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Aestheticization of Infrastructural Power:

**How is the Everyday Life Conditioned by Waterfront Infrastructure
in Beijing?**



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Abstract

It remains a complicated question that how Chinese governments perceive infrastructure in conducting their power. Overrepresented by materiality, infrastructure is often seen as rigid and apolitical engineering works. The critical urban theory tries to advocate an “infrastructure turn” in urban studies to encourage reflections on how infrastructure impacts on everyday life and practice in the aspects of techno-politics and aesthetics. There are some case studies focusing on details of the government's exercise of power with the help of infrastructure. But there is little empirical research on China's government's workings, despite this country's fame of an “Infrastructure Maniac”. So the first main question that this thesis tries to address is what does infrastructure mean to space and the everyday life of citizens under the urban transformation in China. The thesis explores the centrality role of the state (or the government) in creating and managing infrastructure projects in urban China. Two aspects are emphasized, namely the techno-political and aesthetic meanings of workings. The aesthetics of infrastructural power are foregrounded to explain how the infrastructure and everyday life are conditioned by the state power.

This study takes the urban renovation project of the Liangma River in Beijing and relevant events as the targeted case. Detailed field research and observations provide a valuable chance to disentangle the power relations in the waterfront renovation process. The interactions between infrastructure and power are endowed with aesthetic meanings on three levels: the engineering of the waterfront, the discipling of activities and the discourses. The study addresses the second main question about how and how far the government interact with social life and space in the arena of the Liangma River. The two qualities of infrastructure, the techno-politics and aesthetics respectively answer the two main questions on “what” and “how” is infrastructure. Through critical investigation on the production and management of infrastructure, one can see the urban government's perception on its legitimacy and significance in urban China. More empirical studies on the relations between China's infrastructure and everyday life are expected to enlarge the critical urban studies literature.

Key Words: Infrastructure; Power; Aesthetics; Techno-politics; Liangma River; Waterfront; Everyday life; Apparatus of governmentality; Water space;

1. Introduction

1.1. Set-up of the Liangma River

1.1.1. *A Historical Thread Between the River and the Power*

The famous Yongle Emperor Zhu Di decided to move the capital of the Ming Dynasty to Beijing in 1420, which was a significant tipping point for many landscapes in Beijing. As the most important means of transportation and warfare tools in the 15th century, horses were vital resources to the royal family in Beijing. The royal steeds would go through a last process of scrubbing before presenting them to the emperor, near a small river in the east of the city. After a bath in this river, horses would be made to wait and dry off under the sunshine on riverbanks, which later gave the river a name “The River of Drying Horses under the sun” (晾马河, pronounced as Liangmahe in Chinese). With time going by, a mistake of homophone between 晾 (liàng, dry off in the sun) and 亮 (liàng, bright) is confused and today people call this river 亮马河 (Liangma River), which is the very water body discussed in this thesis (Jeremiah, 2023). Located near the highest power seat, this river has been related to the power flows at the very beginning of its anecdote. What is different, however, is the drastic landscape change through time. The Liangma River was in the suburb with grassland in the 15th century, while today it has been a core area crowded with high office buildings and roads.

During the period between the 1880s and 1970s, the Liangma River was neglected and seldom dredged, which led to serious sedimentation of the riverbed and impeded drainage during flood seasons. Since 1981, the Liangma River has gone through a long period of dredging and management process under pure engineering principles (Hu, 2019), which dates back to the starting point of the Reform and Opening policy in China. At the early stage, the state-owned enterprises along the Liangma River were partly responsible for cleaning the riverbed, which means the staff of these factories had to offer obligatory labor for dredging with no payments. Later, the development of the market economy and the construction of the second embassy district displaced these factories with luxurious hotels, diplomatic apartments and office buildings. Despite great changes in landscapes and property owners, the shadow of the state has never faded away along this river. During the command-and-control economy era, the boundary between government and enterprises was blurred. The state-owned factories were asked to bear some non-economical functions like river drainage, which should go to the local water authority. When Chinese market began to open and foreigners flew into the area, the government tried to accommodate and manage the “international landscape” along the Liangma River with state-owned capitals and the classy buildings are physical representations.

While luxurious hotels seem distant from ordinary citizens, the workings of the surrounding area exerted great impact on people’s life. During the rapid urbanization of Beijing in the 1990s, many villages then along the Liangma River were demolished and peasants were relocated to the periphery with unfair compensation. By acquiring these core-area lands at a low cost and selling them expensively (Wu, 2018), the local government was able to start development and infrastructure projects. In other words, the classy appearance of the current Liangma River is

based on the transferred property prices from peasants. The unfair land acquisition regulations at the early stage constituted a part of the infrastructure of the waterfront renovation of the Liangma River. The residents once living at the very location of the current Chinese-Japanese Youth Communication Center along the Liangma River in 1980s, are now stuck in small apartments of a 30-year-old Soviet Union-style residential compound, located three kilometers outside the Liangma River. This compound has barely any greenery or convenient facilities and is full of disrepair and gloom with few old people enjoying the sunshine, which features sharp contrast with expensive grassland and vibrant young people along the Liangma River.

The government invests different amounts of attention and resources into the residential compound accommodating the relocated people compared with the revitalized Liangma River area. Since the Ming Dynasty, the Liangma River has been receiving increasing attention from the authorities with different purposes in various periods of time. From the 1980s, both the capital and the government power flows concentrate around the river, arousing continuous changes of landscape. These changes not only represent the urbanization process of Beijing but also significantly influence ordinary people's life. Different urban activities are similar with writing on a parchment, every time you write new texts over the old ones, while the old things leave their hints in corners (Zhao, 2020). The historical legacy of this river implies its destiny of constant workings, including the latest renovation scheme, as what will be mentioned below.

1.1.2. A State-led Infrastructure Project

The April and May of 2022 witnessed a most silent Beijing because of the strict Covid-19 restriction policy. Citizens were banned from eating in restaurants and most kinds of indoor public activities were impossible. Consequently, people began to seek possible spaces to enjoy communication, relaxation and sunshine. Liangma River in downtown Beijing began to become popular among social media as a “Last resort” for exercising, holding parties, picnics, and other creative entertainments (Hu & Lin, 2022). From then on, Liangma River has received continuously increasing attention as an attractive spot in Beijing, even lasting into the “post-Covid era”. This river gains a high reputation such as “La Seine of Beijing” (Du, 2023) and represents a sense of ‘Beijingers’ lifestyle’ (Jeremiah, 2023). Traditionally this capital city was known for lack of “great” rivers which could accommodate admiration, nostalgia, and sentiments of citizens like Shanghai, London and Paris. How is it possible that the Liangma River manages to stand out because of its idyllic and Western European attributes? Underlying the popularity of this small river is an interesting process and interaction on infrastructure between stakeholders under the era of urban transformation in China.

Liangma River, with a length of approximately 10 km, an average width of 40 meters, and an average depth of 3 meters, is in the Chaoyang District, northeastern part of downtown Beijing. Many white-collars and expats who have relatively high income and education agglomerate there (Du, 2023). They have strong demands for public space, cultural and leisure activities related to water. Therefore, the area is more accessible to Western fashions, recreations, and lifestyles, which are significantly differentiated from local manners. The embassy area in Chaoyang District has a lasting reputation of “the most international, fashionable and fancy

area in Beijing”. Thus, it is reasonable that Liangma River newly accommodates fancy activities like kayaking, picnicking and frisbee that are regarded by Chinese as “western-originated” and “middle-class” sports (Chaoyang, 2023a). Liangma River provides a sense of connection to the international world in contrast with the solemn image of a socialist capital city. Empirically, expats had a lower tolerance for strict Covid restrictions during the pandemic in Beijing. Consequently, foreigners first started gathering along the Liangma River to seek remaining “freedom”. Then more ordinary citizens were enthusiastic about getting sunshine and open space along the river. Nevertheless, the Beijing Municipality Government (hereinafter BMG) performs relatively tolerantly to foreigners along the Liangma River in terms of these unorthodox activities.



Figure 1: Foreigners enjoy sightseeing on a cruise of the Liangma River (Hu & Lin, 2022)

Liangma River is a focal point with intensive governance resources including materials, techniques and discourses from BMG. From 2019 to 2023, BMG implemented a great waterfront renovation scheme named the “Liangma River International Waterfront Area” Program in a top-down manner. One billion yuan (approximately 130 million euros) was invested to reinvent the waterfront landscape and living environment (BMG, 2017), improve water quality and ecosystem, refresh water management, stimulate commercial vitality, etc. The local water authority, Chaoyang District Bureau of Water Resources (hereinafter CBWR) is responsible for making the renovation plan in practice stressing four aspects: environment, publicness, commercial vibrancy and governance structure. To handle these issues, the waterfront renovation plan classifies riverbank space into four distinguished thematic sections, respectively focusing on relaxation and leisure, international interactions, local business, and ecology. The comprehensive redevelopment plan reflects emerging transition trends in water management in Beijing: from technical rationale emphasizing flood prevention and drainage, to a place with an identity that is open, inviting and inclusive for people and that supports interaction and leisure (Van Der Brugge et al., 2005). From discursive thinking, the Liangma

River redevelopment plan is a representation of BMG's strategy to leverage urban regeneration in a broader sense by waterfront reinvention which is traditionally considered a purely technical issue (BMG, 2023). Therefore, the discourses and strategies related to the Liangma River imply contextual relations between state and society.

1.2. Contextual Conditions

The big social structure is significant in investigating the Liangma River renovation plan. One primary cause is the influential role of the government in a quite top-down style in dealing with city matters. China has just almost finished a period of rapid urbanization and construction of infrastructure in the urban environment. Beijing, as the capital city and one of the biggest powerhouses of the country, has reached an urbanization rate of 87.6% (BMG, 2022). Meanwhile, various challenges such as aging infrastructure, overcrowding and lack of public spaces become predominant in the urban governance field, making Beijing face an urgent need for urban transformation to a more inclusive, effective, and intensive way of development. To manage these urban problems in a cautious and elaborate manner, President Xi Jinping emphasized urban renewal as a main policy discourse of urban governance like "one is doing embroidery", which means one should be very cautious and careful in the process. The political pressure and the reality of urban transformation promote BMG to implement urban revitalization to deal with a series of (framed) problems. Regulations on urban renewal, street cleansing and coercive displacement of "low-end" residents have been enacted (BMG, 2017; Beijing Municipality Council, 2022). The Liangma River renovation program is affiliated with this broader policy context in engaging with urban transformation. Investigation into these policy narratives helps us understand the micro-level logic of government intervention in the Liangma River case.

Digital media is another primary societal factor that boosts the reputation of Liangma River, whereas traditional official propaganda got involved much later. The river has not been accounted as a typical tourist attraction spot even after the renovation work. The spread of fame of Liangma River was first accelerated by social media applications like Weibo (Chinese Twitter) and Xiaohongshu (Chinese version of Instagram & Tripadvisor). Xiaohongshu was originally targeted at young people who enjoy overseas shopping, but later developed into a popular platform for sharing personal lifestyles and entertainment. The earlier posts from KOL (Key Opinion Leader) or influencers of "La Seine of Beijing" are attractive to a large proportion of Xiaohongshu users who are familiar with Western lifestyles. When so-called "bourgeois" activities are coupled with Liangma River on digital media, more users will practice these activities to reinforce this discursive landscape with their own behaviors. Furthermore, bars, restaurants or office buildings try to adapt themselves to the specific atmosphere created by digital media. Therefore the "platform urbanism" (Sadowski, 2020) led by social media not only boosts the fame of Liangma River and related symbols, but also deeply shapes the landscape and everyday life of citizens. The official discourse, however, got involved much later with traditional media infrastructure like television, newspaper or official news accounts to add incremental attention. Nevertheless, compared with the propaganda on official media, Liangma River is more disputed on digital media. Some people enjoy commercial kayaking

services while some others question whether the publicness of the river is undermined by commercial and “bourgeois” activities. The advocates and praises of public space on the riverbanks are dismissed as “young tenants’ pathetic remedy for their cramped dwelling space” by some Beijing locals who owned expensive residential properties. Internet discussion upon Liangma River, therefore, reflects a spectrum of political and social perspectives and corresponding demographic structure (Joassart-Marcelli & Bosco, 2023).

1.3. Infrastructure: A Substratum and an Analytical Thinking

Liangma River provides a new entry point to examine infrastructure studies in China. This costly project of river revitalization is a minor representation of the dramatic development of infrastructure in urban China. Massive construction of infrastructure has been a predominant driving force for economic growth, social welfare and geopolitics (Sidaway et al., 2020). Emphasizing materiality narrowly and traditionally, China’s authorities and academic world take infrastructure for granted as an apolitical matter (Rippa & Oakes, 2023). This trend reduces infrastructure into the inert and rigid entity, missing its implicit registers of social dynamics and political maneuvers that attract potential academic interests in critical urban studies. Recently social sciences call on an “infrastructure turn” in English literature to explore the theoretical potential of infrastructure not only in materiality angle, but also in symbolic and discursive terms (Barua, 2021). Therefore, the infrastructure here is going beyond an objective matter like a road or airport, but a social construct or relation that enables mobility and exchange of other materials, ideas or people in space (Larkin, 2013). The behavioral patterns are subject to the workings of infrastructure in this sense. The reconceptualization of infrastructure is insightful for analyzing unique urban space in China which heavily relies on megaprojects. From a perspective of critical urban studies, Liangma River serves as a metaphor to illustrate what infrastructure means in political and social aspects, and what impacts on physical things, everyday life and discourses in urban China. The literature is relevant to waterfront reinvention and management which constitute the de facto infrastructure that facilitates human landscape, aesthetics gentrification, social stratification in space and apparatus of governmentality (Joassart-Marcelli & Bosco, 2023; Tomba, 2014). In this study the infrastructure of the waterfront renovation of Liangma River refers to physical workings and relational framings that enable ideas (especially local authorities’ ones), activities and communications, including but not limited to engineering actions, planned natural environment, commercial facilities and activities, governmental organizations and facilities, etc.

