Improving Livability in Historic Neighborhood

A Case Study of Meiyuan Xincun, Nanjing, China

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Personal motivation

This thesis focus on the livability issue in historic neighbourhoods under the Chinese heritage management context. I choose Meiyuan Xincun, a historic neighbourhood in Nanjing, as a case to identify the problems, test new theories and envision a livable future. This topic and site arose from my personal experience and interests. I used to live in Nanjing, a city with many historic districts, for six years. I noticed that citizens and tourists liked to take a walk inside historic neighbourhoods for the human scale streets, the historic atmosphere, and the aesthetical historic buildings. However, once entering the houses, one can see how bad the living situation is inside the lovely facades. Such problems are not specific but universal in Chinese cities. For a long time, the Chinese practices only focused on preserving historical objects and gaining economic profits out of historic resources. However, the living situation of the residents is not considered by the government and urban planners. The protection and utilization of heritage are based on a narrow understanding of heritage, considering heritage as non-renewable resources that belong to the past. Human interventions from the present are seen as harmful to historic resources. Nevertheless, livability often requests changes in the physical elements. Therefore, heritage preservation and livability improvement often considered as two irrelevant things.

As an urbanist student, I feel the duty to speak for the residents and envision the future from a livability perspective. In this project, I will use Meiyuan Xincun as a case to find a balance between heritage preservation and the improvement of livability.

Abstract

This graduation project focuses on the livability issues in the historic neighbourhood under the Chinese context. The current Chinese heritage preservation focuses on conserving material, while livability means adapt physical settings for present use. Therefore, the living condition in the historic neighbourhoods is often neglected. This thesis aims to solve the conflicts between heritage preservation and livability by using a broader definition of heritage value.

Literature suggests that the community is also a part of the heritage. The well-being of the local community will add a unique identity to the heritage site. So heritage preservation and residents' livability should be linked together. The value of heritage is attributed to the material and shown in the social aspect. There are multiple values attributed to a heritage site, and the spatial transformation process is actually the consequence of prioritizing specific values. By comparing three heritage management approaches that prioritizing different stakeholders and values, a hypothesis is made. The hypothesis states that the value-based approach can be used to improve livability in historic neighbourhoods under the Chinese planning context. This thesis uses Meiyuan Xincun as a site to test this hypothesis.

There are three steps in the research by design process. Firstly, research on the broad heritage value will be done to understand the values based on perspectives from all stakeholders. These values overlap or even conflict with each other, and prioritising certain values will lead to different spatial transformation strategies. Secondly, the material-based approach (prioritizes the value of the physical element) and the living heritage approach (prioritizes the local community) are tested to explore the conflicts between the current heritage preservation approach and community needs at the spatial level. Then the value-based approach is adopted to solve the conflicts and come up with spatial strategies. Lastly, design scenarios are developed based on these strategies and are assessed by livability indicators.

The outcome of this thesis is a set of methods to elicit heritage values, spatial transformation strategies, and design scenarios to show the livable future in historic neighbourhoods. The research concludes that the local community's livability is vital in preserving historic residential areas' true value. The value-based approach can be used in the current Chinese planning context to improve livability.

1 Introduction

This chapter will describe and analyse the context of this project. A short introduction of the values attributed to the site from various stakeholder perspectives will be made. Then, livability issues will be raised, and a multi-scalar approach will be used to demonstrate the problems in different scale and aspects. The purpose of this chapter is the set the scene and explicit the livability problem.

1.1 Location and scale

The site is located in the city centre of Nanjing, China. This subchapter defines the site's location and shows the context in different scales. The livability problems in the site are caused by situations from different scales. Therefore, before giving an in-depth analysis of the problems, a brief introduction will be made to all the scales. All the topics listed here are relevant to the livability of residents in Meiyuan Xincun and will be discussed in detail in the following chapters.

1.1.1 China: heritage preservation controlled by the central government

Meiyuan Xincun is a protected historic area in China, and the preservation strategies follow the legal protection framework made by the central government. The heritage preservation practice in China started in the 1980s and was initiated to resue the historic fabric and resources threatened by rapid urban development. The Chinese approach is expert-driven; the value of heritage is seen as inside the old fabric. Therefore, the main principle used to define heritage is the material's age, and only minimal interventions are allowed for the sake of the completeness of the heritage structure (Jokilehto, 1998). Meiyuan Xincun is designated as a historic district according to such rules, and its structure and buildings are protected. However, such protection is only for the physical environment, and the lives of residents are rarely mentioned.

1.1.2 Nanjing: a famous historical city

Nanjing's literal meaning is "Southern (南, Nan) Capital (京, Jing)". It is one of the four ancient capital cities in China. The city's rich history contributes to the formation of today's Nanjing and makes it a predominant historical and cultural city. Besides the historic famous, Nanjing is also the provincial capital of Jiangsu Province, and it serves as a political, industrial, cultural, logistical and technological centre (Yuan et al., 2016). In order to win up in the completeness with other major cities, the local government is planning to build up the cultural identity and attraction by making the city brand of "Capital city for six Dynasties". As a historical relic during the Republic of China, Meiyuan Xincun is a crucial part of Nanjing's city brand and identity. Therefore, the municipality has made several transformation plans for the site, aiming to turn it into a tourist attraction.

1.1.3 city centre: opportunities for transformation and new social group

Meiyuan Xincun is located in the city centre, surrounded by many historical attractions and economic hubs. Various stakeholders are interested in this site. The historical and cultural meanings attract tourists, and the premium location plus aesthetic buildings attract creative workers. Developers also interested in this site for

the potential of redevelopment and economic profit. These new opportunities can be chances for residents well-being but might also disrupt their daily life.

1.1.4 Meiyuan Xincun

Meiyuan Xincun was built in the 1930s and is one of Nanjing's ten historical and cultural preservation areas. It is considered by the government to be one of the most attractive city images due to its proximity to the city centre and its distinct feature of the Republic of China. Because of the influential factors from the larger scale, this historic site has multiple meanings and values to different stakeholders. However, from the eye of the actual user, the residents, this neighbourhood is a living place lacking space and facilities. Unfortunately, the transformation plan of the site has never focused on the living condition of the residents. This thesis aims to use Meiyuan Xincun as a case to test new theories and link heritage preservation with livability need.

1.2 Multiple values from various perspectives of Meiyuan Xincun

Meiyuan Xincun was built in the 1930s and witnessed several historical events. So currently, there are different meanings attributed to the site from various perspectives. Historical preservationists, government, tourists and developers all value this site, but for different reasons. This subchapter will introduce the site from the perspective of all relevant stakeholders to show the site's importance and the complexity of values attributed to the site.

1.2.1 Historical preservationist

From the perspective of historical preservationists, the site is a historic neighbourhood with unique building typology and urban fabric.

The oldest building in Meiyuan Xincun is the Pilu Temple, built in the 16th century. Most of the buildings that remain today were built between 1930 and 1936, during which the urban tissue took shape. The 1930s was the time when western urban planning knowledge and building technique came into China. The government hired the American planner's Henry Kikkam Murphy, Ernest P.Goodrich, and Ruud Gullit, to make the city plan of Nanjing (Han, Chen, & Zhou, 2020). Meiyuan Xincun was part of the new city plan, and several foreign architects designed the site. The architecture was a combination of western garden house style and Chinese style. These unique building materials and style show the characteristic of the Republic of China (1912-1949) and seen as precious resources by historians to study the past.

1.2.2 government

From the government's perspective, the site has political value because it was the residence of Zhou Enlai, the first Premier of the People's Republic of China.

After the site was built, the Anti-Japanese War (1937-1945) and the Chinese Civil War (1945-1949) started. In 1946, during the negotiation between the Communist Party and the Kuomintang, the site was the residence and office place for the delegation of the Communist Party. Enlai Zhou, one of the leaders of the Communist Party and the first Premier of the People's Republic of China, was the leader of the delegation and lived here for several months. After the Chinese Civil War ended, a Memorial Hall was built to memorise Zhou Enlai and the historical events. Currently, the site is used as a touristic attraction and patriotism education base.

1.2.3 Visitors

The site is also attractive to tourists because of the cosy historical streets and esthetical historic buildings. From the tourists' perspective, the site has historical values, stimulating a reaction to the past. The site also has aesthetic values due to the visual qualities of the streets.

1.2.4 Developers

From the perspective of developers, the site has economic values. The site is attractive to tourists, and several cultural relics and economic hubs also surround it. There has vast potential for touristic development and economic profit. The developers' pursuit of economic profit is also supported by the government, which can also gain economic benefits from the tax. In 2019, the government made a transformation plan that focuses on the design of the streets. In this project, a large number of houses along the streets are transformed into tourist shops.

1.3 The heritage preservation framework in China

Because of the multiple values attributed to Meiyuan Xinucn, it is listed as a historically protected area by the central government, and the Chinese heritage preservation system is applied. This system was first created in 1982. During the years, China has developed a legal framework to protect cultural relics, which is exceptionally protective and nationalistic (Smith, 2014). In this framework, the most important one is the Cultural Relics Protection Law (CRPL). All the cultural relics are divided by a grading system and have appointed protection stakeholders. Since this project's main topic is a historic neighbourhood, only the chapters about the "immovable" cultural relics explained are relevant and introduced here. The categories of immovable cultural relics, responsible protecting government, and transformation permission are defined in chapter 13 in CPRL as follows and illustrated in fig 1.xx.

1) Process of defining cultural and historic units: The cultural relics are designated for protection at the national, provincial, city, or county levels. The local government needs to delineate the protection scope and construction control area around each cultural relic according to each cultural relic's environmental

conditions to ensure that the construction of the city will not endanger the safety of the cultural relics.

"State-level cultural protection units should be reported to the State Council for approval and announcement.

Provincial-level cultural protection units shall be approved and announced by the governments of provinces and reported to the State Council for the record.

The municipal-level and district-level cultural protection units are respectively approved and announced by the local governments and reported to the governments of provinces for the record.

Immovable cultural relics that have not been approved and announced as cultural protection units shall be registered and announced by the district government."

2) Transformation permission process of cultural heritage

"Maintenance of cultural relics: The user is responsible for the repair and maintenance of state-owned immovable cultural relics; the owner is responsible for the repair and maintenance of non-state-owned immovable cultural relics. If the owner cannot repair, the local government should assist; if the owner can repair and refuses to perform the repair obligation, the local government can provide rescue and repair funded by the owner. Repairs to cultural relics protection units should be reported to the administrative department for approval. The repair, maintenance, and relocation of immovable cultural relics must comply with the principle of not changing the cultural relics' original state.

Construction inside protection scope: Construction projects or blasting, drilling, and digging can only be carried out within the cultural relics protection unit's protection scope in specific cases. The safety of the cultural relics protection unit must be ensured. Before starting, the construction work should be approved by the same government that announces the cultural relic and governments at the next higher level.

Construction inside the construction control area: Construction projects within the cultural relics protection unit's construction control zone shall not damage the historical features. The design plan shall be submitted to the urban and rural construction planning department for approval by the corresponding cultural relics administrative department."

This protection framework focuses on the completeness of historical material. In this framework, different levels of governments are involved in the preservation process to make sure minimal human intervention to the historic fabric.

1.4 Livability issue

The site has multiple values from the perspective of various stakeholders, but it is not a livable neighbourhood for the residents. This subchapter will explore the site from the residents perspective and analyze the livability problems.

1.4.1 Current community

The site was initially built as a residential area, and the primary function is kept till now. According to the preservation plan of Meiyuan Xincun in 2014, the whole area is 10.15 hectares, and the residential area occupies half of the total land.

In Meiyuan Xincun, the housing ownership of most houses has changed after the war during 1937-1949. The original residents, mainly the social elites, left the city when the war began. After the war, only a small group of the original residents returned and took ownership of the house. As a result, most of the houses do not have a private owner anymore, and they are now owned by the District Housing Management Office (collective ownership) and used as public rental houses. Fig 4.x shows the current property of historic buildings, more than half of which are in collective ownership right now.

The change of ownership led to the change of social groups. Now the residents living in the privately-owned houses are social elites, and they occupy 2.3% of the total population. The low-income tenants in the public houses are the majority social groups now; they make up 73.7% of the total population. Besides, middle-income residents who live in apartments make up 24% of the total population.

