistent social issue. Therefore, taking density and quality as two key elements which have been consistently interacted throughout the history of area development, in addition to the study of a general history of Shanghai French Concession where the target site located as a basis, this paper explores the demographic changes and its resulting urban phenomenon in multiple historical stages for comparison; it then investigates the significance of population density and its relationship with urban quality, especially, when many architects and urban planners embraced an ethos of low density urban community.

The Necessity of Population and Density

When American socialist and activist Jean Jacobs' talks about city diversity in her book *The Death and Life of Great American Cities*, the necessity of a concentrated density and old buildings are almost equally important to



a community⁴. Although, the population of in each city is different, Asian cities, such as Shanghai and Beijing, follow a high-density mode⁵. According to urbanists' analysis of urban density and sustainability, environmentalists Peter Newman and Kenworthy indicate a negative correlation between the energy consumption and the overall population density of a city, which means that the lower population density it is, the less sustainable the city will become⁶. Conversely, architect Steffen Lehmann indicates that there is a limitation of compactness for sustainable urban liability⁷. Sustainability represented by the energy consumption is merely one of the indicator to assess urban quality of every locality, this research reveals a scientific fact that within the public's choice for production convince many things are discarded, including people⁸. There is particularity of Sinan Road; more sustainable urban features, such as vibrant urban forms, social equity, efficient infrastructure and urban greenery, could not be achieved in a stable district with a history over semi-century⁹. Under the circumstances, its significance as urban heritage should be re-examined; settling both population and liveability of Sinan Road under the demographic shift throughout history, native residents, whether at what historical phase they moved into this community, without doubts, have become one of the most representative features of the site. In this paper, it further investigates the demographic composition of native residents and their engaging approaches and degrees of involvement in Sinan historic site, to investigate people's material and spiritual needs in everyday-life. Applying this method, this paper aims to clarify population's sense of location intimacy, which is tightly associated with living quality, liveability and urban health of every specific historic district.

The Formation and Expansion of the French Concession and Two Urban transformation Phases before 1949

The story of modernism in Shanghai originated in 1840s when the first foreign merchants and missionaries settled. Before and after entering the Republic of China, although the newly appearing New Shikumen Lilong houses were equipped with basic sanitation facilities and better environment, they were still built for economical and practical purpose. Those old Lilong houses, as a result of the shifting socioeconomic atmosphere, could no longer satisfy the needs of booming nouveau riche, let alone meeting politicians' and bigwigs' living standards. Sinan Road area was formed during this era, the third expansion of French Concession (Figure 1). Before the contemporary urban transformation started in 1999, Sinan Road area had gone through five phases of urbanization, within which both population structure and urban morphology of the district had undergone apparent changes. This urban development process will be elaborated in the following content.