Liangma River provides a meaningful arena for observing the dynamics of urban China. The local authorities take a central position in managing social-spatial transformation and planning is usually employed as a “strategic endeavor” to realize growth (Wu, 2018). Hsing (2010) explores the concept of “urbanization of the state” to illustrate how the state is omnipresent in physical, political and symbolic dimensions in urban projects. Liangma River case is sufficient to go beyond the analysis angle of urban political economy, to catch a glimpse of how the “local government builds its territorial authority, and finds its political identity in urban modernity” through the techno-politics and semiotics of infrastructure (Hsing, 2010). The infrastructural power refers to a modern type of state power that penetrates landscapes, everyday life,

behavioral patterns and governing of aesthetics with the help of the government's impact on infrastructure of water, entertainment, ecosystem, and information. The power on infrastructure is relatively invisible but no less overwhelming compared with the traditional type of technocratic power which usually applies coercive governing techniques (Mann, 2003). While citizens by no means accept this top-down penetration without resistance, the everyday life practiced by users of Liangma River unfolds a vivid picture of the interaction between the state and society through the framing of infrastructure. The urban experiences in time-space changes of waterfront reinvention provide a precious window for critical analysis to look at urban infrastructure and the power relations it entails in China.

Therefore, this thesis raises two main research questions by investigating Liangma River: The first is, what does infrastructure, in critical theory, mean to spaces and everyday life in waterfront revitalization under the background of urban transformation in China? The second question is, how and how far does the government practice power to interact with social life through the relational space of Liangma River? To answer these questions, it is necessary to reconceptualize infrastructure by using concrete urban contexts in China. Infrastructural thinking (Rippa & Oakes, 2023) should be introduced to China studies to analyze megaprojects and social-spatial changes in cities in a more critical way. By incorporating the materiality and aesthetics of infrastructure into one integral framework, a more insightful critique into the logic of urban transformation in Chinese megacities can be made. Subsequently, empirical data is examined to distinguish how the power is practiced in symbolic, physical, organizational, and institutional aspects in the waterfront renovation and government of Liangma River, as well as the responses of everyday life.

The study is going to unfold as follows: Chapter 2 is going to discuss the “infrastructure turn” in social sciences literature and explain the necessity of applying infrastructure as an analytical term in urban China studies. Then the role of the government in Chinese urbanization and transition will be explored, focusing on the practice of power in social, spatial and temporal changes. Chapter 3 will introduce the analysis unit of the case study and applied methodologies. Empirical data is collected through semi-structural interviews, participatory observations and desk research on the discussion and news report of Liangma River on digital media. In Chapter 4 the thesis tries to politicize the concept “infrastructure” in China against the background of transforming economic structure and urban environments. The rich techno-political functions and symbols carried by the infrastructure in Liangma River will inspire the current urban studies. The conditioning of infrastructure strictly regulates the possibility of how citizens use space and reinforces social stratification. In this process of waterfront reinvention, the role of the government is prominent. Chapter 5 will draw a conclusion in reconstructing the techno-political and aesthetic meanings of infrastructure in waterfront renovation in urban China. The workings of Liangma River here, including its hard engineering parts and related societal and mental constructs, construct a part of legitimacy of the urban government.

2. Theory Framework

2.1. Infrastructure

Infrastructure, in this thesis, is not going to be only the configurations of technologies and physical environments that are under investigation, but it is also seen as a powerful analytical concept to question deeper urban processes and relations. Besides the aspect of materiality which is a common research arena, the socio-political relations also help the conceptualization. Various functions of infrastructure are in transition, and how and why these transitions happen need to be explained with socio-political factors. Then the two important aspects of infrastructure, namely techno-politics and aesthetics, are uncovered to find deeper attributes of it in a relational perspective. These two interwoven concepts constitute a part of the analytical framework of this research. Notably, modernity, or the sense of being modern and futuristic is relevant to both functions of infrastructure. Additionally, the discourse of modernization is also proved to be a critical source of legitimacy of the government, which is worth detailed discussion in this thesis. On the one hand, physical and mental transformations of sociopolitical conditions entail the “modernization” of infrastructure. On the other hand, the sense of “modernity” serves as a critical metaphor for power relations. The construct of terms like modernity and modernization hence acts as an entry point of infrastructure studies on China and the conjuncture of techno-politics and aesthetics of infrastructure.

2.1.1. The Anthropological Ontology of Infrastructure

Infrastructure is usually perceived as a fixed and built physical structure in our society, which reminds us of facilities like roads, dams, telecommunications, etc (Arts et al., 2021). However, the institutional, socio-political, personal and symbol terms of infrastructure are out of vision from time to time. With the development of theories paying attention to the relations between humans and non-humans (Lieto, 2017), infrastructure is noted as a theoretical conjuncture to analyze social-spatial changes in urban studies. The infrastructure is used here in a broader term, being “physical networks that facilitate the flow of goods, people or ideas and allow their exchange in space” (Larkin, 2013). Infrastructures are things that facilitate other things to operate. In this concept, infrastructure is understood as interwoven with social, institutional, and political aspects. This perspective asks systemic thinking to examine things like projects, technologies, and spaces in urban studies. It provides the foundation on which other matter is enabled or disabled to move, which is the main distinction between infrastructure and technology (Larkin, 2013). Conventional thought suggests the invisibility of infrastructures until they are broken and dysfunctional (Star, 1999, p. 380; Elyachar 2010, Collier 2011), Chu (2014) also mentions that the eventfulness of infrastructure only exists in the stages of their construction and destruction, which are often politically disputed because people’s interests are influenced drastically. While the studies on everyday practice imply that these objects do not blend into the background, reversely, all visibility and invisibility of infrastructure are “situated” there deliberately (Carse, 2012). Different sectors and spheres of subjects perceive infrastructure in various ways due to multiple social and economic environments. Infrastructure should by no means be reduced to an inert and rigid entity, rather, it entails a relational process between social life and power relations. Thus, it is worthwhile to investigate the politicization

and depoliticization of infrastructure by looking at both people's mundane everyday life and the government's attitude towards space and place (Chu, 2014).

2.1.2. The Techno-politics of Infrastructure

Techno-politics is a key analytical concept in approaching infrastructure in urban studies. The workings of infrastructure are taken as entanglements of a seemingly apolitical technology system and political sphere which is filled with power struggles (Barry 2001; Joyce 2003; Mitchell, 2011). According to Foucault, government should be regarded as techniques and processes to govern behaviors and ideas of people. Infrastructure, easily manipulated by the government, can be a critical technique served as the "apparatus of governmentality" which is beyond its original functionalities (Foucault, 2010: 70). Dismantling the world into "govern" and "mentality", apparently the governmentality is a type of governing technique by controlling mental things in a "soft" manner, in contrast to the technocratic power of the state. Compared with sovereignty, the exercise of governmentality must be legitimated with a sense of progress (Li, 2007: 12). Thus the infrastructure can easily exert an impact on affections and feelings of people. The attached sentiments and values make infrastructure political. From the vein of state-society relations, infrastructure constitutes an arena for the government to dominate and penetrate society, undermining the common understanding that it is a neutral and apolitical background of social-political development (Rippa & Oakes, 2023). The political register of infrastructure is foregrounded because the related technologies indicate the possibility and impossibility of being modern and futuristic, and corresponding affective and sensory relations at different scales (Archambault, 2012). Going beyond the materialities of infrastructure, a focus on techno-politics is able to unfold the urban political economy dynamics embedded in the previously neglected relations between humans and nonhuman actors.

Apart from the affective relations that infrastructures possess, these urban projects can be manipulated and engineered directly to impact who gets what when and how this is realized. The urban water supply system is incorporated into the political dynamics of democracy in Mumbai with an interesting causal relation between political pressure and hydrological pressure (Anand, 2011). Even in the OECD countries with rich experience in communicative governance like the Netherlands, the integrative flood protection program "Room for the River" has to politically reconstruct the concept of resilience to compromise complex objectives and interests (De Bruijn et al., 2015). The national practice of specialized economic zones in China deploys massive infrastructural spaces to merge villages into the blueprint of urban sprawl, while at the same time fragmenting local life with grids of road networks (Oakes, 2023). This centralized planning focusing on big cities degrades the self-contained rural areas into functional territories affiliated with the urban government, which is a very political process. The techno-politics of infrastructure is usually underlying the construction, management and operation of material and technological attributes, causing direct influence on normal citizens. Whereas individuals will also take measures through infrastructure as an arena to claim their interests. To put it a bit further, the process of defining infrastructure is the very political moment of classification of urban space, which determines what is infrastructure and what is not. This process is also

political because the specific criteria and epistemology are applied in classification (Larkin, 2013).

2.1.3. The Modernity Fantasy in Infrastructure

Infrastructures provide a sense of controlling the world, which is always desired and chased by human beings (Larkin, 2013). With the help of a network of technologies, people master the arbitrariness to shape landscapes, possess and deploy various resources necessary for modern life, commit to facilitating social development and regime transition (Edwards, 2003). In other words, infrastructure forms the substratum of modernity because this concept means future, avant-garde technologies and development (Campos Johnson, 2023). Mattelart (2000) also suggests the theoretical origin of infrastructure is from the Enlightenment thought that the movement and changes of goods, people and ideas promote societal progress. This relation also implies people's impulsion to relate infrastructure and a sense of modernization. Among the world, infrastructure projects have been deployed to illustrate a sense of being modern, not only at material level, but also at poetic or aesthetic level (Larkin, 2013). On many occasions, the experiences, affection, and feelings of being modern brought by infrastructure are assessed even more significant than its actual functions in technical term. By poetics and aesthetics here, I refer to the symbolic and discursive meanings of infrastructure projects that provide affections and feelings related to modernity. This sense of modern is not, or less, from the convenience and progress from the original functions of infrastructure. Although infrastructure is usually considered tightly integrated with investment, capitalism and neo-liberalism (Foucault, 2010), it is also apparent that the poetics of modernity in infrastructure is widely applied in other social systems, which means the unconditional fantasy and pursuit of infrastructure projects prevail. Factories in the Soviet Union were criticized that they were defective in producing goods while too effective in producing excessive symbolic meanings, serving as political projects rather than economic powerhouses (Todorov, 1994). In Latin America, the importance of infrastructure projects in supporting regional development is depicted along historical logic, while the confusion of indigenous residents in confrontation with the accompanying sudden modernity is also unfolded (Campos Jonhson, 2023). The governments' strong belief in infrastructure, confirms the analytical power of this term in approaching urban problems to answer the question "Why is infrastructure" in power relations (Dalakoglou, 2010).

2.1.4. The Aesthetics and Aestheticization of Infrastructure

The discussion upon the modernity of infrastructure inevitably encounters aesthetic and ethic meanings. The concept of aesthetics is originated from art theory, while later entered the disciplines of philosophy and culture studies as an analytical sphere (Chayka, 2017). The earliest meaning of "aesthetics" is to distinguish between "the material and the immaterial": between things and thoughts, sensations, and ideas, rather than between "high art" and "mundane life" (Eagleton, 1990). Recently the everyday life has entered the research domain of aesthetics as daily practices go beyond their materiality and functionality, trying to realize the articulation of symbolic experience (Nielsen, 2005). In the projection of urban space, aesthetics facilitate the loosening of forms from technical functions, and constitutes the arena

of power struggles between various stakeholders, manifested through division, exclusion and displacement (Lindner and Sandoval, 2021: 15). Placed with “enthusiasm of imagination” (Mrazek, 2002: 166), infrastructure politically shapes urban landscapes as well as everyday life in the way of affection and aesthetics (Larkin, 2013). The symbolic meanings that infrastructure carries are much more important than its original functions. In this case, the material registers of the signified (infrastructural things) are not that important, but the representational meaning of the signifier matters. Some megaprojects are conducted mainly because they provide linkages and trust from the government, so many infrastructure facilities only operate in documents, news reports, regimes, but not in their technical functions so the public do not benefit from these projects (Mbembe, 2001).

To go further in critique, aesthetics should not only be seen as the representation of feelings but also the urban everyday experience which is governed by infrastructure (Larkin, 2013). In the urban authorities’ eradication of urban slums, De Boeck (2011) observes the vulnerable residents being displaced were proud on what was going to happen in their hometown. The affectual relation to infrastructure implies potential maneuver on aesthetics by the aestheticization of the government. Aestheticization represents a tendency to aestheticize with intensification of everyday practice to provide imagination and affective relations (Nielsen, 2005). So the “universal aestheticization” of urban life results from the imagination of citizens (Chayka, 2017), which can be easily manipulated by the government or capital. Joassart-Marcelli & Bosco (2023) discuss the symbolic displacement through vehicles of food and digital media, asserting the aestheticization of everyday life constitutes a critical factor of gentrification, as well as urban transformation in turn. Furthermore, from a spatial and material perspective, the aestheticization of infrastructure with the presence of the government is going to be a more direct and efficient way to reshape urban spaces and power relations, compared with the aestheticization of everyday life.

The techno-politics and aesthetics discussed above are not exclusive to each other. They are interwoven with the connection to the materiality of infrastructure. The so-called “aesthetic governmentality” of the state is applied to exercise power in the official calculation of slums in Dehli, which contains both techno-political dynamics and symbolic metaphors (Ghertner, 2010). When real numbers are applied by residents to struggle with the government, the latter starts to introduce the standard of aesthetics to “count” which slum should be demolished. Apart from the political rationality that is directly reflected by technical and material functioning, the focus on aesthetics helps to answer how the political is formed in the workings of infrastructure (Larkin, 2013). In other words, the techno-politics perspective responds to the questions of “What” and “Why” is infrastructure concerning real consequences, while aesthetics explains the dynamic process that realizes these impacts, saying the “How” and “for whom” questions (Hall, 1997: 6). The neighborhood regeneration in China witnessed how citizens interact with the government with poetic meanings of workings of infrastructure, that reflect demarcated political rationalities (Chu, 2014). In the analytical framework of this thesis, the techno-political functions and symbolic meanings of infrastructure are not going to be distinguished deliberately. Instead, an integrated and relational perspective will be applied to politicize the infrastructure in Liangma River, and rethink the state-society interactions materially and critically.

2.2. Infrastructural Power

From the discussion on infrastructure, it is obvious to find the clue of the government in exercising power which deeply influences social-political changes in urban spaces. So what is the nature of the state power? How does the power maneuver in urban space? Mann (2003) provides a dichotomy of despotic power and infrastructural power. Through “autonomous” power with a top-down manner, government elites are able to conduct arbitrary behaviors escaping supervision from institutions and the mass. While infrastructural power means the government is empowered to “penetrate” civil society, which is a relatively soft, invisible, permeable but overwhelming way of domination over society compared with the oppressing and coercive manner (Jessop, 1990). Mann’s two-dimensional framework on the typology of states is convincing, but too structural and functional when it really incorporates the thinking of infrastructure (Mann, 2003). He asserts the exercise of infrastructure power may undermine the empowerment of marginal citizens at the individual level, which is the only relation between the two kinds of state power. However, the practice of modern state power has moved far beyond the four standard grids in two dimensions (Table 1), Infrastructural power can also be coercive in both ends and means, with the help of aesthetics of infrastructure workings. The aestheticization of infrastructural power facilitates the arbitrariness of the government, which is not only at the individual level, but also on landscape and institutional scales. Moreover, this top-down infrastructural power can “capture” the infrastructures, putting the government more distant from the public and closer to the elites, which is opposite to Mann’s anticipation.