In conclusion, the social structure of Meiyuan Xincun right now is very diverse, regarding the income level and the social status. The main social group is the low-income tenants living in public rental houses.

1.4.2 Livability problems

From the residents perspective, the site is a residence with low livability. The most significant problem is the housing shortage and low quality. The population has grown fastly over the years. The houses original designed for one family are now offering living space for several families. The average living area per person is only 8 square meters. The living facilities, like toilets and kitchens, are also lacking. Residents have built informal constructions in the courtyards, but the quality of these facilities is not good enough.

Secondly, The available open space in Meiyuan Xincun is only 1,43 square meters per person, which contrasts with the WHO standard of 9 square meters per person. The primary public space is the street, but the street is now occupied by car parking, leaving little space for walking and street furniture.

Last but not least, most of the current residents are public housing tenants. Based on the Nanjing Municipal Public Rental Housing Application Regulations, applicants for public rental housing must be Nanjing citizens, and their monthly household income must be less than 1,700. According to Nanjing's wage statistics, only 2% of residents earn less than 2,000 yuan. Therefore, it can be assumed that the tenants are the low-income social groups in the city. The income level also leads to social segregation with other social groups.

In short, the livability of most residents is not qualified in Meiyuan Xincun from environmental, social and economic aspects.

1.5 Problem analysis (position the site in a broader context)

When positioning the site in a broader context, it can be found that the livability problem is mainly caused by the current Chinese heritage preservation approach. The conflicts can be analyzed from two aspects:

1.5.1 The inherent conflicts between livabilty and preservation

The current preservation approach is mainly focused on the physical elements. A strict and systematic preservation scheme ensures that there are minimal interventions to the historical objects. However, from the residents' side, they want to adapt the physical environments to improve the housing quality and create more living space. In other words, preservation means static, but livability requires change. Therefore, there is an inherent conflict between the current preservation system and livability improvement.

1.5.2 the threats on liveability from the profit-driven transformation

Except from the conflict in the spatial aspects, the current preservation approach also threatens social well-being. The preservation system on physical objects is very protective, but no national legislation ever emphasizes preserving social patterns nor respecting local communities' willingness to stay in their original sites. What is worse, two national laws implemented in 2001 and 2007 reinforced the local government's legal right to expropriate private property for public interests. However, the term public interests are vague and often transferred to economic growth by local government(Chen et al., 2019). Therefore, the local governments kept claiming heritage sites for economic development and relocating the local communities to modernist apartments. Those who want to stay in their original neighbourhood will often be stigmatized as "nail households," disregarding public interests for their own wellbeing (Shin, 2013).

Meiyuan Xinxun is located in a cluster of tourist spots and has a unique historical feature. Therefore, the government plans to develop it into a tourist attraction to increase the city's attractiveness and economic income. In 2019, the government made a transformation plan that focuses on the design

of the streets. In this project, a large number of houses along the streets are transformed into tourist shops. Consequently, some residents, who have developed a mental bond to the site and their neighbours, will be relocated. These relocated residents will probably be forced to live in the apartments in the suburbs, far away from the current site, and practice a totally different lifestyle. The change of location and social context will cause mental problems for the relocated residents. Those who can stay here will also face problems like disrupted social connection and gentrification.

In conclusion, the current heritage preservation approach only focuses on the physical material's completeness and leads to livability problems in environmental and social aspects.

1.6 Problem statement

Because of Meiyuan Xincun's multiple values, a strict preservation system is applied by the government. This preservation approach considers human interventions from the present as harmful to historic resources. However, as the population growing and living standard improving, it is necessary to adapt the physical settings for present use. Thus there seems to be an inevitable conflict between heritage preservation and livability improvement.

What is worse, the material based approach may also lead to psychological issues for the residents. The social pattern is not preserved in the current preservation approach. Therefore the local government and developers might seek economic profit by transforming the site into a touristic commercial area. Consequently, some residents will be forced to relocate, and the social structure will be destroyed. Both the relocated and stayed residents will suffer from psychological stress.

In a nutshell, the current Chinese heritage preservation approach only preserves the physical elements and neglects the social value and living conditions, thus conflicting with residents' need to improve livability.

1.7 Research aim

The problem analysis has identified the conflicts between the current Chinese material-based preservation approach on residents livability. This project aims to find a balance between these two conflicting sides. New theories will be introduced to broaden the definition of heritage and its value, finding a link between heritage preservation and livability improvement. After giving a new definition of heritage comprising multiple values, it aims to find a proper heritage management approach to improve livability in historic neighbourhoods under the current Chinese planning context.

The project is not aiming to make a blueprint design for the site. Instead, it aims to recommend a new way to assess heritage value and management approaches to balance heritage preservation and

current livability. In this project, new theories and approaches are tested in the site, Meiyuan Xincun. Based on the tested approaches, spatial strategies and future scenarios will be developed. The spatial strategies and scenarios are made to explore future possibilities. What is more, they can make the recommendation understandable and convincing to all stakeholders and be used as a starting point for future negotiation and decision-making.

2 Theory

The first chapter has revealed the conflicts between heritage preservation and present livability. The research aim is to improve livability in historic neighbourhoods under the Chinese context. This theory chapter will review the current academic discourse in heritage management and synthesize a theoretical framework for this aim. Firstly, The living heritage concept emphasized that the local community is also a part of the heritage and needs to be preserved. Later, to understand the complexity of heritage value, the value assessment methods will be introduced to clarify the value typology. Then, three heritage management approaches will be explored and compared, leading to a hypothesis that the value-based approach is suitable for this project. Lastly, the conclusion will be a theoretic framework that links these components and will guide the methodology framework.

2.1 living heritage site: the link between livability and heritage value

The first step in the theoretical research is to find a link between heritage preservation and the community's livability. The living heritage concept is introduced here to state the local communities' value to the heritage site. Not only can the site offers psychological support to its residents, but the local community, with its generational socio-cultural practices, can also create a unique identity and makes a place attractive (**Orbasli**, **2001**). The recognition of a heritage site's living dimension started in 1972 when the importance of cultural property and a direct link between heritage and community was announced by UNESCO (Poulios, 2011; UNESCO World Heritage, 1972).

Later, the "cultural landscape" was introduced by UNESCO to explain the living cultural traditions, including the traditional management system and the land tenure mode of the local community in a heritage site. (UNESCO World Heritage, 1995) The term "living heritage site" defines a heritage site's living dimension created and continued by the local community. However, the definition of living heritage is vague since all kinds of community that occupy a site can be seen as local community(Poulios, 2011).

To define the living heritage site more clearly, scholars started to take the continuity of a communities' original connection with a site to be the key concept in discussing a living heritage site(Wijesuriya, 2004). Thus, continuity is now seen as the core of living heritage. It contains three aspects: the original function, the process of management, and the future arrangement of space—this continuity does not mean that all elements need to be kept as the initial state; on the contrary, the continuity is embraced with changes to ensure the relevance of a site to the current societal and political environments. (Poulios, 2011).

The living heritage concept indicates that the improvement of livability is the community's response to the changing environment, so it is part of the continuity. The improvement of livability is a part of preserving the heritage site.

2.2 Value assessing methods

Now that it is clear that the local community is also vital to the heritage site, and the value of the community is different from the values perceived by the experts or government. It is necessary to clarify the complex values and learn about how to assess them. Assessment of the values of a heritage site is critical as it is a process to define what is the cultural significance, what are the physical elements showing these significances, and lead to the decision making process.

The value of heritage is self-evident because no society will make efforts to preserve something invaluable. However, there is an urgent need to discuss value in current academic fields because of the current exclusive way to determine value. Currently, values are mainly determined by experts. Some researchers argued that cultural significances are actually the importance of a site as determined by the aggregation of values attributed to it. The values considered in this process should include those held by experts(art historians, architects) and others; these new stakeholders or constitutions brought new values, such as social value and economic value (Randall, 2002). This subchapter will review the literature about value assessment to learn how to analyse heritage values comprehensively.

The values of a heritage site can be very complex, as, in a given moment, there might be several values attributed to a single object. For example, take a temple: it has spiritual values because there is a Buda in it; It has economic values as the potential to attract tourists and sell incense; it has historic values because it was built a long time ago and associated with some historical event. This multivalence is an inherent quality of heritage. The second quality of heritage values is that they are contingent. The values of heritage are not from the object itself. They are generated out of the interaction with the context. When discussing heritage values, it is crucial to referring the context—through the lens of who has defined the values, when and where. For example, a temple may have more spiritual value to the monks, more economic value to the developers and more historical value to historians (Randall, 2002).

Value assessment aims to create statements of significance to synthesize the reasons behind all preservation and transformation actions. These statements will offer a clear position that would be the basis of the decision making process. These statements need to be understandable for all stakeholders. There might be some conflicting statement of significance; for instance, the developers may see the significance of profit, while the residents would first put the social value. So, the plural statement should include all the views equally and put all the voices on the table (Pearson & Sullivan, 1995).

According to Randall Mason, the two major categories of value typology are sociocultural and economic values. These two are not referred to as different sets of values but are different ways to understand values.

2.2.1 Sociocultural values

Sociocultural values can be generated from age, beauty, or related to a significant person or event.

There are several subcategories within the sociocultural value: historical value, educational value, cultural/symbolic value, social value, spiritual/religious value, and aesthetic value. These values can overlap to the same objects. However, they are seen as different values because they correspond to different ways of conceptualizing heritage value, to different stakeholder groups, and therefore to different bases for making management and conservation decisions.

1) historical value

Historical value is at the root of the notion of heritage. This value refers to the capacity of a site to convey or stimulate a reaction to the past. It is the fundamental meaning of heritage. The historical value can gain from the material's age, the association with historical people or events, heritage's rarity, and uniqueness of the documentary potential. The educational value is derived from the historical value; it represents the capacity to let people gain knowledge from the past.

2) Cultural/ symbolic values

Cultural/ symbolic value is also at the root of the heritage notion. It is used to build cultural affiliation in the present. It is the shared meaning of living together associated with heritage. Political value is contained in the cultural value. It refers to the use of heritage to build or sustain civil relations, governmental legitimacy.

3) Social values

Social value is not necessarily related to central heritage values. It refers to the heritage's capacity to facilitate social connection, networks, and other relations. There are two assessing points for this value. one is the site's use for social gatherings, such as celebrations, markets, picnics, and community activities. The second is the place attachment hold by people to the site.

Place attachment is defined as bonds between people and their residential environments that positively affect individuals (Shumaker & Taylor, 1983). Both the connection with the physical settings and interpersonal relationships comprise a person's attachment to a place (Mihaylov & Perkins, 2014), while the social aspects are emphasized more by scholars. Hidalgo and Hernandez (2001) stated that the attachment to a place is more caused by social bonds with the people who live close (Hidalgo & Hernandez, 2001). They have shared history, common concerns, mutual interests, and values that can contribute to their social cohesion and form a sense of community (Perkins & Long, 2002). Alawadi (2017) defined the qualities that contribute to place attachment, including physical and social aspects. The physical elements comprise closeness to neighbourhoods, proximity to the city centre, equal access to social and public spaces that can foster natural or organized interaction. The social factors include a sense of control over the place, socio-economic homogeneity with neighbours, interpersonal familiarity, memories accumulation, mutual concerns that can trigger discussions and chats between individuals (Alawadi, 2017).

4) Spiritual values

the spiritual/religious value refers to the religious or other sacred meaning, usually refers to religious buildings or those admired by people.

5) Aesthetic values

Aesthetic value refers to the visual qualities of heritage and can be the design and evolution of a building, object and site.

2.2.2 Economic value

economic value is one of the most potent ways society identifies, assesses, and decides on the relative value of things. The objects that show economic values overlap a lot with sociocultural values, and they are distinct because they are measured by economic analysis.

1) Market value

Market values are the ones most easily assigned with a price. Market values of material heritage refer to the goods and services that flow from it that are tradable and priceable in existing markets. For instance, the admission fee to a heritage site, the fee of food service and accommodation are all market values.

2) Nonmarket value

Nonuse values are economic values that are not traded in or captured by markets. So they are difficult to express in terms of price.

