

ON THE ROAD TO A MODERN CITY:
NEW TRANSPORTATION TECHNOLOGY AND URBAN
TRANSFORMATION OF TIANJIN, 1860-1937

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Abstract

After the northern Chinese city of Tianjin was opened as a treaty port in 1860, the steamship, railroad, and electric tramway were introduced into the city in rapid succession. The adoption of modern transportation technologies enabled Tianjin to occupy a crucial position in the emerging national and global transport and trade networks, Tianjin thus became one of a few cities that made the transition from a traditional commercial city on the Grand Canal to a modern seaport and railroad hub. Instead of taking a city's modernity for granted, this dissertation examines how the physical forms of modernity came into being in Tianjin by connecting these processes to the adoption of new technologies and the building of national and international networks of transportation. Studying Tianjin from this angle, this dissertation sheds light on why, during the late nineteenth and early twentieth centuries, a select few cities thrived even as China as a whole was struggling economically and politically. While fundamentally transforming Tianjin's status, these new transport technologies also led to unintended consequences, which revealed the contingencies in modernization and the complexity of the Chinese modernity. In order to make the port of Tianjin a high-capacity, reliable harbor for large steamships, the river connecting Tianjin with the sea was drastically reshaped during the first two decades of the twentieth century. These efforts, however, created environmental problems that eventually harmed the sustainability of the port. In the construction of the railroads connecting Tianjin with critical resources, the Qing officials demonstrated their ability in employing western capital and professionals while curtailing western intervention in the railroad planning. Officials and local elites dominated the urban planning of Tianjin, trying to divert the benefit of the railroads toward the Chinese administered parts of the city. At the turn of the twentieth century, a

system of electric tramways was forced upon Tianjin mainly to display the superiority of western civilization and technology. Bearing the mark of imperialism and being far ahead of the actual demand for mass transportation, the tramway system met with enormous resistance. The protests to the tramway often utilized the modern media and the discourses of nationalism and sovereignty. Modernity means that even actions of anti-modernization had to speak the language of the modern.

Table of Contents

List of Figures	v
List of Measures and Units	vi
Introduction.....	1
Modernization and Modernity.....	3
Technology and Public Works	9
Infrastructure and Urbanization	15
Organization of Chapters	23
CHAPTER I From Canal City to Seaport.....	1
A Port on the Grand Canal	2
The Advent of the Steamship and Its Challenge to the Shipping Conditions.....	12
Engineering the Hai River.....	31
The Prospects of Tianjin Remaining a Seaport.....	46
CHAPTER II The Railroads and the Growth of Tianjin.....	66
Becoming the First City Connected to the Railroad	68
Connecting Tianjin with the Capital	93
Connecting Tianjin with the Economic Center	103
CHAPTER III Tramway: Politics of Technology and Urban Space	123
Fear of the Unknown: Initial Reactions to the Tramway	124

Defining the Relationship between a New Technology and Urban Lives	143
Difficulties of Expanding the Tramway System	156
Chinese Efforts to Recover the Right of Managing the Tramways	178
CHAPTER IV Mobility and Tianjin's Modernity	190
Mobility of Goods: Raw Cotton and Cotton Products	192
Mobility of Information: The Making of a National Newspaper	212
Mobility of Talents and Capital: A Banker's Experience	228
Conclusion	242
Bibliography	248

List of Figures

Figure 1 Ten Beauties Parading Lanterns, Tianjin, ca. 1915.....	2
Figure 2 Foreign Concessions of Tianjin.....	18
Figure 3 The cuttings on the Hai River.....	42
Figure 4 The dike break on the Chaobai River.....	47
Figure 5 The Dagu Bar new channe	54
Figure 6 A map of Tianjin dated 1899.....	66
Figure 7 Tianjin-Kaiping line	90
Figure 8 Locations of the three railway stations in Tianjin	118
Figure 9 The original plan of tramway in the agreement signed in 1904	131
Figure 10 Tramway system in 1908	165
Figure 11 Proposed line from Beidaguan to the West Station in 1911.....	169
Figure 12 Proposed line connecting Dahutong with the Central Station in 1917.....	179
Figure 13 The Green Line and Flower Line added in the 1920s	186
Figure 14 Production areas of cotton in Zhili	196
Figure 15 The structure of the cotton market in Tianjin.....	199

List of Measures and Units

Shi is a unit of volume when it was used to measure grain. 1 *shi* can be converted roughly to 60 kilograms in weight in the nineteenth century.

1 *mu* = 0.1647 acre

1 *dan* = 50 kg

Tael is a unit of weight unit for silver ingot currency used in imperial China, 1 tael = 1.3 ounce of silver.

Introduction

In a New Year woodblock print created in Yangliuqing, a town near Tianjin, around 1915 (Figure 1), the traditional theme “lantern parade” was presented alongside new elements of the time.¹ The print entitled “Ten Beauties Parading Lanterns” depicts ten women dressed in Han and Manchu feminine garments or cross-dressed in police and military uniforms or gentlemen’s robes. They hold lanterns manifesting various objects that can be divided into two categories: the first category being traditional festive images such as fish, lotus, and cabbage; the second category being novelties from the west. Among the objects of the second category, save for a foreign language book, each of the other six lanterns showcases one new kind of transportation: the steamship, locomotive, rickshaw, steam powered carriage, automobile, and hot air balloon. Unlike the well-established auspicious meanings of fish, lotus, and cabbage in popular culture,² the implications of the images of transportations are open to interpretation. However, the fact that these images were incorporated into such a traditional art form points toward the impact that new transportation technologies had on the urban society of Tianjin.

¹ Chinese wood block print collections of the Royal Ontario Museum, reproduced from James A. Flath, “The Chinese Railroad View: Transportation Themes in Popular Print, 1873-1915,” *Cultural Critique* 58, no. 1 (2004): 184.

² These images are rebuses that were common knowledge among the Chinese. Fish stands for surplus, lotus for integrity and lasting prosperity, and cabbage for wealth.



Figure 1 Ten Beauties Parading Lanterns, Tianjin, ca. 1915

By the 1910s, steamships, electric tramways, trains, and railroads had all appeared in Tianjin, a treaty port in north China. In fact, Tianjin had become the second largest seaport in China, the hub of three trunk lines of railway, and the first city in China equipped with electric tramways. From the outset, steamships and railroads helped and continued to help in improving Tianjin's position within China's coastal treaty port trade network and as well as in the city's overseas connections with Japan, Europe, and America; meanwhile, the installment of cross-city electric tramways modernized urban transportation, which enabled far more rapid movement of people within the city. Yet as important as modern transportation is to Tianjin, it has not been given much attention in the existing scholarship on the city. Modernized transportation is often treated as the logical and almost natural results of opening Tianjin as a treaty port in 1860, and how exactly these new transportation technologies were put into use in Tianjin is usually glossed over. Yet without studying how modern transportation ethnologies were implemented and utilized

within the city, we cannot hope to achieve a thorough understanding of its experience with modernity. Investigating Tianjin as a hub of modern transportation will also provide us with a vantage point to examine the first wave of adopting modern technologies in China and its consequences. It is the goal of this project to reconstruct the historical processes of building a modern transportation system in Tianjin. Also, this dissertation aims to ask the following questions: When modern transportation technologies were first employed in China, who controlled or participated in building the necessary infrastructures and operating the new forms of transport? How were the new technologies integrated into daily life within Chinese cities? How did they shape the growth of a Chinese city and contribute to the making of modern China?

Modernization and Modernity

In order to understand the adoption of new forms of transportation in the context of the modernization of a city, it is necessary to clarify the terminology of “modernization” and “modernity.” Modernization theory was first utilized during the 1950s by American social scientists to analyze universal processes of modern transformations in the post-colonial societies at the time. These scholars believed that although modern societies might generally differ from one another, they shared certain common features such as urbanization, high literacy rate, wide usage of mechanical power, rising per capita income, the widespread participation of the populace in political affairs, and the increasingly rational and secular orientation of

society.³ The modernization discourse was challenged later in the 1950s and 1960s amidst the tides of national liberation movements in the third world and the Mao Zedong's socialist reforms in China. In the mid-1980s, the once-prevalent modernization theory was revived in both the Western and Chinese historiographies of modern China. This was due to, as Arif Dirlik points out, the emergence of East Asian countries as newly industrialized economies, the fading of third-world revolutions, and the disintegration of socialist powers in eastern Europe.⁴ The "renaissance" of modernization theory signaled a paradigm shift in studies of modern China from revolutionary to one of modernization, in which scholarly attentions were refocused onto the urban areas instead of the countryside.⁵ Since then, a field of literature has been growing regarding the urban culture, commerce, and civic society in Shanghai and other urban centers, which has laid the foundation for a scholarly understanding of China's modernization.

A field that is rapidly changing its interpretation, the historiography of China is too often subject to global events, a situation which has given rise to several problems. First, the modernization paradigm's victory against the revolutionary paradigm presupposes an unbroken narrative of China's modernization from its beginnings in the nineteenth century to the present.⁶ This suppresses the complexity

³ Sheldon Garon, "Rethinking Modernization and Modernity in Japanese History: A Focus on State-Society Relations," *The Journal of Asian Studies* 53, no. 2 (1994): 346.

⁴ Arif Dirlik, "Reversals, Ironies, Hegemonies: Notes on the Contemporary Historiography of Modern China," *Modern China* 22, no. 3 (1996), 243-284, and "Modernity as History: Post-revolutionary China, Globalization and the Question of Modernity," *Social History* 27, no. 1 (2002), 16-39.