<i>Despotic power</i>	<i>Infrastructural coordination</i>	
	<i>Low</i>	<i>High</i>
<i>Low</i>	Feudal	Bureaucratic
<i>High</i>	Imperial	Authoritarian

Table 1: Two dimensions of state power Source: (Mann, 2003)

Although Mann is keen on defining the typology of multiplicity of the state regime at the macro level (Mann, 2003, 2008) in the political sphere, the theoretical concept is insightful in approaching the contingency of everyday life in urban spaces. Truelove (2021) loosens this concept to embrace the social-material relations of critical infrastructures, investigating various actors’ perceptions and construction of everyday politics in the urban environment in Dehli. In dealing with the conceptualization and measurements of infrastructural power, Soifer (2008) notices the societal influences that the local authorities exert, but his analysis is still rather unidirectional from the state over society. To fill this gap, Rippa and Oakes (2023) suggest a perspective of social relations on infrastructural power, asserting it does not emerge from the subject of the government. The government cannot fully control infrastructure, instead, infrastructural workings constitute the partial basis of state power. The “infrastructuralization” of platforms in China’s massive technologies application witnesses strong societal and market

power in shaping infrastructures which the government even has to purchase services from (De Kloet et al., 2019). To go further in this relational thinking in infrastructural power, Chu (2014) discovers infrastructure as a mediator on the tensions between the state power and individuals, serving as materialities of “biopower”. Ripa and Oakes (2023) also borrow this concept from Foucault (2004) to expand the connotation of infrastructural power as the maneuvers of determination on access to fundamental goods, information, services and movements. Therefore, infrastructural power entails the authority over the rights to mobility, livability, and valuation of things. This crystallization at the micro level provides a convenient basis for the concept to be applied in specific urban spaces. While this configuration of power is not located in or possessed by the government, rather, it manifests through relational practice in developing and restructuring systems of infrastructure (Easterling, 2014). In this sense, the infrastructural power forms the modernity of the state, in both techno-political and symbolic terms.

Infrastructural power can be exercised in multifaceted styles through various types of infrastructure. Some kinds of them are quite visible such as life- and human rights-supporting, economy-supporting, connective, ecological and environmental infrastructure which are relatively “necessary” and “fundamental”. Ripa and Oakes (2023) focus on the material and techno-political aspects of infrastructural power, which usually exist in the visible manifestations that are like “infrastructure” in narrow terms. The maintenance of the Panama Canal watershed always draws worldwide attention because of the canal’s pivotal and infrastructural role in global logistics (Carse, 2012). However, power can also be exercised through symbolic, discursive and aesthetic maneuvers of infrastructure, which still gets little academic scope. These infrastructures are usually related to leisure, rumors, imagination, or propaganda. In contrast with the “fundamental” infrastructures providing basic services for livelihood, these categories tend to be reduced as less significant or not indispensable. However, these types of infrastructures have been exploited to new spheres for government domination given the “basic” arenas have been industrialized and occupied. In this thesis I will name this new power as aesthetics of infrastructural power. Compared with traditional wisdom on “fundamental” infrastructures, the aestheticization of infrastructural power is more implicit but more arbitrary in penetrating society and social life (Ghertner, 2010). Compared with the aestheticization of everyday life (Matteucci, 2017), the aestheticization of infrastructural power is a more straightforward way for the presence of the urban government to restructure urban spaces and power relations. Hence, the infrastructural power that influences, if not controls imagination, affection, discourse and sense of identity is a rather efficient channel to facilitate the government to realize infrastructural modernity and social engineering because it is a kind of apparatus of governmentality (Tomba, 2014). The modernity of the state, in other words, is based on the aestheticization of infrastructural power. This study is going to examine the dynamics of this aestheticization of infrastructural power under urban transformation context, reflecting infrastructural thinking in urban space and its relations with the mundane life.

2.3. The State as Centrality in China

To accommodate infrastructure thinking in the Chinese context well, it is necessary to refer to the contextualized urban space that infrastructure is based on. Although marketization and

liberalization have been primary trends in China's cities after the transformation from the command-and-control economy (Wu, 2018), the omnipresence of state power in urban development is still visible. With a strong incentive for booming local economy and city branding under fiscal decentralization, the local authorities have a strong interest in engaging with market trends and applying economic instruments acting like entrepreneurs. Thanks to this "state entrepreneurialism" (Wu, 2018: 1385), the urban territories can be governed within both market and government maneuvers. In this process, planning is regarded as the centrality of the development model to realize spatial production with the help of infrastructure related to land commodification (Bach, 2016). The massive urban regeneration projects since the early twenty-first century and special economic zone construction have witnessed urban rescaling and restructuring under the steering of the government (Oakes, 2023). These mass infrastructures thus are materialization and concretization of planning power with a marketized façade.

It is counterintuitive here that this argument is in conflict with the trend of predominance of neoliberalism around the world, even in China according to traditional views (Weber, 2018). Because it is the state power that applies market mechanisms as tools to realize its own institutional aims, which are concealed under a token of neoliberalism or entrepreneurialism. Based on this suggestion, a more radical but convincing argument is made as the role of the government per se constitutes centrality, at least in urban transformation in China (Wu & Zhang, 2022). They clearly delineate the aims of governing different scales, namely neighborhood, city and regional levels all manifest the demands to maintain and flourish the authoritarian state from material, institutional, discursive levels, etc. In this sense, the new urban space becomes the seat of state power (Lefebvre et al., 2009) and the government is not only a method to realize something like urban strategies, the government *itself* is the ultimate goal to maintain and reinforce. The power and legitimacy of the government are to be sustained in the urban as an "end-of-pipe". Unlike democracies in Western countries, the source of legitimacy of contemporary China's government is from neither constituency nor charismatic leaders (at least to some extent), but from the "Chinese" modernity discourse characterized by rapid economic growth (Buzan & Lawson, 2020). Infrastructure which is mainly provided by the authorities, and as a technology of government easy to manipulate, is suitable for realizing social consensus in modernity (Tompa, 2014), maintaining and manifesting the legitimacy of the government in deeply contested urban space. From the everyday practice angle, what is conceived by citizens is their close interaction dynamics with the shadow of the government when using the infrastructure. Consequently, the infrastructure serves as the essential arena to unfold the struggles between citizens and the stretch of state power.

Notably, this centrality of the government's role is manifested in all scales of the territories in China. And this entails the willingness and capabilities of the government to apply total resources at its disposal to maintain its enduring power relations. In this sense we should be able to treat every level of jurisdiction with the same methodology in the examination of institutions (Wu, 2022). However, the dynamics of the urban process usually perform unexpected outcomes of the state power. The concept of topology is often borrowed in geography to illustrate fuzzy and changing urban relations, especially twisting power relations (Allen, 2011; McFarlane, 2016). In China the urban density of state power encounters the

densities of material, societal and sensory aspects over the mighty pursuit of infrastructure, which process showcases the government's enduring will to power and legitimacy (Zhao, 2020). While the chase of extreme control and power in the physical environment cannot prevent uncertainties and complexities in urban causalities, Zhao (2020) concludes with the limit of the authoritarian state in "disciplining" cities when it confronts unanticipated kind of density. I would argue this leak does not only mean the dysfunction of the government, but also implies inequality and injustice in the urban space, which is possible to be another government strategy manifested through the unworking of infrastructure.

2.4. Infrastructure Studies on China

The recent two decades have seen an "infrastructure turn" in broader social sciences, especially in critical geography and anthropology gaining expansive attention and development in English literature. This trend enables infrastructure to go beyond material forms and act as a critical analytical tool in approaching urban experiences and spatial politics (Addie et al., 2020; Angelo & Hentschel, 2015; Graham & Marvin, 2022; Monstadt & Coutard, 2019.). Therefore, the significance of system thinking is raised in assembling the urban (Zhao, 2017). The traditional sectoral thinking in urban studies also draws critique from this vein because of the growing complexity in cities. With the lens of infrastructure and related problems, it is possible to develop an integrated perspective in analyzing socio-political changes in urban spaces. In addition, a strong argument is made that the conventional wisdom of networked and technical infrastructural thinking is stubborn in overemphasis on supply-side of infrastructure, namely the government on most occasions. In this sense, the experience of the recipient perspective and the interactions and struggles that are highly political among the providers and consumers of infrastructure are still missing (Graham & Marvin, 2002). There is an enthusiastic call to unravel the "black box" of infrastructure to reveal how it is governed in specific territories (Addie et al., 2020). The infrastructure is conceptualized as "an assemblage of human and non-human actors", rather than stable material configurations (Oakes, 2019), which has its theoretical source from the Actor-Network Theory.

China seems not yet accomplished the disenchantment of hard infrastructure in mindset. Rapid and effective construction of infrastructure makes the Chinese proud of their collective capability to get a sense or imagination of being modernized and affluent. Admittedly, China's investment in infrastructure takes up nearly 45% of the sum of government investment, which contributes 14% to the GDP of the whole country in 2013 (Zhang & Barnett, 2014). The giant financial remedy baskets on general construction of infrastructure projects save this socialist country from global economic crises in 1997 and 2008. And this generous emphasis on megaprojects helps China earn the fame of the "infrastructure state" (Bach, 2016). In foreign affairs, critical infrastructure projects and financial frameworks also serve as important paths for state capital export (Sidaway et al., 2020). Unlike normal understanding that takes these technologies for granted and the background of societal life, China takes infrastructure megaprojects as visible evidence of its significant progress led by the socialist party-state system (Oakes, 2019). In this sense, infrastructure is often termed as a spectacular statescape for propaganda meaning which seems "political", on the one hand. However, infrastructure, on

the other hand, is still usually reduced to apolitical “things” like concrete and steel by the Chinese practical and academic world (Rippa & Oakes, 2023). Here I mean the techno-political meanings and symbolic representations of infrastructure that indicate power struggles are strictly regulated by the government. Only the “positive” images of megaprojects that are harmless to or aligned with the CCP’s propaganda purposes are allowed to be visible. In this sense, the reflexivity of infrastructure in China is still understudied.

Now that infrastructure has been incorporated into both the internal investment routine and foreign geopolitics strategy framework of China, this lack of infrastructure thinking in Chinese research discourse hinders empirical experience in urban China to be engaged in international discussion on relations between government, power and urban space. Further, it is an obstacle to the persistent efforts of the Western academic world to understand the concealed logic of “China’s model” of development. Departing from the entry point of a critique on infrastructure, one can partly get rid of either elaborated and boring propaganda narratives, or biased, rootless and misunderstood stigmatization from the opponents of socialist China, to unravel the “black box” of socio-spatial changes in this “infrastructure state”. Admittedly, some helpful insights are trying to look at Chinese everyday practice under rapid and somehow ruthless urbanization process through the lens of infrastructure (Chu, 2014), and examine carefully how exports of infrastructure projects reshape geopolitics and recipient contexts (Oliveira et al., 2020, Sidaway et al., 2020). However, as Chinese urban space has been constantly evolving from rapid urbanization to a new transformation to a “post-growth” era, more empirical observations at a smaller scale have the potential to engage with infrastructural thinking. By scaling down, more nuances occurring in everyday practice are clearer in the investigation at the urban level or neighborhood level. Infrastructure should be understood as both an important research target in China studies and a vital analytical perspective of the nation-state (Oakes, 2019).

Due to the demand for industry restructuring and upgrading, direct investment in giant physical projects is less effective in powering the economy and is gradually out of fashion in China (Shi, 2024). The inertia of over-investment leads to heavy debt pressure on local authorities in the coming austerity period. The central government suspended new infrastructure megaprojects in 12 provinces which have severe financial burdens to tackle debt problems (General Office of the Council, 2023). While existing infrastructure has been a pillar for normal functioning in urban China, which means a significant amount of capital and resources should continue focusing on the urban sphere in a more subtle way. For example, the ruling policy discourse of “Urban Regeneration” enacted by the central government is directing municipalities to conduct local-scale and elaborative revitalization projects to support infrastructure status in the long run. These microprojects may have less investment in the short run and not as spectacular as previous counterparts like high-speed railways and modern airports, but they impose no less influence on citizens’ everyday life, as well as landscapes in urban space for a sense of modernity. Therefore, academic attention on infrastructure should be expanded from solely on a national scale to a local scale, deeply examining how infrastructure penetrates people’s life in daily practice. The academic community should try to turn focus from only inquiring aggressive foreign policy of infrastructure projects like the Belt and Road Initiative (BRI) at a national and supernational level to urban and neighborhood levels, examining the deep roots that support

these ambitious projects. That is to say, we need to find a clue about the complex power relations that this socialist state deals with from promising infrastructure studies centered on local endowments (Oakes, 2019). The theoretical resources of Chinese domestic infrastructure are rich enough to unfold political relations between government, capital, space and society. Therefore, ongoing urban renewal projects are valuable opportunities to observe and broaden Chinese infrastructure studies from implicit techno-political aspects.

2.5. A Wrap-up

According to the theories discussed above, I develop this conceptual framework to support the study of the Liangma River (Figure 2). The infrastructure itself plays a rather proactive and political role in the urban process. The materiality is the basic quality of infrastructure, functioning as a conjuncture between various aspects. Inspired by the theory of semiotics and representation (Hall, 1997:5), the techno-political and symbolic functions of infrastructure are uncovered with interdependent relations with the bridge of materiality. Multifaceted empirical cases have illustrated how infrastructure is engineered to realize socio-political and socio-economic changes in urban experiences (Anand, 2011; Campos Johnson, 2023; Carse, 2012; De Kloet et al., 2019; Oakes, 2019; Truelove, 2021). While the political/discursive meanings are more with regard to the impacts of infrastructure, the poetics/semiotics/aesthetics/symbolic meanings respond to how the representations are produced (Hall, 1997; Larkin, 2013). Nevertheless, it is dangerous to distinguish these two aspects in the actual analysis cause they are both concerned with affections and lived experiences of people (Zhao, 2017). Whereas this study will focus on the aesthetic meanings to unfold mental constructs and sensory politics.

