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Planning of public housing in modern Tianjin (1928–1945)

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ABSTRACT

European, American, and Japanese debates on public housing served as models for those in modern China, and Chinese scholars and professionals, with the support of the KMT (Kuomintang), developed public housing as a sign of innovation in both societal reform and building typology. Using the under-researched case of Tianjin's public housing during the so-called Nanjing Decade (1928–1937) and then again during the Japanese Occupation (1937–1945) as case studies, the paper first explores how journals, books, and foreign-trained Chinese scholars introduced the concept of public housing to China. It then examines five public housing projects that municipal authorities developed for Tianjin, two in the Nanjing Decade and three during the Japanese Occupation. Analysing the sites, architectural designs, and management rules of these projects, the paper argues that the projects in the Nanjing Decade (both planned and realized) mostly targeted poor families, serving to simultaneously solve housing problems, reform society, and police the poor; while the projects during the Japanese Occupation benefited high-income people or the Japanese, and did not play a role in the relief of the local poor, who suffered most from the housing shortage.

KEYWORDS

Public housing; societal reform; modern Tianjin; Nanjing decade; Japanese occupation

Introduction

In *Fundamentals of National Reconstruction* (1924), Sun Yat-sen, the first president and founding father of the Republic of China, argued that 'the government should co-operate with the people to build houses on a large scale in order that they might procure comfortable shelter'.¹ His statement in favour of what came to be known as public housing was a reaction to a dramatic population increase and the resulting housing shortage in most metropolitan areas in China, themselves the mainly result of foreign powers' forced opening of Chinese port cities as treaty ports after 1840 and their industrialization. The arrival of so-called Western (that is, mostly European and American) and Japanese ideas of public housing in China in the 1920s inspired the Kuomintang (KMT) government to construct public housing in big Chinese cities, including Nanjing, Shanghai, Guangzhou, Qingdao, and Tianjin in the Nanjing Decade (1927–1937).²

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¹Sun, *Dr. Sun Yat-Sen*, 33. In keeping with Chinese and Japanese customs, we are using the ordering of last names first name also in English in this paper.

²The Nanjing Decade refers specifically to the decade from 1927 to 1937 in the Republic of China.

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We know that the KMT used zoning and public housing projects to separate the poor from the rich in Nanjing during this decade.³ Two public housing projects in Beijing, constructed in 1937 and 1942, showed the KMT's increased attention to regulating management, and exposed problems in the process, such as the inadequate examination of tenants' qualifications and the generally poor living environment.⁴ The construction of public housing in Shanghai flourished in the Nanjing Decade, but went downhill during the Japanese Occupation.⁵ Officials organized public housing in Guangzhou during the period of Republic of China based on experiences from Western countries.⁶ Public housing projects in Qingdao during the 1920s and 1930s eased social contradictions and boosted local welfare services.⁷ But scholars have ignored the case of Tianjin in the Nanjing Decade and some have even posited that planning and design of public housing in Tianjin began only after 1936.⁸

This paper argues that Tianjin's public housing is a unique case. First, it shows that Tianjin, the most important treaty port in northern China, was an integral part of the national public housing debate, starting in 1928. Although the number of public housing units constructed in Tianjin in the Nanjing Decade (1928–1937) was relatively small compared to other Chinese cities, its focus on low-income residents stood out. Highly developed charity organizations and powerful charitable activities led by merchants and officials in Tianjin in the nineteenth century had earned widespread praise, including from the leaders in Tianjin.⁹ The Tianjin Special Municipal Government (天津特别市政府) planned two public housing projects to both help and govern the poor.¹⁰

Second, this article shows that public housing in Tianjin was unusually extensive in the Japanese occupation period (1937–1945). Because natural disasters and the rapidly increasing population created a larger housing shortage here than elsewhere, the puppet government in Tianjin, the Tianjin Special Government Office (天津特别市公署), constructed more public housing units than other cities occupied by Japan, including Shanghai, Nanjing, and Beijing; indeed, the construction of public housing in those cities stopped or struggling to keep up in this period. The puppet government in Tianjin planned and constructed three public housing projects during the occupation, primarily for rich people and Japanese occupants.

Third, this paper positions the development of Tianjin in the larger context of global exchanges of ideas on public housing, showcasing the essential role that Japanese actors played in those exchanges. In particular, they translated and imported such ideas from the West to China, in parallel with others' direct import of such ideas from the West.¹¹ In Tianjin, the multilateral cross-cultural exchange of ideas had a strong impact on public housing projects. The paper highlights the existence of inner-Asian networks of ideas and policy exchange, part of larger exchange networks, that have yet to be fully explored.

The public housing projects explored in this paper were built in the Chinese areas of Tianjin by the Tianjin Special Municipal Government (the KMT government) between 1928 and 1937 and the Tianjin Special Government Office (the Japanese puppet government) between 1937 and 1945. Other actors had shaped the area historically. The city of Tianjin had been divided into foreign concessions (租界, areas governed and settled by foreign powers for trade and residence) and Chinese areas (华界, areas

³Tsui, "Regulating Urban Living".

⁴Tang, "Residential Real Estate".

⁵Zhang, "Civilian Residential Construction".

⁶Sun, "Residential Planning and Construction".

⁷Sun, "Preliminary Exploration on Civilians".

⁸Zhao and Li, "The Construction of Affordable Housing," 72–80.

⁹Liu, *Space and Society*, 329.

¹⁰When the paper talks about the municipal government of Tianjin in the period 1928–1937, it means the Chinese-controlled part of Tianjin.

¹¹Hein, "Introduction"; Hein, "Imperial Visions and City Planning"; Hein, "Transformation of Planning Ideas".

governed by Chinese authorities) from 1860 to 1945. Its development had been influenced by foreign powers and local elites – particularly the elite community of Chinese merchants, scholars, and former Qing officials. Some of these elites lived in the foreign concessions, interacting with foreign powers as members of municipal councils and participating in the development of the concessions.¹² In the Chinese areas, the Chinese merchant community had been active in commercial investment, public education, the pavement of roads, hygiene and sanitation, and local relief since its establishment in 1902. After 1928, the power and influence of this community declined under the control of the KMT government and Japanese power. But neither the Chinese elite community nor foreign powers in the concessions were involved in the building of public housing.

Introduction of public housing to China through journals, books, and model housing

Like other metropolitan areas of China, Tianjin had experienced a population boom and a subsequent housing shortage in the early nineteenth century. After the city was opened as a treaty port in 1860, foreign powers established nine concessions. In the first quarter of the twentieth century, Tianjin's industries developed rapidly, and the city became the largest industrial and commercial centre in northern China and therefore an attractive destination for warlords, peasants, and foreign merchants.¹³ Then, in the 1910s and 1920s, natural disasters were frequent in North China, and Tianjin was a relief centre serving a large number of refugees.¹⁴ In 1928, when the KMT reunited China formally, changing flags in Northeast China to the ROC flag,¹⁵ many people who had lost their homes in the war poured into Tianjin, worsening the housing shortage. Tianjin saw the highest population increase between 1910 and 1928 (Table 1), more than Shanghai, Guangzhou, or Nanjing.

Progressive intellectuals in China were concerned about the housing problem and sought solutions in Western and Japanese societies. The number and high quality of journal articles and books published by Chinese scholars demonstrates Chinese awareness of foreign housing policies in the 1920s and the extent to which they disseminated their concepts to the public. Chinese writer and thinker Zhou Zuoren described his experience in the Japanese cooperative new village in Miyazaki Prefecture, initiated by Japanese novelist Saneatsu Mushanokoji in 1918.¹⁶ Zhu Xinong, a progressive scholar, discussed the housing shortage problems of America, Britain, France, Japan, Germany, and Netherlands after the First World War and the respective governmental responses.¹⁷ He also described British housing laws to Chinese readers for the first time, including the Labouring Class Lodging Houses Act 1851, the Housing of Working Class Act 1890, and the Housing, Town Planning, &c. Act 1919.¹⁸ The editor of *the Eastern Miscellany*, Qian Zhixiu, whose pen name was Jian Hu, was the first to describe British cooperative housing; he called on the Chinese to learn the tenant co-partnership system.¹⁹ Other articles discussed American labour housing and the Japanese Renewal of Poor Housing Districts Act of 1927.²⁰ These articles were all published by the most influential Chinese magazines, which aimed to introduce advanced foreign thoughts

¹²Rogaski, *Hygienic Modernity*.

¹³*Ibid.*, 197.

¹⁴Liu, *Space and Society*, 104–111.

¹⁵Li and Wang, *Outline of Modern Chinese History*, 267.

¹⁶Zhou, "The Spirit of New Village," 136–141.

¹⁷Xinong, "Housing Shortage Around the World," 10–11. Xinong was Zhu Xinong's penname.

¹⁸Xinong, "Housing Policy and Urban Planning of Britain," 4–5.

¹⁹Jian, "Housing Problem and Co-operative Housing," 4–6.

²⁰"The Construction of Labour Housing in America." *Shishixunkan* (时事旬刊) 2 (1920): 58–59; and "Japan Will Spend 37,000,000 Yuan in Solving the Housing Problem of the Poor in Six Cities." *Falvpinglun* (法律评论) 181 (1926): 8–10.

Table 1. Comparison between population in Tianjin, Shanghai, Guangzhou, and Nanjing.