⁵ Wen-hsin Yeh, "Introduction," in *Becoming Chinese: Passages to Modernity and Beyond* (Berkeley: University of California Press, 2000), 3. Huaiyin Li, "From Revolution to Modernization: The Paradigmatic Transition in Chinese Historiography in the Reform Era," *History and Theory* 49, no. 3 (2010): 338.

⁶ Arif Dirlik, "Reversals, Ironies, Hegemonies," 258.

of the concept of modernization in terms of the distinct phases in the transformation of Chinese society and international conditions. Is the current infrastructural boom in China simply a continuation of a trend already begun during the late nineteenth century? This dissertation will show that imperialism was a structural force in conditioning the early adoption of transportation technologies and the building of the modern facilities, whereas the contemporary upgrading and expansion of China's transportation network was empowered by the authoritarian government as well as global capitalism.

Second, modernization theory possesses intrinsic flaws when it is applied to China or other (post-)colonial regions, as it represents a process with a presupposed destination that is defined by the experiences of Europe and North America. In order to overcome the Euro-centric connotations of modernization, scholars have begun exploring alternative modernities that grew out of various cultural and social contexts. In some cases, the alternative modernities within the colonies reversely reshaped the techniques of modern governance of the metropole.⁷ In other cases, the alternative modernities of third world countries inspired one another.⁸ The concept of "alternative modernities," although not perfect (for it implies an assumption that there is an unmarked, "authentic modernity" which must by default mean Western⁹), enables us to see the alternative structures and complicated histories that forces of globalization such as capitalism, colonialism, and imperialism participated in creating at different locations. It also helps us to avoid the risk of prioritizing a single

⁷ Timothy Mitchell, *Colonising Egypt* (Berkeley: University of California Press, 1988).

⁸ For example, Mao Zedong and Ghandi's antimodernism.

⁹ Madeleine Yue Dong and Joshua Lewis Goldstein, *Everyday Modernity in China* (University of Washington Press, 2011), 3.

paradigm (such as revolutionary and modernization paradigms), which could otherwise lead to negligence of crucial aspects that do not accord with the chosen paradigm.¹⁰

Third, current studies of modernity in China have privileged the urban experience of colonial modernity largely represented by Shanghai over other responses to modernity occurring in both Shanghai and the rest of China. Arif Dirlik attributes this situation to a “contemporary neo-liberal understanding of modernity.”¹¹ The hierarchy of modernity, or, seeing some forms of modernity as more modern than some others, is a product of contemporary ideology and cultural politics. To overcome this, scholars certainly should expand their scope to reach the countryside and study how peasants respond to modernity. Meanwhile, studies of urban modernity should also take into consideration a wide variety of forms of modernity; and that is what this dissertation will do. To avoid the implication within “alternative modernities” that there is an authentic Eurocentric modernity, I define modernity in China not as another form of “alternative modernity,” but as a kind of modernity that is forged by different experiences of the modern that is neither homogenous nor the opposite to the traditional or western. As this dissertation will show, the Chinese modernity contains contradictions and has denial, resistance, and negation to the modern as its integral components.

Having defined what “modernity” is in my study, I now turn to lay a ground of scholarship that my research builds upon. Revolutionary historiography was

¹⁰ Arif Dirlik, “Reversals, Ironies, Hegemonies,” 276.

¹¹ Arif Dirlik, “Modernity as History,” 31.

oriented to challenge the Eurocentrism and cultural determinism of previous historiography by shifting attention to the material conditions in question,¹² an example being Philip Huang's two monographs on rural economies in North China and the Yangzi region.¹³ However, once the paradigm shifted, there immediately was a spatial and discursive turn in which scholars' attentions were drawn to diverse urban experiences and the emergence of a new vocabulary. The rupture has left a certain field nearly untouched, namely a study of material modernity that is premised neither on China's future unique trajectory towards socialist revolution nor on a continuous development towards modernization.

Although the majority of the studies on Chinese modernity focuses mainly on cultural and discursive aspects, there are scholars who have shifted their interest to more concrete and material topics. An edited volume *Creating Chinese Modernity* by Peter Zarrow and colleagues showcases studies of knowledge and everyday life in the early half of the twentieth century.¹⁴ Another volume by Madeleine Yue Dong, which also adopts everyday life experiences as its theme, further expands the scope to encompass the urban utilities of water, lightening, and food distribution.¹⁵ Similarly, Frank Dikotter devotes study to a wide range of material culture in early modern

¹² Arif Dirlik, "Reversals, Ironies, Hegemonies," 257

¹³ Philip Huang, *The Peasant Economy and Social Change in North China* (Stanford: Stanford University Press, 1985); *The Peasant Family and Rural Development in the Yangzi Delta, 1350-1988* (Stanford: Stanford University Press, 1990).

¹⁴ Peter Zarrow, *Creating Chinese Modernity: Knowledge and Everyday Life, 1900-1940* (New York: Peter Lang, 2006).

¹⁵ Madeleine Yue Dong and Joshua Lewis Goldstein, *Everyday Modernity in China* (University of Washington Press, 2011).

China and the late imperial periods, including transportation, architecture, food, housing, clothing, and sights and sounds.¹⁶

Among such relevant works, two pieces are the most instrumental in positioning my dissertation. Leo Oufan Lee introduces a mechanism of commercialization that converted modernity into a material-based, popular way of life. Wen-hsin Yeh comments on Lee's work, saying that "Modernity was about the material transformation of everyday life for the hundreds of thousands, rather than the organizational mobilization of an elitist few for a well articulated cause."¹⁷ While I appreciate Leo Lee's analysis of the material forms and public spaces in the 1930s' Shanghai, I side with Dirlik in criticizing Leo Lee's work for depriving modernity of any critical edge. The overtly celebratory stance he takes in examining elite culture and modern lifestyles is a simplified version of urban history which has deduced modernity to "styles and images" and neglected the economic, political, and ideological connotations.¹⁸ It is perhaps a mission impossible to perfectly balance the proportions of material conditions, culture and ideology, and it is not my intension here to do so. However, I do wish to incorporate economic, social, and political conditions into a close examination of the material forms of modernity. I also intend to work ideas and actions of anti-modernization into the narratives of the Chinese modernity.

¹⁶ Frank Dikotter, *Things Modern: Material Culture and Everyday Life in China* (London: Hurst & Co., 2007).

¹⁷ Wen-hsin Yeh, *Becoming Chinese*, 7.

¹⁸ Arif Dirlik, "Modernity as History," 31.

David Strand's study of Beijing rickshaws is another scholarly work that has given me major inspiration.¹⁹ Rickshaws, despite not being steam or electric powered, were also a means of modern transportation. The proliferation of the sector of rickshaw pulling in Beijing was both an incorporation of modern technologies into urban lives and a power in resisting further modernization. Thus, the modernity of Beijing in Strand's narration is multi-faceted and not without contradiction. The modernity manifested in the modern transportation technologies in Tianjin, as this dissertation will illustrate, was even more complicated as multiple Western and Japanese powers held an active presence in the time period under examination. Strand's modernity of Beijing is also about the organizational power of the state and the technology of control. The adoption of modern transportations in Tianjin similarly demonstrates that modernity is much more than a material-based culture and lifestyle, but was in fact fundamentally rooted in state-society relations and technology of control, which were enabled by modern technologies. I contend that the introduction of new technologies and the establishment of modern infrastructure opened up new opportunities for a certain degree of democratic political participation, opportunities that had not yet been confiscated/occupied by the state.

Technology and Public Works

Studies on the history of technology in China primarily focus on the native technologies that were invented by the Chinese in the medieval and early-modern

¹⁹ David Strand, *Rickshaw Beijing: City People and Politics in the 1920s* (Berkeley: University of California Press, 1993).

periods.²⁰ With regard to the technologies that were introduced from the West beginning in the latter half of the nineteenth century, scholars have focused on the public discourse among Chinese officials and elites regarding the political and economic advantages and disadvantages of adopting western technology.²¹ Some study the history of business and the cultural implications of a new technology.²² Some others investigate the questions of imperialism and nationalism by studying the foreign loans induced because of the importing of western technology or the movement of recovering the rights of operating certain technology.²³ However, a great deal of these studies still treat western technologies in China as a historical case that demonstrates the failure of the Qing or Republican states in facilitating rapid and broad industrial development in all the sectors that required keeping pace with the advancing technology. In an effort to revise this interpretation, my study is informed by Francesca Bray's exploration of technology, gender, and power in late imperial China.²⁴ Her methodology is inspired by Foucault's analysis of the "diffused power"

²⁰ The series of *Science and Civilization in China* initiated by Joseph Needham in 1954.

²¹ Stephen R. Halsey, "Sovereignty, Self-Strengthening, and Steamships in Late Imperial China," *Journal of Asian History* 48, no. 1 (2014): 81–111. Stephen R. Halsey, *Quest for Power: European Imperialism and the Making of Chinese Statecraft* (Cambridge, Massachusetts: Harvard University Press, 2015). Ruth Rogaski, *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China* (Berkeley: University of California Press, 2014).

²² Christopher Reed, *Gutenberg in Shanghai: Chinese Print Capitalism, 1876–1937* (Honolulu: University of Hawaii Press, 2004). Anne Reinhardt, *Navigating Semi-Colonialism: Shipping, Sovereignty, and Nation-Building in China, 1860–1937* (Cambridge, Massachusetts: Harvard University Asia Center, 2018). Siyi Li, "Railway and Chinese Modernity: The Experience of Time and Space, the Cultural Imagination from the Late Qing to Republican China" (Ph.D., Hong Kong, The Chinese University of Hong Kong, 2018).