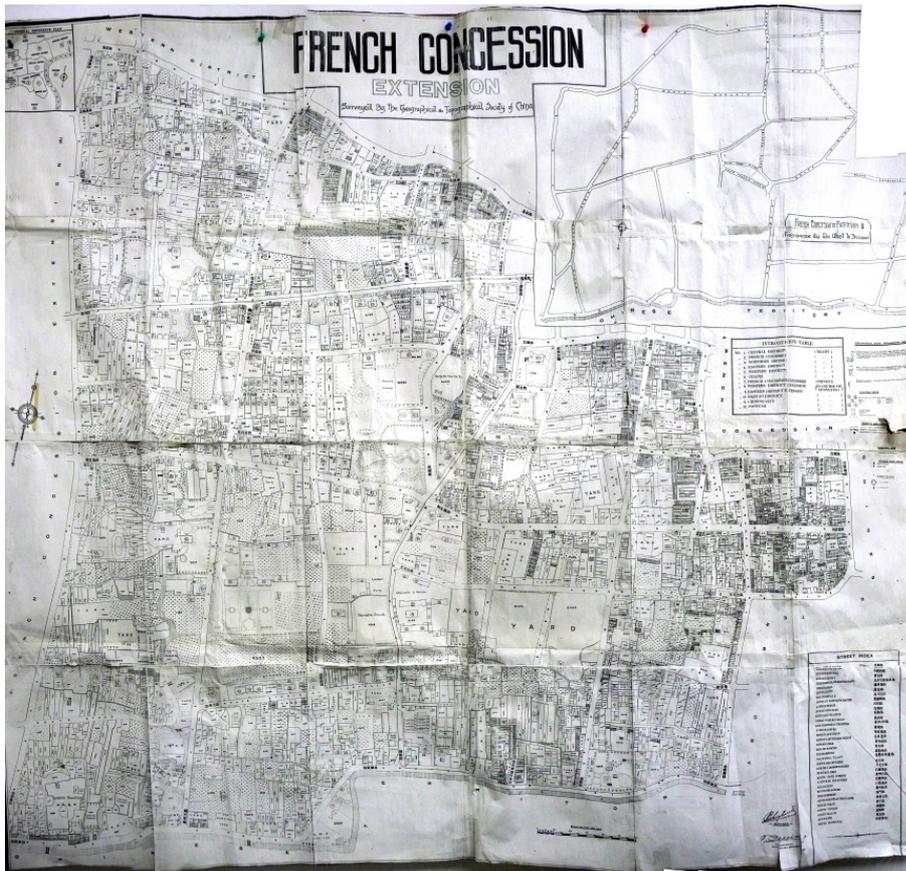


Figure 1. Anonym. *Extension map of the French Concession in 1920*. [Shanghai, date unknown]



Stared in 1914, the French Concession authorities took advantage of the third expansion to create a core zone intentionally. Under such circumstances, in order to ensure the purity of European residents of the region and its thriving and prosperous, the French Concession Bureau issued a series of related orders. It was clearly stipulated by the bureau that only houses constructed with European features was allowed in the expanding area, with elaborate description of architectural details. In addition, each community was equipped with doorkeepers who were mainly responsible for public security and health¹⁰. According to the *Decade Report of Customs (1912-1921)*, the west part of the French Concession was the first and single unique example of Shanghai that was delicately designed by architects and planners¹¹. This west end had therefore become a place where political, economic, military, cultural, entertainment and social activities frequently happened. Although there was a structural adjustment of population composition after 1927, both housing usage conditions of every single property and surrounding public urban environment were staying in a ideally preconceived state as planned.

Turning point of urban transformation in Sinan Road area first appeared with the outbreak of the Second Sino-Japanese War. During this period, expatriates from Europe and America had withdrawn from China in succession; coincidentally, most domestic households, the politicians and bigwigs, left their properties and handed over to relatives and friends for management. Meanwhile, as a respond to warfare, famine and shortage of materials, a large number of victims flooded into the French Concession, causing a shortage of housing. In this case, with the decline of these powerful or glamorous families, a single family house in Sinan Road area was usually divided into several households, subsidizing family daily expenses. Most previous households could not return, and the main body of residents had changed from politicians and celebrities to entrepreneurs and businessmen; nevertheless, compared with communities in Luwan District, the ratio of educated population held a sharp advantage of 90 percent more than the others¹². In the second phase, Sinan Road area was still a high-end residential area in Shanghai. This paper thus claims that in the second historical phase of urban transition, in terms of living density, the increase in population had literally put pressure on varied communities in Sinan Road area; moreover, such demographic shift had not effected the overall sustainability of the area, either from the perspective of the elitism of the local population or the degree of regional environment and community vigour and vitality. The relationship between population density and urban quality in Sinan Road area had therefore reached and maintain a healthy and sustainable balance before 1949, after its establishment.

Three Urban transformation Phases in Sinan Road Area after 1949

Between 1949 and 1999, the whole Chinese society had experienced a period from turbulence to recovery and development. Global Industrialization brought the evolution of China's industry, leading growth of labours, and besides, multi-storey commercial housing more in line with market demands. In addition to the reform of political system and the change of house-ownership in the new regime, former status of historic blocks in Sinan Road area were to comply with the political demands of the era. Since 1949, urban transformation in this historic site has chronologically experienced three phases successively: starting from 1956, the urban housing renovation utilized for emerging industries under the context of a mechanism of public-private partnership; immigration of low income households to this area in the Cultural Revolution period in order to balance housing resources in various administrative districts; urban conservation practices as a respond to the rising emphasis on historic relics after the reform and opening-up policy in 1978. The latest urban transition has kept happening contemporarily.

