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**How the planning concept of “Microdistrict” (*Xiaoqu*) shaped
the Chinese contemporary living ideologies: Documentation
and Understanding of Space-People Relationship**

Zhengyu Wu

Supervisor: Kaiyi Zhu

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Abstract

Have microdistricts changed Chinese people's living ideologies? The appearance, spatial relationships and community organizations of Chinese Microdistrict have changed dramatically over the decades since the 1950s when the Soviets first introduced this concept. Meanwhile, the rapid urbanization and commercialization of the real estate market made it hard to document and observe. Therefore, limited time and energy were primarily devoted to economic and aesthetics. This essay will use the 1978 Chinese Reformation as the dividing line, comparing the different living ideologies before and after the commercialization of the real estate market. To observe the result of the architectural changes from perspectives of social activities, daily routines and living experiences. The documentation process in this essay is essential, offering an opportunity to compare the same concept's evolution over decades. This research aims to set a starting point for the acknowledgement and involvement of architects and historians to be aware of the value of microdistricts and how they shape people's living habits. The potential application can help designers understand the consequences of their decisions to prevent irreversible results.

Keywords

Microdistrict, Xiaoqu, Residential compounds, USSR urban planning, China, Real Estate, Community life, Xiong An, SSIP

Glossary

Microdistrict – Residential compounds, normally with several residential building together forming a neighborhood.

Five-year-plan – Ecology planning tool, often last for 5 years (sometimes less)

Bolsheviks – Political group led by Lenin, later formed Russian Communist Party

Garden City – Urban planning theory proposed by Ebenezer Howard, aiming to create utopian healthy city

Danwei – Chinese word for “Unit”, used to describe working place.

Podium Building – Small building volume attached to the main building, usually used to separate functions.

Chapter 1: Introduction

To begin with, Winston Churchill said this famous sentence in 1943: “We shape our buildings, and afterwards, our buildings shape us”. In China, cities have urbanized tremendously, leaving insufficient time for smooth transition and deep research on some angles. The commercialization brought vast opportunities for making fortunes, contributing to comparatively more research focusing on economics, real estate developments and urban planning aspects instead of from a living ideology or architectural ethnographical perspective. In 2016 and 2017, the revenue growth rate of the real estate price in Chinese top-tier cities reached its peak (MacroMicro, 2024), which encouraged the birth of technology companies like XKool, who even applied Artificial Intelligence in the design of floor plans and arrangement of the site, providing extensive data analysis for investors and developers to make the most efficient and rational decisions (Bruno, 2019). This pursuit of maximized profits has led to the overlook of the interrelationship between building environment and human life, resulting in various related social and economic issues, such as reduced greenery areas for larger parking lots, feelings of isolation, and even crime activities due to lack of surveillance (Xu, 2012). Therefore, the problem is through which perspective we could understand how spatial qualities of microdistricts change people's perception of their surrounding environment and how this relationship changes people's daily routine.

To understand what makes the Chinese urban environment unique and how the mentioned problems appear, it is necessary to acknowledge the fundamental urban planning concept of using “Microdistrict” as a guiding rule in planning and architectural designing. “Microdistrict”, or in some particular cases *danwei* (“unit” in Chinese), has been one of the most dominating elements in shaping the Chinese urban landscape and living environment (Xu & Yang, 2009, p.100).

Learnt from the Soviet Union, this planning concept was applied and evolved through decades in China, influencing the living ideology of Chinese people. By definition, Microdistrict is a type of communal residential morphology that emerged from the demand for large numbers of housing during the 1920s-1950s in the Soviet Union (Engel, 2022, p.664). Due to complex social, political and economic reasons, in China, this term is also named as “residential compound” or “gated neighborhood”, describing an enclosed area with a number of similar apartment buildings and shared public spaces, and usually belongs to one community municipality or real estate developer. Over the past few decades, “Microdistrict” along with the architectural form within it have evolved dramatically, embracing the design concepts from both aesthetics aspect to environmental and anthropological aspects.

The appearance, spatial organization, and community structure all changed during this period, especially when we compared the living units before the Chinese reformation in 1978, during Mao’s era, with the residential compounds after the commercialization. By combining the research on the spatial qualities and the documentation of people’s experience in different phases of development, we could have the raw materials for comparisons to evaluate the advantages or disadvantages of different architectural ideas, as well as their influences on living styles.