²³ Mary Backus Rankin, "Nationalistic Contestation and Mobilization Politics: Practice and Rhetoric of Railway-Rights Recovery at the End of the Qing," *Modern China* 28, no. 3 (July 2002): 315–61. Ghassan Moazzin, "Networks of Capital: German Bankers and the Financial Internationalisation of China (1885–1919)" (PhD diss., University of Cambridge, 2017). Elisabeth Kaske, "Sichuan as Pivot: Provincial Politics and Gentry Power in Late Qing Railway Projects in Southwestern China," in *Southwest China in a Regional and Global Perspective (c. 1600–1911)*, ed. Ulrich Theobald and Cao Jin (Boston: Brill, 2018), 379–423.

²⁴ Francesca Bray, *Technology and Gender: Fabrics of Power in Late Imperial China* (Berkeley: University of California Press, 1997).

in the everyday life as shaped by techniques of observation, classification and containment.²⁵ Although her focus is on native technology, her method of decoding the construction of the social systems behind certain technologies can also be applied in studying the processes of implanting a foreign technology.

Scholarship on the relationship between modern technology and cities is surprisingly lacking within the studies of nineteenth-and-twentieth-century China. Print has been studied more thoroughly in the context of the city as a technology, culture, and industry.²⁶ Transportation technology, in contrast, although often mentioned in the scholarship of urban history and seen as a high impact factor in the development of cities, has not received the scholarly attention it deserves. Recently, two important pieces of work on modern transportation in China were published, bringing our understanding of the histories of the steamship and railroad to a new level. Elisabeth Köll's study on the railroads in China, spanning from the late nineteenth century to the post-Mao years, provides a comprehensive narrative of the development of railroads as business and administrative institutions in China. She further explores the interplay between the bureaucratic/economic railroad system and the development trajectory of China. Anne Reinhardt, meanwhile, interrogates China's encounter with Euro-American and Japanese imperialism through the emergence and growth of steam shipping. However, although both works briefly

²⁵ Francesca Bray, *Technology and Gender*, 38.

²⁶ Joan Judge, *Print and Politics: 'Shibao' and the Culture of Reform in Late Qing China* (Stanford: Stanford University Press, 1997). Leo Ou-fan Lee, *Shanghai Modern: The Flowering of a New Urban Culture in China, 1930-1945* (Harvard University Press, 1999). Ellen Johnston Laing, *Selling Happiness: Calendar Posters and Visual Culture in Early-Twentieth-Century Shanghai* (Honolulu: University of Hawaii Press, 2004). Christopher A. Reed, *Gutenberg in Shanghai: Chinese Print Capitalism*. Robert Culp, *The Power of Print in Modern China: Intellectuals and Industrial Publishing from the End of Empire to Maoist State Socialism* (New York: Columbia University Press, 2019).

mention the connection between these new transportation technologies and the urban development, the focus of these two studies are the companies or governmental bureaus that managed the steamships or railroads. These are doubtlessly insightful and productive perspectives, but are not sufficient in helping us understand the effects of these new transport technologies on different localities within China and how local societies engaged with them. This dissertation complements the current scholarship on the histories of cities and transportation technology by studying the modern forms of transportation in the context of a Chinese city.²⁷

The processes of adopting western transportation technologies were simultaneously projects of large-scale public works. Large-scale public works were nothing novel to the Chinese society; in fact, the tremendous ability of the state in mobilizing resources and manpower to implement hydraulic engineering works was seen by scholars as the very definitive characteristic of Asian societies. Karl Marx coins a phrase “Asiatic mode of production” to summarize the social formation in Asian nations where the state played a dominant role by controlling land ownership and irrigation systems; Karl A. Wittfogel’s thesis of “oriental despotism” was similarly defined by the state’s power of regimenting all levels of society to work on gigantic hydraulic projects.²⁸ These hypotheses, however, have been challenged and revised since they were first proposed. For instance, scholars have revealed the limited ability of the imperial power in manipulating local society and discovered the

²⁷ Anne Reinhardt, *Navigating Semi-Colonialism: Shipping, Sovereignty, and Nation Building in China, 1860–1937* (Cambridge, Massachusetts: Harvard University Press, 2018). Elisabeth Köll, *Railroads and the Transformation of China* (Cambridge, Massachusetts: Harvard University Press, 2019).

²⁸ Karl Wittfogel, *Oriental Despotism: A Comparative Study of Total Power* (New Haven: Yale University Press, 1957).

pervasive autonomy of the local societies in implementing and maintaining public works. David Pietz's study of the Nationalist government's handling of the conservancy project of the Huai River shows that the Nationalist government was far from a despotic power and that it was through the engineering works on the Huai River that the Nationalist state sought to centralize power.²⁹

The existing scholarship on China's history of public works has outlined the transition of techniques and the state's ability of carrying out public works during the late imperial and Republican periods as China was faced with increasing domestic unrest and challenges from outside. David Pietz shows that the traditional techniques and local knowledge in river engineering sometimes proved to be more effective than the western engineers' proposals during the Republican era.³⁰ Lillian Li points out that the traditional mode of managing public works had proven to be effective throughout the larger part of the Qing period, but the ability of the state in organizing large-scale public works declined in the nineteenth century.³¹ These works have laid a solid foundation for our understanding of the Chinese tradition of maintaining the infrastructure for agriculture and public safety. However, we know relatively little about how new types of public works were managed when the Chinese state's sovereignty was encroached upon by the western imperialist powers. This dissertation is aimed to fill this gap in scholarship.

²⁹ David Pietz, "Engineering the State: The Huai River and Reconstruction in Nationalist China, 1927-1937" (Ph.D., Washington University in St. Louis, 1998).

³⁰ David Pietz, *The Yellow River: The Problem of Water in Modern China* (Cambridge, Massachusetts: Harvard University Press, 2015).

³¹ Lillian M. Li, *Fighting Famine in North China: State, Market, and Environmental Decline, 1690s-1990s* (Stanford: Stanford University Press, 2010).

How did the public works that enabled the operation of the modern transport technologies differ from the traditional ones such as the hydraulic projects and the upkeep of the official highways? First, the steamship, railroad, and electric tramway were all imported from the west in the beginning. Thus, the building of the infrastructure and the operation of the transports relied highly upon foreign engineers and technicians. Moreover, the ordinary people were acutely conscious of the western origins of these new forms of transportation, which came to shape people's perception of these new technologies. Second, because most of the mechanic parts and the personnel came from the western industrialized countries, these projects often required enormous amount of funding. The local elites, who played an important role in public works such as the repair of a dam or the installation of a new bridge, were no longer capable of assuming a leadership in the construction of a modern transportation infrastructure. Last but not least, the participation of the imperialist powers and, in some cases, the dominant leadership that the westerners took in the adoption of modern transportation technologies toppled the habitual ways through which the Chinese state had previously managed public works. Therefore, the local elites and the state had to make adjustments and find new modes of engaging with the new technology and with public works. The establishment of new means of transportation provides a vantage point from which to examine how historical actors on both the national and local levels adapted to their new political and technical situations.

Infrastructure and Urbanization

Modern transport technologies began to appear in China as a result of two interrelated processes, and the landing locations of such technology were cities. Starting from the 1840s, as Britain, France, and other western powers made aggressive incursions into China, China was forced to grant a series of economic privileges to these powers. A number of ports and cities were opened to foreign residence and trade. Steamships that were only used in foreign trade in the beginning, began to frequent these treaty ports. Seeking domination over profitable enterprises in China, European and American capitalists invested directly in or extended loans to mining coal and building railroads, which were industries that China lacked the funding or technology to develop. At some treaty ports, western and Japanese powers seized concessions where they managed independently and enjoyed extraterritoriality. The western-run municipalities of these concessions, in order to demonstrate the superiority of western civilization and technology and to improve the economic gain and the westerners' living standards, carried out urban construction following the models in the metropolises, including measures to pave roads and upgrade the means of transportation. Faced with the devastating foreign encroachment upon China's sovereignty and economic rights, some Chinese officials and elites realized the exigency of implementing reforms, and they came to believe that in order to defeat the foreigners, they had to first gain command of foreign skills and technology. Experiments in establishing modern industry took the form of government-supervised merchants-managed enterprises, and began within the fields of armament, mining, railroad, shipping, and ship building. Due to the limited capital and restricted access

to the necessary technology and personnel, these early industries and enterprises were concentrated in select few cities where reformist, resourceful governors were appointed. Tianjin was a remarkable example among those places: from 1860 to 1943, multiple political powers coexisted in Tianjin, and their involvement in the adoption of new technology demonstrated the complexity and dynamics of infrastructure building and transportation management in a treaty port.

Since the mid-1970s, historians of Europe and America have paid increasing attention to the role of technology and public works in the development of cities. Scholars have convincingly established that after 1850, capital-intensive, networked technologies replaced the centralized or labor-intensive methods that had served as urban infrastructure for centuries. Meanwhile, the transition of European and American cities from “pedestrian cities” to “fully networked cities” was completed in less than a century.³² As a late comer to modernization, China possessed certain late-development advantages. The modernizers had learned from the western experience that developing modern transportation should be a high priority on account of its dual function in improving economies and strengthening military defense. That Tianjin became the first city to be linked to a railroad was largely due to the city’s importance as a crucial commercial center and a strategic point for coastal defense.