The literature offers these value typologies as a starting point in the assessment process. For a specific site, researchers can choose from these typologies or adding some. However, these provided typologies are the most commonly seen on different heritage sites. Besides, it is also necessary to involve stakeholders in the assessment process. The state of value only makes sense when linked to a specific group and their reaction to the site. The final step of value assessment is to link values to physical objects. Therefore the assessment of values can lead to decisions in spatial transformation.

The process of assessing and eliciting values is universal, but the management part is not universal. It is the process to decide what values should be prioritized and what to conserve. The following subchapters will review three heritage management approaches, including the material-based approach, the value-based approach and the living heritage approach.

2.3 Three heritage management approaches

There are multiple values attributed to a heritage site, and each value is linked to specific physical elements. Therefore, the spatial transformation of the heritage site largely depends on the prioritized values for the decision-makers. The heritage management approaches define who are the decision-makers and where to set priorities. Currently, there are three main heritage preservation approaches that fit different situations. This subchapter will review all of them and compare the preservation logic, prioritized values and decision-making process. In the end, a conclusion will be made on which one is more suitable to improve livability in the current Chinese planning context.

2.3.1 The material-based approach (the Chinese heritage management approach)

A review of the Chinese heritage management is first made to learn about the main principles and stakeholders involved in the management process and understand their interests and powers. There are three perspectives relevant in the heritage preservation process in China, and they are developed in different development stages:

1) Dominant entrepreneurial urban development

During China's long history of development, various indigenous housing types were formed from different parts of China, which are now valuable historical resources. After the founding of the people's Republic of China in 1949, extensive state-led industrialization started, causing massive population growth in urban areas. Urban development's main goal was to provide public housing for residents, so almost all the Chinses cities conducted their housing-oriented redevelopment programs in the 1980s and 1990s. However, this kind of redevelopment was implemented at the expense of various historic areas with significant features (Michael Leaf, 1995). At this period, both the government and citizens do not have the awareness to preserve valuable historical resources, causing many historic neighbourhoods to be replaced by mid-rise apartments (Chen et al., 2019).

Later in 1998, the reform of China led to the commodification of housing and land. The local government started to sell the land to the developers to obtain financial income. (Wu, 2016). The historic neighbourhoods, which are often located in premium locations, became the developer's primary choice, so large amounts of historic districts are demolished and rebuilt to seek economic growth (Chen et al., 2019).

2) The growing power of historic conservation in China

The discipline of heritage conservation was first established in Europe and marked by the material-based approach that focused on rescuing the fabric and buildings threatened by war and redevelopment. Later on, this material-based approach was imposed on other parts of the world, including China. (Poulios, 2014). The material-based approach is expert-driven and concludes a set of modern, scientific-based conservation principles. The meaning and value of heritage are seen inside the fabric, which is announced as non-renewable at that time. The main task is to protect the heritage, and only minimal interventions are allowed for the sake of the completeness of the heritages' structure (Jokilehto, 1998).

Influenced by the western preservation disciplines, the Chinese government and heritage experts started to add a new historic conservation voice to prevent the demolition of historic districts. Firstly, The state wants to establish its figure as a defender of 5000 years of national cultural heritage (Madsen, 2014), so the central government has issued a series of laws and regulations on historical protection. Secondly, cultural figures pay close attention to the demolition of traditional neighborhoods and the homogenization of the urban landscape, so they have used social media and other measures to push forward the historical conservation (Yao & Han, 2016). As a result of the above two reasons, the conservationist discourse and historic conservation legislation were expanded.

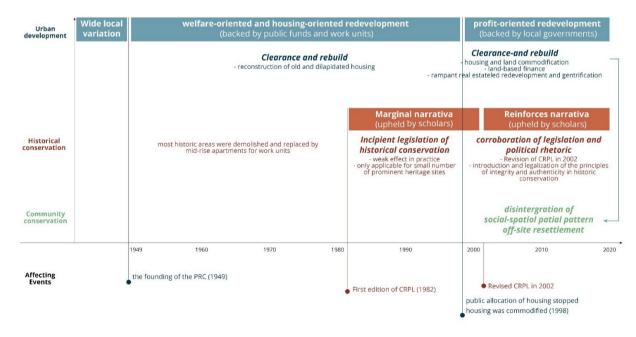
In 1982, the first version of the Cultural Relics Protection Law (CRPL) was promulgated. In 2002, the revised version of CRPL was published, and the European principle of "integrity" and "authenticity" was integrated (González Martínez, 2016). The "regeneration through conservation" approach was

also introduced to China, and several practices were implemented in major cities like Shanghai and Beijing. For the other cities, the demolition and replacement were still in the dominant role of urban redevelopment (Chen et al., 2019).

3) Marginalized residents and community power

However, historic conservation is not the saviour of residents of historic neighbourhoods. The voice of local residents and the community is still marginalized today. No national legislation ever emphasizes preserving social patterns and respecting local communities' willingness to stay in their original sites. What is worse, two national laws implemented in 2001 and 2007 reinforced the local government's legal right to expropriate private property for public interests, which is a vague term and usually abused in China (Chen et al., 2019). The local governments kept claiming heritage sites for economic development and relocating the local communities to modernist apartments. Those who want to stay in their original neighbourhood will often be stigmatized as "nail households," disregarding public interests for their own wellbeing (Shin, 2013).

The evolution process of the three different discourses regarding historic preservation in China is illustrated in figure 1. Entrepreneurial development is the most powerful voice throughout the time; historical conservation began to grow in 2000 but is still not in the dominant role, and community conservation is still not there. This uneven power matrix led to fragmented social structure and, more importantly, incompleteness of heritage values. There is an urgent need for China to adopt a more inclusive preservation approach that protects both physical heritage and social values.



g 1. The three discourse in Chinese heritage preservation practice

illustrated by author based on the source from Michael Leaf, 1995; Chen, Wang, & Waley, 2019)

2.3.2 The Value-based approach

As more and more scholars have realized the value of heritage imputed by humans, practices to continue the relationship between heritage and various stakeholder groups, especially the local community, are conducted in the historic preservation field (Mason, 2002). ICCROM, one of the three advisory bodies to the World Heritage Committee, has led programs to explore methods in preserving the local community and developed a value-based approach. The value-based approach is an expanded version of the material-based approach (Poulios, 2014). The fabric is still seen as non-renewable resources and is placed in the central protection scope. Intangible values are included in the protection scope only when it is beneficial for preserving tangible values. Although different stakeholder groups are involved, they are still under the heritage authorities' supervision. The central power is in the hand of experts, and other stakeholder groups are treated equally (Demas, 2002).

This kind of conservation system can cause failure in preserving the continuity between community and heritage under certain circumstances. For example, the Chaco Cultural National Historical Park in New Mexico, USA (de la Torre et al., 2005) shows how the conflicts between the local Indian communities and the "new age" group led to a failure of keeping the indigenous cultures. In order to preserve the local communities' intangible heritage, different stakeholders are involved in the decision-making process, which is supervised by the Park Authorities. The "new age" group wanted to perform their religious rituals in the site, which are seen as violations by the local Indian communities, but whether the "new age" group's request can be approved is decided by the Park Authorities. The two groups should be treated equally, so the Park Authorities can either allow or ban both groups' religious rituals. Eventually, all the groups' ceremonies are forbidden, thus failing to preserve the traditional lifestyle (Poulios, 2014).

2.3.3 The Living-heritage approach

As explained before, the core of a living heritage site is continuity, which refers to the original function, the local communities' experimental knowledge of management and maintenance. The local community has the instinct to adjust their living environment responsibly to changing circumstances. Thus change is embraced as part of the continuity (Wijesuriya, 2005).

Unlike the value-based approach, the living heritage approach is not a democratic process. Different stakeholder groups are categorized as core community and the broader community. The core community is the group of people who created and keep the original function of heritage. They have a strong sense of ownership of the legacy and consider the present use to be a continuity of heritage's identity, pride, and wellbeing. Seen as an inseparable part of the value of heritage, the core community has the power to make decisions on how to preserve the estate (Poulios, 2011). The broader community, the other related stakeholder groups, take a second role in the conservation process. The professors are there only to offer support, guidance, and assistance. As a result, all the decisions are made based on the core communities' present concern, and the emphasis is on the current use. The present is seen as a continuity of the past and will go on to the future, so all temporal dimensions are included in the ongoing present (Poulios, 2014).

The example of Phrae, Thailand, shows how the living heritage approach can boost the local community's power in the preservation process and even add more value to the heritage. A Local Heritage Management Committee is established to set the agenda and decide how to preserve its heritage (Patcharawee Tunprawat, 2010). The committee developed the principles to revive heritage pride through awareness activities, such as award programs for those who take good care of their houses, local libraries and museums, and awareness programs for children. The committee also seeks development options using local resources like local dished and potteries and cooperation with other national or international organizations. A network has been developed to coordinate and mobilize people and activities to continue the heritage's glory (Poulios, 2014).

2.3.4 Discussion

Unlike the Chinese methods, the value-based approach and living heritage approach are both dedicated to protecting local communities in heritage sites. Still, there are some differences in the latter two's primary protection aim and system (table 1). Firstly, the preservation aim is not the same. Both approaches are preserving a heritage site's physical and social elements, but the emphasis is different. The value-based approach focuses on physical aspects as the fabric is seen as non-renewable resources, and the current user should not sacrifice the historic structure. The living heritage approach's attention is on the continuity of communities' association with the sites, so the community's current needs should be satisfied even at the expense of the historic fabric. Secondly, the preserving and planning process is also different. The two approaches' stakeholder groups are almost the same, including heritage authorities, local communities, and other related stakeholders, but decision-making is in different groups' hands. In the value-based approach, the experts have the leading role to negotiated among various interest groups. In contrast, in the living heritage approach, the core community has the power to decide.

The value-based approach is an expansion of the Chinese material-based approach (the logic of treating historic fabric as non-renewable resources keep the same). But significant progress is made regarding the protection of social value in heritage sites. The different stakeholders are involved in the preservation process, and the local communities' willingness is respected. The living heritage approach is a fundamental change as it treats the historic fabric as renewable resources that can be adjusted to present use. China's current approach treats heritage as non-renewable resources and prevents changes in the historic structure, failing to embrace change. The population is growing, and the living standard is changing; thus, the historic structure should be adjusted accordingly. Given that the local community is mostly the poor while inviting a designer to make a sophisticated design regarding with heritage site is usually expensive, there should be a group of designers who can offer such help organized by the community or heritage authorities.

All three management approaches are suitable for certain situations, and they need to be chosen based on different situations. The previous problem analysis has already shown that the material-based approach is improper for the historic neighbourhoods because of the conflicts with livability. The living-heritage approach prioritises the local community's values, and the transformation is based on the community's need. In this approach, livability is the primary concern in the planning process, mainly organized by the local community.

Therefore, it is suitable in places where self-organization at the community level already exists. However, the living heritage approach is not feasible in China because it is a totally bottom-up process.

For Meiyuan Xincun and most other Chinese historic neighbourhood, it will be manageable and feasible to shift towards the value-based approach. The government and experts' current preservation framework can be continued, and new stakeholders like the local community should be included to find a balance between heritage preservation and livability.