This essay will start by introducing the Soviet origin of the Microdistrict and make comparisons between the Microdistrict in Mao’s time and the commercialized Microdistrict after the 1978 reformation, focusing on both spatial characters and their influences on people’s living concepts. The example of SIP (Suzhou Industrial Park) and Xiong An district will be used to build up a proposal on what Chinese residential units can change to cooperate with the latest technologies and design concepts, as well as what spaces can be created to encourage better community life. The result of the essay will not only serve as documentation of the development of microdistricts in China but also possibly raise awareness of the influences of the design of microdistricts. The research can be further developed into architectural ethnographical research on the modern Chinese Microdistrict.

Chapter 2: Literature Review

Two main aspects will be discussed in this essay, which tackles both the architectural and social characteristics of microdistricts. Therefore, it is important to look into both related academic fields. As for the architectural aspect, there is an inspiring article by Daniel Weiss, Gregor Harbusch and Bruno Maurer: “CIAM 4 and the “Unanimous” Origins of Modernist Urban Planning”, in 2015, introducing the shared acknowledgement of architects in the 1930s that urban planning should embrace communal life, function areas need to be separated to save the chaotic metropolis, but the interrelationships need to be aware. This discussion and documentation revealed a theoretical base of the Soviet’s communal and functionalist urban plan. Since Chinese microdistricts came from the Soviet Union, it is necessary for this research to be based on theoretical origins.

The research done by Xu and Yang (2009) combines the spatial characteristics of Chinese gated neighbourhoods with the spatial characteristics of historical Chinese houses to document some evolutions in architectural forms and spatial compositions. Their article was the starting point for this research. Nevertheless, it is clear that their article does not talk about the changes that have taken place in space concerning people's living habits or how such changes have, in turn, acted on the evolution of space. At the same time, the article was written in 2009, and it does not address the policy direction of the emerging spatial forms of the latest time, which is where the timeliness of this research comes in.

As for the discussion of the relationship between microdistrict’s space and residents, Attwood (2010) offered a great opportunity into the research soviet residential buildings throughout different times from the perspective of family composition and gender relationships, whose depth is rarely shown in other research. Some of the problems of Soviet residential buildings were linked by the author to

changes in the scale, organization, gender, and ages of the residents' families. If we apply the same perspective and principle to the research of Chinese microdistrict development, we will have an interesting perspective that connects the living experience more closely with architecture.

Discussions about Chinese microdistricts often remain at the level of architectural structure, efficiency of space use and maximizing economic benefits. At the same time, the relationship between neighbourhoods and human activity is very rarely noticed and documented. Momoyo Kaijima's (2018) architectural ethnography, which was based on Modernology, offers new opportunities for understanding modern architectural space, encouraging the documentation of the forms in which today's urban spaces are assembled and the impact they have on people, but stopped at observation. This essay hopes to provide a reference and encouragement for documenting the modern Chinese microdistricts, a dominant element in Chinese cities. The study and observation of microdistricts should not overlook the human perspective, and ignoring the role of space in shaping people may lead to moral, legal, and political changes. Based on the architectural ethnographical perspective, this research will devote some efforts to documenting and observing the current situation. However, the essay will further discuss the historical development and the relationship between space and humans, particularly in current China, in the main chapters, filling the gap in the Chinese academic fields.

Chapter 3: The origins of Microdistrict and its application in Mao's era China

3.1 Microdistrict in Soviet time

The communal lifestyle was not initially ingrained in the Soviet people's minds but through a gradual transformation process lasting tens of years from traditional agricultural to communal urban life. Instead of totally abandoning the original housing style and wood-brick construction methods, the development of Soviet housing estate still established continuity by focusing more on renovations of old low-story wooden residential buildings around industrial facilities (Engel, 2022). It was a reasonable choice, considering the horrible situation of modernization, represented by the fact that in 1913, over 80% of the houses in cities were wooden structures houses with stories below 3, and no tap water was running through (Zhukov & Fyodorov, 1974, p. 11). These living conditions can not satisfy people's needs and do not cope with the promise issued by the Bolsheviks to improve people's living conditions, threatening the credit of the new government. Meanwhile, architects in the 1920s mainly started their professional life in prerevolutionary Russia, having not realized how much freedom they had to create new morphologies and concepts in the entirely new social reality (Kopp, 1970, p.43). Therefore, it was not until 1932, 15 years after the revolution, that massive innovation was achieved in the aspect of building environment (Kopp, 1970, pp.43-67).