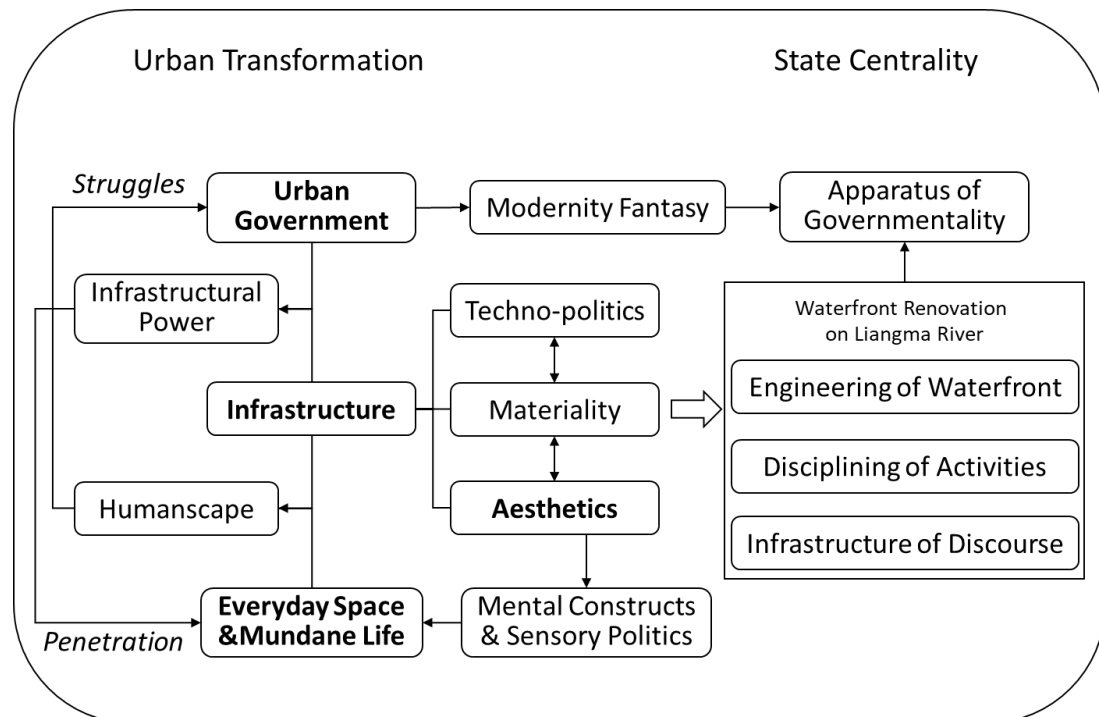


Figure 2: Conceptual Framework of the Thesis (Source: edited by author)

This study assumes that the urban government provides the most of infrastructures, and the everyday life of citizens consumes them in urban China. The interactions between the infrastructure and government establish the infrastructural power which is a very relational term. Compared with traditional technocratic power, which is often coercive (Mann, 2003), infrastructural power can penetrate into society in “soft” and implicit ways. However, the manipulation of the aesthetics of infrastructure means the power can be arbitrary and oppressive without legal binding and accountability (Ghertner, 2010). On the other side, the everyday space and mundane life of ordinary citizens are reluctant to passively accept the penetration. They perform resilient struggles with the infrastructural power within the arena of infrastructure as well. They proactively conduct the aesthetic meanings of materials to build political “humanscapes” (Jacobs, 1962) to express opinions.

Additionally, the concept of modernity is fruitful in approaching both techno-politics and the aesthetics of infrastructure, which is continuously significant in the following discussion. The literature has found a fantasy of being modernized is constantly related to the infrastructure itself. As the main provider of infrastructure, the urban government is keen on controlling the imagination of modernity to sustain its power reach and legitimacy. With the control of the sense of modernization, the government adopts various levels of apparatus of governmentality in the Liangma River. This study focuses on three levels respectively the engineering of the waterfront, the disciplining of activities and discourses of infrastructure. All three arenas have connotations of techno-political and aesthetic meanings while the government conducts the aesthetics of infrastructure increasingly explicitly from the engineering to the discourses. The research gap here is that current studies on infrastructural power usually focus on the material and techno-political aspects of “fundamental” infrastructure which serves the basic survival and growth needs of human society. The aesthetics of infrastructural power is seldom examined in its influence on disciplining governmentality (Foucault, 2004). The thesis tries to use case study to illustrate the aestheticization of infrastructural power is a more straightforward way to reshape urban space and power relations with the omnipresence of the government.

Introducing the centrality of the state in China's context, the sense of being modern which is realized through infrastructure investment is a good entry point to critically investigate how the government practices infrastructural power in the transitioning urban China. Compared with the huge impact of the “infrastructural turn” in English urban studies literature, the infrastructure research on China issues is still underdeveloped (Rippa & Oakes, 2023). The socialist state is undergoing a drastic urban transformation process, from a fetish for megaproject investment to cautious infrastructure maintenance endeavors in the austerity trend. However, the political meanings of infrastructures in China have been consistently governed to limited space, usually only visible when serving as propaganda instruments (ibid). This thesis tries to bring the infrastructure back into the discussion sphere on politics and power in China's context, aiming to investigate how infrastructural power is exercised to realize the goals of the government. The aestheticization of state power is emphasized to unfold the “apparatus of governmentality” (Foucault, 2004). That is, how the government applies various instruments to realize its objectives by regulating citizens' conduct and the “conduct of conduct” (ibid).

3. Research Design

3.1. The Case: Liangma River in Beijing, China

As one of the most dynamic regions in economic development, the Chaoyang District government possesses “state of art” management, intellectual and financial resources in urban governance compared with other districts and other cities in China (Shu et al., 2023). The renovation program in Liangma River is regarded as the most successful exemplar story in urban revitalization around the country and it gains continuous internet attention (BMG, 2023). It is possible to assert the workings of this river represent the highest level of urban waterfront reinvention in China in terms of design ideas, methods and investments. From a critical perspective, if there are significant problems in the “best practice” of cases, then it is reasonable to confirm that there may be (more) possible questions in the conditions with no such good endowments (Flyvbjerg, 2004). In this sense, this case is insightful in generalizing possible influences exercised by the urban authorities’ workings on infrastructure in waterfront renovation and implications on the everyday life of citizens.

It is vital to note that Beijing is the socialist capital city where “possibilities” are often strictly regulated. The river, thanks to its conjuncture (Lefebvre et al., 2009) with the embassy area, is regarded as a “façade” to showcase the cosmopolitanism, openness, inclusivity and modernity of Beijing. Its tolerance to different activities like swimming and fishing, despite the implicit “apparatus of governmentality” realized through infrastructure. Thus the river is an invaluable window to observe how the urban space is governed with the help of infrastructure under a seemingly tolerant atmosphere. Through this window we can find a clue about the contradictory goals of the urban government: on the one hand the necessity of keeping the sense of order and majesty as a political hub, and on the other hand to reverse the negative reputation such as authoritarianism as an international metropolis. Additionally, the renovation of the Liangma River happens during the period of economic structure transition and urban transformation in China (Bach, 2016). The general attitudes towards infrastructure, public space and boundaries between the state and society are under reflection and being reconstructed. The workings on this urban waterfront help the policy and academic worlds get a hint of the bigger picture of Chinese societal and urban changes.

Many interesting stories and anecdotes are emerging from the Liangma River, which enriches various narratives of relevant infrastructure. These narratives themselves are helpful in understanding the practice of urban governance in China (Flyvbjerg, 2004). The famous spokeswoman of China’s Ministry of Foreign Affairs Mrs. Hua Chunying greets diplomatic guests every week on cruises of the Liangma River. The government leaders of Beijing Municipality and Chaoyang District also occasionally hold meetings with their VIPs on board enjoying this river. There are numerous motives and strategies in a top-down manner to govern Liangma River because it has gained a special political status. Admittedly, some stories and narratives in this study are a bit contradictory, while contradictions of Liangma River imply the complexities of the urban space.

Apart from the aesthetic (representational) meanings of waterfront infrastructure under the government 's elaboration, Liangma River also accommodates mundane maintenance activities and citizens' everyday practice that are worth investigation in the study. The property manager which is responsible for the waterfront maintenance realized technique innovation under the pressure of the urban government. While detecting the trend of commodification of water space, kayaking enthusiasts expressed disagreement with their bodies and behaviors. Along the river one can see resilient and spontaneous leisure activities like fishing and swimming, despite the government's attempt to classify space into different functional areas. These landscapes and "humanscapes" are by no means apolitical, but the outcomes of long-lasting struggle between citizens and the government. By digging into these struggles through the workings of infrastructure, the new state-society relations in urban space can be foregrounded. The case of Liangma River helps enrich China's urban studies by approaching the everyday practice of citizens with their lively experience.

The implicit values from various stakeholders are only possible to detect with careful investigation of how different stakeholders deal with relevant infrastructure. Taking the critical urban theory as a standpoint, this research cherishes the values of inclusiveness, equality and fairness in analyzing urban spaces and criticizes the attempts of the power to erode them. To conduct an insightful review on the urban life of infrastructure, I try to find mundane details of construction and management of waterfront in the Liangma River, which exert impacts on the everyday life of citizens. With these details it is possible to examine various values and ideas held by the local authorities, citizens and different interest groups. Different stories, rumors, discourses, anecdotes, discussions and technical data related to the Liangma River will be collected and integrated to form a complete story. Besides, spatial arrangements, material representations and engineering process are also important data to conduct analysis on infrastructure. These data of things and space are threads of deeper institutional and socio-political relations of infrastructure. Moreover, the routine practices, behaviors and ideas of people are important data to analyze the perceptions and constructs of the Liangma River. All these data will be combined with the theoretical tools discussed above and help examine the deeper contexts of the waterfront infrastructure. In the actual interviews, specific questions will be asked according to the positions, professionals and identities of the interviewees.

3.2. Methods and Data Analysis

The case study mainly adopts various qualitative research methods to conduct the case study, including semi-structured interviews, participatory observations, questionnaires and desk work in collection of policy documents and news reports. During October 2022 and August 2023, I conducted 37 semi-structured interviews with different stakeholders. The time lengths range from 20 minutes to one and a half hours. In addition, during this period I went to the field point Liangma River to observe citizens' activities, engineering constructions, riverfront maintenance, etc. I finished 16 field notes which depict my feelings and thoughts during observations. It is notable that at the end of 2022 China went through the drastic and chaotic pandemic policy change, giving up the "Zero-Covid-Policy". A large number of Chinese, including me stayed at home and encountered the Covid disease for the first time that December. Therefore, I failed to

see what happened in the Liangma River during November 2022 and February 2023 by myself, but relying on the interviewees' narratives. For the desk work, I found 14 related policy documents from the BMG and the Chaoyang District Government with officially disclosed project information about the Liangma River renovation. For the Internet discussion, the Liangma River has always been a heated topic and I found 66 related reviewing articles and news reports between March 2019 and April 2024. I also take digital media applications like Xiaohongshu and Weibo as online field points, collecting people's attitudes and opinions relevant to the Liangma River.

3.3.1. Desk Work

Before starting the formal fieldwork, I tried to get as much information about the Liangma River as possible by searching secondary data from the Internet. Firstly, I collected basic information about the Liangma River and made a briefing as the background report, summarizing the project details and policy discourses. Secondly, I collected all online articles, reviews and memoirs about the Liangma River by printing them into PDF formats and made an inventory. This is a long and interesting process because both spontaneous discussion and official propaganda have continuous interests in this celebrated river. So related online articles are still emerging. The topics of articles range widely from activities advertising to deep interviews with fishermen, and from official introduction to historical recall. These articles accumulate rich background knowledge and discourses, and provide a great opportunity for me to learn what happened beyond my research time scope along the Liangma River. The sources of these reports and online articles are important criteria for data collection. The project data from official accounts like the BMG and Chaoyang District government are trusted as reliable. In addition, news reports from professional media like the Sanlian Lifeweek Magazine are collected because these interviews can be regarded as serious enough to inform the study. From these reports I try to capture how citizens perceive and consume the river through their own stories. These background data are extracted and summarized to inspire further investigations and will be testified by my observations and interviews.

Besides the formal formats of online articles, the great number of notes, posts and comments on digital media talking about the Liangma River are also vital primary data despite their fragmentary pieces. Posts on Xiaohongshu provide timely and updated construction status of Liangma River with pictures when I am not available to be present at the field point. Notes and comments on lifestyles present at the Liangma River function as an online focus group discussion to some extent and I can distinguish different opinions on certain topics, and even speculate the identities of these participants. When encountering interesting and heated topics on the Liangma River, I recorded related posts and comments in documents in case of disappearing of critical information. After cleaning the personal information of recordings, I summarized different opinions and narratives to prepare for further discourse analysis (Fairclough, 2013). The criterion adopted here is to collect as various standpoints as possible to depict debated topics on the river. After the primary collection, I sorted these comments, affections and values into different categories for further analysis. For active influencers on the topic, I contacted them to seek for chance of face-to-face interviews.

After studying the Internet materials mentioned above, I got basic knowledge about the Liangma River and began to prepare for fieldwork research. For both users and providers of the infrastructure of Liangma River, I prepared several interview outlines depending on the different positions of interviewees and interview purposes. There are outlines prepared for residents, low-ranking civil servants of the CBWR respectively for maintenance and construction, the former head of the CBWR, the manager of the maintenance company, etc. For residents, I focused on how they perceive the waterfront and what activities they perform. For different departments of the CBWR, I tried to get as many working details as possible in their construction and maintenance processes on the river. Sometimes they would disclose some personal affections and values about the project. For the key figure who initiated the project, I hoped to know his principles and blueprints but this interview was not realized unfortunately. With the interviews going on, I constantly adjusted these outlines to get the most of information from various respondents. In the meantime I also designed a questionnaire form based on research standards in order to portray user groups. Therefore, in the whole process desk work and fieldwork are not excluded but mutually supported and complemented. At the end of desk work I began to seek a pathway to get in touch with key insiders in the waterfront renovation program from the CBWR. Also I need to get a paper endorsement to develop my field research from the Renmin University of China to gain trust of the potential interviewees.

3.3.2. Interviews, Field Notes and Questionnaires

Semi-structured interviews, field notes and questionnaires are used to collect empirical data in the case study. The interviewees can be classified as users and providers of the Liangma River waterfront renovation. The users refer to the ones who make use of the waterfront space and related infrastructure for leisure purposes. Retired workers, students in a gap year, swimmers, street vendors, kayak enthusiasts and white collars all belong to this category. 27 interviews are user-oriented to make clear their feelings, affections and behaviors about the Liangma River waterfront (Table 2). With different backgrounds, education, social and economic status, one can see distinctive perceptions and conceptions between various groups of users. This differentiation of users stimulates my interest in generating a typology of users of the Liangma River based on statistical data. My aim is not to know the exact percentages of various user groups with a large sample test, which is meaningless and expensive work. A user portrait with basic characteristics of various groups is enough to conduct the case study. Therefore, I designed a questionnaire and collected 67 responses in consideration of spatial distribution along the river because multiple users may prefer different parts of the riverfront. The questionnaire contains 47 questions related to personal feelings and experiences about the riverfront.