Table 1. comparable analysis of different conservation approaches

| | Chinese approach (material-based approach) | Value-based approach | Living heritage approach |
|---------------------------|---|--|--|
| WHAT | historic fabric and buildings | Esthetic and Social Values (Still Emphasis on the fabric) | Communities' original connection with heritage (Emphasis on intangible one) |
| WHO | Government and heritage authorities | Stakeholder groups under the supervision of heritage authorities (Emphasis on those associated with the fabric) | Core community and other stakeholder groups (not equally treated) |
| HOW | Scientific-based principle and profit- driven Fabric: non-renewable resources Touristic redevelopment of heritage sites | principle Fabric: non-renewable resources Adjusting use to protect | Place scientific-based approach within traditional care Community empowerment Fabric: renewable resource Equilibrium between use and protection (Emphasis on utility) |
| Logic | Minimal intervention to heritage Profit-driven Expert-driven (no community) Discontinuity: heritage are considered to belong to the past | Mostly minimal intervention to heritage Develop is based on stakeholder groups' concern Expert-driven (community is involved) Discontinuity: heritage is considered to belong to the past | Allow major interventions to the heritage Develop is based on the core communities' concern Community-driven approach Continuity: preservation of heritage as part of the present community |
| Community Preservation | × Local communities are relocated for touristic development or gentrification | √ all groups are treated equally under the supervision of professions | √ Core community is the key to preservation |

2.4 Theoretical framework

This chapter reviewed influential and recent literature in the heritage management field. The living heritage concept state the importance of considering community need in the preservation process, so livability consideration should be included in the heritage preservation. Then the multiple values attributed to the heritage site are clarified by the heritage value assessment methods. These multiple values may overlap or conflict with each other, and the spatial transformation strategies are based on the values that need to be prioritized. Moreover, there are different ways to define the prioritized values, and they are suitable for specific places. The last two subchapters introduce three heritage management approaches: the current Chinese approach (the material-based approach), the value-based approach and the living heritage approach. After comparing these approaches, a hypothesis

was made that the value-based approach is more suitable for improving livability in historic Chinese neighbourhoods. This thesis will test this hypothesis in Meiyuan Xincun.

3 Methodology

The theoretical analysis leads to a hypothesis that the value-based approach is more suitable in this project. The main research question is whether the value-based approach can improve livability in historic neighbourhoods under the Chinese context. This chapter will explain the process to carry out the research and test this hypothesis. First, the research framework split the main research question into five sub research questions. Then the conceptual framework clarifies the components in each step and the main line of inquiry in this project. The methodology framework is then made to explain what methods I will use to get data, analyze data and answer the research questions. This chapter helps to navigate and understand the research process while also giving the thesis rigidity and validity.

3.1 Research framework

The problem chapter raised the conflicts between residents' livability and the current heritage management approach. The theoretical research explores the broad value of heritage and three different t heritage management approaches. The conclusion of the theoretical analysis is a hypothesis: the value-based approach can be used to solve the livability issues in historic Chinese neighbourhoods. This thesis will use Meiyuan Xincun as a site to test this hypothesis. So the main research question is:

Main research question:

Can the value-based approach be used to improve livability in historic neighbourhoods under the Chinese urban planning context? (This will be tested in Meiyuan Xincun)

In this project, this main research question will be split into five sub research questions. these sub research questions will also form the main steps of this research:

Sub research questions

What is the heritage value of Meiyuan Xincun assessed by a broader scope and multiple stake-holders?

What values are prioritized in the current heritage management approach (the material-based approach) in Meiyuan Xincun, and how will it affect spatial transformation?

What values are prioritized in the living heritage approach, how can these values be linked with the livability issue, and what are the spatial implications?

Can the value-based approach be used to solve the conflicts of spatial strategy in the material-based approach and the living heritage approach?

What future scenarios can balance heritage preservation and present livability based on strategies derived from the value-based approach?

3.2 Conceptual framework

The conceptual framework (fig 3.2) is composed of the notions got from theories and the problem fields of Meiyuan Xincun. This framework synthesises both the deductive(theories as shown in the theoretical framework) and inductive (site analysis as shown in the problem analysis) conclusions. Furthermore, this framework aims to map the main steps in the research process.

Firstly, research on heritage value will be done to understand the complexity of value from different perspectives. This step will answer the SQ1, and the conclusion will be used to develop spatial strategies in later steps.

Then the research by design approach will be used to test the three different heritage management approaches. Although the material-based approach and the living heritage approach are not suitable for this project's aim, they will still be explored to see the conflicts at a spatial level. The material-based approach can show the spatial implication of the current Chinese heritage management approach, while the living heritage approach will show the spatial transformation strategies to improve livability. Then the value-based approach will be used to come up with some strategies to balancing the conflicts. In this part, the aim of all stakeholders will be analyzed regarding the conflicts in spatial strategies, and a set of balancing solutions will be developed.

Lastly, two design scenarios will be developed based on the spatial strategies. These two strategies will use the same spatial transformation strategy, but they deal with the different social changing trend. Then these two scenarios will be assessed by livability indicators again to answer the main research question. As the future is full of uncertainty and there is a need to negotiate between stakeholders, these two scenarios are not the blueprint design of the site. Instead, they are made as two examples to show the outcome more directly, helping change the mindset of the experts and government. What is more, these two scenarios can be used as a starting point of discussion. The design outcome and consequences in social and economic aspects will give stakeholders more insight into voting or negotiation. So everyone can be involved in the process of assessing the value and designing the livable future.

3.3 Methodology framework

This methodology framework displays the methods I will use to answer the sub-research questions and reach the outcome.

The first steps is a research on the values of the site, the methods will be used

4 Spatial analysis

The spatial analysis is a part of the value assessment process. The values need to be linked with specific objects so that the value assessment can indicate the next step of spatial transformation. Therefore, it is necessary to understand all the spatial elements before assessing the values. In this chapter, the spatial context of the project will be extensively researched. Every physical element will be analysed regarding the built time, the users and the quality. This chapter will give a comprehensive understanding of the site before researching heritage values and preservation strategies.

4.1 Introduction

The first step is to define all the elements in this neighbourhood. The physical elements can be divided into public space, semi-public space, semi-private space, and private space.

The structure of this chapter follows the structure of the site. In the beginning, an overview of all the spatial elements will be made, and a structure from the public-semipulic-semiprivate-private space will be identified.

Public spaces refer to the areas accessible to everyone. In this neighbourhood, the amount of public places is minimal, and the main public areas contain the streets, pedestrians, and public greenery.

The semi-public spaces refer to the areas where people can get in with a ticket or buy the service, including the exhibition hall, the Pilu Temple, schools, shops, and hotels.

The semi-private spaces refer to the shared area by several families who lived in one block, mainly including historic courtyards, apartment courtyards, and private greenery. There are working spaces that are categorized as semiprivate spaces.

Private spaces refer to the living space that is owned or rented by residents. The private area mainly includes historic houses, extensions, apartments.

4.2 Public space

4.2.1 Streets

The streets in this block mainly consist of tertiary roads and living street. Tertiary roads are part of the urban road network and serve transit traffic. Living streets primarily serve the daily lives of residents. In addition to daily parking and travel, living streets are also places for residents' public activities; for instance, fig5.6 shows residents doing laundry together on the streets. Generally speaking, the streets in the community offer historical features and provide high accessibility. Living streets can also promote neighbourhood communication. However, all streets are occupied by too many vehicles, leaving little space for pedestrian and activity.

Fig tertiary street in Meiyuan Xincun

This photo was taken at the entrance of Meiyuan Xincun. The historical buildings and phoenix trees along the road are from the Republic of China, showing the historic features.

Fig tertiary streets

In this photo is another section of tertiary road. This road is only 4.8 meters wide. It is a mixed road with motor vehicles, non-motor vehicles and pedestrians.

Fig 5.5 living street

Half of the space on the living street is occupied by cars. The walking experience is destroyed because of crowdedness and unsafety.

Fig 5.6 living street

This picture shows that the narrow living street between buildings. This street is only 2 meters wide, so it is not accessible by cars. As a result, it is a social place where neighbours wash clothes tighter. Besides, this is also the place people park their bikes.

4.2.2 Pedestrians

The pedestrians exist along the tertiary roads. From point A to B, the pedestrian is 3 meters wide. Fig 5.x shows a resident sitting on the pedestrian. The pedestrian can be a good place where people interact, but there is a lack of street furniture and activities right now. From point B to C, the pedestrian is only 1.2 meters wide (fig 5.x); the space is too narrow for walking or meeting others. In all, the pedestrian can be a social place that facilitates social cohesion, but currently, there is a lack of pedestrians and street furniture.

4.2.3 Public greenery

The total area of public greenery is 2000 square meters, only 10% of the total area, and the public green space per person is only 1,43 square meters. What's worse, the green spaces are mainly located at the edge of the neighbourhood, so they are quiet and lacks activities.

4.3 Semi-public space

The semi-public spaces refer to the areas where people can get in with a ticket or buy the service, including the exhibition hall, the Pilu Temple, schools, shops, and hotels.

4.3.1 Exhibition & temple

The Pilu Temple and the Meiyuan Xincun Memorial Hall are the main touristic destinations. The Pilu temple is also a place where people visit for its historical meaning or prayer. The Meiyuan Xincun Memorial hall contains an exhibition hall that displays the materials regarding historical events and the historic buildings Zhou Enlai has once lived in.

4.3.2 Hotels

There are two hotels located at the edge in Meiyuan Xincun. The main users of these two hotels are tourists. They are part of the touristic industry and contribute to the economic value of the site. But the appearance of these buildings is inconsistent with the atmosphere of the historic district.

4.3.3 Education

There is a middle school and an elementary school in the neighbourhood. These two schools provide educational services to the surrounding residents. The school's architectural design also respects the historic district's overall environment, especially the elementary school newly built in 2012. This elementary school's building height is controlled below 12 meters, and the roof form also adopts a sloped roof.

4.3.4 Shops

The shops here are mainly distributed on both sides of the city tertiary road on the north of the block. Most of them are supermarkets, small restaurants, grocery stores, building materials stores and other shops serving local residents. There are also a small number of shops selling incense for tourists and those who come to worship Buddha.

4.3.5 Community centre

The community centre was transformed from a historic building. There are different types of community activity venues, including community kitchens, libraries, cultural salons, etc. This community centre makes full use of the historical features and can also increase residents' communication and cultural dissemination. It is an example of how to make historical buildings better serve modern life.

4.4 Semi-private space

The semi-private spaces refer to the shared area by several families who lived in one block, mainly including historic courtyards, apartment courtyards, and private greenery. There are working spaces

that are categorized as semiprivate spaces.

4.4.1 Historic courtyards

The most essential and characteristic space in this block is the historical courtyards. Most of the historical courtyards are currently shared by several households. Generally, there will be some small green spaces for growing vegetables in the courtyards and some ponds, drying racks, and other daily necessities. Such historical courtyards is an essential part of the historical tissue, and it is also the support of the previous lifestyle.

4.4.2 Apartment courtyards

Between the apartments, there is also some space and enclosed by a community wall. These spaces are open to the residents of the apartment. Usually, there are some greenery and parking slots in the apartments courtyards.

4.4.3 Design studio

In recent years, there are some design studios came into these neighbourhoods. The historic atmosphere and the nice buildings are attractive to the artists and designers. These design studios offer an excellent example of how to renovate historic buildings. What is more, new social groups are introduced. However, there is no chance for the newcomers to communicate with original residents, so there might be more threats of gentrification and social segregation.

4.5 Private space

The private space is the living space for residents. The buildings on the site were built at different time by various stakeholders, so the type of living space is also diverse.

4.5.1 Private owned historic houses

After the site was built, the war started, the residents all left the site. After the war, only a few of them came back and took the houses back. Some of these houses were inherited by the descendants of the original, and some were sold to others. These privately owned houses are well maintained and have high historical value, so the market value is also very high. Now, most people living in these houses are high-income residents, who only account for 2% of the total population.

4.5.2 State/ collective owned historic houses

Most historic houses have no owner after the war, so they were taken by the state and used as public rental houses, renting to low-income citizens. These historical buildings were originally high-end residences, so each household has about 200 square meters. After being used as a public rental house, a building was distributed to several households, each with only one room used as a living room and bedroom. The kitchen and bathroom are shared with neighbours. This kind of housing pattern also leads to a co-living lifestyle for a long time, and social cohesion is also built. The residents living in these public rental houses are low-income tenants, accounting for 75% of the total population.

4.5.3 Extensions

After historical buildings were used as public rental housing, the residential population increased sharply, and the living space was seriously insufficient. In order to meet the needs of daily life, residents built some expansion houses in the courtyards, which are usually used as kitchens, storage rooms or non-motorized vehicle parking rooms. The construction quality of these houses is not high. However, they provide the necessary support for residents' lives.

4.5.4 Shanty houses

After the People's Republic of China was built in 1949, more people flew into the city, and many houses were built. Due to the limited construction technology at that time, most of these houses only had one or two floors. Some of these houses are now used as residences; those facing the streets are used as shops. Currently, the quality of these houses is inferior.