The innovation in the architecture field was not just pure imagination, but more similar to a slightly radical evolution based on the new social realities. The decisions of planners and policy makers were influenced by improvements on building technologies, industrialization of manufacturing building materials and western urban planning theories. 1928-1932 has witnessed the first Soviet's five-year-plan, which focused on heavy industries, especially concrete and steel, made it possible for the application of steel structure frames and pre-cast concretes, offering a solid material and technological



Figure 1: An apartment building in Moscow are constructed in 1961 using pre-fabricated panels.

base. Although with the help of the technology and industrialization, the problem Soviet cities faced were in fact severe. The growing number and scale of these factories encouraged the population shifted from farmers to factory workers. People pouring into the cities and desperate for houses. This trend was disrupted by the WWII when the aims for factories shifted from civilian products to tanks, guns and ammunitions, while considerable amounts of people went for battle. After the war, the Soviet government had to once again face the reality of mostly destroyed cities, rapid growing number of populations and their demands for housing. Population growth and housing shortages created a much greater conflict this time than ever before, in 1949, the housing number had just returned to its pre-war level while the population grew another million in Moscow, and this became the great challenge that the future new Soviet leader, Nikita Khrushchev, faced when he became the chairman in the capital (Tompson, 1995, pp.99). Under his instructions, the construction of the new residential buildings aimed at three goals: better, faster and cheaper (Engel, 2022, pp.665). Consequently, building technologies that help achieving this goal were applied, meaning the usage of prefabricated concrete panels or even modular room blocks (Engel, 2022, pp.666), as it is shown in the figure 1. Not only did this new form of industrialized buildings satisfied part of the housing demands, but also conveyed a message that the party is advanced and the achievement in industrialization is outstanding.

As Engel (2022, pp. 665) introduced, the possible very first attempt was made by Milyutin in his planning of Sotgorod. In Milyutin's plan, public functions, social facilities, and residential areas were placed closely together, distant from production area, isolated by green belt buffer zone. There was a clear reference to the "Garden City" theory, which encouraged awareness in environment, limited population, and low-price living units (White, 1980). From this perspective, each Microdistrict functions as a mini city with controlled population, controlled functions, and controlled lifestyle. As Engel (2022, pp.669) reported, microdistricts encouraged communal life by integrating people from different classes and social backgrounds, but the function areas were strictly kept being purely solo usage: residential area can only be lived, no other activities should be held here, which is very different when we compare the Chinese modes afterwards.

These rapid growing prefabricated apartments mainly served so called "average families", defined by a combination of parents with 2 kids (Attwood, 2010, pp.155), along with single residents. Therefore, the living areas were often small and there were canteens and public leisure rooms, residents would have their beddings and clothes washed by other workers so they can focus on work and their own life (Attwood, 2010). However, these apartments did not consider the future expenditure or change in family structures, leading to potential risks of insufficient space and lack of flexibility. In most cases, these building blocks were planned to work together as a residential compound. These standardized apartments were allocated to people from different social classes and an interesting public connection were established. Attwood (2010, pp.162) introduced that: in these apartments, residents' community have so much professional skills that they seldom asked for plumbers or electricians. People with certain skills would also hold up tutorials for others to develop their interests; they also managed to organize volunteer groups to clean the public areas like corridors and staircases by their own.

As showing in the figures below, these spaces still encouraged social contacts, but they were no long able to cater to the growing population and became crowded and old fashioned.



Figure 2 & 3: 1979 film Moscow does not believe in tears.

Left: old lady complaining the shrinking space. Right: same room showing how the tiny space can have multiple uses