City	Tianjin	Shanghai	Guangzhou	Nanjing
Population around 1910	198,715	601,432	520,666	269,000
Population in 1928	138,8747	2,726,046	811,751	497,526
Per cent growth rate	599.00%	353.00%	56.00%	85.00%

Sources: compiled by authors based on Zhou, *The Social Life History*, 10; "Shanghai Population Rose by Three Thousand Times in one hundred Years." *Real Estate Quarterly* 2 (1945): 96; "Population Statistics Over the Years in Guangzhou." *Xinguangzhouyuekan* 3 (1931): 76.

into Chinese conversations; scholars, students, financial professionals, and government officials alike welcomed them.²¹ Along with journals, new books such as *Theory of Urban Policy*, by Ma Yinbing, and *Complete Book of Urban Administration*, edited by Lu Danlin, from the National Road Construction Association of China discussed the housing policy of Western countries and Japan.²²

An important inspiration for public housing policy-makers in China was the Model Village in Pootung, Shanghai, built by the YMCA in 1926, supervised by the Glasgow-trained Chinese social thinker M. Thomas Tchou. Tchou gone to Scotland to study in 1908, earning a Bachelor of Science degree in naval architecture and a Bachelor of Science in mechanical and civil engineering at the University of Glasgow. After he returned to China, Tchou became the executive secretary of the industrial department of the Shanghai YMCA in 1921. There, he studied labour conditions in China and began reform efforts.²³ In 1923, Tchou made an extensive trip to study labour conditions in America and Europe,²⁴ and on his return, he published a series of articles: he wrote about cooperative movements in England and other Western countries, including housing cooperative societies, and he argued that cooperation was a means to regenerate China.²⁵ He also drew up a plan of labour reform in China that emphasized public housing, cooperation, and education.²⁶ In 1926, Tchou conducted an extensive investigation into the living condition of the working class in Shanghai and persuaded the YMCA leadership to provide housing for the workers.²⁷

The Model Village in Pootung was an experiment with Tchou's idea of labour reform, supported by donations from all sectors, including factories, companies, religious organizations, KTM leaders, and Chinese and foreign philanthropists.²⁸ Construction started in 1926, featuring two types of houses of different sizes and rents to meet different needs of tenants; by 1928, there were 24 houses, each consisting of a sitting room, a bedroom, a kitchen, and a bathroom (Figure 1). As Professor Xing Jun, a scholar of Asian and Asian-American studies, described in his book *Baptized in the Fire of Revolution: The American Social Gospel and the YMCA in China, 1919–1937*, 'at the center of the village was the so-called Mott Hut that provided social, educational, and recreational programs'.²⁹ Apart from addressing the housing shortage of the working class, the Model Village also aimed to improve society by setting up a self-governance system and encouraging education and cooperation (Figure 2).³⁰ Tchou believed that social unrest was due to a lack of education in the working class, arguing that this was the reason why the socialist revolution happened in Russia

²¹Li, "A Study of Bank Weekly," 7; and Tao, "On the Eastern Miscellany," 17.

²²Lu, *Complete Book of Urban Administration*; and Ma, *Theory of Urban Policy*.

²³Heise, "Colonel Thomas Tchou".

²⁴"M. Thomas Tchou's Speech in Hangzhou." *Hangzhouqingnian* (杭州青年) 4 (1923): 2.

²⁵Tchou, "Cooperative Movements," 367–374; and Tchou, "Reform the Working Life," 16–21.

²⁶Tchou, "Working Problem and the Solution," 43–51.

²⁷Tsui, "Regulating Urban Living".

²⁸Zhang, "Tenth Anniversary Speech," 15–32.

²⁹Xing, *Baptized in the Fire of Revolution*, 116.

³⁰Tchou, "YMCA and the Labours New Village," 62–65.

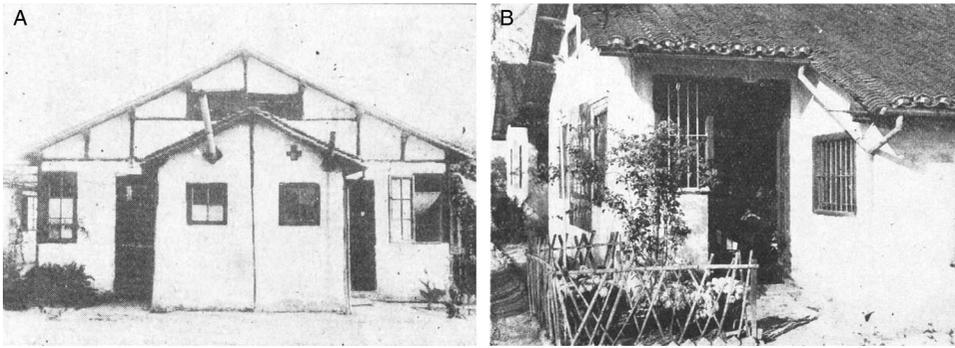


Figure 1. House type A (a) and B (b) of Pootung Model Village in Shanghai. Source: Zhang, “Tenth Anniversary Speech,” 16.

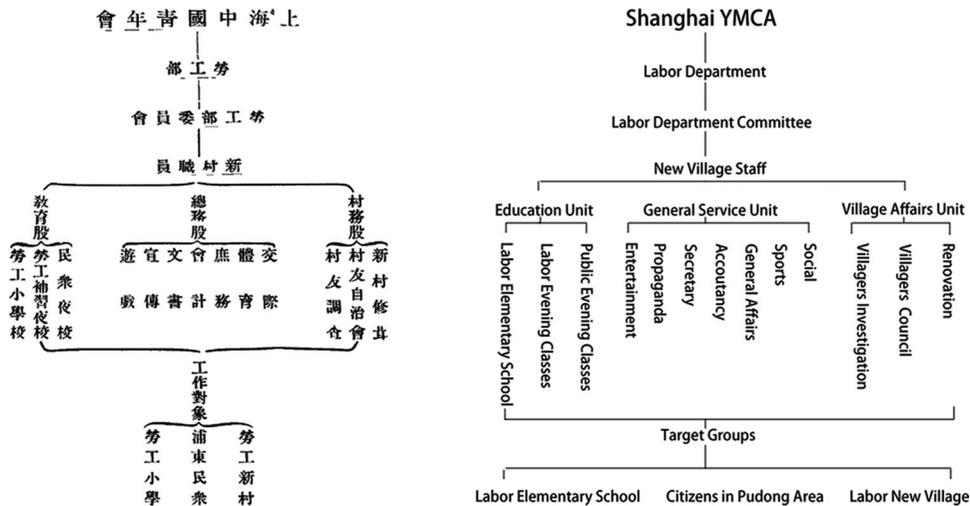


Figure 2. Organizational structure of the Pootung Model Village in Shanghai. This project was both a social and a physical innovation. Source: Diagram by authors based on Zhang, “Tenth Anniversary Speech,” 14.

instead of the US or Britain.³¹ Thus education and cooperation were essential parts of his model village, and this idea also influenced later Chinese public housing.

The innovative model village in Pootung won praise from all circles, including scholars and government officials, among them the KMT leader Chiang Kai-shek.³² The KMT government accepted Tchou’s ideas and recruited him to be the Director of Labour at the Ministry of Labour and Commerce, where he served from 1928 to 1930. In this position, he proposed a Housing Reform Plan (改良勞工住宅計劃) modelled on the Pootung Model Village, and it was passed by the ministry.³³ The Civilian Welfare Committee of Shanghai, established in 1935 to develop public utilities in Shanghai, invited Tchou to be a committee member specializing in architectural design and implementing public housing plans. When Shanghai constructed the First Commoner’s Residence, that is

³¹See note 27 above.

³²Xing, *Baptized in the Fire of Revolution*, 116–117.

³³Tsui, “Public Housing of Nanjing”.

public housing for low-income people, it invited the Pootung YMCA to send a staff member to be its manager. In fact, the social workers of the First Commoner's Residence had all been trained at the Pootung Model Village.³⁴

The spread of Western public housing ideas in China during the 1920s through journal articles, books, and the experimental practice of the Pootung Model Village promoted by progressive intellectuals in China had provided the KMT government with new solutions to housing shortage problems. As a result, the KMT started public housing in metropolitan areas including Tianjin in the following Nanjing Decade (1928–1937).

Nanjing decade (1928–1937): early attempts at public housing in urban planning

Impressed by Pootung Model Village, the KMT not only appointed Tchou Director of Labour, it also decided to use public housing to solve housing problems, reform society, and police the poor, all part of a larger attempt at urban redevelopment. In October 1928, the Ministry of the Interior ordered local governments to build housing for civilians, specifically for low-income population groups; it mandated them to fund this public housing, site it close to the working places of the poor, and charge the lowest rents in the city.³⁵

Meanwhile, after 1928 and at the beginning of the so-called Nanjing Decade, as the KMT was seeking to build a modern nation, Chinese scholars introduced more Western ideas on public housing to China. They translated books such as *Housing Policy in Britain* (英國の住宅政策), by Japanese social thinker Eijiro Kawai, and *The Housing Situation in the United States*, edited by the ILO (International Labour Office). These translations popularized the concept of public housing among municipal researchers and other authorities in China, and paid particular interest to the living conditions of the workers and the poor, and the question of how to improve them.³⁶

These national debates inspired local proposals, with Tianjin being the site of the first citywide proposal made by Chinese planners. Whereas the *Capital Plan* for Nanjing, announced by the National Capital Reconstruction Technical Office in 1929 was prepared with foreign experts Henry Murphy and Ernest P. Goodrich as consultants, the 1930 *City Plan for Tientsin* (Tianjin was transliterated as Tientsin in modern Chinese history) (Figure 3) was prepared by two American-trained Chinese professionals, Zhang Rui and Liang Sicheng.³⁷ Both plans argued that public housing was extremely important in modern urban planning. The *Capital Plan* for Nanjing argued that the city should learn how to develop public housing policy from Western countries, devoting an entire chapter to the topic.³⁸ In the *City Plan for Tientsin*, Liang and Zhang also regarded public housing as important – here, one of the six most important types of public buildings – but they offered no detailed plan to build it.³⁹ This proposal won a planning competition organised by the local government of Tianjin.