4.5.5 Apartments

After 1980, the opening and reform of China, the real estate industry has gradually developed, and real estate developers have built some middle-rise apartments. The housing prices of these apartments are similar to the average housing prices in Nanjing, and the residents in them are bsically middle-income residents, accounting for 24% of the total population.

5 Value analysis

In this chapter, all the heritage values will be searched out, articulated and linked with physical elements and stakeholders. This chapter is objective research on the values of the site. The conclusion will be a scheme that links all the values with specific spatial elements. This scheme will be used in the development of spatial strategies later.

Related sub-research question: What is the heritage value of Meiyuan Xincun assessed by a broader scope and multiple stakeholders?

5.1 Introduction to the value analysis process

This chapter is an integrated assessment of all the elements from the lens of values. Moreover, it can lead to future decisions of conservation and transformation. Heritage is multivalence, one can see different values from one site, and even different stakeholders can have various views regarding one specific value typology.

All values need to be elicited clearly based on value typology and stakeholders. This project chooses the six most relevant values from the value typology made by R Mason. The stakeholder groups include the users and other stakeholders. The users are mainly the residents. Besides, there are potential users like tourists and designers. The other stakeholders are those who are not using the site but are involved in the decision-making process, including the government, authorities and developers.

The previous chapter has already researched all the spatial elements in Meiyuan Xincun. The second step in value assessment is to link these values to specific physical objects. The urban planning and designing process must integrate the values and the physical properties, so assessing value can indicate changes in physical elements.

In the conclusion part, a scheme that synthesized values, stakeholders, and physical elements will be made. This scheme will be used in the later exploration of spatial strategies.

5.1 Historic values

Historical values are the site's capacity to convey or stimulate a reaction to the past. There are three parameters to assess this value: the material's age, the association with historical people or events, and the heritage's uniqueness of the documentary potential (Mason, 2002). The following pages will assess the site with these three parameters, and all the values will discuss with specific stakeholders and linked to physical elements.

5.1.1 the association with historic events or people

The first parameter to assess historical value is the site's association with historical events or people. Meiyuan Xincun was built in the People's Republic of China when Nanjing was the country's capital. As Meiyuan Xincun was near the political and cultural centre, it has witnessed several historical events and was a residence for some famous people.

1930s China's modernization process

The site was built when China opened up and adopted Western theories and technology in all fields. With the Qing Dynasty's fall in 1911, the Chinese Republic was founded, and the capital was located in Nanjing. After the National Government established the capital, Nanjing has many government agencies, and the city's industry, commerce and service industries have also achieved considerable development. Staff groups distributed in all walks of life have gradually emerged. Since Meiyuan Xincun was close to the political and cultural centre, many famous officers from the country and pioneers in all lived here.

1946-1947 negotiation between the Nationalist Party and the Communist Party

At the end of the Anti-Japanese War in 1945, the Kuomintang and the Communist Party began

negotiations on the country's future development direction. In May 1946, Zhou Enlai led a Communist party delegation to Naniing and settled in Meivuan Xinucn. During that time, Meivuan Xincun was the

party delegation to Nanjing and Settled in Melyuan Xinuch. During that time, Melyuan Xir

working and living place for the delegation.

Conclusion

Meiyuan Xincun is associated with several important historical events and people. Its birth was part of

the modernization process of China, and at that time, it was located near the political and cultural

centre of China. Therefore, many officers and pioneers lived in Meiyuan Xincun during the 1930s. During wartime, it was the residence of the delegation of the Communist Party. After the war ended,

the site turned into a residence for ordinary citizens, and no significant events happened here.

5.1.2 Material's age

The second parameter to assess historical value is the material's age. Meiyuan Xincun was first built

as a human settlement during the Six Dynasties (222-589 A.D.). However, the main fabric that remains today was built between the 1930s. In order to assess the historical values based on material age, all

the physical objects will be introduced in a time sequence.

Before the 1930s: the Pilu Temple

The oldest building in Meiyuan Xincun is the Pilu Temple, built between 1522 and 1566.

1930-1937: the historic streets and historic buildings

The urban fabric and most houses were built in the 1930s. Meiyuan Xincun was planned as a

secondary residential area and designed by western architects. The physical objects built at that time

include the streets, historic buildings, and historic courtyards.

1949-1980: extensions, shanty houses and memorial hall

After the war, some of the original residents came back and took ownership of their houses. The rest

historic houses became public rental houses, and they were allocated to low-income residents. As the population grew, the residents built more informal living space, including extensions and shanty

houses. The extensions were built inside the historic courtyards, usually shared by several families and

used as storage or parking space. The shanty houses were built in empty spaces around historic

houses.

1980 till now: living facility and middle-rise apartments

After 1980, the reform and opening of China, the housing market formed, some middle-rise apartments were built by the local government and developers as commodity Housing. Besides, two hotels and schools were built as public services. These new buildings add a new layer of pattern to the original structure. The street network remained in its original state, but the building volume was larger than the historic houses.

conclusion

most of the buildings in Meiyuan Xincun was built in the 1930s. Based on Chinese preservation regulations, these buildings are listed as monuments because of their age.

5.1.3 heritage rarity, and uniqueness

The third parameter to assess historical value is the heritage rarity and uniqueness. The assessment of the rarity is a comparison with other areas on a broader scale, spatially and temporally.

Nanjing is a city with a very long history, and the relics from different eras gradually form the city's fabric today. There are four layers of historical city structure in Nanjing: the Six Dynasties, the Southern Dynasty, the Ming Dynasty, and the Republic of China. During the Republic of China, the new government initiated a new urban development movement to change Nanjing into a political centre. The master plan was named The City Plan of NanKing (1929). As a symbol of modern Republican China, the new city plan represented western planning concepts from architectural style, urban planning, and building construction. (Han, Chen, & Zhou, 2020) American planners Henry Kikkam Murphy, Ernest P. Goodrich, and Ruud Gullit were hired to produce this city planning document. The entire plan was completely different from traditional Chinese city planning principles with multiple city walls. Instead, a new road system with the western grid system and axes were designed in the city (Wang, 2015). This plan is a milestone in China's modernization process, and Meiyuan Xincun was part of this plan.

The residential areas from different eras also show significant features. Most residential areas are now of high density and height, making the low rise housed from former periods more valuable. What is more, the uniqueness is also different from the perspective of different stakeholders.

Uniqueness from the residents' perspective

The uniqueness of the site to residents is more about the lifestyle. Compared with the apartment, there is more private place shared by neighbours in the historic houses. The historic courtyards is a shared space with gardens, washing spots and even kitchens. As a result, residents can have some common activity and social interaction and develop a sense of community over time. However, there is only one open space for many families in modern apartments. As a result, residents do not have chances to get familiar with each other, and the sense of community is lacking.

Uniqueness from the outsiders' perspective

The outsiders usually visit the site from the street, and they might see the uniqueness of heritage from

the urban fabric, the materials, the fabric and the building structure. The most significant feature in the fabric is the human scale in the historic site. The street is only 4-6 meters wide, and the buildings are mostly under 12 meters. While newly constructed streets are 20-50 meters wide and the buildings are more than 20 meters high. This unique scale makes the site very attractive to outsiders.

5.2 Cultural value

Cultural/ symbolic value is also at the root of the heritage notion. It is used to build cultural affiliation in the present. It is the shared meaning of living together associated with heritage. The parameters that can be used to assess cultural value is the sites' capacity to build or sustain civil relations or governmental legitimacy (Mason, 2002).

The Meiyuan New Village Memorial Hall is a manifestation of cultural value. This was once the residence of Zhou Enlai and the delegation of the Communist Party of China. It is now listed as a revolutionary memorial building. The Meiyuan New Village Memorial Hall has been newly built, consisting of two bronze statues of Zhou Enlai, Zhou Enlai Library, and a historical materials exhibition hall. The site is an important patriotic education base, and the cultural value it represents is significant to the government.

5.3 Spiritual value

the spiritual/religious value refers to the religious or other sacred meaning.

During the Republic of China, Nanjing became the political and cultural centre of the country, and Pilu Temple also became the centre of Buddhism in the country. The Chinese Buddhist Association, Chinese Buddhist Studies Association, Chinese Religious Association, and Capital Hospital of Traditional Chinese Medicine are all located here. Today, it has become an important Buddhist centre and tourist attraction in Nanjing (fig 4.x). However, currently, most Chinese do not have a religious belief, so religious value only comes from a small number of citizens.

Other spatial elements that can convey spiritual value are the statue and former residence of Zhou Enlai. Zhou Enlai was the first prime minister of China, and he has become a spiritual symbol in the hearts of most Chinese people.

5.4 Aesthetic value

The aesthetic value refers to the visual quality of a heritage site, and it is very subjective. Everyone will

have his or her own understanding of beauty. But the most commonly agreed aesthetic values are the beauty of historic buildings, historic streets and the temple

5.5 Market value

Market value is not the intrinsic value; instead, it is more relevant to present use. It is the one most easily assigned with a price. Market values of material heritage refer to the goods and services that flow from it that are tradable and priceable in existing markets. For instance, the admission fee to a heritage site, the fee of food service and accommodation are all market values.

There are no economic activities in Meiyuan Xincun, and the Meiyuan Xincun Memorial Hall is free of charge, so the market value mainly comes from the real estate industry. There are three housing types in Meiyuan Xincun, and the housing price differs. The private-owned houses have very high market value as the housing price is much higher than the average housing price in Nanjing. The apartments also have market value, and the housing price is similar to the average housing price. The state/collective owned house has barely any market value because of the low price. However, there are enormous economic potentials in the public rental houses from the perspective of developers and the government.

5.6 Social value

The social value is not the centre value of heritage. It is the value that comes from the present use. The social value has two assessing parameters: the heritage's capacity to facilitate social connection and the other refers to residents' place attachment to the site.

5.6.1 Place for gathering

In Meiyuan Xincun, the space for a social gathering is mapped out in fig xx. The streets, shops, pedestrians are spaces for different social groups to meet. The community centre served as a place for various community activities, including a community kitchen, community meeting, and traditional artefacts. The historic courtyards are used as shared space for washing, laundry and even cooking, supporting social cohesion. This social value is generated from the residents interaction with each other.

5.6.2 Place attachment

Most residents have already lived here for decades. They have developed emotional bonds with the site and their neighbours—especially those who live together and sharing the same courtyards. When considering the place attachment, the social value is attributed to the objects that are most relevant to daily use: the historic houses, courtyards, and streets.

Fig maps out all the physical elements linked with residents' daily lives or gathered activity, and they should be preserved for social value.

5.7 Conclusion

There are multiple values attributed to Meiyuan Xincun: historical value, cultural value, spiritual value, aesthetic value, social value and economic value. The main stakeholders involved in the value assessment process include the residents, government, experts, and developers. Residents are the actual users of the site. The government, experts and developers are the current decision-makers, but they are not the users.

Historic value refers to Meiyuan Xincun's capacity to stimulate a reaction to the past. Most of the buildings were built in the Republic of China in the 1930s, with a long age and unique fabric, scale and living style. Besides, the site has also witnessed the negotiation between the CCP and KMT during the war. It can let people recall the history of the Republic of China and the wartime. Almost all the stakeholders cherish this historical value, but for different reasons. The residents cherish the historical way of co-living, and the others mainly cherish the historic physical elements.

Cultural value is the site's capacity to build a civil sustain and government legitimacy. Political value is a subfield of cultural value and is held by the government. The site was the residence of the Leader of CCP in wartime. The government use this historic event to promote the contribution of the Communist Party.

The spiritual value refers to the spiritual or sacred meaning of a site. The Pilu Temple has the spiritual value attributed to the Buda, and the status of Zhou Enlai also has spiritual value as he is seen as an icon for the Chinese people.

The residents mainly hold the social value, and it refers to residents' place attachment to the site and the capacity to facilitate social connection.

This chapter's conclusion is two schemes showing the link between stakeholders, values, and physical elements. These two schemes illustrate the complexity of values, and all values are given equal importance. They will be used as the basic information for spatial transformation strategies in the following chapters.