The transportation infrastructure that has been proven so critical in understanding the transition of the Euro-American cities has not received the attention it deserves in the field of China studies. This dissertation will demonstrate

³² Joel A Tarr and Gabriel Dupuy, *Technology and the Rise of the Networked City in Europe and America* (Philadelphia: Temple University Press, 1988).

the effect of the modern transportation system on the Chinese city at both macro level and micro level. The macro-level perspective demonstrates how modern transport technology redefined the city's connection with the outside world. Studies on Chinese cities have been growing for the last three decades and have extended our understanding of the urban societies and cultures. Yet most of these works focus on a few vibrant cities, taking the cities' prosperity for granted. These works tend to neglect the cities' connections with the macro-level and regional systems that conditioned the cities' ups and downs. As a result, the existing scholarship has painted a picture of a prosperous China that is incompatible with the other modern China that was experiencing devastating foreign invasions and domestic instability. For example, studies of Chinese treaty ports often presuppose that a treaty port automatically joined the networks of treaty ports in trade, information, and technology.³³ But the case of Tianjin will show that only after the reengineering of the shipping channel and the building of the railroads did Tianjin become an important hub of the treaty port network. By focusing on the adoption of new transportation technologies, this dissertation takes a new approach to study China's modernization and sheds light on why, during the early twentieth century, a select few cities thrived even as China as a whole was struggling economically and politically.

That being the case, Tianjin is probably a more representative case for studying China's modernization than Shanghai or Beijing. Shanghai was an

³³ Marlon Zhu, "Typhoons, Meteorological Intelligence, and the Inter-Port Mercantile Community in Nineteenth-Century China" (Ph.D., United States -- New York, State University of New York at Binghamton, 2012).

insignificant town before its opening as a treaty port. Even after it was made a treaty port, it did not gain much development until the Taiping Uprising cut the Grand Canal and forced the Qing state to use the Shanghai port as the southern terminal for shipping the tribute grain via the sea. Modern Shanghai was a completely new city that was not so much a model for turning traditional into modern but rather for building a modern city from scratch. There are scholars who attempt to revise Shanghai's past into a not-so-humble one or to emphasize the uneven modernization, as a result of which there were ordinary urbanities who enjoyed little of the modern fruit.³⁴ Yet, the most pervasive image of Shanghai was still its unmistakable modern and western elements. Beijing represented another type of city that had never completed its modernization but had always been lingering at the door of modern.³⁵ Although Madeleine Dong summarizes the modernity of Beijing in the Republican period as one characterized by actions of recycling, it is undeniable, as Mingzheng Shi argues in his work on the public utilities in Republican Beijing, that Beijing's modernization represents "growth without development" due to the city's limited financial resources.³⁶ Unlike Shanghai nor Beijing, Tianjin, already a key port on the lifeline of the Ming and Qing empires, was transformed successfully into a modern city in the late nineteenth and early twentieth centuries. Thus, the transformation of Tianjin can help us understand how a traditional commercial city, after the old trade

³⁴ Linda Cooke Johnson, *Shanghai: From Market Town to Treaty Port, 1074-1858* (Stanford, Calif: Stanford University Press, 1995). Hanchao Lu, *Beyond the Neon Lights: Everyday Shanghai in the Early Twentieth Century* (University of California Press, 1999).

³⁵ David Strand, *Rickshaw Beijing*.

³⁶ Madeleine Yue Dong, *Republican Beijing: The City and Its Histories, 1911-1937* (Berkeley: University of California Press, 2003). Mingzheng Shi, "Beijing Transforms: Urban Infrastructure, Public Works, and Social Change in the Chinese Capital, 1900-1928" (Ph.D., United States -- New York, Columbia University, 1993).

network it relied on declined, seized the opportunity to enter an emerging network. Consequently, instead of sinking alongside the old transport and trade system, it became a hub in a brand-new system and prospered as a modern city.

A number of historical studies on Tianjin have provided concrete information on specific aspects of Tianjin's modern transformation. For example, Brett Sheehan's study of the class of modern bankers and their contribution in Tianjin's financial modernization; Gail Hershatter's similarly studies on another social class in Tianjin, the industrial workers. Ruth Rogaski's investigation of the "hygienic modernity" of Tianjin is probably the most ambitious; she discusses the formation of a concept of hygiene through the works of the westerners-initiated bureau of public health in Tianjin.³⁷ These robust thematic studies, however, take Tianjin as an expedient case to study the history of a certain business, type of institution, or ideal, but do not care much about the city itself. This dissertation is fundamentally different from past scholarship in that it uses Tianjin not merely as a case to study transportation, but rather to employ the lenses of infrastructure building and adoption of technology to study the history of Tianjin.

In addition to the larger picture of Tianjin's modern transformation, this dissertation also pays attention to the inner workings of Tianjin as the city went through a series of constructions of transportation infrastructure. Adopting a transportation technology in the city was a social project; the smooth operating and

³⁷ Brett Sheehan, *Trust in Troubled Times: Money, Banks, and State-Society Relations in Republican Tianjin* (Cambridge, MA: Harvard University Press, 2003). Gail Hershatter, *The Workers of Tianjin, 1900-1949*, 1 edition (Stanford: Stanford University Press, 1986). Ruth Rogaski, *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China* (Berkeley: University of California Press, 2014).

consistent maintenance of transportation vehicles required a variety of professionals, such as qualified engineers and technicians, trained drivers and staff, and experienced managers. Study has shown that although in the late nineteenth century most of the engineers who designed and built the earliest railroads in China were westerners, returned students who held foreign degrees and domestically educated professionals began to dominate the engineering positions at transport bureaus and other transportation related institutions.³⁸ In addition to propelling the emergence of a new class of professionals, new forms of transportation also involved hiring construction workers and other kinds of casual laborers. Despite creating new jobs, adopting new transportation technologies also had negative impact on people's lives. For example, modern transportation inevitably competed with existing means of transport, and posed a threat to people who earned a living from keeping carts or pulling rickshaws; moreover, the construction of necessary facilities for the new transportation technologies often required demolition of properties and acquisition of land. Therefore, it was not surprising to see that the adoption of new transport technologies caused resistance and protests. At Tianjin, the discontent and oppositions of laborers, property owners, and merchants were communicated with the government through local elites or local autonomous organizations such as the chamber of commerce, guilds, and the county assembly. By paying particular attention to the conflict and negotiation that occurred between the society, the state, and the foreign powers, this

³⁸ Stephen L. Morgan, "Personnel Discipline and Industrial Relations on the Railways of Republican China," *Australian Journal of Politics & History* 47, no. 1 (March 2001): 24-38.

dissertation will help us understand how the plans of railroads, port, and tramways were shaped by the local society.

Once put into use, the new forms of transportation began to pose numerous challenges to the city management. The accommodations that the different authorities in Tianjin made for the new technology is another important dimension that this dissertation examines. First of all, the new means of transportation created new spaces such as railway stations, tramway stops, and the inner spaces of trains, steamships, and trams. At the same time, they took away spaces on the river and streets and interrupted the accustomed pattern of using the rivers and the littoral spaces and of planning and building roads. These spatial changes led to unprecedented scenarios that needed to be addressed and regulated. For example, for many residents in Tianjin, the tramcar distinguished itself from all other traditional rides not only for its speed and appearance, but also because it was a space shared by strangers, men and women, from various classes, a space where not every passenger had a guaranteed seat. Moreover, the tracks and overhead trolleys outlined a convertible space on the road that tramway, animal-pulled carts, rickshaws, and passengers shared. For the other users of the road, tramway tracks had no discernible difference from the rest of the road when tramcars were not in sight, but when tramcars drew near, the tracks immediately turned into life-threatening spaces. Even for passengers of the tramway, if they were not aware of the proper method of getting on or off the cars, they could become victims of the heavy and speedy machine. In order to cope with the new dynamics within the tramcars and on the road that appeared following the adoption of the tramway, new rules were promulgated by the

tramway company and the Tianjin police to regulate the behaviors of the passengers riding the tramway and the other users of the road.

Due to the nature of these new transport technologies – being invented in the west – and the fact that foreign capital and companies directly or indirectly partook in the building and operation of these modern transport facilities, the new forms of transportation were bound to become a focal point of criticism and attacks derived from anti-imperialist and nationalist sentiments. In the late Qing and early Republic, the recovery of economic rights, including the rights of railway, mining, and shipping was an important means of articulating nationalist opposition against foreign privileges and domination in the economic sectors.³⁹ Mary Rankin points out that mobilizations like railway rights recovery “contributed to the increases in public associational activity during the first as well as the second decade of the twentieth century, linking local institutions to national issues.”⁴⁰ She also notices the changing urban politics as activism unfolded within the new arena of railway rights recovery. Her discussion mainly focuses on the mobilization during the late Qing and how these movements transformed into revolutionary actions that eventually led to the collapse of the Qing. My research shows that popular nationalist oppositions against foreign domination in the management of the new means of transportation or against plans of extending the modern transport service into a new area continued to shape urban politics in the Republican era. Rather than turning into revolutionary activism, the oppositions put forward with nationalist and sovereign right recovery discourses were

³⁹ Anne Reinhardt, *Navigating Semi-Colonialism*, 183.

⁴⁰ Mary Backus Rankin, “Nationalistic Contestation and Mobilization Politics: Practice and Rhetoric of Railway-Rights Recovery at the End of the Qing,” *Modern China* 28, no. 3 (2002): 316.

often rooted in very pragmatic issues and did not escalate into militant confrontation or broader claims.