Also in 1930, the Land Bureau of the Tianjin Special Municipal Government developed another plan, the Flourishing Urban Plan of Tianjin, which provided more information on the funding and

³⁴Zhang, "Civilian Residential Construction," 43.

³⁵"The Order from the Ministry of the Interior to Build Houses for the Civilian." *Shenbao*, October 3, 1928.

³⁶The Chinese translations are: Tokyo Municipal Research Council, *Housing Policy in England*; and ILO, *The Housing Situation in the United States*.

³⁷Cody, "American Planning in Republican China"; and Wong, "The Planning Connection". Before the Nanjing plan, Henry Murphy had made a plan for Guangzhou in 1926 with Ernest P. Goodrich's help.

³⁸National Capital Reconstruction Technical Office, *Capital Plan*.

³⁹Liang and Zhang, *City Plan for Tientsin*.

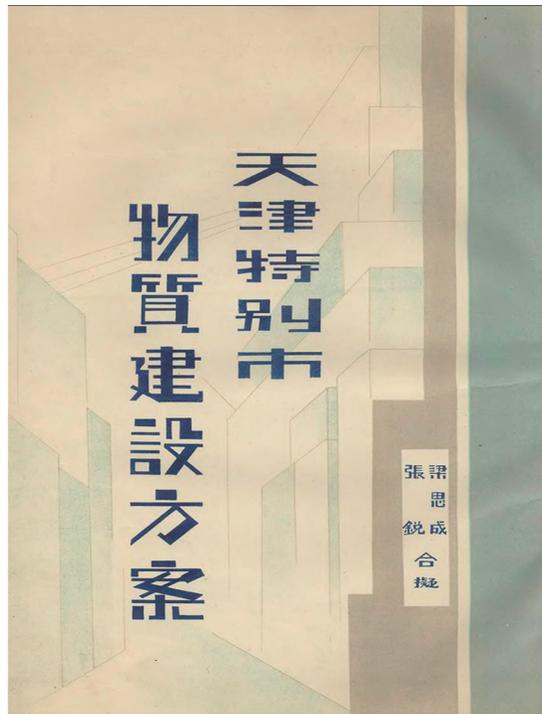


Figure 3. Cover of *City Plan for Tientsin*. Source: Liang, *City Plan for Tianjin*.

use of public housing. This plan adopted a land-use-based zone classification system:⁴⁰ separate from the Residential District was a Poor People's District, designed to house factory workers and to be erected by the government:

The Poor People's District is located next to the Industrial District. Since factory workers are usually living in poverty, the government will build the Poor People's District and let the factory workers move in.⁴¹

These two plans for Tianjin were not realized, due to political tensions and financial limitations. Nonetheless, the proposals showed that the government had picked up on the scholarly debate and considered public housing to be important in Tianjin. They also demonstrate that the municipal government saw public housing as a matter of urban planning.

Public housing projects in the Nanjing decade

Along with the two comprehensive city plans that were not realized, the municipality of Tianjin developed two public housing projects between 1928 and 1937. Due to turnover in government staff and insufficient funding, it built only one, the Low-income Residence – a complex of multi-unit residential buildings, store, and other buildings – of Tianjin's First Municipal Poorhouse in 1931.

⁴⁰"Prosperous Urban Plan." *Social Welfare*, July 14, 1930.

⁴¹Ibid.

Public housing in Tianjin was an integral part of public housing in China. Although the number of public housing units actually built in Tianjin was less than in Shanghai and Nanjing and far less than the demand, it was more practical and friendly to the poor. Simple architectural design, appropriate locations, relatively low rent, and income restrictions for tenants all assured that it benefited low-income families who needed housing most.

The low-income residence of Tianjin's first municipal poorhouse: an expression of Tchou's idea of a model village

After the so-called Northern Expedition led by the KMT leader Chiang Kai-shek in 1928 to unify China under his control, about 100,000 refugees from Shandong and Zhili Province flooded Tianjin.⁴² In June, the number of refugee camps in Tianjin increased to 28, and the existing housing could not meet the need of this rapidly increasing population.⁴³ Although the local newspaper reported in December that the Social Affairs Bureau of Tianjin intended to set up a civilian village on the empty land outside the city, nothing was built.

Lack of housing remained a problem for years. Public servants continued to promote housing for the poor. In 1930, the population of the poor in Tianjin reached 357,000, accounting for a quarter of the total population.⁴⁴ Many lived in self-built straw shacks densely packed in slums. To investigate their living conditions and show the government's determination to help them, the director of the Social Affairs Bureau, Feng Sizhi, paid a visit to the shack-dwellers on the embankment near Fazheng Bridge (Figure 4) on 16 March 1930. He reported that he found about 1000 poor people living there, including rickshaw pullers, sewing women, small traders, jobless old men, and widows.⁴⁵ Their straw shacks were built in high density on the embankment, and were so small – between 1.3 and 3 m tall – that sometimes people had to stoop to enter them. The land rent was only one to two yuan per straw-shack per year, quite low considering that the price of rice was 3.8 yuan per 25 kg bag.⁴⁶ Dirty straw and muck were everywhere.⁴⁷ Impressed by the horrible living conditions of the shack-dwellers, Feng Sizhi believed that the government's primary task was solving the housing problem, which meant to provide them with formal housing.

Six different bureaus of Tianjin government were involved in planning the low-income residence. The Land Bureau was in charge of finding an appropriate site and negotiating with the landowner, the Works Bureau was responsible for architectural design, the Finance Bureau and Social Affairs Bureau applied for funding, the Education Bureau planned educational facilities, and the Public Security Bureau recruited shack-dwellers and relocated them in the low-income residence.⁴⁸ The municipal government also cooperated with the Chinese Businessmen's Race Club of Tianjin, adding a game to raise money for the low-income residence.⁴⁹ Starting with this project, the government gradually developed a system of different bureaus cooperating efficiently in planning public housing projects.

The low-income residence compound was sited near the Hebei New District, in the vicinity of factories that employed poor people. By 15 June 1931, most of its buildings were finished, with

⁴²"The Army of KMT Regained Tianjin Yesterday." *Shenbao*, June 13, 1928.

⁴³"The Army is Handling the Aftermath in Tianjin." *Shenbao*, June 29, 1928.

⁴⁴Feng, "The Poor and the Society," 80–82.

⁴⁵"The Director of Social Affairs Bureau Visited the Slum." *Shehuiyuekan* 1 (1930): 4.

⁴⁶"Average Commodity Prices at Retail in June." *Hebeilingshouwujiazhishuyuebao* (河北零售物价指数月报), February 1930: 47.

⁴⁷"The Picture of the Slum." *Social Welfare*, March 18, 1930.

⁴⁸"A Meeting About the Construction of the Poor's Residential Area in the Social Affairs Bureau." *Dagongbao* (大公报), March 19, 1930.

⁴⁹"The Poor's Residence Will be Constructed." *Dagongbao*, June 10, 1930.



Figure 4. Feng Sizhi visited the shack-dwellers in Tianjin. Source: "The Director of Social Affairs Bureau Visited the Slum." *Shehuiyuekan*, 1(1930): 6.

the exception of a police station and a school.⁵⁰ Occupying an area of 60 *mu* (4000 m²), it consisted of 51 rental units, 7 public bathrooms, 2 storefronts, and a grocery store.⁵¹ The units were single-storey row houses subdivided into eight courtyards, with one public toilet in each courtyard (Figure 5).⁵² Public housing projects in other Chinese metropolises in the same period usually had two or more rooms per unit, but here each unit was only one small 3 m × 3.2 m room.⁵³ This type of unit made the most of limited funding, ensuring that the residential area had more units to benefit more families.

Following Feng's recommendation, the municipal government put the project under the management of Tianjin's First Municipal Poorhouse. Chen Xiaozhuang, the head of the poorhouse, described the low-income residence as the first part of a future utopia, echoing Tchou's ideals of 'education' and 'cooperation' in the model village:

After the completion of the new low-income residential area, we should set up production cooperatives, consumer cooperatives, family clubs, parks, schools and raise money to loan to the poor. The production cooperatives will help the poor to make a living by doing handicrafts and the consumer cooperatives will sell basic commodities especially to the poor for no profit.⁵⁴

According to the rental rules of the low-income residence, the rent of one unit was only one *yuan* per month, which was relatively low compared with the rent of public housing in Shanghai and Nanjing (Table 2).⁵⁵ It was also stipulated that the tenants should be poor people who had jobs and their family members. In this way, the government ensured that the residence was rented to

⁵⁰"The Poor's Residence was Finish." *Social Welfare*, June 19, 1931.

⁵¹See note 49 above.

⁵²See note 51 above.

⁵³Tianjin Municipal Archives, [401206800-J0131-1-000482].

⁵⁴See note 50 above.

⁵⁵"The Rental Rules of the Poor's Residence." *Dagongbao*, July 4, 1931.

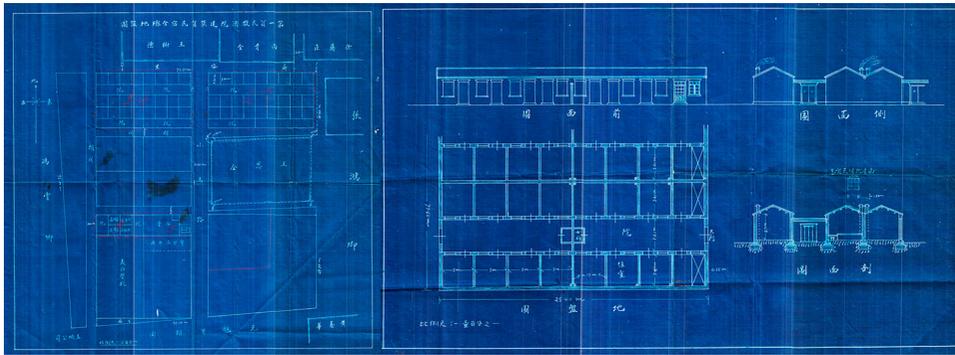


Figure 5. Architectural drawings of the Low-income Residence of Tianjin's First Municipal Poorhouse. Source: Tianjin Municipal Archives, [401206800-J0131-1-000482].