In the third phase of urban transformation, as a result of the original architectural design, there were a number of vacant houses with large space, which were suitable for industrial offices or factory buildings. Allocated to enterprises, these delicate and large houses encountered their first adaptive reuse with rough alterative details. Strictly stipulated architectural features formulated by the old French Concession Bureau had been gradually replaced by industrial materials and coating layer, large equipment, temporary barracks and industrial waste. On the other hand, with the nationalization of historic housing, local government offered a considerable number of such houses in Sinan Road to senior intellectuals, senior officials and returned overseas Chinese celebrities as reward for working¹³. In this case, social function and the original high-end nature of this area had changed, fresh residents moved in still being with reliable socio-political and educational background, but differently, the adaption facing factories has led communities to a more civilian direction. From the perspective of the whole area, such adjustment brought diversity, even though there was doubt whether it could fully integrated into the advancement of Sinan Road area. The dramatic developing process of the Chinese society could not leave time for deliberateness and verification.

Effects of the Cultural Revolution had rapidly swept across the country, in the fourth phase between 1966 and 1976. Luwan District government split upscale houses in French Concession and assigned them to multiple migrant people from working class and poor families, in order to reduce the pressure on urban housing and



equilibrating housing resources across Shanghai. However, this measure helped the stabilization and settlement of inappropriate occupancy, changing the former standards of high living quality. The significantly growing poverty population could not afford their rents, even gas bills at the time¹⁴. Commodities consequently replaced with pits and firewood replaced with gas stoves as well. In addition to those physical alternations of architectural tangible features, intangibly, in order to respond to Mao's call for rebellion, temporal radical 'rebels' pillaged houses from former legal residents who were defined as reactionaries in the turbulent time¹⁵. With an increasing population density of poor households, disorganized reconstruction, deteriorating urban landscape and retrogressive lifestyle had largely impacted the urban health and sustainability of Sinan Road area. Such phenomenon of social disorder had no longer being a matter about adding community inclusion, diversity or complexity, and on the contrary, it had created the polarization of the population of different historical phases within the same community, causing irreversibility effects emerged several year later after the Cultural Revolution.

In the last stage of urbanization after 1978, living conditions in Sinan Road area have accordingly become complicated. Complying to government directive, heritage practices regarding historic neighbourhoods has been evolving; approaches of urban heritage transformation are varied from urban renewal and regeneration, renovation to restoration and conservation. Indeed, Sinan Road area, being one of the most outstanding historic block ever, was appointed by Shanghai administration to be one of the four pilot locations to be conserved at the moment, among all the communities in this area, Sinan Mansion was selected for a testing urban heritage approach. This mansion site, located on the south of Chongqing South Road, west of Sinan Road, south of Medicine Faculty of Shanghai Jiaotong University, north to Fuxing Middle Road, has been designated as an important part of Shanghai Hengshan-Fuxing Historic Area, containing one of the largest concentration Garden Lilong houses (Figure 2). In 1999, according to planning strategy, the project was positioned as a high-quality living and commercial leisure community with Shanghai unique cultural and historical features. The project consists of four functional areas: Sinan Mansion hotel, characteristic boutiques, residential apartments and enterprise mansions; the total construction area is approximately 78,800 square meters, of which approximately 30,000 square meters of old buildings will be conserved. Until now, the entire project has not been completed. This seemingly tangibly ideal conservation plan whereas has also greatly reduced the local population by all residents relocation, obtaining a more efficient environment for redevelopment. Bringing Sinan Mansion area to its previous past glorious scene more or less, urban vibrancy has not been improved as expected by city reformers. Located in the most active commercial centre, Sinan Mansion has become a place where could not gather popularity (Figure 3). Relocation of native residents has indeed a certain degree of negative impact on maintaining the long-term diversity and sustainability of this space. Noticing better urban healthy quality and disappearance of regional polarization, there seems no precise boundary to identify the advantages and disadvantages of population density shrinking.