Organization of Chapters

Across less than fifty years, the steamship, railroad, and electric tramway were introduced into Tianjin in rapid succession. Tianjin was opened as a treaty port in 1860, which enabled foreign steamships to sail to Tianjin. Next, in 1888, Tianjin was connected to China's first railroad. Then, at the turn of the twentieth century, Tianjin's inner-city transportation was transformed when a system of electric tramways was installed in 1906. This dissertation examines the processes of adopting and running these new means of transport and their multi-faceted impact on the city.

This dissertation is organized into four chapters. The first chapter examines Tianjin's transition from a port on the Grand Canal to a modern seaport that could accommodate large steamships. Steamships first entered Tianjin in 1861 after Tianjin was opened as a treaty port. This chapter traces, following the adoption of steamships, how the river connecting Tianjin with the ocean came to be controlled by the westerners and how it was intensely engineered to meet with the requirements of steamships. The motivation behind these efforts was mainly the westerners' interests in boosting the trade and the prosperity of the foreign concessions. Once the Hai River, which connected Tianjin with the sea, was turned into a modern shipping channel, Tianjin was connected to an international trade network and quickly grew to become the second largest port of China. This chapter also presents an under-studied type of environmental history in which new technology caused dramatic

environmental changes in a short time. The intensive engineering projects that were aimed to create a straighter and deeper channel had rendered the Hai River more vulnerable to the silt coming down from its tributaries. My research shows that starting from the late 1920s, siltation of the shipping channel had proven to be unsolvable in the contemporary circumstances, and it became inevitable that the river would be abandoned as the main shipping channel and that the port would have to be moved closer to the shore.

Chapter two documents Tianjin's elevation in the Chinese urban hierarchy by focusing on the construction of railroads. Although western engineers and bankers were deeply involved in the building of many railroads in China, railroads were first built in Tianjin as an effort by the reformist Qing officials to strengthen coastal defenses and munitions industry. One of the most powerful provincial governors, Li Hongzhang, made Tianjin a headquarters for his modernizing projects, and gave railroads a high priority in his agenda. After linking Tianjin with a coal mine by building the first railroad of China in 1888, Li Hongzhang and his successors further connected Tianjin with Beijing, Shanghai, and other cities through new railways. As a result, Tianjin occupied a prominent position in the country's emerging modern transportation network. Meanwhile, railroads were also used by the Chinese officials and elites to assert sovereignty over the treaty port and compete with the westerners in modernizing their quarter of the city. Chinese officials and elites, in their design of the railroad routes and selection of the sites for railway stations, strategically avoided foreign intervention while still employing foreigners' technical help. In this way, they limited for a while the access to railroads from the foreign settlements in Tianjin and

maximized the effects of railroad facilities on expanding and modernizing the urban space of the Chinese quarter of the city.

The third transportation technology examined in this dissertation is the electric tramway. After suppressing the anti-foreign Boxer Uprising in 1900, eight western powers occupied Tianjin for two years. One condition that they insisted upon when returning Tianjin to the Chinese government was that China must allow a European company to establish a tramway system. Chapter three reveals that the motivation of adopting the tramway was not to solve transportation problems—in fact, the technology was far ahead of the actual demand for mass transportation—but to display the superiority of western civilization and technology in the Chinese city. Unlike the steamships and railroads that acted more as independent, deterministic factors in modifying Tianjin's trajectory of development, the electric tramway in the beginning played a more subordinate role in manifesting political and social changes. Therefore, the local Chinese benefitted little from this modern technology and instead suffered from frequent accidents with the speedy machines. The tramway's expansion in the Chinese city consequently met with strong resistance. The opposition was often framed as an assertion of national sovereignty and economic rights, but the fundamental reason why the tramway was the most abhorred modern transport technology was the incompatibility between the technology and Tianjin's level of development. Not until the 1920s did the tramway become a necessary mode of transportation and an essential part of the imagery of Tianjin's modernity as the city's population increased and urban spaces became more integrated.

Chapter four combines three case studies, namely the trade of cotton, the making of a nationally influential newspaper, and the career of a banker, to examine the on-the-ground practices of utilizing the modern transportation network. Modern transportations were among the most direct ways for people from various walks of life to get first-hand experience of what was modern. The three aforementioned cases document the concrete ways in which the materiality and modernity of the transport infrastructure were experienced by the inhabitants of the city: traders, industrialists, journalists, publishers, and bankers quickly made these new technologies useful to their careers and private lives. The three cases demonstrate the important role that the modern transportation system played in supporting various modern industries and businesses, enriching financial and human resources, and defining the modernity of Tianjin.

CHAPTER I From Canal City to Seaport

Tianjin served a Grand Canal port throughout most of the Ming-Qing period. After 1853, when the north-south artery for tribute grain transport and commercial shipping was suddenly cut off, Tianjin escaped the decline that other canal cities in north China suffered because of the previously much neglected Hai River that connected the city with the ocean. Afterwards, its opening as a treaty port in 1860 and the subsequent rapid growth of steamship transport pushed the city into a new track of development. The sudden transition between 1853 and 1860 allowed Tianjin to get a head start for more than forty years over certainly all the northern cities and almost all the southern cities, Shanghai being the only exception. (Even Shanghai was later than Tianjin in adopting railroad and electric tramway.) The increasing use of steamships for transport posed new requirements for the navigating conditions of the Hai River, but because the Qing state had little interest in supporting a radical river project designed purely for commercial benefit, the plans that westerners proposed were not carried out until 1900. After 1900, the Hai River fell into the complete control of foreign powers, and intense engineering works were carried out on the Hai River to improve its navigation conditions throughout the following three decades. These works transformed Tianjin into a high-volume port, which contributed greatly to the prosperity of the city during a time of political instability and general depression in North China. Over the course of improving the Hai River, it gradually became clear that the chronic problems with the river could not be fully solved by exclusively focusing on this one river. However, effective cooperation with the upper stream region proved impossible due to the conflicting agendas of foreign authorities of the

concessions at Tianjin and the Chinese government. After 1927, the potential of the Hai River had been exploited to reach its natural limitations, and serious proposals of giving up on using the Hai River and instead moving the city or the port closer to the river mouth began to emerge. Despite the natural disadvantages of Tianjin's location and the difficulty of maintaining the capacity of the Hai River, with Chinese and foreign interest at stake, the port was ultimately not moved away from Tianjin, and the Hai River continued to serve steamship traffic from the sea.

A Port on the Grand Canal

Tianjin is located seventy miles to the southeast of Beijing and forty miles inland from the Bohai Bay. Near the walled city of Tianjin, the two sections of the Grand Canal and several rivers merged into the Hai River, which was a relatively short river that began in Tianjin and flowed dozens of miles into the sea. Tianjin's role during the Ming-Qing period has to be understood from its specific location and hydraulic conditions.

The Grand Canal was the vital artery for tribute grain transport and commercial shipping between the north and the south,¹ connecting numerous rivers along its way to form an empire-wide network for trade and commerce. The

¹ Research has shown that taxes from the Grand Canal made up half of the overall customs duties in the early Qing. The percentage gradually dropped to about 30% in the mid-eighteenth century, and about 25% in the beginning of the nineteenth century. See Xu Tan 許檀, "Ming-Qing shiqi yunhe de shangpin liutong," 明清時期運河的商品流通 [The circulation of commodity on the Grand Canal in the Ming-Qing period] *Lishi dang'an* 歷史檔案 1(1992): 81. Also, Liao Shengfeng 廖聲豐, "Qianlun Qingdai qianqi yunhe diqu de shangpin liutong," 淺論清代前期運河地區的商品流通 [A preliminary discussion on the circulation of commodity in the Grand Canal region during the early period of the Qing Dynasty] *Zhongguo jingjishi yanjiu* 中國經濟史研究 1 (2014): 42.

northernmost section of the Grand Canal, the North Canal (北運河), ran eighty-nine miles from north to south between Tongzhou and Tianjin. Two and a half miles from Tianjin, the North Canal was first joined by the Yongding River (永定河) and Daqing River (大清河); one more mile toward the walled city of Tianjin, it was subsequently joined by the Ziya River (子牙河). At Tianjin, it was connected with the next section of the Grand Canal, known as the South Canal (南運河), which flowed from south to north. Because the North Canal and South Canal flowed in opposite directions, they thereby needed a shared outlet at their converging point—a role which the Hai River, on account of its starting position at the juncture of these two sections of the Grand Canal and its relatively low elevation, was ideal for. As the common outlet for both the North Canal and South Canal, the Hai River played the important role of discharging floodwater and silt in order to help maintain the navigability of the Grand Canal. In North China, rainfall tended to concentrate in July and August; in fact, the two-month period typically received two thirds of the annual precipitation. The heavy rainfall often caused floods in rivers and canals, and it was therefore of great importance for the security of the Grand Canal that the excessive water could be drained quickly through the Hai River. Silt was another threat to the smooth working of the Grand Canal, as it could clog the waterway and render it too shallow for boats to sail through. The main sources of the North Canal were the rivers that originated from the mountains near Beijing where soil erosion was severe. These rivers, in particular the Yongding River, carried heavy loads of silt into the North Canal, which, if not treated, could block the shipping channel. The starting point of the Hai River

was only a mile away from where the Yongding River joined the North Canal, and when water flowed down to it, much of the silt could be carried away.