Table 2. Comparison between the public housing projects in Tianjin, Shanghai, and Nanjing.

	The poor's residence of Tianjin's first municipal poorhouse	First commoners residence	Commoners housing at Hongwu Gate
Location	Tianjin	Shanghai	Nanjing
Construction period	Commenced on 25/11/1930, completed on 15/06/1931	Commenced on 13/05/1929, completed on 13/08/1929	First phrase completed on 11/1928, second phrase completed on 12/1928
Rent per unit (yuan)	1	2	2
Unit type	Single-storey row houses, 1 room per unit	Single-storey row houses, 2 rooms per unit	Single-storey row houses, 2 rooms per unit
No. of units	51	100	200

Sources: compiled by authors based on Tianjin Municipal Archives, [401206800-J0131-1-000482]; Tsui, "Regulating Urban Living"; Zhang, "Civilian Residential Construction of Shanghai."

people in need who could afford it. Moreover, the government's rental rules sought to govern tenants' behaviour, emphasizing hygiene and forbidding gambling. Similar rules in Nanjing controlled the behaviour of tenants in the Shanty Residential Areas.⁵⁶ Similarly, the presence of a police station in this plan showed that the government's purpose here was not only to provide housing and promote social reform, but also to police the poor. At this time, the KMT was constantly threatened by the Japanese and the Communists, and educating and controlling the poor was a way to consolidate power and ensure the support and stability of low-income people.

The Dawangzhuang (大王庄) low-income residence plan: learning from Nanjing's examples

These early public housing projects in Tianjin could hardly solve the housing crisis, but they inspired the government to engage anew with earlier models. The Dawangzhuang Low-income Residence in Tianjin, for example, was inspired by the mayor's investigation of Nanjing, where he learned a lesson about location. Tianjin was facing the same housing shortage problem as Nanjing. Although some real estate companies had constructed housing projects for citizens, the rents were too high for the poor. The mayor of Tianjin, Zhang Tingge, and the chairman of Hebei Province, Yu Xuezhong, planned to build several low-income residential areas according to principles of the New Life

⁵⁶Tsui, "Regulating Urban Living".

Movement.⁵⁷ In March 1935, Zhang sent his secretary to Nanjing to learn about the municipal situation there. The secretary's report about public housing impressed the leaders. In fact, the Commoners Residential Districts in Nanjing had a low occupancy rate because it was too far away from the places where jobs were available.⁵⁸ They also took inspiration from the successful Low-income Residence of Tianjin's First Municipal Poorhouse that in contrast was located close to factories. In response, the Tianjin municipal government planned to site its own new low-income residence in the Dawangzhuang area, where a lot of poor workers tried to make a living.

In April 1935, the Social Affairs Bureau formally planned the Dawangzhuang Low-income Residence.⁵⁹ Yu pointed out that its style and materials should refer to farmhouses in Shandong province: constructed with mud and straw, they only cost a quarter as much as normal brick houses.⁶⁰ But the city abandoned the plan when Japanese forces invaded Northern China. The Japanese removed Zhang and Yu from office in June 1935 when they refused to collaborate with Japanese forces. On 30 July 1937, the Japanese army occupied the entire city of Tianjin, at the beginning of the eight-year Second Sino-Japanese War.⁶¹ The national government retreated to Chongqing, and this was the end of the Nanjing Decade.

Public housing projects during the Japanese occupation (1937–1945)

The Japanese invasion did not stop the development of public housing in China altogether, however. People continued to import publications on public housing, and Japanese colonial planners themselves imported additional knowledge. Moreover, scholars and municipal leaders alike continued to promote public housing. Chinese scholars started to publish journal articles on case studies of public housing district planning and how to implement public housing in Chinese cities. Examples include the article *Research on Public Housing Planning*, published in the architecture journal *New Architecture*, and *Commoners Housing Policy*, published in the journal *Construction Research*.⁶²

Meanwhile, the KMT government, which still controlled the inland area of China, also emphasized public housing during the war. In 1938, the Executive Yuan of KMT government issued *Inland Housing Relief Regulations*, ordering local governments facing housing shortages to construct and manage public housing units.⁶³ Under this regulation, KMT government constructed a series of public housing projects, such as Wanglingmen Commoners Housing in Chongqing and the New Commoners Housing Residential Areas in Kunming.⁶⁴ These projects were constructed after the national government retreated to Chongqing in 1937.

Puppet governments in cities occupied by the Japanese, including Tianjin, Shanghai, and Beijing, also implemented public housing projects. Shanghai and Beijing each constructed only one poor quality public housing project.⁶⁵ In contrast, the three public housing projects built in Tianjin were more large scale, even including a Japanese-style residential area for the Japanese staff. Construction of public housing flourished in Tianjin, and not in other Japanese occupied cities, mainly because the housing shortage was more severe in Tianjin. Natural disasters had destroyed thousands

⁵⁷New Life Movement was a civic education movement started by KMT in 1934 that promoted hygiene and courteous behaviour.

⁵⁸Tsui, "Regulating Urban Living".

⁵⁹"Five New Constructions of Social Affairs Bureau of Tianjin Municipal Government." *Social Welfare*, April 20, 1935.

⁶⁰Municipal Research Committee, "Poor's Residence will be Constructed in Tianjin".

⁶¹The Second Sino-Japanese War was a military conflict fought between China and Japan from July 7, 1937 to September 9, 1945.

⁶²Li, "Research on Public Housing Plan," 32–69; Sun, "Commoners Housing Policy," 30–41.

⁶³Ibid.

⁶⁴"Commoners Housing in Chongqing." *Zhonghua (中华)* 101 (1941): 22; and "Active Yunnan." *Liangyou (良友)* 155 (1940): 17.

⁶⁵Zhang, "Civilian Residential Construction"; and Tang, "Residential Real Estate".

of houses, and from 1937 to 1945, the population of Tianjin dramatically increased from 1,132,263 to 1,759,513. In contrast, the population of Beijing only slightly increased (from 1,504,716 to 1,650,695), and the populations of Nanjing and Shanghai actually decreased.⁶⁶

After Tianjin fell to Japan in 1937, Japanese forces established a puppet government, the Tianjin Special Government Office, that ruled the city for the next eight years.⁶⁷ The government officials were mainly Chinese people, but the so-called Japanese consultants – in fact representatives of the Japanese military – held the real power. This system guaranteed the obedience of the government to Japanese forces. The puppet government constructed three public housing projects in Tianjin, two of which were rented to all kinds of citizens and the third to Japanese staff. These public housing projects were not aimed at relief of the poor, but rather targeted the upper and middle class, an important difference from the projects in the Nanjing Decade. But the planning of these public housing projects provided an opportunity for Japanese professionals and Japanese-trained Chinese professionals to implement public housing ideas that Japan had learned from the West.

The municipal housing plan made by the public office and the Xinminli (新民里) municipal housing area: learning from the Japanese experience

During the Japanese Occupation in Tianjin, the Japanese puppet government, the Tianjin Special Government Office, influenced public housing in two ways. First, it introduced apartment housing that reflected diverse traditions, including elements of the post-Kanto Earthquake reconstruction of 1923.⁶⁸ Second, it built houses that matched Japanese lifestyles, hiring skilled Japanese constructors for Japanese functionaries.

A large flood in 1939 served as catalyst for the first public housing plan in Tianjin by the Japanese puppet government. Affecting 78% of the city area, it inundated 158,525 houses; 14,218 of them collapsed (Figure 6).⁶⁹ Refugees from the flood in the rural area around Tianjin rushed into the city, and there were not enough houses for them. Private homeowners took the opportunity to raise rents, worsening the situation. In November 1939, the Tianjin Special Government Office issued an ordinance, ordering the Public Office (公用处), a department under the Tianjin Special Government Office managing public utilities of the city, to make a public housing plan to clean up the city's appearance and improve the living situation of its citizens.⁷⁰

Japanese professionals and Japanese-trained Chinese professionals were active in the puppet government of Tianjin. For example, Yanagida Tetsuo, who graduated from the Department of Civil Engineering, Faculty of Engineering, Imperial University in Tokyo, Japan, and Doi Miyaji, who graduated from the Department of Architecture, Tokyo School of Fine Arts, were engineering consultants in the puppet government. In charge of making the public housing plan, the director of the Public Office, Lu Nansheng, and secretary of the Public Office, Lin Lichuan, had also been trained in Tokyo. Lu had graduated from the Tokyo Higher Technical School, and Lin from the Faculty of Science and Engineering, Doshisha University in Tokyo.⁷¹ Although there is no documented evidence, it is reasonable to think that these professionals would have been familiar with the reconstruction of Tokyo after the 1923 Great Kanto Earthquake. That disaster, which killed more than 100,000

⁶⁶Sun, "The Analysis of Nanjing's Population"; Zou, *A Study on the Change*; Gao, *A Study of Tianjin's Population*.

⁶⁷Tianjin Academy of Social Sciences, *History of Tianjin*.

⁶⁸Hein, "Shaping Tokyo".

⁶⁹Liu, *Space and Society*, 31.

⁷⁰Tianjin Municipal Archives, [401206800-J0083-1-000805].

⁷¹Tianjin Municipal Archives, [401206800-J0001-3-010770].