Figure 2. Author. *Sinan Mansion area has been surrounded by high-rise buildings, and other historic houses in the French Concession are located a little bit further around.* [2018]



Figure 3. Anonym. *There is almost no people in the public space of Sinan Mansion area, and this place is losing its urban vibrancy.* [Shanghai, 2014]

Integrated Conservation Plan and Population Expelling

As mentioned, the Sinan Mansion area has been a pilot project under the context of urban heritage transformation. This redevelopment project was overall designed by a French architect Jean-Marie Charpentier and, German architect Wolfgang Keilholz was responsible for the restoration work of this project. Developers and urban reformers applied integrated conservation plan in Sinan Road historic areas in 1999; the measure aimed to relocate all residents is an unescapable method for three reasons. Firstly, historic houses in this area were built more than half a century ago, dark and moisture, deteriorating with less of repair, and besides, the aged facilities can no longer approach the living demands of modern society in Shanghai. Secondly, every single house has contained considerable number of households since the late 1920s, accommodating an extremely high density in each property; moreover, being a micro society with one house, conflicts and contradiction between households and households have been more complicated to solve. Thirdly, considering themselves not native residents, current dwellers have weak sense of private space maintenance and heavily damaged previous architectural details. Under the circumstances, regarding conserving historic houses in Sinan Mansion area as a matter of urgency, the developer assumed that present residents could not afford the further huge rent in a shortly coming future as a result of their existing low income level. Experienced planners' and developers' decision of relation could give no causes for much criticism, although it somehow has taken away the vitality of this community meanwhile. In 1982 and 1987, ICOMOS successively issued and approved the concept of "tangible heritage" and "intangible heritage" in the *Burra Charter* and the concept of "historic towns and urban areas" in *Washington Charter*¹⁶. Since then, protecting city inhabitants as intangible within every integrated conservation plan and urban regeneration practice has received extensive attention across the world. Finnish architect and urban conservator Juukka Jokilehto indicates that interpretations of internationally agreed charters has been deliberately utilized as an excuse rather than a guiding standard by varied politicians in their regulation formulation and stakeholders in their decision making¹⁷; nevertheless, these charters have brought a possibility for population density and multiple qualities in historic sites, with the methodology by merging tangible and intangible heritage conservation at maximum.

Conclusion

Indeed, in a broader sense, population density and urban quality cannot always be positively or negatively related. Going through the whole transforming history, taking tourists and staff members into consideration as permanent population in the present Sinan Road area, looking at the changing population composition and quality in this historic district, this analyse raises a conclusion that the population density and urban quality are roughly express in a curve pattern characteristics of concave function. In this correlation, urban quality reaches the maximum value when area population density stays in an ideal state. However, as a result of the qualitative variates, the most ideal state (peak value) is in suspense without any solution, although population quality and density in the original plan brought great praise in the 1920s. In this context, urban quality contains not only pleasant environment, delicate architectural appearance and urban landscape, but also includes the vitality, complexity and diversity of a region, and besides, the capability to maintain the healthy demographic



development and keep the balance of flexible supply and demand as facilitated foundation for marketing operation in every respect of a historic district.

In integrated urban conservation project of historic district, varied stakeholders' coordination is one of the most key elements to settle the dilemma between concentrated density and public quality. In general, administrative urban plans and capitalists' contribution are crucial remedies in the transforming process of an urban area but cannot determine the final direction of a certain urban transformation when it comes to the essence of lives. Under such basis, this paper hence argues that urban quality is not merely dominated by or directly related to density but more by the population's social demands and their initial interaction with a specific area, active or passive involvement. Multiple habitants' behaviour has decisive influence on the qualitative changes of inhabitants' lives. In the specific example of Sinan Road area, when people took initiative and in an ethical manner occupancy of the communities within, urban liveability and vibrant could improve or at least maintain in a sustainable situation; on the contrary, when appearing passive and immoral intervention, living quality faced decline. The fight for stabilization between density and quality is a time-consuming perseverance, investigating the underlying goals and ambitions, stakeholders' attitudes and motivation, planning strategies for urban transformation in historic districts are in request.