3.2 Microdistrict in China before 1978 economic reform

The rational choice of Soviet Union created this model of Microdistricts, solving the housing problems and successfully advertised the advantage of the new communist party compared to the imperial Russia. These apartments were considered as advanced building technologies at their birth, but due to lack of maintenance, flexibility, and the collapse of Soviet Union, many of these neighborhoods are now leading to considerable issues and need renewal (Engel, 2022, pp.675). On the other side of the earth, the socialist China, as a young republic, who just ended WWII and civil war, chose the same idea for housing its people. The complex considerations behind the decision are similar to soviet: nearly destroyed cities, large population, and the needs of industrializations. At the same time, we cannot overlook Soviet's active or passive influence on Chinese planners. As Lu (2006) mentioned that in 1950s, most articles in the national architectural journal were translated practices of Russia and Eastern Europe. From the urban planning and social political perspective, as reported by Fang (2014, pp.101), the arrangement of the living space in Chinese cities aimed at serving the massive production and made it easier for organizing local municipalities. For example, fruit farmers were centered around the area of fruit fields and formed a large community, where people know each other and took care of others' kids. The composition of these "danwei" forms a relatively equal, unified, honeycomb-like geographical structure (Fang, 2014, pp.101). In terms of architecture, the introduction of the Khrushchev Building in the Soviet Union was considered advanced at the time, distinguishing it from the old low-rise wooden or brick buildings. Multi-story prefabricated concrete buildings solve the problem of increasingly crowded cities and structurally safer. Architect Zhang Kaiji proposed 5-6 stories buildings, instead of high rising buildings, to keep up the pace of the fast transformation from rural areas to industrial and urban areas (Wen & He, 2023, pp.60). These low-story apartments also allow the absence of lifts and water pumps, although it was later proved that this absence is problematic. In conclusion, Microdistricts demonstrated the country's achievements in industrialization and modernization. This kind of propaganda with legitimacy was very seductive to the people, who were experiencing a huge gap between the rich and the poor during republic of China, not to mention the fact that such housing was distributed directly to every working family. Microdistricts created clear political guidance, shaping the fairness and advancement of the new government, while advocated the need to embrace communal life and work hard in socialism construction.

3.3 The last days of the Microdistricts built in 1950s

The story kept being nice and convincing, at least for the decades before the reformation in 1978, when the same situation happened just like the Soviet, lack of maintenance, growing populations, rooms lack of flexibility etc. Many of the Khrushchev Buildings in the microdistricts were given the name of *tongzilou*, meaning buildings like tubes, which was used to describe the spatial composition of central corridors with room on two sides. There were several literature and documentations reflecting the



Figure 4. A dim Corridor in a *Tongzilou* with cooking utensils and other stuff left by various residents. (Xia and Yin, 2007)

situation of these apartments in the 1980s, usually negative. Producer Xia Jun (2006) recorded the life in such buildings in his book: *Residence changed China*. To have a place in such buildings in the 1980s, one must queue for a long time, no matter you are with your families or alone, you may only be able to get 1 small single room. Your family, social credit and titles will be marked to decide your position in the queue. Finally, you would get a maximum 13 square meters room with no kitchen, no bathroom, one door and one window. The bathrooms are shared, with male on one side and female on the other side of the 100-meter-long corridor, during the rush hour in the morning, one may not be able to have a position in the bathroom, so you better prepare urinal yourself. People are cooking on the gas stove directly on the corridors, leaving less than 1-meter-wide free space in between.

However, there were also positive reflection on this communal lifestyle and praise the vitality of the space. Zhou (2018) wrote down his single life in the apartment, describing the rooms and the corridor are like a stage, with people come and go, performing operas of different themes. “Those days, the rooms joined and separated, making different compositions, when someone changed to a single room, the opera of life then shifted from public to private” (Zhou, 2018). This unique residential spaces in the Microdistrict blurred the boundaries between private and public. It is obvious that the space is lack of privacy, extremely dangerous and inconvenient in many aspects, but it indeed did what the designers expected in an unexpected way, encouraging, and actively created communal way of living.

Chapter 4: The Development of Chinese Microdistrict after 1978 economic reform

In the late 70s and early 80s, after Chairman Mao passed away, Chinese government soon began the economic reform, following by commercialization of the real estate market, which greatly influenced the residence situation. There was a collage describing and criticizing the reality of living in the 2000s by Xiang liqing. The vice-president of Shanghai ministry of Urban planning at that time made a comment on this photo that: we all live in such similar space, but we don't really pay too much attention to it, and none of us has realized how shocking they look like (Xia & Yin, 2006, pp.5).



Figure 5. 永不摇晃[Never shaking]. (Xiang, 2002).

People were greatly unsatisfied about the stagnation of the housing construction during culture revolution, considering the total number of the housing could no longer hold the growing population. Before 1978, 90% construction were funded by government and 10% were paid by state-owned enterprises (Yin, 2023). Therefore, after the economic destruction of revolution, the government, no matter local or central, did not have sufficient funds to support new construction of houses. We could therefore argue that the commercialization saved the housing shortages in 1980s China in both economical and physically aspects.