The providers of the Liangma River waterfront infrastructure include the local water authority (CBWR), commercial activities providers like the kayak club, the waterfront maintenance company and property owners along the river, etc. Generally, the government bureaucrats in China are reluctant to disclose internal affairs to the staff of the research institutes because of distrust. Thus the interviews with insiders of the government are really difficult to conduct.

Fortunately, there was a young staff working in the CBWR who took an MBA course at Renmin University and I happened to be the Teaching Assistant of that course. By this chance I managed to establish a personal relationship with the CBWR and realized several insightful interviews. Through this personal relationship, I applied snowball sampling to get in touch with different departments of the CBWR and the manager of the riverfront maintenance company. As a contractor of the CBWR, the manager behaved very humble to bureaucrats and consequently, welcomed my research request because I was introduced by the staff of the CBWR. Following the manager, I observed how they perceive and work on the waterfront with an emphasis on management and maintenance in the mundane process of patrolling along the river. The affections, discussions, complaints, technical “innovations” and so on were recorded to get as much information as possible. I detected different standpoints between the CBWR and its contractor, which reflects their contradicted goals. 10 insightful interviews are conducted with those providers which provide a relatively intact picture of the renovation project workings.

All interviews have been clearly authorized by respondents to be used in the academic research before being recorded. The recordings are anonymized, transcribed and coded according to academic ethics. An inventory is made to summarize interviews and field notes for the subsequent processing of the data. Through these data I can realize cross-validation or falsification of some stories, ideas and anecdotes. For some critical participants, I managed to call back to them to trace the continuous development of issues and get a clear timeline. In this process, some rumors were clarified and more stories were produced. However, stories and anecdotes are part of the discourses that are significant in the analysis because they reflect how the local government perceives and conceives the waterfront renovation. So I adopt a rather constructive epistemology here in the criteria of collecting data. I believe all discourses and changes of discourse are valuable to investigate people’s and organizations’ framings on the waterfront. In reading theories on infrastructure studies, I made reading notes and related academic opinions to my empirical experiences in desk work, interviews and field observations. An outline of important “events” with theoretical values is formed in this way to serve as the backbone of the writing of the following parts. The collected data is distributed to the corresponding conceptual framework (Figure 2) for example how the urban government adjusts different attributes of infrastructure including materiality, techno-politics and aesthetics.

Code of Reviews	Description	Date
LMH-20221021-B01	A young woman working in a foreign company	10.21.2022
LMH-20221021-B02	A middle-aged Australian man whose wife works in the embassy	10.21.2022
LMH-20221022-A01	A grandma overlooking a girl playing	10.22.2022
LMH-20221022-A02	A grandpa overlooking a boy	10.22.2022
LMH-20221022-A03	A middle-aged fishing man	10.22.2022
LMH-20221022-A04	A young woman enjoying the view	10.22.2022
LMH-20221022-B01	A white-collar young man	10.22.2022
LMH-20221022-B02	A young couple wandering	10.22.2022
LMH-20221022-B03	A safeguard of the office building	10.22.2022
LMH-20221106-A01	An older sanitation worker	11.06.2022

LMH-20221106-A02	A middle-aged man sitting alone	11.06.2022
LMH-20221106-B01	An elder gardener	11.06.2022
LMH-20221106-B02	A middle-aged wealthy woman	11.06.2022
LMH-20221106-B03	An elder swimmer	11.06.2022
LMH-20221106-B04	A young woman in charge of the canoeing club	11.06.2022
LMH-20221106-B05	A middle-aged man sitting alone	11.06.2022
LMH-20221106-B06	A middle-aged resident "Z" loves taking photos	11.06.2022
LMH-20221107-A01	A young woman who owns a coffee van	11.07.2022
LMH-20221118-B01	A female student	11.18.2022
LMH-20230301-B01	A middle-aged resident "Z" loves taking photos	03.01.2023
LMH-20230303-A01	A retired resident selling staff in the night market	03.03.2023
LMH-20230303-A02	An older man taking morning exercise	03.03.2023
LMH-20230303-A03	An older sanitation worker from the LongFor company	03.03.2023
LMH-20230311-C01	A young female staff "X" of the CBWR	03.11.2023
LMH-20230316-A01	A middle-aged woman selling staff in the night market "A"	03.16.2023
LMH-20230322-A01	A former resident who once lived along the river 30 years ago	03.22.2023
LMH-20230323-B01	A young female staff of the IUCN	03.23.2023
LMH-20230326-C01	A middle-ranking staff of the CBWR	03.26.2023
LMH-20230329-C01	The manager of the LongFor who was in charge of waterfront maintenance	03.29.2023
LMH-20230401-C01	A young female staff "X" of the CBWR	04.01.2023
LMH-20230419-C01	A young female staff "X" of the CBWR	04.19.2023
LMH-20230509-B01	A middle-aged male kayak enthusiast and a social activist "K" working in environmental NGOs	05.09.2023
LMH-20230510-B01	A young female social activist working in environmental protection NGOs	05.09.2023
LMH-20230528-C01	A young female staff "X" of the CBWR	05.28.2023
LMH-20230620-C01	A young female staff "X" of the CBWR	06.20.2023
LMH-20230705-B01	A middle-aged male kayak enthusiast and a social activist "K" working in environmental NGOs	07.05.2023
LMH-20230804-B01	A market manager of the Liangye Ltd which is in charge of lighting infrastructure	08.04.2023

Table 2: The records of semi-structure interviews on the Lianga River (Source: Edited by author)

4. Infrastructure, Power and Aesthetics in the Waterfront

This chapter unfolds how the aesthetic meanings of infrastructural power are realized with three levels of maneuvers on infrastructure, respectively engineering, activities and discourses. In the Liangma River case, the flowing water is highly political, the alleged “nature” is deliberately created, and heavy lighting infrastructure is used to render the fantasy of prosperity and modernization. Beyond visible materialities, the activities related to the river are regulated according to the will of the urban government. The ways that people use the river are defined, classified and displaced on purpose to realize specific purposes. Whereas citizens also conduct interesting struggles in the waterfront space. Furthermore, this study finds the infrastructure of the Liangma River is also built upon the reality of Chinese urban government and policy discourse situation. The operation of waterfront infrastructure is restricted by the government’s perception of its legitimacy and financial situations. One cannot find coercive administration in these three interwoven aspects, but the workings on the aesthetics of infrastructure.

4.1. Engineering of Waterfront

4.1.1. The Politics of Water

Water is the most important composition of rivers. However, for a megacity extremely thirsty for water like Beijing, urban waters are usually seen as scarce resources that spark competition between departments and jurisdictions. The water sources of the Liangma River can be divided into two parts, namely natural water and reclaimed water. The first part of the water starts from the Tuancheng Lake in western Beijing, going through the North Moat and finally enters the Liangma River. While the water in the Tuancheng Lake is from the Yangtze River basin, which is 1500 km away, thanks to the famous South-to-North Water Diversion Project (Zhao et al., 2017). In other words, the vibrancy of the Liangma River relies on the expensive aqueduct project and constant water flows from the Yangtze River. The original solution for Beijingers’ drinking water evolves into the substructure of the showcase of cosmopolitanism. Beijing as a capital city is able to employ power to counter the restricted natural conditions by acquiring water from thousands of kilometers away (Zhao, 2020). The politics of water is not only an urban issue restricted in this city, but jumps to a higher scale due to the national project. There is a question of whether it is worthwhile to spend billions of taxpayers’ money to mobilize water for fulfilling the capital city’s entertainment.

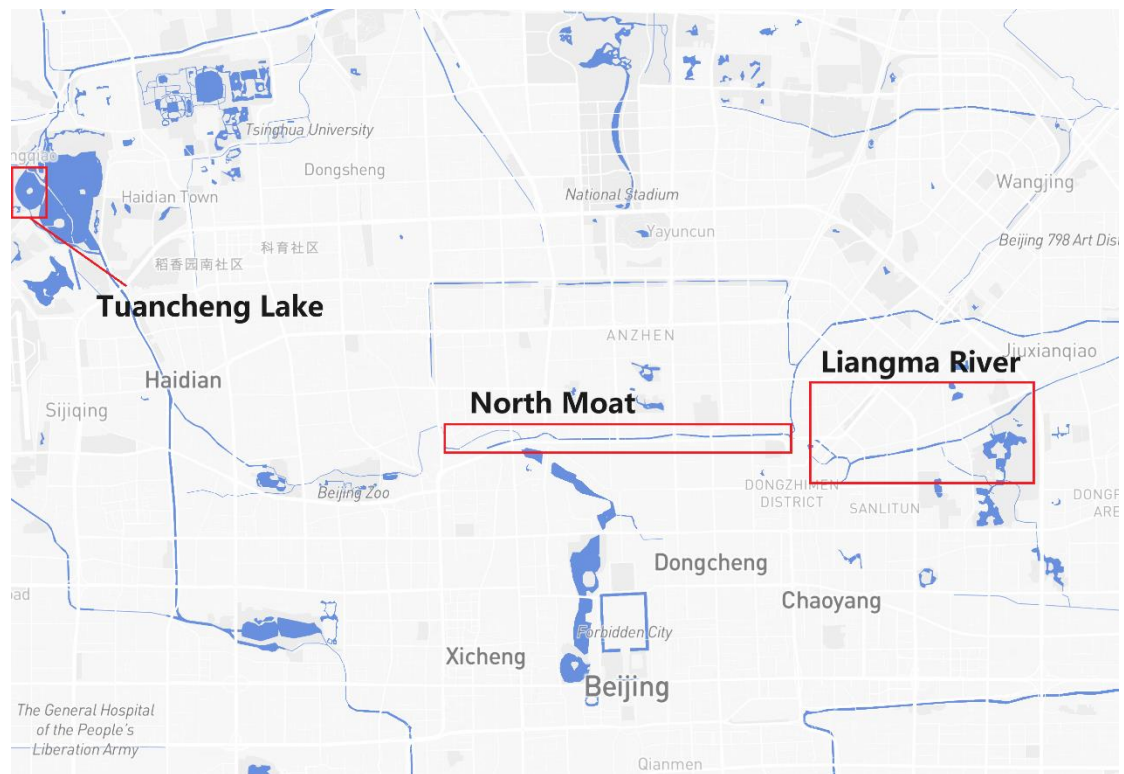


Figure 3: The layout of waters in Beijing (Source: Edited by author)

The Beijing Water Authority is in charge of the water arrangement in the Tuancheng Lake and the North Moat. Whereas the Liangma River belongs to the jurisdiction of the Chaoyang District Water Authority (CBWR) which ranks lower administrative level. Therefore, the water volume of the Liangma River is subject to the Beijing Water Authority because it depends on the upstream supplement from the North Moat. At first, the Beijing Water Authority was reluctant to deliver much water to the Liangma River because it needed to guarantee its own jurisdictional rivers with sufficient water. Later, however, when the Liangma River became heated discussed, the water delivered increased a lot to support the exemplar. Nevertheless, when other rivers got ambitious plans to imitate the success of the Liangma River, the water distributed to it decreased again because “water support” was diluted. So the water volume of the Liangma River is not determined by natural conditions like precipitation but is strictly planned, and it is the local authorities who make decisions on volume distribution based on their attention and purposes in how to “use rivers” to be modern (Anand, 2011). The distribution of natural water is a very political process, but the workings of water are more than this.

The second part of the water source is the reclaimed water from the Jiuxianqiao wastewater treatment plant which is located downstream of the Liangma River. It sounds weird that the downstream water constitutes the source of a river. This is because the Liangma River possesses a second buried stream which is beneath the existing riverbed. The distributed water from the North Moat is not enough to keep an appropriate water level of the Liangma River (Napieralski & Carvalhaes, 2016). For purposes of navigation and water quality, a pipeline is built under the riverbed to channel the reclaimed water from the downstream to the upstream part of the river. Two pumping stations are located in the middle of the river to pump the water to the upstream

step by step. The invisible pipeline and the visible waterway collaborate to constitute what people call the “Liangma River”. The natural landscape of the waterway with great vegetation is impossible without a technical pipeline. The water is “recycled” in the river to serve as a beautiful urban landscape as well as the infrastructure for recreational cruising, which is a politically important activity in the Liangma River. While the technical buried stream is not as reliable as it looks like. Last winter the pipeline was broken and engineers had to drain the waterway to replace the material, which made residents very confused.

Although with two sources of water discussed above, flowing water is still scarce in the river considering entertainment like cruises and careful arrangements are necessary. The principle of allocating water is based on how one is close to the power. There was a major engineering project at a specific point on the river last summer that temporarily blocked the upstream water. In the very downstream of the construction site, a sluice is responsible for adjusting water level and navigation. Every time when the cruises go through the ship lock of the sluice, some amount of water is “lost” because it flows away due to gravity. So the downstream water storage was only enough to allow nine times of opening the ship lock in two weeks. And after the nine chances are used up, the water storage between the dock and the engineering site would be too little for navigation because of the “bottleneck” of the construction. Whereas cruising was already commercially popular at that time, there was a problem that who could get the limited opportunities to get on board. The commercial cruising for ordinary citizens would be suspended with no doubt, while the expensive private tours and low-ranking officials also had to wait for two weeks. Only the big boss of the Chaoyang District government and CCP committee, Mr. Wenxian could still greet his guests on cruises. Besides, the officials of the National Ministry of Foreign Affairs got on a cruise to showcase the Liangma River to “international friends”. So access to water is determined by administrative rankings or international influences (Anand, 2011). Only the government power has a say in determining the distribution of the water. Even the richest people can not get the opportunity for higher bidding during this special period, implying a deficit of the neoliberal logic on this occasion.

To summarize, the technical issues about water sources and distribution become political because the power of government is involved. The power flow in the river is mobilized by the large-scale water diversion infrastructure project, the administrative hierarchy and routines. According to Larkin (2013), these factors become the necessary infrastructure that facilitates the waterfront renovation. Vice versa, access to scarce “political water” is a wonderful indicator to reflect the rigid bureaucratic stratification and to foreground the visibility of urban government. With the elaborate workings of water, local authorities handle the basic instrument to continue to build impressive landscapes and showcase the capital city’s cosmopolitanism to the world. With the change in the government’s perceptions, the discursive qualities of water see a great transition. The water itself should be no longer drained as quickly as possible according to the traditional technical paradigm (Van Der Brugge et al., 2005), but it becomes the foundation of urban (and political) landscapes that should be kept as much as possible. This transition in water management paradigms happened almost in one night because of the strong administrative intervention. However, government’s over-emphasis on aesthetic functions of

the water may lead to the neglect on the flood safety issue, which happened in the Liangma River in the last rainy summer.