Notes on contributor

ZHU Kaiyi (1991), is a PhD candidate at TU Delft. Kaiyi obtained her Msc in Conservation of Historic Buildings at the department of Architecture and Civil Engineering of the Faculty of Engineering and Design in the University of Bath. Since October of 2016 when she started her first year of PhD studies at Chair History of Architecture and Urban Planning, Kaiyi's research and practice is related to the development of international conservation theories and urban heritage practice "in the name of conservation" located in historic residential areas of China's big cities.

Endnotes

¹ Shao, Yong, and Yisan Ruan. "Urban Heritage Protection under the Background of Market Economy: A Case Study of the Garden Residence of Sinan Road, Luwan District, Shanghai (市场经济背景下的城市遗产保护—以上海市卢湾区思南路花园住宅区为例)." *Urban Planning Forum (城市规划汇刊)*, no. 2 (2003): 39-43.

² Mou, Zhenyu. "Land Development Pattern of Modern Shanghai: Take Rue Massenet for Example (近代上海的土地开发模式——以马斯南路为例)." *Historical Research in Anhui (安徽史学)*, no. 3 (2013): 28-35.

³ Wei, Min. Project of Sinan RD, Block No. 47-48: A Research on the Integrated Conservation (思南路 47-48 号街坊的整体性保护研究). *Shanghai: Tongji University (上海: 同济大学)*, 2006.

⁴ Jacobs, Jane. *The Death and Life of Great American Cities*. Vintage, 1961.

⁵ Lehmann, Steffen. "Sustainable Urbanism: Towards a Framework for Quality and Optimal Density?". *Future Cities and Environment* 2, no. 1 (2016): 8.

⁶ Newman, Peter, and Jeffrey Kenworthy. *Sustainability and Cities: Overcoming Automobile Dependence*. Island press, 1999.

⁷ Lehmann, Steffen. "Sustainable Urbanism: Towards a Framework for Quality and Optimal Density?". *Future Cities and Environment* 2, no. 1 (2016): 8.

⁸ This argument is addressed from Samuel Johnson's words in Jane Jacobs's book, saying as "Men, thinly scattered," and "make as shift, but a bad shift, without many things ... It is being concentrated which products convenience." Jacobs, Jane. *The Death and Life of Great American Cities*. Vintage, (1961): 200.

⁹ Hall, Peter, and Mark Tewdwr-Jones. *Urban and Regional Planning*. Routledge, 2010; Bramley, Glen, and Sinead Power. "Urban Form and Social Sustainability: The Role of Density and Housing Type." *Environment and Planning B: Planning and Design* 36, no. 1 (2009): 30-48.

¹⁰ Information is recorded in documentary material in Shanghai Archive, U38-1-1255, p.32 and p. 33-35.

¹¹ Xu, Xueyun, and Zhongli Zhang. *Overview of Shanghai's Modern Social and Economic Development: Compilation of the 1882-1931 "Department of Customs Reports" (上海近代社会经济发展概况: 1882-1931 《海关十年报告》译编)*. Shanghai Academy of Social Sciences Press (上海社会科学院出版社), 1985.

¹² Hu, Ruirong, and hui Shanghai Shi Luwan Qu zhi bian zuan wei yuan. "Luwan Qu Zhi." [In Chinese]. (1998): 110.

¹³ Zhang, Xing Quan. "Chinese Housing Policy 1949-1978: The Development of a Welfare System." *Planning Perspectives* 12, no. 4 (1997): 433-455.

¹⁴ Lu, Wenda. *Shanghai Real Estate Annals (上海房地产志)*. Shanghai Academy of Social Sciences Press(上海社会科学院出版社), 1999.

¹⁵ "Rebels" (造反派 in Chinese) were groups of people who contributed to abolish cultural traditions in the Cultural Revolution.

¹⁶ Icomos, Australia. *The Burra Charter: The Australia Icomos Charter for Places of Cultural Significance 1999: With Associated Guidelines and Code on the Ethics of Co-Existence*. Australia ICOMOS, 2000. ICOMOS, Charter. "For the Conservation of Historic Towns and Urban Areas (Washington Charter)." Paris: ICOMOS, 1987.