The point where the two sections of the Grand Canal was connected with the Hai River was called the “*Sanchahekou*,” (三岔河口) or the Three-way River Juncture. The walled city of Tianjin’s placement directly adjacent to the Sanchahekou was in fact the key to its prosperity in the Ming-Qing period. The hydrologic design of the Grand Canal made Tianjin a significant port for trans-shipping tribute grain and distributing other goods. The North Canal and the South Canal, though joined each other at the Sanchahekou, were quite different in their navigation conditions; specifically, the North Canal possessed a much higher riverbed and was significantly shallower than the South Canal. Therefore, when tribute grain boats arrived at Tianjin through the South Canal, the grain and other goods often had to be reloaded onto smaller barges in order to sail through the North Canal to reach Beijing. In addition to transshipping, Tianjin also served the tribute grain transport as a site for temporary storage. When areas of north China suffered from floods and other natural disasters, part of the tribute grain would be retained at Tianjin, waiting to be distributed to regions in need of relief. Other occasions that the tribute grain would be stored at the granaries in Tianjin were when the tribute grain boats came up north later than their scheduled time, in which case, these tardy boats would be unloaded at Tianjin in order to allow them to return south before the Grand Canal froze.

Moreover, the rivers and canals that converged in Tianjin’s vicinity made the city a hub of an extensive trade network. Goods from Shandong and Henan and further south could easily reach Tianjin through the South Canal, and southern goods

shipped to Tianjin could in turn be distributed to Zhili and Shanxi through the rivers of Yongding, Daqing, and Ziya. Likewise, produce from Zhili and Shanxi could be collected at Tianjin and transported south through the Grand Canal. The scale of trade conducted at Tianjin was immense: every year, more than six thousand grain boats arrived at Tianjin from Jiangsu, Zhejiang, Anhui, Jiangxi, Hunan, and Hubei, carrying 4,000,000 *shi* of grain in total;² the Qing state permitted each boat to bring 180 *shi* of goods from the south exempted from duties and to return south with up to 114 *shi* of northern goods.³ However, there is evidence that the actual amount of goods carried by the tribute-grain boats was much greater.⁴ For example, porcelain, bamboo, and lumbers that tribute grain junks brought did not count toward the quota but rather were unlimited in quantity and all exempted from taxes. The attendants escorting the tribute grain often took advantage of the tax exemption, buying and selling goods on their way. Sometimes the shipping of tribute grain was delayed because the attendants made too frequent and too long stops all along their trip. On top of these, the attendants sometimes used the tribute grain boats for smuggling; occasionally, officials reported that the tribute grain fleet brought more commodities than grain.⁵ In addition to tribute grain junks, a great number of commercial boats also came to

² 1 *shi* equals to 60 kilograms.

³ Li Wenzhi 李文治, *Qingdai caoyun* 清代漕運 [The transport of tribute grain in the Qing] (Beijing: Zhonghua shuju, 1995), 483. Li Junli 李俊麗, *Tianjin caoyun yanjiu (1368-1840)* 天津漕運研究 [A study on the tribute grain transport of Tianjin] (Tianjin: Tianjin guji chubanshe, 2012), 256.

⁴ The actual amount was much larger because the grain boats were allowed to carry an unlimited amount of certain tax-free goods such as wood and bamboo. Additionally, goods were also smuggled with the grain boats. According to Li Wenzhi's estimation, during the reign of Daoguang (1821-1850), the 6326 grain ships could carry 6,000,000 to 9,000,000 *shi* of goods in addition to the tribute grain in one round trip between the south and north. See Li Wenzhi, 485-487.

⁵ Wang Qisun 王芑孙, "Zhuan ban si yi 轉般私議," in vol. 4 of *Huangchao jingshi wenbian* 皇朝經世文編, ed. He Changling 賀長齡, in vol. 731 of *Jindai Zhongguo shiliao congkan* 中國近代史料叢刊 (Taipei: Wenhai chubanshe, 1966), 1647.

Tianjin through the Grand Canal. It is estimated that during the period when the Grand Canal was functioning properly, as much as one tenth of the total amount of goods transported on the Grand Canal were traded at Tianjin.⁶

As an important supplement to the Grand Canal-centered commerce, Tianjin also enjoyed a considerable amount of maritime shipping brought through the Hai River. Vessels from Guangdong, Fujian, Jiangsu, Zhejiang, Shandong, and Fengtian could sail along the coast and arrive at Tianjin through the river. In the first half of the nineteenth century, one to two hundred sea-sailing ships from Fujian and Guangdong entered the Hai River each year, bringing to Tianjin all kinds of sugar, tea, paper, medicinal herbs, and foreign goods.⁷ There were also more than three hundred boats trading grain and lumber from Fengtian to Tianjin each year.⁸ Long-distance trade often brought high-value luxury goods, and thus the shipping on the Hai River contributed significantly to the coffers of the Tianjin customs house. In the late eighteenth century, the tax collected from the sea ships that navigated the Hai River contributed one third of the overall revenue of the customs house at Tianjin.⁹

⁶ Under the reign of Qianlong (1735-1796), the annual tax revenue from the passes on the Grand Canal was 1,400,000 to 1,500,000 taels. (See Xu, "Ming-Qing shiqi yunhe," 81) The tax revenue from the Tianjin pass was at its best from 1763 to 1769 and was more than 120,000 taels each year. See Xu Tan 許檀 and Gao Fumei 高福美, "Qianlong zhi Daoguang nianjian Tianjin de guanshui he haishui," 乾隆至道光年間天津的關稅和海稅 [The *guan* tax and *hai* tax of Tianjin in the reigns of Qianlong and Daoguang] *Zhongguoshi yanjiu* 中國史研究 [Journal of studies of Chinese history] 2 (2011): 184.

⁷ Gao Fumei 高福美, "Qingdai Tianjin guan ji shangpin liutong," 清代天津關及商品流通 [The custom house of Tianjin and the commodity circulation in the Qing] *Chengshishi yanjiu* 城市史研究 [Studies on urban history], no. 26 (2010): 193-194. Xu and Gao, "Qianlong zhi Daoguang nianjian," 187, 192.

⁸ Xu and Gao, "Qianlong zhi Daoguang nianjian," 187-188.

⁹ This proportion increased to fifty percent in the early nineteenth century as the Grand Canal deteriorated and some goods were shipped through the sea instead. Xu and Gao, "Qianlong zhi Daoguang nianjian," 192.

The shipping on the Grand Canal and the Hai River made Tianjin into a vibrant commercial city. Ships coming to Tianjin were mostly moored at the Sanchahekou area, where the customs house and other offices collecting dues and taxes were located. The surface of water at Sanchahekou was normally very busy and crowded with ships waiting to be taxed, inspected, or loaded and unloaded. John Barrow, an attendant of Macartney's mission of 1793, described the difficulty that their boats had in navigating through the "immense crowds of shipping of every description" when passing Tianjin. He noted that among these ships, "about five hundred of the Emperor's revenue vessels with grain for the capital." Eventually, it took four hours for their barges to get through.¹⁰ The crowded boats covering the surface of the water were a gorgeous image symbolizing the prosperity of Tianjin; numerous poets had praised the magnificent view of the sails and masts of thousands of ships in the Sanchahekou.¹¹ Ships from all directions brought to the market of Tianjin a wide variety of goods. For example, a poem described that "an overnight south wind brings in the tribute grain junks, then jugs from Yue and Wu pile up on the streets."¹² Stores specialized in selling southern goods flourished. Types of fresh fruit from both south and north was abundant, such as tangerines, apples, lotus roots,

¹⁰ John Barrow, *Travels in China* (London: T. Cadell and W. Davies, 1804), 496.

¹¹ For example, a Ming poet Yu Shenxing's 于慎行 poem entitled "Tianjin" in his *Guchengshanguan ji*, 穀城山館集 *juan* 11, 12a. Qing poet Li Qingchen's 李慶辰 poem entitled "jin su." 津俗 See *Tianjin fengwushi xuan* 天津風物詩選 [Selections of poems on customs of Tianjin], ed. Miao Zhiming 繆志明, *Tianjin wenshi congkan*, no. 5 天津文史叢刊 [Series on the literature and history of Tianjin] (Tianjin: Tianjinshi wenshi yanjiu guan, 1985), 206. Kangxi emperor wrote poems on the busy scene of the Sanchahekou as well. See Li Wei ed., 李衛 *Jifu tongzhi*, 畿輔通志 volume 9, 137. Additionally, in the adjacent counties along the Grand Canal, Wuqing and Jinghai, one of their "six scenes" and "eight scenes" was the sails of the ships on the Grand Canal. See *Tianjin fengwushi xuan*, 264, 298.

¹² Wang Hang, 汪沆 "Jinmen zashi shi," 津門雜事詩 in *Zili lianzhu ji* 梓里聯珠集 (Tianjin: Tianjin guji chubanshe, 1986), 53. Yue and Wu refer to the Jiangnan region in the lower Yangzi valley.

and peaches.¹³ Apart from the household supplies and sustenance, luxury commodities and collectibles were also in demand in Tianjin. For instance, trendy cosmetics and jewelries were wholesaled at Tianjin and then distributed through the Grand Canal and connected rivers.¹⁴ There were also shops selling antiques such as ancient inkstones, seals, paintings, calligraphy, and jade objects.¹⁵ Therefore, the Sanchahekou area had developed into the most prospering commercial zone of Tianjin. Specialized market places thrived in the region, such as the needle market street, street of used clothes, pot shop street, bamboo pole alley, grain shop street, and the street of foreign goods. On the market, in addition to domestic goods such as silk, paper, porcelain, sugar, and tea, there were also foreign goods brought to Tianjin from Guangzhou and Fujian. A poet described the curious view on the street of foreign goods: “All kinds of treasures come from sea ships, big glass mirrors are lined up at the door. Dutch wool and western brocade, strange and rare is the street of foreign goods.”¹⁶ A district of entertainment also emerged near Sanchahekou. Restaurants, theaters, brothels, public bathrooms attracted the pleasure-seekers from various backgrounds. Newcomers to Tianjin often were overwhelmed by the hustle and bustle of the city. A poet recorded his first impression of Tianjin: “The unparalleled place of flower and moon to the south of the capital, the number one prosperous city within the Great Wall.”¹⁷

¹³ Cui Xu, 崔旭 “Jinmen bai yong,” 津門百詠 in *Zili lianzhu ji*, 153.