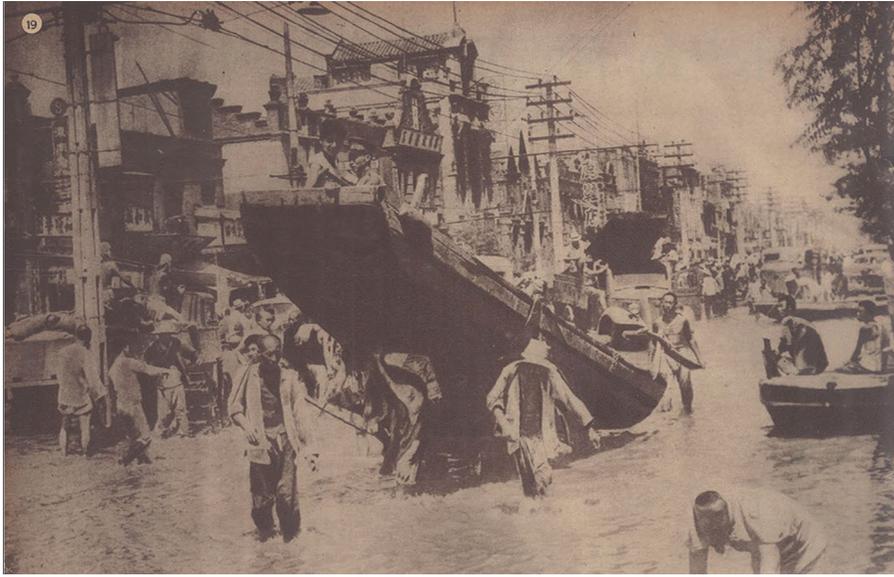


Figure 6. The Tianjin city after the flood in 1939. Source: "Tianjin Floods." *Liangyou*, 147(1939): 17.

people, brought about the establishment of the so-called Dojunkai Foundation, which provided housing and work for the earthquake victims with financial support from the Japanese Government and donations both from Japan and abroad.⁷² Specifically, it constructed 16 housing projects between 1926 and 1934, with multiple site layouts and building types. As we shall see, the Tianjin public housing projects under the Japanese occupation suggest that the Dojunkai projects – multi-storey reinforced concrete collective housing erected after the Tokyo 1923 earthquake, arranged as ensembles often with courtyards and that had been influenced by European models – influenced Chinese planning. Within five months after the flood, in March 1940, the Public Office submitted the Municipal Housing Plan to the Tianjin Special Government Office.

In total, they proposed six residential projects throughout the city. As citizens had different levels of income, the plan featured three housing types targeting the upper class, the middle class, and the working class, respectively, with different architectural forms, building materials, facilities, and site principles (Table 3).⁷³ The name of the housing type for the upper class, Culture Housing (文化住宅), was imported from Japan.⁷⁴ It originally referred to a type of house developed in the Taisho era that combined Western style with Japanese style; but the meaning of Culture Housing changed to high quality *residence* in the municipal housing plan in Tianjin.

Judging by the architectural drawings, a variety of Western and Japanese influences shaped the two proposed projects for the upper class. One project, at the intersection of Zhongjie Road and Hangzhou Road, contained houses with Western-style layouts. The other, at the intersection of Zhongjie Road and Wuchang Road, seemed to have a mixture of influences. The layout of the Tianjin three-storey apartment buildings – a square with a courtyard in the centre – was rare in the public housing projects of China at the time. It seems to be inspired by *Liyuan* (里院), a housing type that

⁷²Sorensen, *The Making of Urban Japan*, 132; and Pompili, "Modern Multi-Unit Housing in Japan", 27.

⁷³Tianjin Municipal Archives, [401206800-J0083-1-000805].

⁷⁴Sand, *House and Home in Modern Japan*.

Table 3. Comparison of three housing types in the Municipal Housing Plan made by the Public Office of Tianjin Special Government Office.

Housing type	Type A: culture housing		Type B: common housing		Type C: labour housing	
Facilities	Indoor facilities	Electric light, tap water, flush toilet, general sanitary equipment, heater		Electric light, tap water, flush toilet, shower room		Electric light, public tap water
	Outdoor facilities	Garage, small garden		Public garden		
Building materials	Concrete		Red brick		Red brick	
Site chosen principles	Clean roads and beautiful environment		Close to commercial area and administrative area		Close to industrial area	
Construction site	The Intersection of Zhongjie Road and Wuchang Road	The Intersection of Zhongjie Road and Hangzhou Road	Hebei Lvwei Road	the site of the former prefectural government office compounds	Hedong Yangqixia Slope	Beiyngmen, in Front of the West Station
Building style	Three-storey apartment houses	Two-storey houses	Two-storey houses	Two-storey houses	Single-storey houses	Two-storey houses and single-storey houses
Construction area (m ²)	2178	2028	10,393.6	5594.4	6226	4569
Residential area (m ²)	5904	2080	9000	4389.13	11,300	7500
Construction fee (<i>yuan</i>)	1286,500	458,400	1,388,000	752,500	338,800	328,300

Source: compiled by authors based on Tianjin Municipal Archives, [401206800-J0083-1-000805].

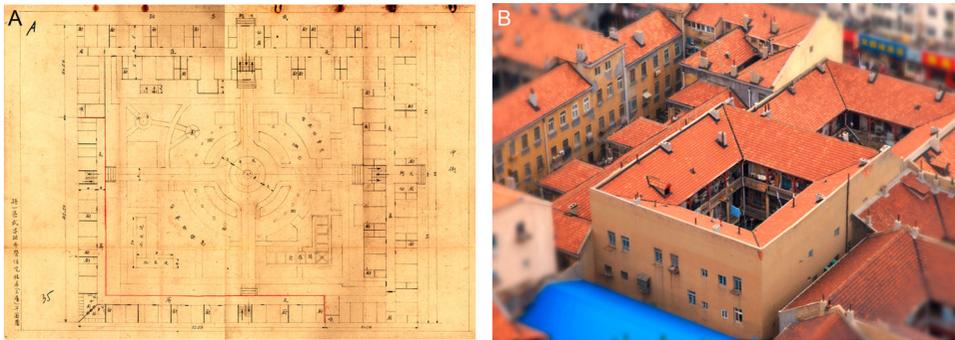


Figure 7. Comparison of the Culture Housing on the intersection of Zhongjie Road and Wuchang Road made by the Public Office in 1940 (a) and Qingdao's *Liyuan* (b). Sources: (a) Tianjin Municipal Archives, [401206800-J0083-1-000805]; (b) Photo by r.becken, 2012.

integrated features of the Western apartment house and elements of *Siheyuan* (四合院), a historical type of residence in China; its name literally means a courtyard surrounded by buildings on all four sides (Figure 7). This housing type appeared in Qingdao during the German Occupation (1891–1914) and continued to be developed during the Japanese Occupation (1914–1922).⁷⁵ It also seems to be inspired by the Japanese Dojunkai apartment projects, in which the architects designed public communal central courtyards to ‘serve as parks, children’s playgrounds, and for the location of community water pumps for residents of the whole development.’⁷⁶ Similarly, the courtyard in the Tianjin case was well designed, including a park with a pavilion, flower beds, trellises, children’s playgrounds, and a place for doing laundry. Another similar courtyard can also be found in another project of the Municipal Housing Plan submitted by the Public Office, sited on the former prefectural government office compounds (Figure 8). Moreover, the designing of the three-storey apartment in concrete was a new attempt in Chinese public housing history.

Five of the six projects in the Municipal Housing Plan were never built. The exception was the one located at the former prefectural government office compounds, the Xinminli Municipal Housing Area. The Social Affairs Bureau, Finance Bureau, and Works Bureau of the Tianjin Special Government Office together remade the final construction plan of this project, and these three bureaus were the core departments in planning and developing public housing projects during the Japanese Occupation.⁷⁷ The Municipal Housing Area plan had included various public amenities, including gardens and children’s playgrounds. In the final plan, the Works Bureau removed all of these public amenities, increasing the number of houses (Figure 9): 41 single-storey houses of two types and 4 two-storey houses (from the original 37 two-storey houses) (Figure 10). According to the architectural drawings, the single-storey houses used a traditional Chinese courtyard to organize the rooms, but adopted a modern flat roof, in a compromise between Chinese traditional style and Western modernism.

This project was constructed at the end of 1940: in December, the Huatong Construction Company completed buildings of all the houses and submitted them to the Finance Bureau to manage.⁷⁸ The rent, 6 *yuan* per room, was too high for people with the lowest incomes. Nevertheless,

⁷⁵Zhang, “Conservation and Renewal of Liyuan”.

⁷⁶Tewari and Beynon, “Tokyo’s Dojunkai Experiment,” 469–483.

⁷⁷Tianjin Municipal Archives, [401206800-J0001-3-003744].

⁷⁸See note 8 above.