The very first attempt of commercial housing took place in Shenzhen, 1981, as one of the earliest testing areas for the reformation, the central government specially allowed the Shenzhen government to separate the ownership and the usership from the legitimistic level and develop the land together with merchants from Hong Kong. This Microdistrict called “donghuliyuan” (east lake beautiful garden) was

born for attracting families of Hongkong merchants, instead of given to single workers for free. The name suggested an obvious tendency to make the living quarter private, as “yuan”(苑) in Chinese normally means private gardens, the transformation from state owned dormitories for workers to houses for private joyfulness is clear. At the same time, this Microdistrict was the first example of introducing the property management company to take care various matters in Microdistricts (Liao, 2005). The property management companies take over the function of neighborhood committees in providing assistance in living aspects and has certain administrative functions. The role of the neighborhood committees has been weakened, but they continue to serve as the most fundamental level of management organization in cities. People nowadays are used to ask these property management companies to solve most of the daily issues, such as repairing the gates, check the securities and maintaining greeneries etc. One can hardly imagine the life in microdistricts without a proper management company now and willing to pay annually.

Since this first test in 1981, there have been many changes in China's commercial housing in terms of architectural style, room layout, the relationship between public space and residential space, etc. In architectural field, there are encouragement to ensure the private joyfulness, security, and convenience. For example, in 1950s, the living space in the apartments were often described as dim, narrow and lack of privacy. Seems to be a compensation, French windows soon gain huge popularity in the opened housing market. Pengpai news (2020) reported the situation that wherever there is usage of large opening windows in an apartment to be sold, the developers must include this information in the advertisement, even though the French windows cost a lot and inefficient in energy saving.



Figure 6. Large French window in Chongqing.

These large glazing units exceed the size of normal windows in residential houses by 80% and require special equipment to transport and install on site (Pengpai, 2020). Considering its cost and visual effect, they are often synonymous with luxury commercial Microdistrict. While large glass windows can be considered a reasonable pursuit of better illumination, the pursuit of Western-style façades sometimes seems to illustrate the influence of Western commercialized culture on people's aesthetic habits towards living spaces from another perspective. Microdistrict with the name “Mediterranean garden”, “California Rose”, “Peninsula mansion” appear in various cities in China, from rich eastern coast to even cities like Xi’an in central China. The façade of such apartments usually mimics the style of western vernacular buildings, for example in Figure 7, with chimneys for only decoration use, orange tile pitched roof and “watch tower” at the entrance. These decorative elements normally have no practical

functions and low in quality. The new commercial microdistricts clearly reflect an appeal to Western aesthetics, to consumerism and hedonism.



Figure 7. A Mediterranean Microdistrict in Xinyu, Jiangxi Province.

Rather than depending on other workers to take care of life chores like in the Soviet 1950s, most of Chinese microdistrict residents are now wishing to keep every possession contained within the enclosure of the apartment wall, and even the enclosure of the Microdistrict walls, like the thick city wall in the medieval age. These gated neighbourhoods influence people's idea in a subtle way, that the Microdistrict is not a community, but more similar to private possession. This influence can be shown in various of aspects, such as the electric wires above the walls, steel bar protection caged the windows, the popularity of thick steel doors with fingerprint locks for each apartment. Residents nowadays seem to be willing to live in a "secured cell". In 2016, when the Chinese government was trying to remove the enclosure wall, there was a huge contradictory voice in the society (Zhang, 2016). Residents don't want anyone from outside the microdistrict to come in, yet they wish they do not need to go out. There is a particular small space that is working as the bridge to connect the exterior and interior side of the Microdistrict, which seems quite unexpected, the express station or self-pick-up locker.



Figure 8. A resident picking up at one of the lockers. (Li, 2020).

As shown in the Figure 8, these pick-up lockers are part of the result of thriving online shopping in China and a solution for the convenience and concerns on safety of residents. Deliveries put the package during the worktime when residents are not available and send a code for people to collect them after works. This facility prevents the direct contact between deliveries and residents; therefore, one can no longer be able to see the residents greeting on person with the mailman. Another space is the express station, normally not within the microdistrict's wall but at the attached buildings within close reach. It becomes interesting when people gradually start to communicate when seeing each other during

picking up and some people are wearing pajamas during this process. The process of picking up package somehow encourage the communication among residents and lower the barrier between public and private space. The podium buildings are also a unique application in shaping the microdistrict's spatial

relationships. Several years ago, these outward-facing buildings appear only in busy city districts to hold commercial activities (Xu & Yang, 2009, p.115). They became popular and expand to almost every microdistrict and form new commercial and public spaces within city blocks.