6 the material-based approach

The research of the values and relevant stakeholders and spatial elements offers a basis for transformation strategies. The next step is to test the three heritage management approaches and develop a set of spatial strategies. This chapter is the first part of the research by design process, and it aims to explore one side of the conflicts between current heritage preservation and livability. The material-based approach is tested to illustrate the spatial implications of the Chinese heritage preservation system.

Related sub-research question: What values are prioritized in the current heritage management approach (the material-based approach) in Meiyuan Xincun, and how will it affect spatial transformation?

6.1 Preservation principles and decision-making process

The material-based approach is a scientific-based conservation process. The value and meanings are seen inside the fabric (ICOMOS, 1964). The intrinsic values attributed to the historic fabric are prioritized, including historical values, cultural value, spiritual value and aesthetic value. These values are assessed by the experts only; the local community is not involved. The logic of the material-based approach is the historical fabrics are non-renewable resources. Heritage is considered to belong to the past, and protection is more important than present use. In order to protect these resources, minimal human interventions are allowed.

The material-based approach is adopted by the Chinese government and shifted based on the country's situation. In the Chinese planning system, the decision-makers are a combined group, including the government, the experts and the developers. The experts are responsible for assessing the intrinsic values, identifying authentic historical materials, and setting protection regulations. Based on these preservation regulations, the historic houses will be sold to developers for economic redevelopment. The whole process is under the supervision of the government, whose aim is to preserve the historic fabric for cultural identity and gain economic profit for growth.

There has already several preservations and transformation plans made for Meiyuan Xincun. This chapter will use the material-based approach to explain the current strategy, and later, these strategies will be compared with the strategies derived from the living heritage approach (chapter 7) to figure out the synergies and conflicts.

6.2 preservation strategy

The influential stakeholders in the Chinese material-based approach are the experts, the government, and the developers. The experts' identification of protected buildings is exclusive and only decided by the experts depending on the historical value, the cultural value, the spiritual value, and the aesthetic value. In the Preservation Plan of Meiyuan Xincun, there are three preservation strategies:

6.2.1 Historic buildings preservation

There are 43 protected buildings listed in the Preservation Plan of Meiyuan Xincun (2014), including two national-level protected buildings, three municipal-level protected buildings and 37 district-level protected buildings. The regulations used to protect these buildings are the same. The only difference is the level of governments that is responsible for protection. According to the Cultural Relics Protection Law (2017), these buildings should not be demolished, and the structure of these buildings should not be changed. Furthermore, inside the courtyards, no construction is allowed to preserve the original housing type.

6.2.2 Historic streets preservation

Inside this neighbourhood, there are five streets that are protected as historic streets. The preservation regulations are that the streets should not be widened. The facades facing these streets and the pavement need to follow the original style regarding the colours and materials.

6.2.3 Fabric preservation

Meiyuan Xincun is listed as a Cultural Preservation Area by the government. The regulations used to preserve the historic fabric is that new buildings are limited in function and height. Only buildings for public service and under 12 meters can be built inside the area.

6.3 transformation principle

The main stakeholders involved in the transformation process is the government and the developers. The transformation aims to resue the "violated" historic fabric and gain economic growth.

6.3.1 Demolish extensions

In the last decade, local citizens seek to mitigate practical spatial problems from various sources informally and illegally. The extensions were built by the residents inside the historic courtyards to support daily use. These informal buildings are seen as illegal constructions that destroy the fabric from experts' perspective, thus needing to be demolished.

6.3.2 Profit-driven redevelopment

The second step in the preservation plan is to gain economic profit out of the historic resources. The preservation law only focuses on the physical elements and fabric, but the function can be changed. Therefore, the strategy is to launch a touristic redevelopment project or transform the public rental houses into the high-class residence to gain economic growth.

6.4 Conclusion

This chapter explored the spatial implications of the material-based approach. The primary stakeholder involved in the decision-making process is the experts, the government and the developers. The preservation mainly focused on the historic material with intrinsic heritage values. The two primary transformation strategy are the demolish of extension and profit-driven development.

In this process, the residents' voice is invisible, and these strategies will lead to no good for their livability. The living heritage approach will be tested in the next chapter to envision the site from the residents' perspective.

7 the living heritage approach

This chapter is the second step of the research by design process. This chapter will envision the site from the residents perspective by adopting the living heritage approach. The living heritage approach will be used to set the preservation logic and explore spatial strategies for Meiyuan Xincun. The conclusion of the last and this chapter will help to elicit the conflicts at the spatial level and lead to strategies to solve the conflicts.

Related sub-research question: What values are prioritized in the living heritage approach, how can these values be linked with the livability issue, and what are the spatial implications?

7.1 principle and logic

The living heritage approach focuses specifically on living heritage. The concept of living heritage is linked to the concept of continuity. This continuity refers to the heritage's original function, the purpose for which the site was built. For residential areas, continuity refers to the communities' connection with the site, expressed through the communities' management and maintenance, and their response to changing circumstances. This community is the group that created the living heritage and sustain the original function of heritage. They have a strong sense of caring for the

heritage as an obligation. This community is referred to as the "core community" (Wijesuriya, 2005; Poulios, 2008; Poulios, 2011). The other community groups also involved in heritage life are often referred to as the "broader community". Living heritage is not aimed at preserving the fabric but conserving the continuity. The living heritage states that heritage preservation should focus on the continuity of the link between the community and the site. The change of physical elements is the community's response to the changing context, so this change is part of the continuity.

The decision-making process is community-based that the core community is given the primary role. The broader community and the experts are given a secondary role. In Meiyuan Xincun, the original community has already left the site in the 1930s. The current community is composed of the public house tenants, the private house owners and the residents in apartments. The majority population is the public tenants, making up 75% of the total population, and they have created a unique co-living lifestyle. They are taken as the "core community" by this project. The other stakeholders will be the broader community. The government and the experts provide an enabling framework of support, guidance and assistant to the core community.

A living heritage approach is also an approach that brought the livability concern into the heritage preservation process. So it is chosen to explore the livability side in the historic neighbourhood. The transformation needs to based on the needs and concerns of the core community. The material-based approach takes heritage preservation as static and livability as change. However, the living heritage approach sees the community's response to the changing context as continuity of the connection with the site. The living heritage approach embraces change as part of the continuity, answering the inherent conflict between preservation and livability.

7.2 Prioritized values and physical elements

The primary decision-makers of the living heritage approach are the residents, so the prioritized values are those hold by the residents, including the social value, historical values, and market value. As a historic neighbourhood, the social value of Meiyuan Xincun mainly refers to the residents' place attachment to the site, including the mental bond to the site and the community. The historical value is attributed to the historic buildings. This value is vital to built community identity and proudness. The last value is market value; as the residents are primarily low-income residents, they also want economic activities or job opportunities to raise personal income.

7.3 preservation strategies

The core of preservation is the local community and their connection with the site. By identifying the values held by the residents and the relevant physical objects, spatial strategies can be made for preserving the local residents. Based on the previous analysis on values, the physical elements that need to be preserved are listed below, and the preservation strategy also states following the principle of preserving the local community

7.3.1 The historic houses

The historic houses are the living space for most residents, and they have lived here for several decades. These historic houses offer a unique living style that is different from the predominant apartments. The residents have a mental bond to the place and the unique lifestyle. Therefore they should be preserved. However, not as the preservation strategy in the material-based approach, the living heritage puts the present use first, so the structure of these buildings can be adapted according to the present need. For example, the inner walls can be moved or demolished to make more use of the space.

7.3.2 The historic courtyards

The historic courtyards are used by several families as a shared space. There are some small gardens, washing facilities, and drying racks in the courtyards. Some families even built a small kitchen in the courtyards. The historic courtyards are only a living space and a shared space for neighbours to interact with each other.

7.3.3 The historic streets

The historic streets are linked to social values and historical values. These streets were built in the 1930s. The human scale and the material makes the street unique, thus building a sense of community identity. The streets also offer space for residents to sit and meet each other, so they are part of the place attachment to the site.

7.3.4 The extensions

As the population grows, more spaces are needed, and residents built extensions to deal with living needs. These extensions are seen as illegal construction by experts and the government, but these constructions are very important to the residents. When considering the communities' connection with the site, the extensions are the most critical elements as they were built by the community. Thus these extensions need to be preserved in the living heritage approach.

7.4 The transformation strategies

As stated in the living heritage approach, all transformation should be based on the residents' needs and concerns. In this thesis, the theory and method used to analyse residents need is the livability theory. First, the livability indicators will be used to assess current livability and find future needs. Then transformation strategies will be made based on the former analysis.

7.4.1 Livability assessment

The term "livability" was first used by Donald Appleyard in the 1970s to define neighbourhood streets' quality in environmental and social aspects. According to Donald, livable streets should be comfortable places that are healthy and protected from noise, pollution, and traffic intrusions. A defined neighbourhood territory, sense of community, and neighbourhood identity are critical factors towards livability in the social aspect. (Donald Appleyard, 1980) Later, Marcus and Sarkissian add the meaning of livable housing to the term "livability" and emphasized the form and affordability of housing that functions well for families (Cooper Marcus, Perlgut, Sarkissian, & Wilson, 1986). In 2005 Macdonald extends the spatial scope of livability to include the semi-private spaces between facades and streets (Macdonald, 2005). Bosselmann argued that the term had been progressively broadened to include available services, walkability, and transit in consideration of resident's daily life (Bosselmann, 2008). Szibbo linked livability with sustainability by pointing out that a livability neighbourhood should address the three pillars of sustainability: people, planet, and profit. In Szibbo 's opinion, the socio-economic and socio-culture aspects have not gained much attention as they deserved, partly resulting from the difficulty of quantifying and qualifying (Szibbo, 2015).

Livability is a broad term with no precise or universally agreed-upon definition. It encompasses broad human needs ranging from food and basic security to beauty, cultural expression, and a sense of belonging to a community or a place. (National Research Council 2002) The description of livability refers to a complex urban system that can offer environmental, economic, and social support to its inhabitants. In order to evaluate livability and inform future development, a set of indicators need to be used. The indicators used in this project are based on Urban Living Index (*Urban Living Index*, n.d.) and considers the site's context. The indicators can be generalized into four categories: accessibility, environment, society and economy. These are the four main aspects and will be explored in the analysis part, relating to the site's specific context.

As mentioned in the theory chapter, livability is a broad definition that comprises every perspective of residents' needs. Therefore, this thesis adopted the indicators in the Urban Living Index (*Urban Living Index*, n.d.) to assess the current livability. These indicators are divided into four categories, accessibility, the environment, society and the economy.

Accessibility refers to the proximity to the public transportation system and walkable street. Public transportation contains the metro station and bus station. The walkable street can be assessed by the connectivity of pedestrians. As a large portion of walking space is occupied by car parking, so the number of parking lots is added as an indicator to assess walkability (Higgs, 2019).

The environment includes a series of spaces at different publicness level. The theory chapter has already stated that the environment includes livable houses, semi-public space and public space. The livable houses should be affordable to all people and can offer good quality for residents well-being. So there are two indicators regarding houses: diversity of housing type and housing quality.

Semi-public space with enclosures will promote privacy, a sense of territory and safe, finally increase social contact(Mahapatra, 2016). Public space is also needed to welcome outsiders and foster interaction between different social groups.

Society refers to the social mix and social cohesion. Social mix is essential as it offers people a sense of option of whom to interact. Therefore they can feel secluded. Moreover, it is determined mainly by the diversity of housing type. The diversity of housing type will lead to the diversity of social groups. Social cohesion between these groups is based on social interactions fostered by activities in the public space.

The last category is economy, including affordable housing, job opportunities and personal income.

accessibility

The mobility network is also well-developed in this area. Meiyuan Xincun is surrounded by urban express road, main road, and secondary road on the east, south, and north sides. Besides, it is located around the metro line, and there are two metro stations within 500 meters of distance.

However, human-friendly traffic is not existing in Meiyuan Xincun. There are no bicycle lanes, and the pedestrian network is also incomplete.

Environment

The housing type is diverse in Meiyuan Xincun. There are public rental houses with very low price, middle-rise apartments with average housing price and expensive private-owned historic houses. The housing amount and quality is not satisfactory yet.

The main semi-private space, the courtyards, offer an enclosed space for several families to share, fostering social cohesion between neighbours. Nevertheless, semi-public and public space is lacking, and consequently, there is no space for different social groups to interact.