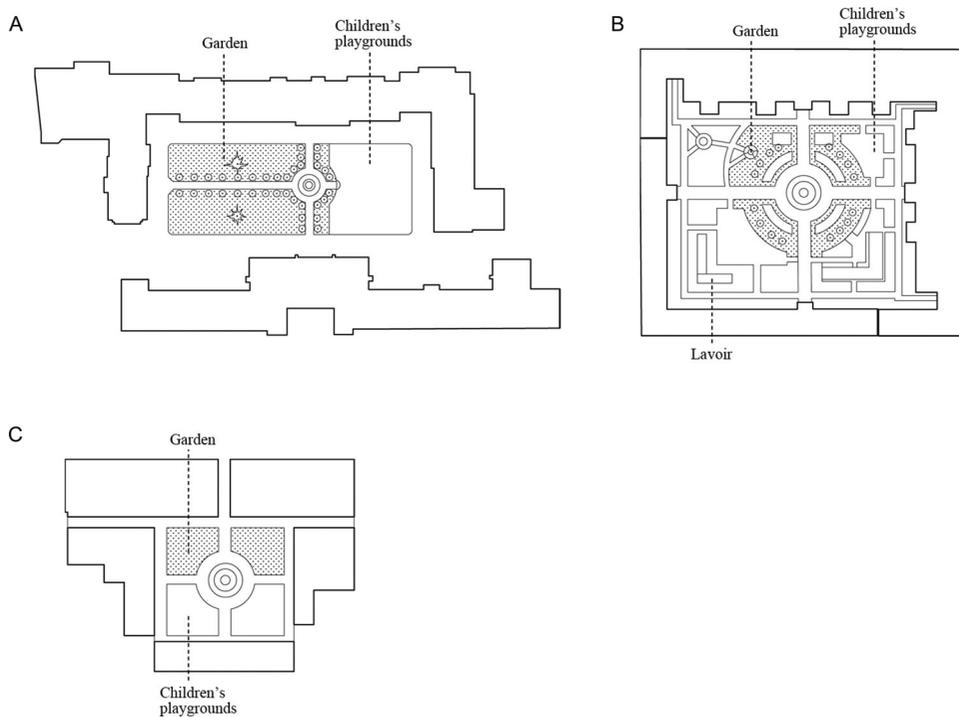


Figure 8. Comparison of layouts of courtyards. (a) The layout of Edogawa Dojunkai Apartments. (b) The planned layout of the Culture Housing on the intersection of Zhongjie Road and Wuchang Road made in Tianjin. (c) Part of the planned layout of the Common Housing in the site of the former prefectural government office compounds in Tianjin. Sources: Diagrams by authors based on site plans obtained from <http://namikikatutoshi.web.fc2.com/02-14uedogawa.html> and Tianjin Municipal Archives.

even before it was finished the project had attracted a lot of middle-class tenants, more than half of whom were Chinese businessmen; most of the rest were staff of the government, schools, or hospitals.⁷⁹ To ensure fairness, the city selected tenants by drawing lots. Only 7.13% of the many applicants won entry, the popularity of the project greatly enhancing the government's confidence in public housing.

The Municipal Housing Plan made by the Public Office was a typical example of the phenomenon that the Japanese occupants implemented ideas that they had learned from Western countries in planning of Japanese occupied territories in Asia during its colonial period (1895–1945).⁸⁰ However, most of the advanced planning ideas in the Municipal Housing Plan in Tianjin failed to realize, and were not inherited in the later public housing projects.

Peishanzhuang (佩珊庄), Xingyacun (兴亚村), and Yugongzhuang (雨宫庄) commoners housing areas: continuing Chinese tradition under the control of Japanese power

The other five sites proposed for public housing by the Public Office were all owned by private land-owners, which meant that the government needed to buy them before building anything.⁸¹ Because

⁷⁹Tianjin Municipal Archives, [401206800-J0055-1-004499].

⁸⁰Hein, "Transformation of Planning Ideas," 54.

⁸¹Tianjin Municipal Archives, [401206800-J0055-1-005207].

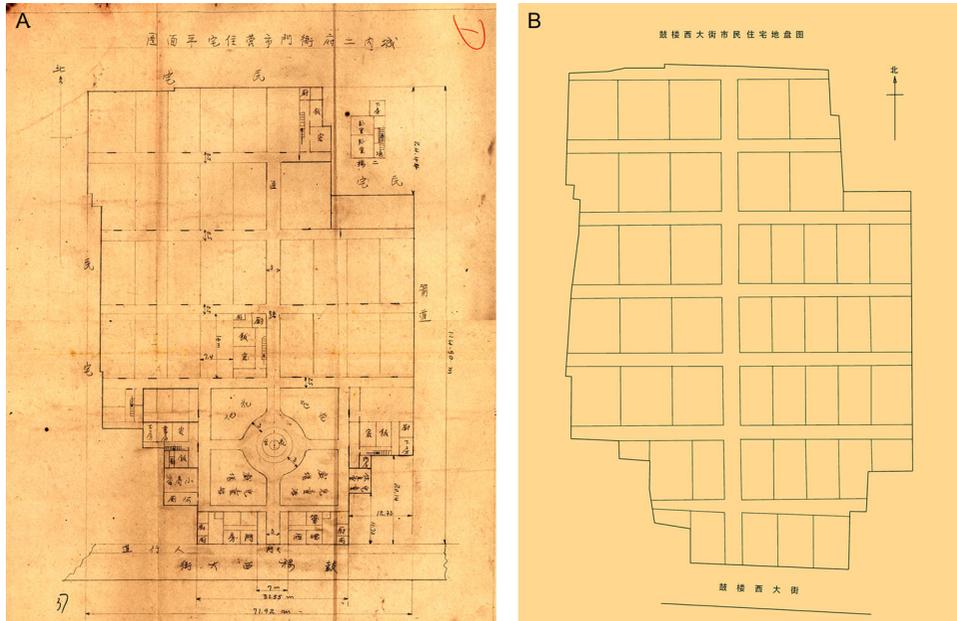


Figure 9. Comparison of the previous municipal housing plan made by the Public Office (a) and the Xinminli Municipal Housing Plan (b) in the same site. Sources: Tianjin Municipal Archives, [401206800-J0083-1-000805], [401206800-J0001-3-003312-043].

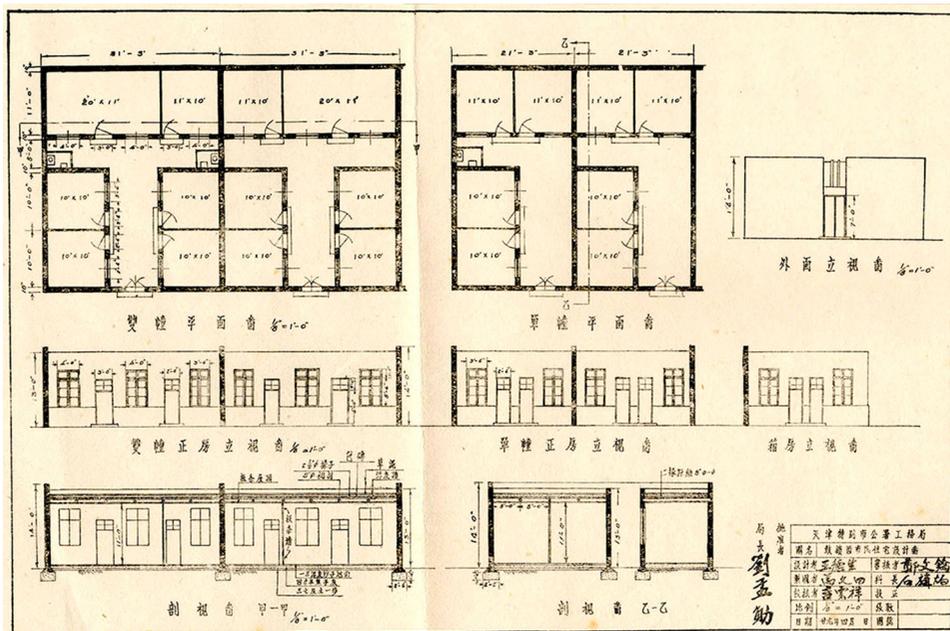


Figure 10. Architectural drawings of the single-storey houses in Xinminli Municipal Housing Area. Source: Tianjin Municipal Archives, [401206800-J0001-1-003744-012].

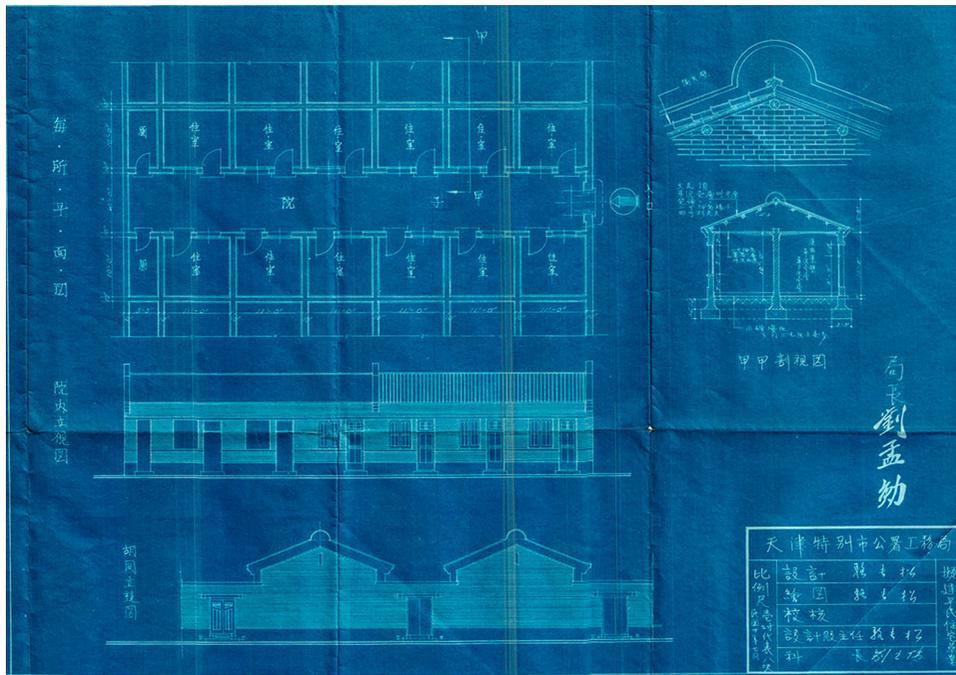


Figure 11. Architectural drawings of the commoners housing areas. Source: Tianjin Municipal Archives, [401206800-J0055-1-005315].

of financial constraints in the early years of the puppet government, the Tianjin Special Government Office abandoned the Municipal Housing Plan after finishing the Xinminli Municipal Housing Area in 1940. But it started to plan new public housing projects in 1941. The first new plan included three commoners' housing areas. The main aim of this plan was not flood relief but easing ongoing leasing disputes between tenants and private house owners due to the severe housing crisis. The major of Tianjin, Wen Shizhen (温世珍), believed this unrest had damaged public security in Tianjin, and he instructed the government to provide housing for citizens.⁸²

The Social Affairs Bureau, Finance Bureau, and Works Bureau prepared plans for the commoners housing, including rules for rent, management fees, insurance fees, and repair fees. In May 1941, a team of Chinese staff from the three bureaus investigated five vacant lots chosen by the Police Bureau throughout the city, and finally confirmed three of them as housing sites.⁸³ The three housing areas built on the three sites were composed of single-storey row houses (Figure 11), with a combined 1001 rooms (Table 4).⁸⁴ After they were completed at the end of 1941, the rooms in two of the three housing areas were completely rented out within 12 days. The other housing area had also leased 140 rooms and the number was predicted to rise.⁸⁵ The rent in all was 6 *yuan* per room per month, the same as the rent in the Xinminli Municipal Housing Area. It was clearly targeted at the middle class, and not friendly to the poor.