4.1.2. The Makings of Nature

The sense of nature is one of the most important official discourses of the waterfront renovation of the Liangma River. While this aim demands much “de-engineering” work because the Liangma River was built with hardened and straight dikes and riverbed for channelization of flood (Liao, 2014). In the new design cement riverbed is removed and rigid riverbanks are rebended to make it appear like a natural river. Nevertheless, the cement and steel are not given up, they are just buried much deeper and still act as the substratum of the river as I have discussed above. And the curving riverbanks are made of factory-produced wooden floor and fenced with glass barriers. In the far downstream Liangma River where no one visits, it is reduced to a five-meter-wide cement drainage channel. In this way, the imagination of the “naturalization” of urban water is reached with the “original riverbed” and curve shapes, winning citizens’ collective appreciation. People also enjoy the “wild” and tall reed marshes along the riverbanks, but they do not notice the man-made cement “flower beds” underwater that accommodate these “natural” reed marshes. The renovation project manages to make the natural landscapes visible and the engineering work invisible. Immediately the urban government claims the Liangma River is a “natural site” to relax oneself in downtown Beijing. By blurring the boundary between nature and engineering on the waterfront, the state power regulates the conceptualization and perception of nature, as well as citizens’ mental construct (Carse, 2012). Whether they are trying to invest to restore an authentic ecosystem is questionable. It is hard to contend the makings are in water management transition from a technical paradigm to a nature-based governing (Schoeman et al., 2017).

In the Liangma River, aquatic plants are classified into two categories, the first category refers to the ornamental plants like reeds and scirpus planted in the underwater “containers” I have mentioned above. They are beneficial to the alleged natural landscapes so they are protected well with financial investment. The second category refers to the unexpected waterweeds outside the “containers”. They grow too fast and degrade the water quality thus unwelcome. The property and vegetation management company Longfor Ltd. as a contractor of the CBWR, has been exploring engineering solutions for a long time to get rid of waterweeds efficiently and economically. The great workload forces the Longfor to innovate some new methods: two workers hold a 60-meter-long steel wire rope standing at both sides of the river, they let the wire rope sink in the water, sawing waterweeds when taking actions simultaneously. It is very counterintuitive that the genuinely “naturally” grown waterweeds are forbidden, while the cultivated ornamental plants are conceived as representations of nature. Through the workings on the classification of aquatic plants, the CBWR provides citizens with an imagination of enjoying nature in the downtown area, and citizens buy this offer because the sense of nature seems a more fashionable and classy lifestyle than the purely technocratic modernization to which they are numb in the modern megacity. Further, citizens acknowledge the efforts and “advanced” appetite of the local authorities who reinvent urban spaces, being more convinced that the authorities prioritize citizens’ well-being as they are always claiming.

But not everyone enjoys the natural landscapes of the river. The sense of nature is kept under the intense labor work. The Longfor employed several less-educated, old and therefore “cheap” migrant workers to drive a crude and primitive mechanic boat to harvest waterweeds. These workers have to be exposed to extremely hot weather and dangerous and harmful working conditions for 14 hours a day and continuously work with no social insurance in order to guarantee the requirements on waterweeds from the CBWR. In this way the labour of these workers forms the actual infrastructure of “good” water quality of the river. However, the regulation infrastructure for decent and secure conditions for migrant workers is absent. Both the CBWR and the contractor Longfor have their excuses for not being responsible for this case. Besides the workers harvesting waterweeds, the workers collecting rubbish and trimming grass are omnipresent along the Liangma River to protect vegetation. These dark-skinned, bad-nutritioned, stooped and aged workers are indifferent to the so-called natural landscapes of the Liangma River (which they may be very familiar with back in their rural hometowns), working with “nature” literally on their knees to earn daily wages. Meanwhile they are somewhat invisible to those well-dressed, young, healthy and cozy citizens who admire the naturalness of the river. The exclusively elegant aesthetics of the waterfront and bad working conditions alienate the workers themselves to the infrastructure and background of the Liangma River (Wu & Zhang, 2022). At the national level this case is common, hundreds of millions of migrant workers contribute to infrastructure construction without livable conditions and decent payments, which means their labor values are deprived and transferred unjustly (Ye et al., 2019).

The naturalization of the waterfront of the Liangma River does satisfy various groups of people. The built “wildness” surprises outdoor enthusiasts and they do not have to drive hundreds of kilometers to kayak. For those tenants living in “cages”, they enjoy more relaxation and private space in the waterfront than in the confined shared flats (Shen, 2022). During the pandemic in May of 2022, the strict lockdown policy forbade people from eating in restaurants, causing the first popular wave of enjoying public space in the Liangma River. The sense of getting close to nature in the Liangma River serves as a comfort for tired and nerve-wracking people. Whereas the five-star hotels adjacent to the river, are glad to enjoy higher room prices because of the scarce “naturalness” just outside their windows. To wrap up, the government accepts the aesthetics of nature as a general working philosophy and exploits the workings of de-engineering and engineering, differentiation and migrant workers’ labor to materialize the infrastructure for the imagination of nature. In achieving “nature”, the state power gets naturalized for governmentality and the authoritarian parts of the power can be covered (Chu, 2014).

4.1.3. Dazzling Lights

Apart from the naturality, the Liangma River is attributed to other qualities in official discourses like a sense of modernization and flourishing. This is visible in the daytime through beautiful facades of skyscrapers, while it is more complicated at night. The light decoration workings are common pathways in China to showcase the prosperity and cosmopolitanism of cities (Yan et al., 2009). The most famous landscape is the Waitan Bund night view, presenting the fancy

Lujiazui CBD for tourists. Some tourist sites also deliver dazzling light shows in the lakes, rivers or plazas. These light shows usually demand complicated electric and lighting infrastructure and expensive operation costs. In the Liangma River, 100 million RMB (approximately 13 million Euros) has been invested by a state-owned company Liangye Ltd. which is an expert in designing and operating light shows for tourist purposes, accounting for 10 percent of the total waterfront renovation project budget. With such generous investment, the Liangye is allowed by the CBWR to operate the cruises and additional activities to make profits. Thus the Liangma River is no longer a pure urban space under local government, but also a tourist attraction for the “night economy” (BMG, 2022) with the state capital involved.

The Liangye equips the Liangma River with dazzling and complicated colors. Trees along the river are cast purple, the arched bridge is rendered with rainbow colors. With massive spotlight equipment, fluid patterns and landscapes are projected on bridges, buildings, riverbanks vegetation and every possible background. The Liangma River becomes a giant outdoor theater at night, repetitively displaying landscapes that represent technology, international relations, traditional culture, and the importance of “possibility” (Chaoyang, 2023, a). One can always notice a classical slogan displayed on a bridge: “Liangma River, thousands of lifestyles”. The officials believe diversity of lifestyles can be achieved by presenting diverse lights. Strong visual stimulation and contextual stories from light shows, though totally opposite to the makings of nature, are also admired by the audience for granted who tend to scale up the spectacularity of a river to the prosperity of the urban in mental construct. The continuously changing images provide an aesthetic appetite for enjoying and exaggerating the benefits of modernization through the workings of artificial spectacles. In contrast to the typical argument that infrastructure is usually invisible during operation (Larkin, 2013), the light infrastructure along the Liangma River manifests itself through exhausting shining. While this setting of aesthetics cannot persuade everyone admittedly, the elaborate photos of the splendid night views of the river presented by official media and digital platforms are persuasive enough to drown out the critical opinions on light pollution and electricity burdens.



Figure 4: The lighting infrastructure on the Liangma River and cruises (BMG, 2023)

The light equipment is directly applied as the infrastructure of city branding issued by the local government. The “Beijing Chaoyang International Light Light Festival” was held by local authorities including departments of culture and tourism, business management, China Central Television, etc. in November 2023 (Chaoyang, 2023, b). As a parallel session of this governmental activity, the Liangma River told a story with light equipment to showcase that the district takes a leading role in fashion trends, international communication, art and culture economy, nightlife, etc. It is necessary to ask here: Should citizens be the primary users of the waterfront, or should the local government appropriate the open space as an arena of fantastic lighting propaganda? With the local authorities telling symbolic stories more and more often, these two functions are becoming increasingly exclusive. The state power employs waterfront infrastructure to serve citizens with preferred representations and tells them to accept these symbolic meanings as social facts (Larkin, 2013). Governmental workings on material and engineering infrastructure are meant to realize its mastery of mental things of the governed. In addition, the government has to address the contradictions between the discursive makings of nature and fancy artificial landscapes. The different discursive directions imply the local government’s hesitation and arbitrariness in dealing with governmentality with the workings of infrastructure.

4.2. Disciplining of Activities

4.2.1. “Chill” Life Under Policing

“Relaxation” is becoming a necessity in recent years especially in big cities due to various reasons, and the Liangma River seems to be a perfect escape for residents to relax, of course under strict surveillance from the state. “Chill” is quite a common English word in the online posts of Xiaohongshu that describes one’s relaxed feelings when he or she spends time around the Liangma River, and the qualities of the river per se. When you approach the river, it seems you can get rid of all the pressure related with the megacity life, relax yourself as if in the countryside. This minor adjective meaning of “chill” is widespread on social media, attracting more users to experience the “state-of-art” lifestyle in a pretty easy way: as long as you come to the Liangma River and have a picnic or play frisbee with friends, you can reproduce more aesthetics of “chill” online with Photoshopped pictures and seemingly causal sense of relaxation. Key elements of the aesthetics of Liangma River are from the Western world: the use of an English vocabulary in online posts, the western middle-class typical activities like picnics, frisbee and kayak, etc. But is this discourse of “chill” a genuinely spontaneous construct from the citizens themselves?

Compared with the repressed space and fast-paced atmosphere in Beijing elsewhere, at first the Liangma River is less regulated in activities by the local authorities. However, the extent of regulation and policing is subject to arbitrarily changing “contingency” defined by the government. The gradually tightening “noose” of lockdown during the 2022 epidemic is a perfect example. Firstly, only indoor activities were forbidden, and citizens crowded along the Liangma River enjoying sunshine and public space. Some people took the riverfront as a shelter

because their workplaces were labeled high Covid risk according to the smartphone “Health Code”. It did not necessarily mean they would have to get infected if they went to work, but their “Health Code” would get red if their smartphone locations once reached there. And if parents’ “Health Code” were labeled red, children would be denied out of the school due to assumed infection risks. To avoid being labeled as red, someone came to the Liangma River to spend time. At this stage the river served as a resort for citizens to temporarily or tactically respond to the strict Covid regulation. Citizens found the riverfront a buffer space to get a break under the pressure of intense urban lifestyle and overwhelming social control.

Later, when the Liangma River became increasingly famous and too crowded along the riverside, the local authorities saw this as a risky gathering that may lead to virus infection. They tried to control visitor volumes by establishing a metal cordon along the riverfront and hiring guards to patrol. People who wanted to “enter” the riverfront space had to scan a “place code” at the entrance, so that the government could trace everyone who once reached the location at specific time, in case of any possible infection risks. At this stage the riverfront was also incorporated into the omnipresent policing network infrastructure of the state, and any gatherings in public space that could be suspected as violence to the supreme principle of infection control were forbidden. People were only allowed to enjoy the river view alone without any suspicious communication and activities with each other. The imagination of the “chill” lifestyle had to give way to the Zero-Covid policy because the latter task possessed a prioritized status for all levels of authorities.

When the epidemic further spread and local authorities’ nerves got more strained, they pushed the surveillance to its extreme and the “chill” function of the river was totally phased out. The riverfront was attributed a new exclusive function as the place for residents to take PCR Covid tests. The Liangma River became a “must-go” place on a daily basis for residents living nearby, because anyone who did not take the Covid tests for more than two days would be labeled with a red “Health code” on smartphones and suspected as being infected. Therefore, the “chill” function is a “reward” to the Liangma River from the government, which can be withdrawn whenever the state power believes it is necessary. The riverfront space, together with smartphone “health code”, PCR tests and metal fences constituted the infrastructure for the power flows which were coercive but also symbolic. While the control of aesthetics is not monopolized by the government. On the eve of the termination of the Zero-Covid policy at the end of 2022, thousands of citizens gathered at the gate of a United Nations office along Liangma River to protest against the lockdown, because they thought this location could raise more attention from the international society.

When it comes to the post-Covid era, the “chill” lifestyle is allowed again but policing still exists visibly and invisibly around the Liangma River. Several police scout cars park every day and every minute at the riverside where the protest happened to prevent any possible political gatherings. The cyberspace administration and surveillance department of the Beijing Municipality takes the Liangma River as a key arena of public opinion monitoring on popular social media. Once detecting any negative remarks on social media, the cyberspace surveillance department will push the information to the CBWR and ask for clarification to avoid potential

negative news. One of my interviewees was asked to write a lengthy report on a risky “public sentiment” event that happened along the river: a Xiaohongshu post claimed a lady’s neck was hurt by a hook when she walked by a fisherman who was casting the rod into the river and the lady complained that the fisherman was reluctant to compensate. Such intense surveillance on the Liangma River is seen as necessary by the local government to keep a positive atmosphere to attract citizens to enjoy and reproduce the aesthetics of “chill”. The reproduction of “chill” posts on social media channels city branding of the Chaoyang District.

Therefore, the popular aesthetics of “chill” related to the Liangma River has deviated from its original connotations of relaxation, casualness and leisure. People have to take homogeneous activities (usually with expensive equipment) and pose similarly for appealing photos to make themselves believe they are engaging with an “unfussy” lifestyle and globalization trends (Joassart-Marcelli & Bosco, 2023). Local authorities sharply make use of the collective mental construct of the “chill” riverfront for government purposes. But the tolerance for public activities is under strict and omnipresent surveillance. The local authorities make sure they have enough instruments to manipulate the workings of the riverfront. The Liangma River is endowed with symbolic meanings under everyday consumption and state control to reach a conditioned “consensus” (Tomba, 2014) on how to use the riverfront. This “consensus” is reached when the daily practices of regulating the river space are accepted by the public under elaborated framings. With a regulated consensus the urban government is able to keep various interest conflicts and disputes under a controllable level in the arena of the Liangma River, to prevent the “franchised” public activities from challenging the authoritarian government techniques.