Society

There are currently three main social groups in this area, low-income tenants, middle-income residents and social elites. However, the social mix does not lead to social cohesion. There has no public space for social interactions with other groups.

economy

Most residents are low-income residents. They are usually also low educated that finding jobs is very difficult. Job opportunities are needed to raise their personal income.

Based on the livability assessment, the main livability problems include the following ones:

- 1, lack of a walkable network
- 2. affordable housing shortage
- 3. lack of economic activity and low personal income
- 4. lack of public spaces and social programs to foster social cohesion

The transformation strategies will be made for these problems.

7.4.2 Transformation strategy

1) Network: walkable street network

The first step of transformation is to create a walkable network. And there are several steps to take.

Firstly, two buildings at the neighbourhood's edge can be transformed into vertical parking slots to create a car-free area.

Second, the main streets can be changed to a bicycle lane to create more pedestrian space.

There will not be cars parked on the living street from the human perspective, and more space can be created for walking and street furniture.

2 Economy: economic activities to provide job opportunities for the residents.

The main problem regarding the economy is that there are no economic activity or job opportunities for the tenants with low education level. Currently, the monofunctional site has no economic activities. However, the site has economic potential as it is attracting outsiders. Job opportunities can be created by implementing some shops or restaurants. At the same time, residents need a relevant private area that will not be disturbed. Therefore, the economic activities should be limited along the main street. The areas facing the street on the ground floor can be transformed into small shops, the upper floor can be kept as private living space for residents.

3 Environment: densification to provide more houses.

There has already three kinks of houses in the neighbourhood and many semi-private spaces for neighbours to interact. However, the housing amount is not enough, and the housing quality is not standard, especially the historic house. There is also a lack of public space (public space and for different groups to interact) and semi-public space (enclosed space mainly for residents for community activity). The transformation actions are as follows.

Firstly, there should be some high-rise buildings to offer more houses. This built-up site has no space for densification, so some elements must be transformed or demolished. Based on the value analysis, there are the least values attributed to the shanty houses, so they will be demolished to make space for densification.

4 Society: more public space and social facilities to foster social cohesion.

Currently, the courtyards foster social cohesion between neighbours, but there is no chance to interact with other residents. Public space is needed to build social cohesion in the whole neighbourhood. By interviewing residents, the activities they want are concluded and illustrated in fig. These will be a design guide for the public space.

7.5 Conclusion

The living heritage is a heritage management approach that focuses on the preservation of local community. The primary decision-makers are the residents, and the values prioritized by them is social value, historical value, and economic value. The social value is the residents' mental bond with the site, the unique lifestyle and their neighbours. The residents also value the historical value as it can be built more proudness. Lastly is the economic value. The current low-income residents need some economic activities or job opportunities.

The preservation mainly focuses on the physical element associated with residents daily life and their self-identity. The historic houses and streets are most important to the residents. They have both social value and historical value. The other living spaces, including the extensions, the apartments and shanty houses, are also valuable as they are the physical elements that support residents. The historic buildings not relevant to daily life, including the temple and the memorial hall, are essential as they can build a place identity and the residents' proudness for living here.

The transformation strategy is based on communities need, assess by livability indicators. The transformation strategies can be summarized as follows:

- 1. Walkable network
- 2. economic activities along the main streets to improve personal income
- 3. high-rise or middle-rise house to offer more houses
- 4. more public space for social and community activities

8 Value-based approach

The exploration of the material-based approach and the living heritage approach illustrates the conflict between the current preservation approach and residents' livability needs at a spatial level. This chapter will use the value-based approach, a democratic process, to find solutions for these conflicts. In this approach, all stakeholders voices will be considered in the decision-making process. The value-based approach will be used to discuss the willingness of different stakeholders that lead to these conflicts. The conclusion will be a set of design principles to solve the conflicts, thus balancing heritage preservation and livability.

Related sub-research question: Can the value-based approach be used to solve the conflicts of spatial strategy in the material-based approach and the living heritage approach?

8.1 Principles and decision making process

The material-based approach and the living heritage approach was tested in the previous chapter. The material-based approach is already demonstrated as no good to livability, thus not suitable for the site. The living heritage approach is also unsuitable as it uses bottom-up methods, letting the residents be the deciders. So the living heritage approach is not feasible shortly in the Chinese top-

down planning system. However, exploring the two methods is still helpful as the conflict between the current preservation approach and residents livability need are explicit in a more detailed way and relating to explicitly the transformation strategy of certain elements.

A value-based approach is a democratic approach that can be used to negotiate between various stakeholders. The value based-approach can be seen as an expansion of the material-based approach but include more social values (Poulios, 2014). The fabric is still seen as non-renewable resources and is placed in the central protection scope. Intangible values are included in the protection scope only when it is beneficial for preserving tangible values. Although different stakeholder groups are involved, they are still under the heritage authorities' supervision. The central power is in the hand of experts, and other stakeholder groups are treated equally (Demas, 2002). Following these principles, this chapter will analyze the conflicts between different stakeholders (the research outcome of the previous two chapters) and see if the value-based approach can be used to solve these conflicts.

8.2 The synergies from the material-based approach and the living heritage approach

Before going into the conflicts, the strategies that are both agreed in the material-based approach and the living heritage approach will be summarized here. This will be the next action with no friction.

- 1. Preserve the historic houses, courtyards and streets
- 2. Preserve the Pilu Temple and the Memorial Hall
- 3. Introduce new social groups and economic activities

8.3 The main conflicts and balancing strategy

By comparing the conclusions from the material-based approach and the living heritage approach, three conflicts are identified. The conflicts in spatial transformation is the conflicts between the values cherished by different stakeholders. As above mentioned, the value-based approach is a democratic process that all voices are included. So for each conflict, the willingness of stakeholders will be discussed, and solutions will be developed based on various views.

In this approach, the meaning of heritage is more inclusive. The tangible elements are still seen as non-renewable resources. The intangible elements and the social value can be included when it is beneficial for preserving the other values attributed to the physical elements. So the heritage preservation will not only focus on the completeness of historical material, and there is some space for change. Therefore the transformation for livability can be approved by the experts and government. This logic will be used in the following pages to discuss the three conflicts:

- 1) Extensions: demolition or preservation
- 2) high-rise buildings: decline or permission

3) Redevelopment: residents relocation or residents involvement

8.3.1 Extensions: demolition or preservation

The first conflict between the material-based approach and the living heritage approach is on the transformation of extensions.

Extensions are the informal facilities built by the community and supporting their daily life. However, they are seen as illegal to the experts and government.

The government and experts are planning to demolish the extensions as they are not authentic historic buildings. Their extensions are illegal construction built by residents, so their existence will destroy the historic fabric. The other reason is that the quality and appearance of these informal constructions are not good, and they are not contributing to the aesthetic values of the whole neighbourhood.

However, these extensions are necessary connectors between residents and the site. They were built by the residents and supporting their daily life. The preservation of extensions is vital in preserving the intangible and living side of the heritage. The extensions represent the co-living lifestyle and make the heritage site complete and more identical.

The experts' main concern is that they destroy the historic fabric and the aesthetic values of the site. Strategies can be that these low-quality extensions can be renewed with view control so people can not see them from outside (fig). The height of the extensions can be controlled that the outsiders will not see them, or plants can be used to block the view. Thus the visual quality can be ensured while the extensions can still be preserved.

8.3.2 high-rise buildings: decline or permission

The second conflict is on the densification plan. The government and the experts disagree with constructing high-rise buildings because they will destroy the heritage's original fabric. However, the residents require more houses to solve the crowdedness.

The reason hold by the government is that all the historic buildings are low-rise, so that a high-rise building will destroy the historic fabric. This logic follows the principle of the material-based approach that the value of heritage only lies in the physical elements. However, if the tangible heritage is also included, the high-rise buildings might be a new layer that conveys the intangible uniqueness of the site.

There are some design principles for the new construction to convey the unique co-living style or the human scale space design:

- 1. The new houses need to show the values of Meiyuan Xincun. one value is the human scale of streets and buildings. There needs to be some buffer zone between the new house, like an active plinth that restores the human-scale streets.
- 2. Another value is the shared space with neighbours to foster a coliving lifestyle, so there need to be some terrace of balconies in the new building and should be visible from the street.
- 3. The highest building in the neighbourhood is seven-floor, the new houses should less than seven floors to keep a harmonious skyline.

8.3.3 Redevelopment: residents relocation or residents involvement

The last conflict lies in the process of economic redevelopment. In the government's plan, the residents will be relocated, and the houses will be sold or rented to developers. As a result, the government will gain considerable economic income. The redevelopment process is also easier for the developers as they do not need to consider the residents. However, the relocation will cause a break of social connection and place attachment, so from the residents perspective, they want to stay here and be involved in the redevelopment process.

As said in the living heritage concept, the existence of the original community will add a unique identity to the heritage. In addition, the community's practice of a unique living style can complete heritage values and make the site more attractive. Consequently, the newcomers can bring economic profit to the residents and developers.

Based on previous analysis, there are two potential newcomers: the tourists and the designers. Different newcomers request different economic activity and will generate different social interactions with the residents.

If more tourists are introduced to the site, the economic activities will include tourist service, restaurants, hotels and homestay. These economic businesses can be launched by developers so that they can get economic profit. In the meanwhile, there will be job opportunities created for the residents.

If more designers are introduced to the site, the economic profit mainly generated from the real estate and the economic business. As more houses are built, the developers can also rent apartments to young starters for economic profit.

9 Scenarios

This chapter will develop the spatial design based on the strategies derived from the value-based approach. Two scenarios will be developed considering the uncertainty of social groups changes.

These are two examples of implementing the value-based approach. In the end, the livability will be assessed again to demonstrates the improvement.

Related sub research question: What future scenarios can balance heritage preservation and present livability based on strategies derived from the value-based approach?

9.1 Common strategies and time sequence

The change to the value-based approach requires the change in perceiving values, which might take some time. So those commonly agreed strategies, including introducing economic activities and redesigning a walkable network, can be implemented firstly.

Later the conflicted strategies can be adopted. The renewal of extension and residents' involvement will be launched first because these two do not strongly conflict with the historic fabric. The construction of new houses will be implemented lastly when all stakeholders commonly perceive the intangible value.

9.2 Two alternatives based on social trends

Based on the strategy of introducing new social groups and economic activity, the change of social composition is going to happen in this area. However, the new social groups are uncertain; they can be some tourists, some creative workers, or a mix of these two groups. So two scenarios are made to discuss different spatial strategies for these two new social groups. A layered approach, including the infrastructure, the public space, the buildings, and the program, is adopted when developing the two scenarios.

In the first scenario, the tourists are introduced to this neighbourhood. Currently, the only place for tourists to visit is the temple and memorial hall at the site entrance. However, tourists are also interested in visiting the inside part of the site to experience the living style. In this scenario, a visiting route is created for tourists. The main historic streets are selected and designed as visiting street. In order to make the historic value more recognizable, there will be some storytelling board along the streets, where old pictures or maps will be displayed. There can also be some seats, street food cars on the street for people to stay. Along the main visiting path, some historic houses can be transformed into homestay hotels.

In the second scenario, the new social group is the creative workers attracted by the historical atmosphere here. More working space is made for them in this scenario, and even apartments will be made for young starters. They will also bring restaurants, cafes, exhibitions, and sales, thus creating economic profit and creating job opportunities.

As the designers will stay here for a long time and it is necessary to implement some incentives for the newcomers to interact with the original residents. Most of the current residents are elderly, and they need accompany by young people. In order to encourage the young starters, a lower rental fee can be offered if they can spend some time accompanying the elderly.

9.3 comparison of the two scenarios

This chapter will compare the two scenarios from a spatial perspective. Public spaces, semi-public spaces, densification index, and the experience from residents' perspective will be compared and discussed.

9.3.1 Public space

The primary public space is the street, and some open spaces are added to this system. The main difference in the public space network is the level of openness of the site. In the first scenario, the public street is designed deep into the neighbourhood because tourists want to experience more and visiting more. Therefore, a visiting route is created deep into the area, and some activities happen along the street.