Figure 9. 临街房[storefront]

These small-scale constructions can be the extension of the concrete frame structure from the lower level of the residential buildings or completely isolated as new building blocks. Usually reach two stories and with the maximum height of 24 meters by law, these podium buildings hold mostly commercial functions like restaurants, grocery stores and clothes shop. Nowadays, more diverse functions are using this space, like local municipality office, police station, or even community hospitals, adding much importance and public characteristics to the space along the busy street. These rooms can only access from the front, which means they are totally separated with the living areas and work as part of the wall, to secure the safety and bring less trouble for the property management companies. Such space cultivates the habits and change the definition of convenience of local residents, who are getting used to be able to obtain all necessities for life right downstairs. There is a tendency that the podium buildings are playing a main role in encouraging public activities and gradually become a tool for designers and governors to provide social welfare for communities. In 2020, Chinese government issued a document demanding some areas to make experiment of inserting “public cafeteria” in the neighborhood. Some people worried that this will be the sign of regressing back to planned economy era (Lianhezaobao, 2022). But it can also be interpreted as the proof that the government has realized the importance of these podium buildings have in serving the residents, is a valuable attempt to integrate past communal spatial relationships into the contemporary context.

In conclusion, plenty of new architectural form, style and spaces have appeared in microdistricts and evolved through decades after 1978 Chinese economic reform. They established new spatial and social relationships among different stakeholders within microdistrict and further shaped the living habits of residents. Yet the current microdistricts are still unsatisfactory and there are possibilities that the potential of the space is not fully aware by designers. Both Xu (2012) and Fang (2014) mentioned the problem of “space differentiation”, representing by people from different social class live differently within a certain area. In Microdistrict, this can be shown by the situation that poor migrants from other cities, usually labors or relocation people, are living at microdistrict with poor qualities and apartments with over 20 floors, while mid-class, white collars, locals, are living in those with higher building qualities and apartments with only 5-6 floors. This situation ultimately led to the social isolation among groups and is destructive for the community.

Chapter 5: The latest examples and future possibilities

As Xu (2012) criticized, the current microdistricts fail to strengthening the communal life of the residents due to unreasonable scale of building elements, mono-functionality of space and lack of public spaces. It can be assumed that the Chinese government has already noticed such problematic issues and tests has already been carried out in Suzhou, who signed a co-operative contract with Singapore, and Xiong an, a new city near the capital. They employed two different approaches to enhance the benefit of microdistricts and trying to solve the problems

Suzhou government signed a contract with Singapore in 1994 to build a district with joint efforts and aimed at providing a blueprint for future Chinese cities (Pernice and Dong, 2014). Judging from the result, it succeeded in defining the principle of roads, park design and most of all, introducing the idea of neighborhood center, as Pernice and Dong (2014) reported. They also introduced that this neighborhood center by definition, should support the demands of surrounding 20,000 to 30,000 residents in approximately a range of 15,000 to 20,000 square meters, with functions like grocery stores,



Figure 10 and 11. Yaojiaxiang Neighborhood Center and the public event held in the courtyard

canteens, library and other social activities. Considering the humid and rainy weather condition, many of these neighborhood centers choose to have inner streets, covered but open corridors and shops facing inwards, with squares but less open spaces (Pernice and Dong, 2014, p.7-8). Multiple design methods of composing the building complex are applied, such as linear form, centralized form and courtyard form. Yaojiaxiang Neighborhood Center is a clear example, as shown in the figures 10-11, which employed the linear courtyard type, with the courtyard normally work as children's playground and transformed into public event space when needed. These neighborhood centers are organizing events with the participation of surrounding residents, creating a centralization of community life. The Neighborhood Center model is obviously successful in terms of encouraging social connections, providing convenience to local residents and support public events and functions efficiently (Pernice and Dong, 2014). However, this model still has several drawbacks. There gradually appeared to form the spacial differentiation that some neighborhood centers do not serve residents within its own range, where most of the people are relocation families from rural areas, but serve the middle-class immigrants driving cars. As such a dominant commercial complex existed within a certain range, there are less survival space for street shops and low-price markets (Pernice and Dong, 2014, p.10).