⁸²Tianjin Municipal Archives, [401206800-J0001-3-010854].

⁸³Tianjin Municipal Archives, [401206800-J0090-1-001575].

⁸⁴See notes 84 and 85 above.

⁸⁵Tianjin Special Municipal Government Social Affairs Bureau, "The Rent Situation of the New Constructed Commoners Housing." *Shehuiyuekan* 12 (1941).

Table 4. The bidding status of the commoners housing areas.

Police district	Commoners housing area	Number of rooms	Construction company	Construction fee (yuan)	Construction duration (day)
6	Peishanzhuang	184	Tonghuashun Construction Company	127335.84	40
7	Xingyacun	635	Zengcheng Company, Tonghuashun Construction Company	438150	55
8	Yugongzhuang	182	Juxingshun Company	125599.52	40

Source: compiled by authors based on Tianjin Municipal Archives, [401206800-J0001-3-010854].

The names given to the three commoners housing areas – Peishanzhuang (佩珊庄), Xingyacun (兴亚村), and Yugongzhuang (雨宫庄) – reflected the Japanese occupation. Peishan (佩珊) was the courtesy name of the mayor of Tianjin, Wen Shizhen (温世珍), who worked for the Japanese puppet government. Xingya (兴亚), also known as Japanese Pan-Asianism, was a major element in Japanese propaganda to justify Japanese invasions of other countries. Yugongzhuang (雨宫庄) was named after a Japanese man, Amemiya Tatsumi (雨宫巽), the chairman of the Tianjin Building Control Committee, whose last name read in Chinese was pronounced Yugong (雨宫), with Zhuang (庄) meaning village. The names signalled that these areas were under the control of Japanese power.

Despite the influences from Japan on public housing in Tianjin in many aspects, the Chinese continued and advanced their own system in managing these housing areas. In previous public housing projects in China, local governments usually appointed administrators to manage daily business, such as those in Nanjing and former Tianjin. In 1929, the government of Nanjing had issued Management Rules of Commoner's Residence regulating the responsibilities of administrators.⁸⁶ In some cases, such as public housing projects in Shanghai and Zhengzhou, governments also established specific management agencies.⁸⁷ In order to manage the commoners housing areas in Tianjin, the puppet government similarly established a housing management agency, the Commoners Housing Management Office, in each commoners housing area. They were the first public housing management agencies in Tianjin. Each commoners housing management office included a worker in charge of collecting rent and three permanent staff (from the Social Affairs Bureau, the Finance Bureau, and the Works Bureau, respectively) responsible for managing other workers to clean the dirt and clean up the toilet, conducting household hygiene inspections, and keeping dangerous goods from the premises. The government also issued 'Commoners Housing Management Advice', 'Draft Organization Rules of Tianjin Special Government Office Social Affairs Bureau Commoners Housing Management Office', and 'Draft Standing Rules of Tianjin Special Government Office Commoners Housing Management Office', in which it explained how to register as a tenant and how to collect or pay the rent; and it particularly forbade storing inflammable or other dangerous goods, impairing public sanitation, gamble, and fighting.⁸⁸ Compared with the public housing management rules published in China in the Nanjing Decade, these rules in Tianjin no longer emphasized educating the tenants, but attached particular importance to the technical aspect of electricity safety.

At first sight, the three commoners housing areas appear to have continued the tradition of the low-income residence built in 1931, because of their familiar residential style. But under Japanese power, these housing projects were not accessible to the poor, due to their relatively high rent.

⁸⁶Nanjing Special Municipal Government, "Management Rules of Commoner's Residence".

⁸⁷Zhengzhou Municipal Government, "Rules of Management Agency of Zhengzhou Municipal Government Commoners Village." *Shizhengyuekan* (市政月刊) 3 (1928): 82.

⁸⁸See note 84 above.

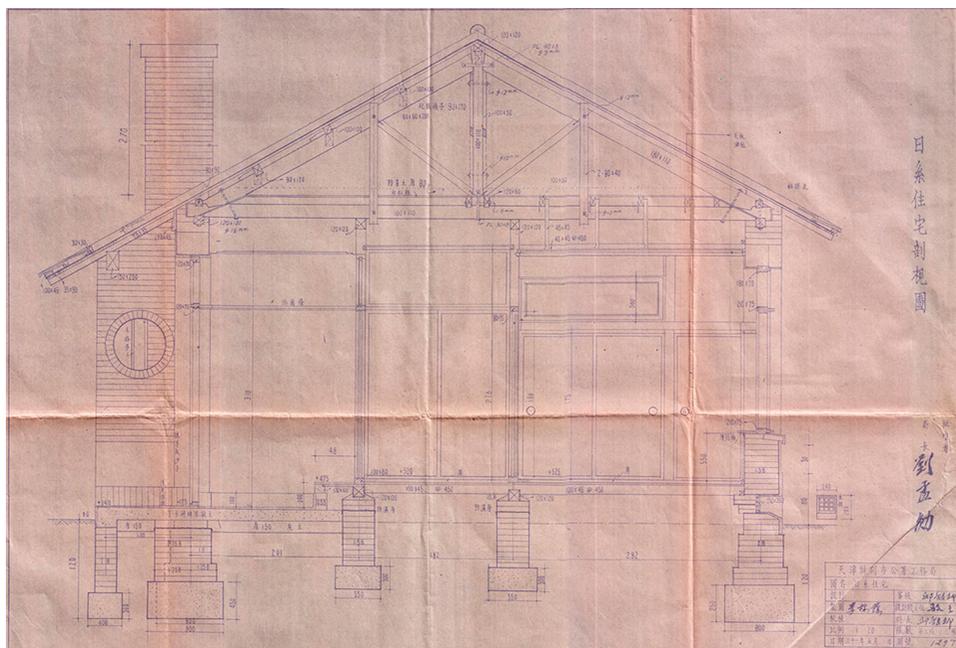


Figure 12. Architectural drawings of the Japanese Style Housing Area. Source: Tianjin Municipal Archives, [401206800-J0055-1-005273].

Shanlinli (善邻里) Japanese style housing area: building for the Japanese staff

The Japanese puppet government also introduced new housing projects for its own growing population. In 1937, there were 13,399 Japanese people in Tianjin, and the number had risen to 44,103 in 1940. In April 1942, Wen Shizhen, the mayor of Tianjin, proclaimed: ‘In order to ease the housing shortage in Tianjin, a new commoners housing area will be constructed this year for the upper Japanese staff.’⁸⁹ Although the major called it ‘commoners housing’, the Shanlinli Japanese Style Housing Area was designated only for upper Japanese staff.

The Tianjin Special Government Office attached great importance to this project. It was called the Shanlinli Japanese Style Housing Project since it modelled Japanese traditional housing style, with tatami and sliding doors, in order to accommodate Japanese living habits (Figure 12). In July 1942, the Works Bureau came up with a first round of planning, proposing 60 houses, each house being 73 m² with a private courtyard in front of it.⁹⁰ The houses were organized by street space, lining traditional narrow streets, similar to Japanese *Roji* or Chinese *Hutong*. But this design did not satisfy the government. After a discussion with the Finance Bureau, the Works Bureau redesigned the houses, and the final design had 2 housing types, with 30 houses of each type.⁹¹ To ensure good construction, the Works Bureau specified every detail of the construction, even the style of lockers and the size of wall paintings. It was recorded in the construction instructions that ‘each brick should be burned sufficiently ... each timber should have no cracks or gaps’. Moreover, the construction work was contracted to a Japanese company to ensure the type

⁸⁹Tianjin Municipal Archives, [401206800-J0090-1-001669].

⁹⁰Tianjin Municipal Archives, [401206800-J0090-1-001665].

⁹¹Tianjin Special Municipal Government Office Works Bureau. *Work Report*.

and quality.⁹² In order to improve security and protect the Japanese people living here, barbed wire and anti-aircraft vats were added after its completion in 1943.⁹³

In contrast to the three commoners housing areas built in 1941, the tenants of which were all Chinese citizens, the Japanese Style Housing project was very well constructed, which showed that the government under Japan attached more importance to the interests of the Japanese forces. According to available research, only Tianjin constructed public housing for high-ranking Japanese staff during the Japanese occupation, making it unique in public housing history of modern China.

The Japanese Occupation was an important period for inner-Asian networks of idea exchange. Public housing projects in Tianjin in this period showed the impact of Japanese housing projects and ideas, both traditional Japanese styles and those that the Japanese had learned from the West. In this way, Japanese professionals and Japanese-trained Chinese professionals introduced Western and Japanese housing ideas to China.