¹⁴ Wang Hang, “Jinmen zashi shi,” 54.

¹⁵ Cui Xu, “Jinmen bai yong,” 154.

¹⁶ Cui Xu, “Jinmen bai yong,” 154.

¹⁷ Zhu Min, 朱岷 “Chudao Jinmen,” 初到津門 *Tianjin fengwushi xuan*, 88-89.

Another crucial role of Tianjin was the administrative center of the Changlu salt district, the biggest of its kind in the north. Salt produced by the many saltpans in the Changlu district was collected at Tianjin, filling up a tract of land on the east bank of the Hai River with numerous huge salt mounds. The Qing Dynasty granted a handful salt merchants permission to sell salt to designated areas in return for a guaranteed payment of salt tax that contributed to one tenth of the annual revenue of the state.¹⁸ Only with the official certificates could the salt merchants draw their quotas from the salt mounds and then ship to their designated markets, which included Beijing and about 180 counties of Zhili and Henan through the Grand Canal and its connecting rivers.¹⁹ With this monopoly, the salt merchants accumulated a large amount of wealth. The wealthiest salt merchants often built large, magnificent residence gardens; in total, there were more than twenty gardens owned by salt merchants in Tianjin. One can take the Zha family's garden, the Shuixi Garden, or "Garden to the West of Water," as an example. Built in the 1730s or 1740s and covering over a hundred *mu*, it was said to have everything a refined Chinese garden needed, and at the same time preserved the simplicity and rustiness of the nature.²⁰ The Zha family also collected books, paintings, and calligraphy, and invited over poets and scholars. During his four tours to Tianjin from 1748 to 1776, Qianlong stayed at the Shuixi Garden.

¹⁸ Antonia Finnane, *Speaking of Yangzhou: A Chinese City, 1550-1850* (Cambridge, MA: Harvard University Press, 2004), 112.

¹⁹ Kwan Man Bun, *The Salt Merchants of Tianjin: State Making and Civil Society in Late Imperial China* (Honolulu: University of Hawaii Press, 2001), 47. Chen Ke 陳克, "Changlu yan lu yu Tianjin chengshi zaoqi shangye wangluo de xingcheng 長蘆鹽路與天津城市早期商業網絡的形成," *Yanye shi yanjiu* 鹽業史研究 3 (2012): 51. Xu Tan, "Ming-Qing shiqi yunhe," 93.

²⁰ Liu Shangheng, 劉尚恒 *Tianjin Zha shi Shuixizhuang yanjiu wenlu* 天津查氏水西莊研究文錄 (Tianjin: Tianjin shehuikexueyuan chubanshe, 2008), 3-4.

The salt merchants also spent their wealth on making donations to the state and local society. For example, in 1765, the Changlu salt merchants proposed and built for the Qianlong emperor a traveling palace on the bank of the Hai River. It was a compound of 500 rooms encircled by rows of willow trees,²¹ and was later bestowed by Qianlong the name *Liushu*, or “Villa of Willow.”²² In 1788, the Tianjin salt merchants covered a substantial portion of the expenses of repairing and renovating the travel palaces on the path of another tour of Qianlong.²³ In the local society, the salt merchants were the major donors to temples, schools, public services, and charities. For example, at Sanchahekou, there stood one next to another the Xianglin Garden, the Wanghai Temple, and the Haihe Tower. The Xianglin Garden was a Daoist temple built by the monk Wang Cong in the late seventeenth century.²⁴ Wang Cong designed this ten-*mu* (around 1.65 acre) temple into a garden that was full of sceneries that shifted along with season and as one wondered around in the garden. Evidence suggested that the temple was built with donations from salt merchants.²⁵ Perhaps also with salt merchants’ funding, the Xianglin Garden had

²¹ Gao Lingwen, 高凌雯 *Tianjinxian xin zhi* 天津县新志, 1052. Originally published in 1931. Reprinted in *Tianjin tongzhi jiu zhi dianjiao juan*, 天津通志舊志點校卷 volume 2 [A comprehensive history of Tianjin: Punctuated and proof-read old gazetteers] (Tianjin: Nankai daxue chubanshe, 1999).

²² Huang Zhanglun 黃掌綸, *Changlu yanfa zhi* 長蘆鹽法志 (1805), *juan* 19, 1b.

²³ *Ibid.*

²⁴ Mei Chengdong ed., 梅成棟 *Jinmen shichao* 津門詩鈔 (Tianjin: Tianjin guji chubanshe, 1993), volume 1, 12. First published in 1832.

²⁵ A lot of poems suggested that Wang Cong often met salt merchants and hosted gatherings for salt merchants and literati. On Wang Cong’s guest list, Long Zhen and Zha Weiyi (1700-1763) were very active in exchanging poems with Wang Cong. Weiyi’s younger brother Zha Li (1715-1782) also wrote poems about Xianglinyuan. They were all from salt merchant families. (See Mei Chengdong, *Jinmen shi chao*, page 12 for Long Zhen’s poem, page 114 for Jin Xiang’s poem, page 162 for Wang Yin’s poem; page 210 for Zha Xi’s poem, page 222 for Zha Weiyi’s poem, page 229 for Zha Li’s poem.) This place was not only very popular among the local elite in Tianjin, but had also attracted the sojourning literati from south China. Several renowned literati such as Long Zhen, Chen Qianqun and Zha Xi got to know each other at Xianglinyuan. See Hua Dingyuan, 華鼎元 *Jinmen zhengxian shi* 津門征獻詩 [1886] (Shanghai: Shanghai guji chubanshe, 2010). Qian Chenqun (1686-1774), a Jinshi degree-holder of 1721 from Zhejiang, affectionately recalled how he was hesitated in going to visit

been maintained well enough to be a place of attraction to the emperor and literati until the late eighteenth century. To the west of the Xianglin Garden was a Buddhist temple, the Wanghai Temple, or the Temple Overseeing the Sea, which was rebuilt by salt merchants in 1736. To the east of the Xianglin Garden, the high-standing Haihe Tower built by salt merchants in 1773, overlooked the Sanchahekou.²⁶ In the city, the orphanage, fire-fighter guilds, and several schools were all funded by salt merchants. The Palace of Celestial Consort and the grand celebration of the birthday of the Celestial Consort hosted every April were similarly sponsored by salt merchants.

Because of the importance of Tianjin in tribute grain transport, commerce, and salt administration, the Qing government promoted the administrative level of Tianjin over the eighteenth century. In 1725, the Qing government promoted Tianjin from a military fort (*wei* 衛) to a department (*zhou* 州) of Hejian Prefecture (河間府). In 1731, the Qing government singled out Tianjin County from the Hejian Prefecture and promoted it into the seat of a new established Tianjin Prefecture, governing seven counties.²⁷ As the city prospered and became increasingly important, the population grew. In 1820, the population of Tianjin County had reached 300,000 to 400,000.²⁸

Long Zhen who had a reputation of refusing visitors but incidentally ran into Long Zhen at Xianglinyuan. (Hua Dingyuan, 18 a-b) When they gathered at Xianglinyuan, it is said that they would paste their poems all over the corridors, walls and doors, leaving no blank space. (See Mei Chengdong, *Jinmen shichao*, 12)

²⁶ *Changlu yanfa zhi*, juan 21, 9a.

²⁷ Guo Yunjing, 郭蘊靜 *Tianjin gudai chengshi fazhan shi* 天津古代城市發展史 (Tianjin: Tianjin guji chubanshe, 1989), 109-111.

²⁸ Li Jingneng, 李競能 *Tianjin renkou shi* 天津人口史 (Tianjin: Nankai daxue chubanshe, 1990), 65.

The Advent of the Steamship and Its Challenge to the Shipping Conditions

Recalling what Tianjin was like right before 1860, the year when it was opened as a treaty port, a literatus by the name of Zhang Tao noted that Tianjin appeared to be in recession. He wrote:

In the past, when the tribute grain transport and salt industry were thriving, it [Tianjin] was bustling and unusually lively. Afterwards, it suffered several catastrophes and harvest failures; the market declined, and the splendor faded. Only at the time of festivals did it not seem particularly desolate. But in comparison with the past, there is still a big difference.²⁹

Indeed, by the 1820s, problems in Qing government management had affected Tianjin's commerce, salt industry, and general appearance.³⁰ The system of collecting tribute grain and transporting it through the Grand Canal had not been effectively operated since the early nineteenth century. Less tribute grain could be collected, and the conditions of the Grand Canal deteriorated.³¹ Therefore, the amount of tribute grain transported to Beijing gradually declined. In the 1820s, about 3,600,000 *shi* tribute grain was transported to Beijing each year, which was already 400,000 *shi* less than required; after 1842, the annual amount was often below 2,600,000 *shi*.³² After 1853, the amount further dropped to under 1,000,000 *shi*, only one fourth of the original quota.³³ As fewer tribute grain boats came to Tianjin, the amount of carry-on commercial goods that arrived at Tianjin decreased. The number of commercial boats

²⁹ Zhang Tao 張燾, *Jinmen za ji* 津門雜記 [1884] (Tianjin: Tianjin guji chubanshe, 1986), 7-8.