Another example is a more controversial project of Xiong An District in Hebei Province, near Tianjin and Beijing. This new district is part of the greater regional plan of Beijing, Tianjin, Hebei Integrations and aims at relocating "non-capital" functions out of Beijing (BBC, 2017). Despite the discussion on the necessity of building such expensive and distant new city, this city still has some reconsiderations of the living environment for future China and aims to be the model for future Chinese cities. For example, most of the microdistricts in Xiong An only have apartments with around 11 floors, with both podium buildings along the street and small commercial complex similar to neighborhood center at the crossing of the streets. A new narrative of creating a digitalized, high technology city is being established by proposing new ideas in both organization and physical environment. For example, currently residents or workers from water and electricity departments need to check the data of their consumption in person. It is not the case in Xiong An, the meters are linked with cloud service, therefore the data will be automatically sent to the central server (Cao, 2024). There is no need to have the physical access to these meters anymore, and the experience of checking these meters will possibly disappear. However,

this is very friendly to the old people, as many of them find hard to physically access to these low height small devices (Cao, 2024). It is also an interesting finding that the walls of microdistricts in Xiong An are rather low, and most of them have small openings for visual connection. This movement might be considered as a gradual attempt for the government to make residents adapting the living environment without walls. Since 5G networks are installed to every single room in microdistricts in Xiong An, government are now trying to promote the application of smart home devices, for example air conditions that can automatically change temperature judging from the weather and usage of the rooms to save energy consumption (Cao, 2024).



Figure 12. Gas meter in kitchen, hidden in the cabin. (Qijia, 2018)

In conclusion, both of the latest models for microdistricts and its surround neighborhood network are unique in their own way and have advantages along with disadvantages. It is hard now to make judgement which one will be the future model for Chinese microdistricts, or maybe combination of both. However, it is clear that either way will have influence on people's perception of their living environment and habits of living. The encouragement for communal life is still clear in all the proposals for the future, yet experiments are still been carried out to prove the effectiveness of the design.

Chapter 6: Conclusion

This research briefly illustrates the birth of the concept of Microdistrict from Soviet Union, and how it evolved in China before and after the 1978 Chinese economic reform, showing a complex history of this unique space. Some of the important architectural and social characteristics of old and contemporary microdistricts are discussed and documented. From architecture field, the essay discussed how the spatial quality influence how people act around microdistrict. The examples are given to vividly describe the living habits shaped by space, enclosure and building technologies. By analyzing the previously mentioned history, this article provides a perspective on the process of change in the attitudes of Chinese residents from collective to private life, and finds that communal life is slowly returning owe to the changes of space. The article does not go deeper into the social-economical aspects but there should be an awareness that the political and social changes also play a dominant role in shaping the living ideology of the residents. The reasons are complex and in diverse levels, but it is not possible to thoroughly discuss all of them in this short essay. For example, the private properties of the new microdistricts is also a valuable topic that can be discussed separately. There are so many stakeholders that it would be impossible to cover them all in one article, and the complexity of these disputes often leads to changes in policy and the creation of new spaces. Unfortunately, this information is not well integrated, and in China most of the information is scattered in the news, blogs and videos rather than in academic fields. And with rapid development, many of these conflicts are left behind and can lead to missed opportunities for research. To be more specific, some objects and the spaces in which they are located are changing, disappearing, evolving with the times. And these will affect people's habits and even create gaps in collective memory. For example, once people were used to cooking in the hallway or bending down to get into the cupboard to read the gas meter, and these living spaces and the memories they bring with them are gradually disappearing as technology advances and microdistricts are upgraded. It would be a shame if these histories are not recorded, and this might also be the meaning why Modernology exists. The expectations to the future might lies upon the beginning of documenting the current changes on various aspects of microdistricts. Based on the observations, there might be a more confident understanding of the strength of space in shaping people's ideologies,

reducing the unexpected outcomes in architectural designing and urban planning, in order to avoid irreversible social economic impacts. It is hoped that this article can encourage focus from more historians and architects on Chinese microdistricts.