Conclusion

The emergence and development of public housing in modern China were closely related to networks of ideas and policy exchange. Western and Japanese public housing ideas were introduced into China via journals and books by Chinese scholars in the 1920s, and soon received attention from government professionals after the success of Pootung Model Village. As the first Asian country to modernize based on the European model, Japan played a key role in the import of Western modern planning ideas into China, including introducing public housing ideas into Tianjin. As a result, rather than only in the East–West direction which is often discussed on cross-culture exchange, a multilateral exchange influenced the development of public housing in Tianjin, making it an important case at the intersection of East–West and inner-Asian exchanges of public housing ideas. Moreover, the examination of public housing projects in Tianjin indicates that the planners often continued and developed Chinese characteristics to suit local environmental and political conditions.

This examination of public housing projects in Tianjin also shows that, in the turbulent history of modern China, public housing policy changed with government regimes. Most public housing projects in China in the Nanjing Decade were modelled on Tchou's model village idea, which emphasized education and cooperation and had the support of the KMT. The public housing projects in Tianjin during this period showed that the KMT regarded public housing as a means to not only solving housing shortage, but also of social reform and governing the poor. In contrast, although numerous public housing projects were planned in Tianjin by the Japanese puppet government to solve the severe housing shortage problem, these projects actually benefited rich people or Japanese forces, and did not help the poor, who suffered most from housing shortage.

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⁹²See note 90 above.

⁹³Tianjin Municipal Archives, [401206800-J0055-1-003852]. An "Anti-aircraft Vat" (防空缸) literally means a vat to protect people from air raid.

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Bibliography

- Cody, Jeffrey. "American Planning in Republican China, 1911–1937." *Planning Perspectives* 11 (1996): 339–377.
- Ding, Tongli. *The Housing Situation in the United States*. Shanghai: Commercial Press, 1929.
- Feng, Wei. "The Poor and the Society." *Shehuiyuekan (社会月刊)* 1 (1930): 80–82.
- Gao, Yanlin. *A Study of Tianjin's Population*. Tianjin: Tianjin People Press, 2002.
- Hein, Carola. "Imperial Visions and City Planning: Visions for Datong in the 1930s." In *Cartographic Japan: A History in Maps*, edited by Kären Wigen, Sugimoto Fumiko and Cary Karacas, 144–147. Chicago: University of Chicago Press, 2016.
- Hein, Carola. "Introduction." *Journal of Urban History* 42, no. 3 (2016): 1–14.
- Hein, Carola. "Shaping Tokyo: Land Development and Planning Practice in the Early Modern Japanese Metropolis." *Journal of Urban History* 36, no. 4 (2010): 447–484.
- Hein, Carola. "The Transformation of Planning Ideas in Japan and Its Colonies." In *Urbanism – Imported or Exported? Foreign Plans and Native Aspirations*, edited by Joe Nasr and Mercedes Volait, 51–82. Chichester: Wiley, 2003.
- Heise, Robin. "Colonel Thomas Tchou." Accessed August 23, 2012. <http://ysheritage.org/colonel-thomas-tchou/>.
- International Labour Office (ILO). *The Housing Situation in the United States*. Translated by Tongli Ding. Shanghai: Commercial Press, 1931.
- Jian, Hu. "Housing Problem and Co-operative Housing." *The Eastern Miscellany* 21 (1921): 4–6.
- Li, Chubai. "Research on Public Housing Plan." *Xinjianzhu (新建筑)* 5–6 (1937): 32–69.
- Li, Hui. "A Study of Bank Weekly (1925–1937)." *Master diss.*, Fudan University, 2011.
- Li, Jie, and Shunsheng Wang. *Outline of Modern Chinese History*. Beijing: Sino-culture Press, 2005.
- Liang, Sicheng, and Rui Zhang. *City Plan for Tientsin (天津特别市物质建设方案)*. Tianjin: Peiyang Art Press, 1930.
- Liu, Haiyan. *Space and Society: The Transformation of Modern Tianjin*. Tianjin: Tianjin Academy of Social Sciences Press, 2003.
- Lu, Danlin. *Complete Book of Urban Administration*. Shanghai: National Road Construction Association of China, 1928.
- Ma, Yinbing. *Theory of Urban Policy*. Nanjing: Meilisheng Press, 1928.

- Municipal Research Committee. "Poor's Residence will be Constructed in Tianjin." *Shizhengpinglun (市政评论)* 3 (1935): 18.
- Nanjing Special Municipal Government. "Management Rules of Commoner's Residence." *Finance Monthly of Nanjing Special Municipal Government* 10 (1929): 35.
- National Capital Reconstruction Technical Office. *Capital Plan*. Nanjing: National Capital Reconstruction Technical Office, 1929.
- Pompili, Marco. "Modern Multi-Unit Housing in Japan and the Dōjunkai Apartments (1924–34)." *Fabrications: The Journal of the Society of Architectural Historians, Australia and New Zealand* 24, no. 1 (2014): 26–47.
- Rogaski, Ruth. *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China*. Berkeley: University of California Press, 2004.
- Sand, Jordan. *House and Home in Modern Japan: Architecture, Domestic Space, and Bourgeois Culture, 1880–1930*. Cambridge, MA: Harvard University Asia Center, 2005, c2003.
- Sorensen, André. *The Making of Urban Japan*. London: Routledge, 2005.
- Sun, Wenben. "The Analysis of Nanjing's Population." *Shehuijianshe (社会建设)* 4 (1948): 52–66.
- Sun, Zongwen. "Commoners Housing Policy." *Jiansheyuanjiu (建设研究)* 2 (1940): 30–41.
- Sun, Xueli. "The Preliminary Exploration on Civilians' Domicile Problems of Qingdao in the 1920s and 1930s." *Journal of Qingdao Technical College* 24, no. 3 (2011): 22–26.
- Sun, Yat-sen. *Dr. Sun Yat-Sen: His Life and Achievements*. Shanghai: Shanghai Mercury, 1927.
- Sun, Xiang. "Research on Residential Planning and Construction in Guangzhou during ROC Period." *PhD diss.*, South China University of Technology, 2011.
- Tang, Bo. "The Study of the Residential Real Estate in the Downtown District of Peking during the Period of Late Qing and Republic of China, 1900–1949." *PhD diss.*, Renmin University of China, 2009.
- Tao, Haiyang. "On the Eastern Miscellany (1904–1948) - An Important Fountain of Modern Culture." *PhD diss.*, Nanjing University, 2013, 17.
- Tchou, M. Thomas. "Cooperative Movements." *The English Student* 11 (1925): 367–374.
- Tchou, M. Thomas. "The Inside of Working Problem and the Solution." *The Eastern Miscellany* 23 (1926): 43–51.
- Tchou, M. Thomas. "The Urgent of Reform the Working Life in China." *Qingnianjinbu (青年进步)* 76 (1924): 16–21.
- Tchou, M. Thomas. "YMCA and the Labours New Village Movement." *The Fiftieth Anniversary Album of Chinese YMCA, Shanghai*, 62–65, 1935.
- Tenshin Chikishi Kenkyukai. *Tenshinshi: saiseisuru toshi no toporoji*. Tokyo: Toho Shoten, 1999.
- Tewari, Shilpi, and Beynon, David. "Tokyo's Dojunkai Experiment: Courtyard Apartment Blocks 1926–1932." *Planning Perspectives* 31, no. 3 (2016): 469–483. doi:10.1080/02665433.2016.1160326.
- Tianjin Academy of Social Sciences. *History of Tianjin*. Tianjin: Tianjin People's Press, 1987.
- Tianjin Special Municipal Government Works Bureau. *Work Report of Tianjin Special Municipal Government Works Bureau 1942*. Tianjin: Tianjin Special Municipal Government, 1942.
- Tokyo Municipal Research Council. *Housing Policy in England*. Translated by Guanghua Liu. Shanghai: Huatong Press, 1929.
- Tsui, Chung Man. "Public Housing of Nanjing during the Republican Period." In *Study and Preservation of Chinese Modern Architecture*, edited by Fuhe Zhang, 325–332. Beijing: Tsinghua University Press, Vol. 8, 2012.
- Tsui, Chung Man. "Regulating Urban Living: The Social and Spatial Segregation of Nanjing, 1927–1937." *Construction* 5 (2010): 240–272.
- Wong, Sidney. "The Planning Connection between Clarence Stein and Liang Sicheng in Republican China." *Planning Perspectives* 28, no. 3 (2013): 421–439.
- Xing, Jun. *Baptized in the Fire of Revolution: The American Social Gospel and the YMCA in China, 1919–1937* (Series in Christianity in China). Bethlehem: Lehigh University Press, 1996.
- Xinong. "Housing Policy and Urban Planning of Britain." *Yinhangzhoubao (银行周报)* 11 (1921): 4–5.
- Xinong. "Housing Shortage Around the World." *Yinhangzhoubao* 10 (1921): 10–11.
- Zhang, Shiguang. "Civilian Residential Construction of Shanghai (1928–1949)." *Master diss.*, Shanghai Normal University, 2012.

- Zhang, Huihua. "Conservation and Renewal of Liyuan in Qingdao." *Master diss.*, Qingdao Technology University, 2011.
- Zhang, Mingqin. "Tenth Anniversary Speech of the Pootung Model Village in Shanghai." *Shanghaiqingnian* 53 (1935): 15–32.
- Zhao, Jin, and Juan Li. "The Construction of Affordable Housing in Modern Tianjin (1940–1942)." *China Real Estate* 2 (2014): 72–80.
- Zhou, Junqi. *The Social Life History of Tianjin in Republic of China*. Tianjin: Tianjin Academy of Social Sciences Press, 2004.
- Zhou, Zuoren. "The Spirit of New Village." *Xinqingnian* (新青年) 2 (1920): 136–141.
- Zou, Yiren. *A Study on the Change of Population in Shanghai*. Shanghai: Shanghai People Press, 1980.