4.2.2. Classification of Waterfront Space

“The definition process of an infrastructure is a categorizing moment (Larkin, 2014).” The waterfront space of the Liangma River has gone through a complicated classification process elaborated by local authorities. Before the 2010s, the main aim of the Liangma River was urban flood drainage. The riverbanks were straightforward concrete without considering the leisure purposes of citizens. Since the recent waterfront renovation, leisure activities have been emphasized by official discourse but also conditioned into different sections of the river. According to the qualities of locations and surrounding properties, the urban government defines four thematic sections of the waterfront, respectively focusing on residents' relaxation, international communication, local business, and ecology and biodiversity. Local authorities invest various levels of attention and resources to create differentiated landscapes regarding different categories of space. The four sections lie in sequence along the river with a total length of only 1.5 kilometers. The “heterogeneity” of such a narrow space does not originate from spontaneous interactions of citizens, but from the top-down government planning. Hard infrastructure and fancy activities concentrate on international communication and local business sections, and these very spaces realize the river’s fame and stimulate most discussion.



Figure 5: The layout of Liangma River Waterfront Space and four thematic sections (Source: CBWR)

Therefore, if we see the Liangma River as the showcase of Beijing, then the international and business sections of the waterfront are the showcases of the Liangma River. Dazzling activities like the “Chinese Tea Culture Festival”, “International Light Festival”, fashion shows or even small concerts take place at the same small square along the river, which are all organized and subsidized by local authorities. The alleged “one thousand types of lifestyles along the Liangma River” is reproduced through various commercial tourism products by one specific state-owned company Liangye. Citizens feel the disparities are happening within the waterfront: the international and business sections are transforming into a commercial tourist attraction with investments from the government and the market, while the residents-occupied riverbanks keep a quiet vibe for fishermen and swimmers. This disparity is based on the aesthetics of heterogeneous demands of citizens along the river, trying to prove the inclusiveness and diversity of the government discourse. But if the heterogeneity is produced in a top-down manner, there must be some unexpected or undesirable possibilities that are excluded from the “authorized” aesthetics of heterogeneities by the urban government. Thus the functional planning of the waterfront and commercial activities become an infrastructure to claim the space is inclusive and diverse.

The classification of space exerts physical demarcations of the riverfront. The kayak club is only franchised to occupy a 900-meter-long river. Those who bring their own kayaks and use other parts of the river will face various barriers. There is a rope blocker for garbage collection below a bridge which is not visible for most people. But the canoers who pass through under the bridge will be blocked by the rope. The blockage for kayaks is not deliberately made but this phenomenon implies kayaks should only appear at planned locations and operated by the authorized provider. Another physical boundary are the workings of gates. The gates do not disappear along the Liangma River in the post-Covid era because local authorities do not want bicycles to go through the riverfront. The delivery men ride electronic bicycles very fast along the river, which is dangerous for pedestrians. And the great number of bicycles crowded on the grassland damages the wonderful “urban appearance” of the riverfront. But the first generation of doors stopped not only dangerous bicycles, but also baby strollers and wheelchairs. The earlier solution was to provide a staff phone number. Those who have difficulties to go through the gate call this number and someone will come to open the gate in 10 minutes. But no one

had enough patience to wait for so long. Then the CBWR urged the Longfor Ltd. to think of another innovative revolving gate. Bicycles are successfully stopped while strollers and wheelchairs can pass through easily. This is a typical case of physical boundaries that benefit most users of the riverfront. The CBWR itself, of course, promotes this story on social media to illustrate its human-centered working principle.

The classification of the riverfront is realized through top-down planning, selective investment of resources, discursive constructs and physical demarcations. Through the workings of categories, the urban government is able to manipulate the aesthetics of conditioned activities. And through the aesthetics of everyday practices, the affections, behaviors and interactions of citizens are deeply shaped by the space and related infrastructure (Larkin, 2013). The fancy lighting facilities, commercial investment and state-advocated festivals constitute the insidious infrastructure to facilitate but also condition citizens' imagination on the possibilities of the waterfront. Occupied with harmless Chinese cultural festivals, the square is thus unavailable for self-organized "suspicious" gatherings. Local residents are assessed as less influential than young citizens and expats who are active on social media, so the residents-occupied sections receive fewer government resources than the international and business sections. Among the working and unworking of classification infrastructure, the urban government attempts to promote designated symbolic meanings in citizens' mental constructs to consolidate its legitimacy under changing economic and societal contexts. The Liangma River is a mascot.

4.2.3. Displacement of Activities

Urban regeneration usually causes gentrification and displacement in the market economy (Mathews, 2010). The vast research has proved gentrification can take place in many forms apart from residential aspects, such as green, retail, state-led, lifestyle or aesthetics (Joassart-Marcelli & Bosco, 2023). During the transition of the Liangma River, an evident displacement process is also visible through the workings of activities, which brings the problem of fairness to public attention. The displacement of activities is induced by local authorities' actions, while the inequality of displacement may also undermine authorities' credibility which they try to avoid. With intended displacement from "uncivilized" and "dangerous" activities to "trendy" and "international" ones, the urban government manages to avoid parts of its responsibilities and confirm the aesthetics of displacement as a modernization process of urban life. The urban elites enjoy the emerging fancy activities and develop an identity on the space imagination provided by the government, while the ordinary citizens are potentially deprived of control of everyday spaces and their mundane practices (ibid). The workings of kayak and swimming on the Liangma River support this argument perfectly.

Swimming and fishing are two indigenous leisure activities on the Liangma River, which date back to at least the 1990s. These activities are free of charge and very popular among local residents. Whereas the urban government does not like these activities because fishing will damage the water quality of the river, and the possible drowning risks of swimming increase management costs of the government. Because in China the state power permeates every corner of citizens' life, the authorities are also assigned almost "unbearable" responsibilities (Zhao,

2020) such as caretaking of swimmers in the open water. To avoid possible accountability pressure from higher levels of authorities and monetary compensation pressure from claims of the families of the drowned, the urban government has a strong tendency to totally prohibit swimming in the Liangma River administratively. However, there is no law or regulation directly supporting an order to ban on swimming in urban waters, which brings great risks of complaints if the local government does that. Therefore, the local authorities strategically manipulate new activities to displace the undesirable ones, which is a soft but insidious way compared with administrative prohibition. Kayaking is the chosen activity.

In reality the Liangma River is not suitable for kayaking because the water surface is too narrow with a river width of only 40 meters. It was the former director of the CBWR who initiated the whole waterfront renovation project that insisted on introducing the kayak because he wanted the Liangma River to be fashionable and comparable with La Seine in Paris. Although the CBWR lacks regulation support to develop such aquatic activities, it explored to use an open comparison procedure for the operator as the symbol of complying with its accountability. A kayaking club was finally selected to provide kayaking experience services for the public with a “nonprofit nature”. However, the services are not for free, the price for one-hour kayaking for a single person is 159 yuan (20 Euros), which is even more expensive than the canoeing in Den Haag (10 Euros an hour). In comparison, the average daily income of citizens in Beijing is 227 yuan (29 Euros per day) in 2023 (BMG, 2024). The kayak club occupied a 500-meter-long river at first, expelling swimmers to the upstream. Later the club was allowed to build a second kayak basin to occupy another 400 meters, further reducing the space for swimmers. The free access to water activities is “gentrified” with an expensive “middle-class” sport under direct support from the urban government (Liu, 2022).

Apart from the displacement of usage patterns of the space, the new occupier adopts discursive instruments borrowed from local authorities to stigmatize indigenous activities. Swimming is regarded as “uncivilized” and “harmful to the urban appearance” because the aged male swimmers change their clothes in the open space along the river. The absence of decent public bathrooms for citizens, which should be a shame of the local authorities, turns out to be the discourse infrastructure for stigmatization. In addition, the dangerous nature of some rapid entertainment programs in the kayak club serves as a threatening tool to persuade swimmers to give up their claims on the water. The club even bought fifty bright red swimming caps for swimmers, claiming that they make swimmers visible in the water so that high-speed canoers can avoid collisions. This “labeling and stigmatizing” red caps are not only the materialization of conflicts, but also a buffering infrastructure between the state’s imagination of “global” and the “local” everyday practices. The commodified and “bourgeois” kayaking competes to be the only “decent” way of using the water. Ironically, the expensive kayak club has to keep its franchise from the CBWR by proving its “nonprofit” nature through a token and sporadic provision of free kayaking instruction and experiences for three hours per week. While the exact time of this free service is never published because they are “fear of overcrowding”.

Besides introducing a private kayak club, the state-owned capital is directly involved in the commodification of aquatic activities on the Liangma River. The Liangye company provides a

series of “innovative” and “customized” cruise products on the river which are targeted at enterprises or high-end businessmen. An intimate business dinner on board or a romantic dating package is worth 20-30 thousand yuan, which is quite an exclusive price for ordinary citizens. Even the general cruise ticket for one person on a 12-seat cruise on weekend evenings costs 180 yuan, compared with 50 yuan to take a cruise trip on genuine La Seine. The extremely expensive and space-occupying cruise products are for only a small group of target consumers, while becoming the most prominent landscape on the Liangma River at night, and shaped as mainstream and a “must go” activity on social media. The commodification of aquatic activities erodes the publicness of the waterfront because those who are unwilling or unable to pay for these diverse products are excluded from access to the original leisure activities. With the infrastructure of the kayak club and colorful cruise products, the government manages to reduce its own management risks and consolidate the aesthetics of cosmopolitanism on the Liangma River (Chu, 2014). When franchised companies make profits with the new aesthetics, the everyday practices of citizens are undergoing brutal displacement which erodes not only their access to urban space, but also their mental constructs on how to use the river. Kayaking and taking cruises are the “appropriate” ways to enjoy the “diversity” of Liangma River.

4.2.4. Struggles on Space

Although the everyday practices along the Liangma River are shaped and reshaped by the omnipresent state power to through the workings of infrastructure, citizens by no means passively take the penetration for granted. Numerous struggles between citizens and local authorities, show the formers’ resolution and wisdom in defending the everyday life activities on the arena of public space. These struggles imply that the aesthetics of waterfront infrastructure are still disputed as Chinese citizens’ awareness of publicness is growing (Sun & Wright, 2024). The government’s powerful techniques on governmentality are not able to totally control the “desired” directions of mental constructs of the governed through symbolic workings of infrastructure. The manipulation of the aesthetics of infrastructure can only serve as a buffering zone, rather than an ultimate way out, between the consistent pursuit of the the state centrality and the growing awareness of citizenship in Chinese megacities.

Struggles first happened between citizens and the “governing agent” of local authorities on the Liangma River. After receiving the franchise from the CBWR, the kayak club was really eager to exclusively take over the related water, preparing to charge tolls to whoever wanted to use its docks to get close to the river. The club claimed that it had to be responsible for the safety of those swimming or kayaking in its “regulated water” according to the contract between the club and the CBWR. Some kayak enthusiasts were angry about the “tolling river” and called the mayor's complaint hotline. Through the unofficial interactions between them and officials who were to respond to the complaints, they found the club had no legislation backed up to charge fees. More interestingly, as the officials are subject to the strict disciplines of civil servants and the CCP, the kayak enthusiasts got their trust and were allowed to speak some opinions on the publicity of the river on social media on behalf of officials. It seems weird that the same officials who decided to commodify kayaking on the river tried to deliver unofficial opinions on legislation deficiency problem anonymously to show their involuntary situation.

My explanation for these inconsistent behaviors is that, the officials have to manipulate the workings of the infrastructure within the sealed system which is to enhance the centrality of the state power, whilst they are not backed up by sufficient legitimacy from the written legislation and without constituency support in dealing with mundane complaints.

The kayak enthusiasts were more than strategic in expressing their concerns about kayaking right on the river, for example body politics. An interviewee once drove his private kayak to get close to the kayak club deliberately, trying to testify if the club owner would prohibit him from kayaking in the water. He managed to appear near the dock several times and the club owner told him to take care of himself. This interviewee created a symbolic “humanscape” to imply his anger at the planned and commodified aquatic activities (Jacobs, 1962). His own body formed a political landscape to illustrate citizens’ concerns about public access to the Liangma River. To fight for citizens’ rights, as the interviewee says, “requires one to not only possess strong awareness of public participation which originates from the West, but also familiar with Chinese traditions of dealing with the authoritarian power to protect himself as a dissident.” The pioneer would rather express opinions in the name of a “collective expression of the community” which is fantasized to avoid possible punishment from the government. The authorities-favored aesthetics of cosmopolitanism and modernity borrowed from the western world, are opposed by the elite pioneers who have received western higher education with western ideas of public involvement and body politics (Henley, 2012).

Local authorities also respond to citizens’ activities and consistently adjust the purposes of the space at a mundane level with workings of ordinary materials. A small public space was originally designed for small parties along the Liangma River, close to the residential area. The young people usually sing songs there, creating nuisances for residents. To handle complaints from residents, local authorities use two big flower beds to occupy the space, preventing annoying gatherings. This artful idea stops residents’ complaints, on one hand, and “improves” the landscape of the riverfront with more flowers on the other hand. More importantly and subtly, the possibility of gatherings and public discussions is reduced with beautiful flowers, which the government would like to see. The “harmless beauty” is totally supported with the workings of various infrastructures, while the invisible qualities of publicness, diversity, inclusiveness and equality are eroded in the waterfront because of strict disciplining of activities.

4.3. Infrastructure of Discourse

4.3.1. Policy Discourse to Tell Stories

Apart from the workings of aesthetics of the waterfront through material infrastructure and governing on activities, the government directly reproduces fantastic stories on social media to support its governance targets. These stories, narratives or slogans are extensions of the engineering and management works discussed before, trying to rationalize and legitimize the purposes and actions of the government. The official discourses proposed by key leaders become the administrative substratum of building aesthetics of waterfront space in the Liangma River. Bureaucrats in various departments of the urban government have to make documents

and conduct discretion within the framework given policy discourse. In the practice of renovation of the Liangma River, local authorities try to make the promoted policy discourses more interesting and acceptable to the general public, rather than dull documents only circling in the bureaucratic system, for example the “Urban reception hall of Beijing”. However, the increasingly understandable policy discourses do not mean the policy-making process of local authorities is more transparent and democratic. On the contrary, ordinary people are softly educated to “take” the narratives from higher-ranking officials which used to be only the task of government staff (Chu, 2014). The extension of discourse education makes more citizens convinced that the renovation is totally for the sake of public interests with the symbolic aspects of infrastructure. The government’s fantasy and desire for cosmopolitanism and modernity transform into the imagination of the general public with the help of discourses.