References

- Attwood, L. (2010). *Gender and Housing in Soviet Russia : Private life in a public space*. Manchester University Press.
- BBC. (2017). 中国宣布的雄安新区是怎么回事? [What is going on with the announcement of Xiong An District in China?]. <https://www.bbc.com/zhongwen/trad/chinese-news-39478216>
- Bruno, E. (2019). Commentary/Integrating AI and Deep Learning within Design Practice Processes: XKool Technology. *Ardeth*, 220-226.
- Cao, Z. (2024). 以“算力”赋能“脑力” 数字孪生城市“看得见”[Use the computer as brain, visible digital twin cities]. *Zhongguoxiongan*. http://www.xiongan.gov.cn/2024-04/17/c_1212353449.htm
- Engel, B. “The Concept of the Socialist City. Plans and Patterns of Soviet Urbanism”. In Carola Hein (ed.), *International Planning History Society Proceedings, 19th IPHS Conference, City-Space-Transformation, TU Delft, 5 - 6 July 2022, TU Delft Open, 2022*.
- Fang, C. C. (2014). 中国城市居住空间的变迁及其内在逻辑 [Changes in Chinese Urban Living Space and Its Internal Logic]. *Xueshuyuekan* (46), 100-109.
- Kopp, A. (1970). *Town and Revolution: Soviet Architecture and City Planning 1917-1935*. George Braziller.
- Liao, X, B. (2005). 东湖丽苑：梦开始的地方 [Donghuliyuan: where the dream started]. *Xiandaiwuye*(07), 58-60. Doi: 10.16141/j.cnki.xdwxyjs.2005.07.027.
- Lianhezaobao. (2022, November 4). 中国城市小区建“社区食堂”引发争议 民众担忧改革开放政策倒退 [Controversy over 'community cafeterias' in China's microdistricts prompts fears of backsliding on economic reform policies]. *Lianhezaobao*. <https://www.zaobao.com.sg/news/china/story20221104-1329539>
- Lu, D. F. (2006). *Remaking Chinese Urban Form: Modernity, Scarcity and Space, 1949-2005*. Routledge.
- MacroMicro. (2024). 中国一线城市房价 (年增率) [House prices in China's first-tier cities (annual rate of increase)]. <https://www.macromicro.me/collections/26/cn-house-relative/255/cn-first-tier-city-housing-price-newly-constructed-commercial-residential-buildings-growth-rate>
- Kaijima, M., Stalder, L., & Iseki, Y. (2018). *Architectural Ethnography*. Toru Kato.
- Pernice, R., & Dong, Y. P. (2014). The Making of a Contemporary Neighborhood Center in SSIP-Suzhou, China Case Studies on an Architectural and Urban Type in Contextual Transformation. *Inter-university seminar on Asian megacities: Smart urbanism for Asian mega cities, 27-30 August 2014*. <http://doi.org/10.13140/RG.2.1.3186.2241>
- Peng, P. (2020, December 29). 买房为什么不能忽视“窗户面积”? [Why should you not neglect the window areas when buying houses?]. https://www.thepaper.cn/newsDetail_forward_10577278
- Tompson, J. W. (1995). *Khrushchev—a political life*. St. Martin's Press.
- White, P. (1980). Urban Planning in Britain and the Soviet Union: A Comparative Analysis of Two Planning Systems. *The Town Planning Review*, 51(2), 211-226. <http://www.jstor.org/stable/40103713>
- Wen, L. F. & He, J. (2023). 百万庄小区历史建筑群：烟火生息 历久弥新[Baiwanzhuang Microdistrict historical building complex: Alive and long lasting]. *Construction and Architecture, 2023, (1)*, 50-85.
- Xia, J. & Yin, S. (2006). *居住改变中国*[Residence changed China]. Tsinghua University Press.
- Xu, J, F. (2012), 中国传统与现代居住空间形态对比研究——兼论现代居住的社区性不足 [A Comparative Study of Traditional and Modern Residential Space Forms in China--Another Discussion on the Insufficiency of Community in Modern Residence]. *Juzhukeji* (10), 1-5. doi:10.13626/j.cnki.hs.2012.10.003.

Xu, M., Yang, Z. (2009). Design history of China's gated cities and neighbourhoods: Prototype and evolution. *URBAN DESIGN International*, Vol.14, 99-117.

Yin, Z. (2023). 中国住房问题的历史回顾和未来思考 [The historical review of Chinese Housing Problems and future thoughts]. Zhongguochengshiguihuawang.
<https://www.planning.org.cn/report/view?id=596>

Zhang, D. Y. (2016, February 22). 人民日报: 中央要求拆除小区围墙不是拍脑袋决定 [Renminribao: it is not an arbitrary decision to tear down the microdistrict walls]. Xinhuaawang.
http://www.xinhuanet.com/politics/2016-02/22/c_128741478.htm.

Zhou, H, B. (2018). 筒子楼[tongzilou]. Qingdao University.
<https://www.qdu.edu.cn/info/1237/13972.htm>

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https://www.youtube.com/watch?v=NTWA_7-ld_U&t=4s

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https://www.thepaper.cn/newsDetail_forward_10577278

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<https://m.jia.com/zixun/jxwd/666083.html>