In the second scenario, the designers need a more gathered space to communicate and work together with each other. This space can also be public to show the works to the public, so the main public space is only along the main streets and the river. Inside this cluster of public spaces, there will be some workshops, working space, innovative park.

9.3.2 Semi-public space

The semi-public space is mainly designed for residents to offer a more private and safe place. Community activities, including dancing, children playing, playing chess, will happen in these spaces.

In the first scenarios, most historic streets are designed as public space, so there is less space for the community. Therefore, the main semi-public space is the community parks.

In the second scenario, there are more semi-public spaces, including the living street and the parks.

9.3.3 Buildings

In both scenarios, the densification area is the shanty house area. As said in chapter 7, the new constructions need to be controlled under seven floors to ensure the visual qualities of the site. These two models show maximum densification amount.

There will be approximately 7415 square meters of new living spaces and 2310 square meters of touristic service in the first scenario.

There will be 6748 square meters of new living spaces and 2370 square meters of working in the second one.

9.3.4 Eye-level perspective

The former comparison is from the top-down perspective, but it is also essential to evaluate the strategies from the residents' perspective.

The two scenarios share the same physical transformation strategies. The changes in the physical setting are similar in the two scenarios. The residents can have social interactions with others in the streets, and more houses are built in the shanty house area.

However, there is some difference in the activities and job opportunities. There are more job opportunities in the first scenario as the tourists need more services from the site.

In the second scenario, the job opportunities are not as much as the first one, but there are more chances to build social cohesion with the newcomers. The reason is that the young starters will stay here for a long time, and some will spend some time accompanying the residents for lower rental fees.

9.4 Design outcome

This subchapter shows the design outcome of the two scenarios. The master plan and a detailed design of the key public space will be displayed and explained.

9.4.1 Scenario 1

This map shows the master plan of the first scenario, and it is the conclusion of the preserved elements, public space, new buildings and greenery.

This bird's eye view focuses on the main public space along the main street. It shows how the new constructions (the red lines) are positioned in the existing physical environment (the black lines). All public spaces (red pavement) and semi-public spaces (grey pavement) are also illustrated with activities inside.

Storytelling board

Along the main visiting street, some storytelling boards display posters or sculptures associated with historical events. The aim is to make the intangible part of heritage more recognizable and make the street more vibrant.

Viewpoint on the terrace

One of the principles for densification is to create public spaces facing the street. In this scenarios, the public space is designed as a view point. Tourists can use this space to see the historic buildings from the bird's view.

Tourist service centre

the tourist service centre is designed in the middle part of the site. There are indoor restaurants, outdoor seats, food cars in the outdoor public space. These different space typology will offer various experiences and attract more tourists. Besides, the square is a node of the visiting route and

the buildings are designed following the human-scale principle. Therefore, the tourist centre will be integrated into the heritage site and express more values to the outsiders.

Community living street

the community living street is a semi-public space with more quietness and privacy. They are seat and green space along the street, and they can be used as space for residents daily outdoor activities.

Human scale street and active plinth

the street is transformed into a walkable street, and a new volume is added to the existing apartments with an active plinth. The transformation of the street follows the human scale principle. It continues the uniqueness of the site and also improved the walking experiences.

Active balcony and terrace

Community park

Preserved historic houses

9.4.2 Scenario 2

This map shows the master plan of the first scenario, and it is the conclusion of the preserved elements, public space, new buildings and greenery.

This bird's eye view focuses on the main public space along the main street. It shows how the new constructions (the blue lines) are positioned in the existing physical environment (the black lines). All public spaces (blue pavement) and semi-public spaces (grey pavement) are also illustrated with activities inside.

9.1 Evaluation of the design outcome

The livability assessment is used to assess the design outcome, and the outcome is shown in. Both two scenarios offer more houses and public space to the residents. The level of social mix and social cohesion will also be increased as newcomers are introduced, and programs are designed for them. The job opportunities and personal income will also be better than before.

Both two scenarios can improve livability. The differences are the type of newcomer, the new jobs and the openness of the community. The object of making two scenarios is not choosing one in the end but to offer more options and show the differences for stakeholders to choose. These two scenarios are two examples to illustrate the strategies and can be used as a starting point for neigociation and decision making.

10 Evaluation & conclusion

In this chapter, all sub-research questions will state their conclusions, and in the end, the main research question will be answered. Limitations and future research recommendations will also be described.

Related research question: Can the value-based approach be used to improve livability in historic neighbourhoods under the Chinese heritage preservation context?

10.1 Conclusion

The research aim of this thesis is to build a link between heritage preservation and livability in the historic neighbourhood under the Chinese context. Literature findings indicate that a broader scope to define heritage value can be used to bring heritage value and livability together. And the value based-approach is suitable in this case to improve livability. So the main research question was raised: can a value-based approach be used to improve livability in historic neighbourhoods under the Chinese planning context?

The process of testing this hypothesis is first to test the spatial implications of the two conflicts fields. The current preservation approach requires the preservation of historical material and demolition of illegal extensions made by the residents. The spatial implication of livability is research by adopting the living heritage approach. And the results are that the historic houses can be adapted or even demolished to fulfil community needs, so high-rise buildings can be constructed to deal with the housing shortage. These two approaches are extremely focusing on one side and not suitable for the current situation.

Then the value-based approach is used to solve the conflicts. The preservation principle is that the intangible elements can be preserved when it is beneficial to preserve the tangible ones. The intangible elements are the social values and the living style of the local community, which makes the site complete and add more uniqueness to it. So the community need to be preserved as part of the site. Then the changes to fulfil the communities' need is a part of the preservation. Based on these arguments, strategies were made to balancing the conflicts.

The strategies from the value-based approach were tested in two design scenarios facing different trends of social change. The livability assessment of the two scenarios both improved, and this demonstrates that the value-based approach can be used to improve livability. The key difference from the current heritage preservation approach is the inclusive value assessment process and the awareness of the communities value.

11 Reflection

This graduation project focused on the livability issues in the historic neighbourhood under the Chinese context. I choose Meiyuan Xincun in Nanjing as a site to explore. This topic and site arose from my personal experience and interests. I used to live in Nanjing, a city with many historic districts, for six years. I notice that citizens and tourists liked to take a walk inside historic neighbourhoods for the historical atmosphere and aesthetic appearance. However, once entering the houses, one can see how bad the living situation is inside the lovely facades. Such problems are not specific but universal in Chinese cities. For a long time, the Chinese practices only focused on preserving historical objects and gaining economic profits out of historic resources. The protection and utilization of heritage are based on a narrow understanding of heritage value, only including historical value, cultural value and market value. Therefore, we often think that the protection of heritage and the livability of residents are two irrelevant things. However, if we use a more inclusive perspective to define heritage value, we will find that the heritage value can also be used to linked to present livability. For instance, social value is also an essential dimension convey by heritage and is closely related to livability. This project aims are defining the heritage value of Meiyuan Xincun in a broader view and find how to promote The diversified value of heritage and how to maximize the use of heritage value to make it serve the livability of residents. During envisioning a more livable future, topics of transformation, densification and sustainable urban environments are also touched upon. These topic are aligned with the Urban Fabrics Studio's main topic.

11.1 Societal relevance

The societal relevance of this project can be generalized into three points: speaking for the vulnerable social groups, raising awareness of heritage value and promoting an inclusive planning process. These three topics are the societal challenges I observed during the last years, and they are the precondition when initiating this thesis.

Firstly, this project speaks for vulnerable social groups. In China, there are many historic houses under state or collective ownership. These houses are usually used as public rental houses. Most of the tenants are poor and elderly. Thus they do not have the capacity to improve their living conditions. This project speaks for these vulnerable groups and tries to envision a livable urban life for this group.

Secondly, this project applied a broader definition of heritage value. Heritage should not be treated as some old objects that should be kept unchangeable, but they can be seen as resources that create new value for present society. This thesis advocates a more comprehensive understanding of heritage and tries to raise such awareness by urban design.

Lastly, most planning decisions in China are top-down, and residents have no decision-making power. However, a key point of livability is to have control over the environment in which one lives. In order to resolve this conflict, this project proposes a bottom-up update strategy based on the Chinese situation. It contributes to the formation of a more inclusive decision-making process in the future.

11.2 Scientific relevance

The main academic topics this thesis explores are heritage and livability. In this project, current discourse in these two fields are being discussed, a link between these two fields are constructed and tested in a historic neighbourhood in China.

Heritage has been seen as a crucial social capital in China since the 1980s, and various legislation and regulations were made to protect the old fabric and buildings. However, the current material-based approach only preserves the fabric but ignoring the social pattern and communities appeal. Two new approaches that including the social value and intangible side of heritage, are introduced. Different scenarios are made to show the outcome and consequence following the principles of these two approaches.

The second theme is livability. The academic discourse ongoing is a broad definition including environmental, social and economic aspects. Based on this frame, specific livability assessing framework is built under the specific context. In order to test how heritage value can be used to improve livability, the four scenarios following different principles of value-based approach and living heritage approaches are assessed in this framework. The outcome is to see which livable aspects are affected the most by each approach.

In a nutshell, this thesis tries to find out how to make heritage value benefit the livability of local residents. The way of doing so is to testing new heritage approaches in a Chinese neighbourhood and assessing the design outcomes by a livability framework.

11.3 Advantages and limitations of the chosen methodology

The methodology I made in the first two months was based on limited knowledge of the site and the topic. At that time, I proposed mapping, morphology study, scenarios, literature review as methods. All of these worked very well in helping me analyzing the site. The most effective method is designing scenarios in my project. Based on some common goals and strategy, four distinct scenarios using different physical and social patterns. These scenarios show possible futures and the consequences. Because of the complexity and uncertainty, choosing is challenging and should not be decided by the designers. Designing scenarios is a good way to show the pros and cons of possible future and a communication tool between designers and other stakeholders.

There is also something that did not work. Considering the Covid-19 situation, I proposed to have some online interview or questionnaire with the residents. However, in practice, I realized that most of the residents are elderly over 60, so they are unwilling to participate. Then I changed the strategy and asked my friend to do some onsite interview and take videos to watch. This method worked well in this project. Although the interviews can't reach many residents, it can offer a more in-depth understanding of the sample living condition. These interviews help to know residents opinion on the historical values and the most urgent need, thus forming the transformation strategy.

11.4 The relationship between research and design

In this project, the design is an essential component but not the final goal. The main aim is to propose a new way of looking at the heritage that aligning heritage value with present livability. With this goal, research and design are two processes interwoven and supporting each other.

Research into the site helped me understand how various physical elements assemble this area and how residents interact with the site. Thus I can imagine a better future based on the current situation and discover possible solutions for specific interventions. By putting the possibilities together and defining new patterns, I am actually designing this area. This is how research helped me to make a design. Moreover, in turn, design can also help me to guide the direction of research. As we are working with an urban area with infinite details to be explored in a limited time, we need to be very specific on what should be researched. However, choosing is always hard, especially when I am not sure where my story will end. When I was in a stage where I felt lost of all the small details and anxious that there is still so much knowledge unknown, my mentor encouraged me to start design right away. I did so, and I found that designing is a process to synergy all the findings to a compact conclusion. In this process, I am more explicit about what I want to address and which part of the analysis is still missing.

11.5 Fthical issues and dilemmas

The research takes several ethical values into considerations, like concerns of the livability of local residents, participation in the planning process, and different perspectives to state the heritage value. Nevertheless, there is still some grey reality.

There are many stakeholders relating to the site. The most centre ones are the original residents and possible newcomers. As said in the living heritage approach, the planning process is not democratic. The needs and concerns of the original residents are prioritized over others, as the original residents and their lifestyle are also seen as heritage.

11.6 Possibilities to generalize the results of the research

The basic research concentrated on the generic theory of livability and heritage. The livability and heritage value assessment framework is generalizable in other sites. Heritage value is multivalence and contingent, so the valuing process should consider different value typology and stakeholders. The value of heritage can be slightly different, but the value typology in this project can be used as a starting point when dealing with other sites.

The research by design process produced specific knowledge for the site, but organizing a participational planning process using scenarios can be generalized. Moreover, the design and assessing process is an example that shows how heritage value can be functional for current and future livability.

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