¹⁷ Jokilehto, Jukka. "International Charters on Urban Conservation: Some Thoughts on the Principles Expressed in Current International Doctrine." *City & Time* 3, no. 3 (2007): 2.



Bibliography

- Australia ICOMOS, 2000. ICOMOS, Charter. "For the Conservation of Historic Towns and Urban Areas (Washington Charter)." Paris: ICOMOS, 1987.
- Bramley, Glen, and Sinead Power. "Urban Form and Social Sustainability: The Role of Density and Housing Type." *Environment and Planning B: Planning and Design* 36, no. 1 (2009): 30-48.
- Denison, Edward, and Guang Yu Ren. *Building Shanghai: The Story of China's Gateway*. John Wiley & Sons, 2013.
- Hall, Peter, and Mark Tewdwr-Jones. *Urban and Regional Planning*. Routledge, 2010.
- Hu, Ruirong, and hui Shanghai Shi Luwan Qu zhi bian zuan wei yuan. "Luwan Qu Zhi." [In Chinese]. (1998).
- Icomos, Australia. *The Burra Charter: The Australia Icomos Charter for Places of Cultural Significance 1999: With Associated Guidelines and Code on the Ethics of Co-Existence*.
- Jacobs, Jane. *The Death and Life of Great American Cities*. Vintage, 1961.
- Jokilehto, Jukka. "International Charters on Urban Conservation: Some Thoughts on the Principles Expressed in Current International Doctrine." *City & Time* 3, no. 3 (2007): 2.
- Lehmann, Steffen. "Sustainable Urbanism: Towards a Framework for Quality and Optimal Density?". *Future Cities and Environment* 2, no. 1 (2016): 8.
- Lu, Wenda. *Shanghai Real Estate Annals (上海房地产志)*. Shanghai Academy of Social Sciences Press(上海社会科学院出版社), 1999.
- Mou, Zhenyu. "Land Development Pattern of Modern Shanghai: Take Rue Massenet for Example (近代上海的土地开发模式——以马斯南路为例)." *Historical Research in Anhui (安徽史学)*, no. 3 (2013): 28-35.
- Mumford, Lewis. *The City in History: Its Origins, Its Transformations, and Its Prospects*. Vol. 67: Houghton Mifflin Harcourt, 1961.
- Newman, Peter, and Jeffrey Kenworthy. *Sustainability and Cities: Overcoming Automobile Dependence*. Island press, 1999.
- Shao, Yong, and Yisan Ruan. "Urban Heritage Protection under the Background of Market Economy: A Case Study of the Garden Residence of Sinan Road, Luwan District, Shanghai (市场经济背景下的城市遗产保护——以上海市卢湾区思南路花园住宅区为例)." *Urban Planning Forum (城市规划汇刊)*, no. 2 (2003): 39-43.
- Wei, Min. Project of Sinan RD, Block No. 47-48: *A Research on the Integrated Conservation (思南路47-48号街坊的整体性保护研究)*. Shanghai: Tongji University (上海: 同济大学), 2006.
- Xu, Xueyun, and Zhongli Zhang. *Overview of Shanghai's Modern Social and Economic Development: Compilation of the 1882-1931 "Department of Customs Reports" (上海近代社会经济发展概况: 1882-1931《海关十年报告》译编)*. Shanghai Academy of Social Sciences Press (上海社会科学院出版社), 1985.

Image sources

Figure 1: 1920 French Concession Extension map, Digital Collections, <http://i.imgur.com/QtZVJPF.jpg/>. (Accessed March 25, 2018.)

Figure 2: Background map from Google Map, <https://www.google.com/maps/@31.2153365,121.4694704,748m/data=!3m1!1e3/>. (Accessed March 30, 2018.)

Figure 3: Sinan Mansions Shanghai.JPG, https://commons.wikimedia.org/wiki/File:Sinan_Mansions_Shanghai.JPG/. (Accessed March 30, 2018.)