Bureaucrats in local authorities usually accept various interviewees on different occasions. We can coincidentally read similar stories about the elaborate renovation of the Liangma River from different sources of media. On the one hand, most media with official background cross-copy and refer to the same narratives of each other under the media disciplines of the party-state (Wu, 2018). On the other hand, government staff tell unified stories to various interviewers, which constitute the infrastructure for producing and reproducing persuasive discourses. Several state-controlled media reported the “Three fences” along the Liangma River which senior officials of the CBWR told to describe the segmented governance situations of various departments before the renovation project. With local authorities’ “dedicated effort”, different stakeholders along the riverfront manage to collaborate to improve the urban appearance. I also heard this story once from a mid-level official of the CBWR in an interview, who was really convinced by himself. The allegory of “Three fences along the river” has transformed into an appealing and general discourse to prove the CBWR’s success in integration and coordination work on the waterfront renovation, no matter whether the fences ever existed or created any inconvenience.

Liangma River has won many titles from the official evaluation systems, proving it is a super successful city branding practice of the government. The renovated river is entitled to a series of “demonstration areas” reputations, like “the national agglomeration areas of nighttime culture and tourist consumption”, “the national pilot project for immersive tourism” “the top list of cultural consumption”, etc. (BMG, 2023). These discursive titles strongly imply the government’s intended direction of development of the Liangma River: to encourage citizens to consume along the river. The expensive commodities in shopping centers are not the only thing that can be consumed. The “modernized” and commodified activities, the appealing discourses are also waiting to be consumed to channel the administrative, political and economic resources in the system. With these resources flowing, the Liangma River contributes to the discourse of forging “International Consumption City” for Beijing. Whereas the grandiose narration of consumption is reasonable for a government that sees economic growth as a significant source of legitimacy, especially considering its capability of stimulating the economy is at risk recently (Wu, 2018). The endless policy discourses serve as the governmentality and instrumentality of the state’s rule (Ghertner, 2010).

4.3.2. Online Illusions of Liangma River and Middle-class Identity

Official policy discourses still seem up in the air to many online consumers. Local authorities step further to make an exemplified template on where to consume when coming to the Liangma River on the official CBWR's WeChat account. This official "consumption strategy" is so expensive that few people can afford it (CBWR, 2024). If one totally follows this instruction, visits two cultural activities, eats in a classy bistro and spends a night in luxurious hotels along the river, he or she will spend at least 2500 yuan (320 Euros) for a "one-day-vacation" on the Liangma River. This extremely expensive instruction goes far beyond general citizens' affordability, consolidating an existing "elegant" and "tasteful" illusion of the Liangma River on social media like Xiaohongshu. Some staff in the CBWR also express confusion about this official instruction, they suspect the strategy is copied and assembled from the Xiaohongshu posts by the outsourced operator of the CBWR's news account. The self-organized strategies on Xiaohongshu about how to consume classy "bistros", private "Omakase" or niche exhibitions are utilized with official attention, helping solidify the cosmopolitan and elite illusion of the Liangma River.

The reason why the online illusions of the Liangma River are worked in both top-down method by the government and self-organized ways on social media, is related to the identification of middle-class citizens. The rapid economic growth of China, especially the wealth increase in households in megacities like Beijing induces heated discussion on the enlarging size of the middle-class. But the concept of middle-class citizens is highly disputed, not only in the academic world, but also in the everyday life of the public (Sicular & Gustafsson, 2022). The middle-class identity which is also a borrowed Western concept is welcome for most citizens in China. The blurred definition drives people to accomplish self-recognition, to distinguish themselves from others with specific consumption behaviors. Xiaohongshu is a typical platform for "recording the beautiful life of middle-class". The users post photos of expensive consumption experiences to qualify themselves as middle-class, and compete to be "more middle-class" than others. When the Liangma River becomes popular online, Xiaohongshu users find a new arena to race for eye-catching posts. The aesthetics of "chill" on the river are intrinsically the aesthetics of the middle-class identity, and the aesthetics of consumption.

From the perspective of local authorities, the urban government welcomes both middle-class citizens and the imagination of the middle-class because they are normally well-educated, "civilized", stable and with strong purchasing power. Focusing on the Liangma River, the dedicated workings of the expensive illusions set a mental threshold of specific aesthetics for visitors of the river, implying that if you do not follow the common consumption instructions, you are not a qualified middle-class citizen. Besides the regulation of mental constructs, the online illusion also indirectly encourages the services economy. The economic concern becomes increasingly significant for the government given the austerity trend across the country. And that is also why I call this aesthetics of consumption an illusion, because most users of the Liangma River prefer the free way to enjoy the waterfront. No doubt there is a group of targeted rich people who are willing and able to pay for expensive activities, and corresponding marketing promotion is reasonable. The key issue is that the density of this illusion of "high-

end” lifestyle on platform media, as well as official propaganda attention of that aesthetics are disproportionately predominant compared with the normal life of most ordinary citizens. This overwhelming aestheticization of the consumption lifestyle indicates the government’s ambition in reshaping citizens’ consumption of urban space.

4.3.3. Discourse Disputes under Tight Financial Constraints

The government produces multiple discourses that need to be addressed in the Liangma River to maintain its legitimacy. However, the realization of these discourses or purposes requires financial resources to work on material and nonmaterial infrastructures, which is contradictory to the severe economic and government budget situations. The stalling commercial housing market in the past three years sharply reduces the urban governments’ revenues in selling land use rights to housing developers (Wu & Zhang, 2022). The huge expenses on the execution of strict Covid policy further intensified the fiscal difficulties of local authorities (Huang, 2024). Different discourses from various government subjects have to compete for limited resources that are distributed to the Liangma River. The Chaoyang Bureau of Treasury asks every department of the District, including the CBWR to literally cut their budgets, and the Liangma River project is specially targeted being required to reduce annual maintenance costs. Nevertheless, the contractor Longfor Ltd. consistently complains it does not get fair payment from the CBWR and loses money in maintenance of the waterfront. The discourse that the government should spend less is contradictory to the discourse of keeping the waterfront well-managed.

There are more forces that exert influences on the discourse competition. The big boss of the Chaoyang Party-state Mr. Wenxian, pays special attention to the Liangma River. The reduction of the landscape quality of the river means a deficit of his own career performance. Financial strain in the government is of course at his concern, but he prefers to build the Liangma River project as a specialty which is conspicuous to superior officials in the Beijing Municipality to channel his career promotion. In addition, the contractor Longfor Ltd. also managed to lobby Mr. Wenxian to get more maintenance money because the head official of Chaoyang District counts on the big property management company to get in charge of other projects in the future. In this case, the CBWR receives subtle political pressure from the “big boss” Mr. Wenxian requesting to add more budget on the river, on one hand; and the rigid audit requirement from the financial department also constrains its discretion space, on the other hand. This dilemma of various discourses within the government partly explains the seemingly inconsistent purposes in the practice of renovating the Liangma River. The political ambitions of individual head officers, the backdoor coalition between the government and enterprises, and the conditions of various departments of execution will project on the discourses of workings of infrastructure. There is no big problem during the rapid growth era between different discourses because growing resources can fulfill all of them, while when it comes to the tough transition stage with a limited growth rate, a necessary trade-off is made which is often subject to the power’s arbitrary will.

5. Conclusion

The Liangma River sees great influences of the aesthetics of infrastructure in the endeavors of the state power in urban China. During the exertion process of the symbolic aspects of power, the lively urban life and spaces are penetrated by the government in many ways. Let us come back on the first research question foregrounded in the Introduction: What does infrastructure mean to the waterfront renovation in transforming urban China from the perspective of critical urban theory? This thesis calls for a Chinese research transition from only the focus on the engineering of infrastructure to conscious attention to its political quality, from the dense investigation of macro and meso infrastructure projects to everyday life research on mundane struggles on urban infrastructure. The infrastructure is not only a substratum of the development of society and economy, but also an insightful analytical tool in unraveling urban dynamics (Oakes, 2019). Thus the infrastructure of waterfront renovation in the Liangma River is more than physical hard concrete and facilities, it also includes government techniques, bureaucratic organizations, market elaborations and discursive manipulations, etc. The state-led investment in the river's infrastructure significantly changes the landscapes of the waterfront. The everyday life practice of citizens is further impacted by the government in both direct and indirect ways. There are multiple socio-political meanings in infrastructure to the general public.

The second main research question is: How and how far does the government practice power during interactions with urban life with the workings of infrastructure? This how question is more related to the second quality of infrastructure, namely the aesthetic or symbolic aspects. In terms of the waterfront space and affiliated infrastructure, they do not provide services for the necessities of survival and economic development. What they provide is aesthetic pleasure and mental workings, which are very subjective and easy to manipulate. Consequently, the aesthetics of infrastructure should be foregrounded to investigate how the government exerts its omnipresent influence in the waterfront space and urban life. With workings on symbolics, discourses, affections and sentiments of the infrastructure, the state power can be increasingly arbitrary in penetrating the society. The aesthetics of infrastructural power question the classical typology of state power from Mann (2003), indicating that the coercive or oppressing impact can still be possible in the “modern” government providing infrastructure. Local authorities in Beijing adopt three levels of strategies on the framings of infrastructure to shape the aesthetics of the waterfront, namely the engineering of materiality, the disciplining of activities and the infrastructure of discourse. These three levels of government strategies correspond to three types of infrastructure of the waterfront renovation: the material ones, the institutional and organizational ones and the discursive ones.

To answer the research questions mentioned before, the thesis tries to uncover why the government has to manipulate the aesthetics of infrastructure in China. The centrality of the state in urban space development is foregrounded (Wu, 2018) to illustrate that the ultimate goal of the waterfront renovation project on the Liangma River is to sustain the legitimacy of the urban government and reinforce its power reach in every corner of the society. The concerns of residents' experiences on the river are significant factors to be considered, but the prominent principles of the street bureaucrats in the CBWR are to struggle with the superiors' endless and

arbitrary discourses and corresponding mundane administrative tasks. Faced with a lack of legal infrastructure to back up and citizens' increasing awareness of public involvement (Zhao, 2020), local authorities turn to insidious workings on infrastructure on the waterfront to realize their goals without apparent confrontations with the public opposition. The imagination of modernization affiliated with the infrastructure is frequently applied in the framings of aesthetics of the Liangma River. Whilst in the Liangma River, the sense of being modernized is not only related to the progress in hard technology or magnificent structure, but also relevant to the portrait and yearning for Western lifestyles and activities to be qualified "middle class". But the imitations of Western tastes can be only channeled without public recognition because of the "political correctness" of propaganda on the "self-confidence" of Chinese culture and systems (BMG, 2023). This inconsistency reflects the limits of the authoritarian state in China in dealing with the opening market and society. The government's attempt to penetrate everywhere is increasingly difficult but it is reluctant to give up. To put it in another way, the aesthetics of infrastructure represent the efforts to transform from an authoritarian government to a modern governance.

The basic physical elements of the waterfront in the Liangma River are subject to the political engineering of local authorities. The amount of water flowing in the water is not decided by hydrological characteristics, but by the bureaucracy hierarchy, intergovernmental relations and policy discourses. The scarcity of water is equal to the scarcity of political power. Urban water can be framed as a risk to urban life and properties, it can also be framed as a symbol of modernity, depending on authorities' demands. In addition, the imagination of nature is a critical part of the aesthetics of the waterfront infrastructure. Local authorities apply both engineering works and discursive framings to realize an illusion of "de-engineering". The aestheticization of "nature" developed by the CBWR is accompanied by suppressing the substantial nature like the wild waterweeds. The "natural" is foregrounded as visible and the "unnatural" as invisible. The workings to make the waterfront seemingly like nature become the infrastructure to convince citizens to accept the government's discourses (Carse, 2012). Nevertheless, the huge investment in lighting facilities along the river seems contradictory to the policy discourse of being nature. The fancy and irritant lighting confirms the government's wish to manifest itself through the waterfront from another direction.

The government employs its regulatory and organizational power to condition the activities on the waterfront of the Liangma River. The precondition of allowing "chill" discourse is based on authorities' confidence that they can control and draw back the granted freedom to citizens at any time according to circumstances. The bottom line of deregulation on activities is the total prohibition of any protest or demonstration that collectively questions the order or legitimacy of authorities. The narrow space along the river is classified into functional areas, producing a planned "diversity" to enrich the aesthetics of waterfront infrastructure. A token discourse of diversity facilitates the government to work on its appetite for cosmopolitanism, which indirectly leads to the displacement of indigenous activities by expensive and "classy" sports. The induced problems of inequality and exclusiveness at the local scale are dissolved by the discourse of urban appearance. However, the citizens apply knowledge and lively bodies to express opposition with the remarkable "humanscape". The waterfront infrastructure is also

appropriated by citizens to conduct their struggles with the state power to fight for access to public space. These struggles are somewhat useful in making local authorities realize the public's increasing awareness of their right to the city (Lefebvre, 2009).

Due to the strict discipline of CCP officials and high permeability in the society of the state power, policy discourses and the instruments channelizing discourses are subject to the government's manipulation. With the infrastructure of discourses, local authorities can easily tell stories and change narrations according to their demands. The government's purposes determine the "public images" of the river and the series of titles are good evidence. The chase of "middle-class" identity drives both citizens and the government to work on special illusions of the river through the Internet and media infrastructure. The essence of the covert typology of users and activities on the Liangma River is intrinsically the recognition and self-recognition of the decent middle class. These groups are considered stable for the government and excessively beneficial to the consumption economy. The double classifications of space and users disperse the tensions of the disputes between different discourses under the current transition period. In addition, the support of discourses complements the deficit of government attention, resources and legitimacy in regulating waterfront space.

The main contribution of this research is to draw attention to the techno-political and aesthetics of urban infrastructure from the perspective of everyday practice in China's infrastructure studies. During the transition of the economy and urban development, local authorities in China found that the aesthetics of infrastructural power is effective in maintaining its power reach and apparatus of governmentality (Foucault, 2004). The aesthetics of modernization in the waterfront infrastructure do not make the state power behave in a modern and democratic way, but provide endeavor space to allow its arbitrariness and extensiveness. The everyday life of ordinary citizens goes through covert displacement and inequality, exclusiveness and unfairness are jeopardized in the urban space in symbolic terms. The result of displacement is opposite to the government's claimed policy goals. Fortunately, the citizens manage to make struggles in infrastructure space with workings on aesthetics as well. This research further confirms the centrality of the state power in China's infrastructure development at the everyday practice level. The future research can continue to explore the institutional and social factors of the government to frame the aesthetic aspects of infrastructure. And the multiple influences on everyday space and life of these manipulations should be further questioned. Increasing academic attention should go to the relations between infrastructure and power practice to disentangle the operation logic of China's authorities.

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