³⁰ By the 1820s, the Qing empire had taken a down turn and had been trapped in economic depression. Since the turn of the century from the eighteenth to the nineteenth, rebellions began to appear due to the deduction of general living standards and the effects of bureaucratic corruption and maladministration. The cost of suppressing rebellions drained the already tight revenue of the government, weakening the state's ability to maintain the costly system of transporting tribute grain on the Grand Canal.

³¹ Li Wenzhi, *Qingdai caoyun*, 430-431.

³² Li Wenzhi, *Qingdai caoyun*, 405.

³³ Li Wenzhi, *Qingdai caoyun*, 58.

tracing the Grand Canal to come to Tianjin also dropped as the Grand Canal to the north of the Yangzi River more frequently became silted up due to poor maintenance. These difficulties caused a considerable decrease in the customs dues of Tianjin. In the mid-eighteenth century, the taxes collected at the Tianjin customs were more than 115,000 taels annually on average; after 1810, the annual income of was mostly around 95,000 taels, and the larger portion of it no longer came from the traffic on the Grand Canal, but rather from the sea-going boats arriving at Tianjin through the Hai River.³⁴

The decline of government efficiency also affected the sale of salt that was an important source of wealth for Tianjin. The registered salt merchants suffered from the market shrinking as the increasingly impoverished people were inclined to buy cheaper salt from smugglers, but the state did not take effective actions to eliminate smuggling. Many salt merchants couldn't even pay the taxes they owed, let alone to sustain their extravagant way of living. By 1848, so many Changlu merchants had retreated from the business that no merchant was registered to sell salt within 44 counties in Zhili and Henan. The problems in the salt sector in turn affected the city's public life and appearance; public services that used to enjoy sponsorship of the salt merchants became underfunded, and the scenic buildings and gardens that once displayed the salt merchants' glory were neglected.³⁵ Having not been visited by any emperors after Qianlong, the Liushu Palace was sold in 1846.³⁶ The Haihe Tower was

³⁴ Xu Tan and Gao Fumei, "Tianjin de guanshui he haishui," 184, 192.

³⁵ Jiang Yuhong 蔣玉虹 and Yu Yue 俞樾, *Xu Tianjinxian zhi* 續天津縣志 [A continuation of the gazetteer of Tianjin County], 299. Originally published in 1870. Reprinted in *Tianjin tongzhi jiuzhi dianjiao juan*, volume 2.

³⁶ Gao Lingwen, *Tianjinxian xin zhi*, 1052.

no longer maintained after the reign of Jiaqing and left deserted.³⁷ The gardens of the salt merchants had the same fate; a poem written in the latter half of the nineteenth century lamented the altogether disappearance of traces of the Shuixi Garden.³⁸

Despite the problems surrounding the Grand Canal, the Qing state was unwilling to change the means of transporting tribute grain. Some Qing officials had from time to time proposed a shift to sea transport of tribute grain, which was a much cheaper means than the Grand Canal. As one official estimated, if the tribute grain was transported through the sea, the cost would be only a third of the expense of doing the same on the Grand Canal.³⁹ Changing the means of tribute grain transport, however, was not simply a logistic issue. Along the Grand Canal, numerous cities and towns, especially the ones to the north of the Yangzi River, depended on the flow of goods that the tribute grain transport brought about. Tianjin, as well as other cities and towns along the Grand Canal, had developed a network of interests tied up with the Grand Canal. The groups of interests ranged from the bureaucrats who occupied the posts related to the canal maintenance or tribute grain transport to the laborers who earned their living by tracking boats or handling goods at the canal ports. The contemporary Director-General of Grain Transport, in a memorial opposing switching to sea transport of tribute grain, argued that “people who relied on [grain transport on the Grand Canal] for a living are no fewer than one hundred million.”⁴⁰ This official worried that once the canal boats were not hired for transporting tribute grain, the

³⁷ Ibid.

³⁸ Liu Shangheng, *Tianjin Zha shi Shuixizhuang yanjiu wenlu*, 17.

³⁹ Ni Yuping, 倪玉平 *Haishang shengmingxian: Wanqing caoliang haiyun zhi lu* 海上生命線：晚清漕糧海運之路 (Beijing: Beijing shifan daxue chubanshe, 2015), 62.

⁴⁰ Ni Yuping, *Haishang shengmingxian*, 70.

unemployed sailors might turn into bandits. With too much interest at stake, the sea route remained a back-up plan for transporting tribute grain and was rarely used.⁴¹

It was only when the Grand Canal had become completely blocked did the Qing government eventually turned to transport tribute grain through the sea route. In 1853, after seizing Nanjing, the Taiping troops occupied Yangzhou, a key port on the Grand Canal, thus cut off the traffic on the Grand Canal. As a result, the Qing court had to allow the provinces Hunan, Hubei, Jiangxi, Anhui, and Henan to submit cash instead of grain. The only two provinces that still turned in actual grain, Jiangsu and Zhejiang, switched to transporting tribute grain to Beijing on the sea.⁴² Since 1853, though there were discussions about recovering tribute grain transport on the Grand Canal in the court, never again did the tribute grain transport resume in the Grand Canal.

For Tianjin, the transition of the means of tribute grain transport was a game changer. After 1853, all the grain boats set out from Shanghai, then traced the coastline to arrive at Tianjin, from where the grain would then be transshipped to Tongzhou. The Hai River quickly became a key shipping channel for transporting grain and other goods into the capital region. Each year, about 1,500 sea sailing boats brought to Tianjin 1,000,000 to 1,500,000 *shi* of tribute grain and more than 250,000 *shi* of duty-free carry-on goods.⁴³ Abandoning the Grand Canal and instead using the sea route for tribute grain shipping caused many far-reaching changes: whereas

⁴¹ Li Wenzhi, *Qingdai caoyun*, 436. It was carried out another time in 1848.

⁴² Li Wenzhi, *Qingdai caoyun*, 408-429.

⁴³ Li Wenzhi, *Qingdai caoyun*, 449-451. Li Junli, 李俊麗 “Tianjin caoyun yanjiu (1368-1840)” 天津漕運研究 (PhD diss., Tianjin Nankai University, 2009), 243.

tribute grain transports sailing in the Grand Canal used to make multiple stops on the way to their destinations, the sea-going boats only utilized the two port-cities of Shanghai and Tianjin. Dozens of cities and towns along the Grand Canal, especially those located north of the Yangzi River, soon declined as they lost most of their long-distance trade. Although, as Zhang Tao indeed observed, the market of Tianjin in the 1850s had not fully recovered to resemble its High Qing level, the normalization of the sea transport of tribute grain granted Tianjin a much better standing than other canal ports. Tianjin did not suffer the rapid decline that the other canal cities experienced, but instead became the only port in North China that retained large-scale trade with South China.

After the Second Opium War (1856-1860), the “Convention of Peking” opened Tianjin to foreign trade and granted concessions to Britain, France, and the United States.⁴⁴ The number of foreign concessions increased to nine after 1902, all of which were located upon the two banks of the Hai River.⁴⁵ (Figure 2) The concessions of Britain, France, and the United States lied one next to another, occupying an area of 4853 square yards and extending two miles along the waterfront. The western powers chose to locate their concessions upon the section of the Hai River that was about two miles away from the walled city as the water surface there was relatively wider⁴⁶ and was used as the anchorage for the tribute grain boats

⁴⁴ Wang Tieya 王鐵崖, *Zhongwai jiu yuezhang huibian* 中外舊約章彙編 [A collection of the old treaties between China and foreign countries] (Shanghai: Shenghuo dushu xinzhi san lian shudian, 1982), 1:145.

⁴⁵ Japan and Germany obtained concessions after the Sino-Japanese War in 1895. After the Boxer Uprising, Russian, Italy, Austro-Hungary, and Belgium each received a concession.

⁴⁶ Archive of Zongli Yamen, “Jiangsu Xunfu Wu Yuanbing zibao zhengshou cao baimi fu Hu ji shachuan yun Jin Tong jiaodui ge shiyi niju zhangcheng chazhao you” 江蘇巡撫吳元炳咨報征收漕

from the sea.⁴⁷ When Tianjin was opened as a treaty port in 1860, there were already fifteen treaty ports opened to foreign trade in China, but Tianjin was a very special one among its kind.⁴⁸ Never had any place so close to Beijing been available for westerners to live and do business. At that time, there were only two other treaty ports in the north—Niuzhuang and Dengzhou. Since neither of them were as close to Beijing as Tianjin was, they could not compete with Tianjin in terms of political centrality and advantages in transportation and commercial foundation. After tribute grain transport on the Grand Canal stopped, Tianjin was the only port in the north that still bore a significant amount of trade with the south; the opening of it as a treaty port in 1860 further made it the most important outlet for foreign goods in north China.

白米赴滬及沙船運津運通交兌各事宜擬具章程查照由, The Archives of the Modern History Institute of Academia Sinica, No. 01-13-006-02-024, dated January 12, 1879.

⁴⁷ Archive of the Grand Council, “Zou wei xu bao haiyun michuan dao Jin bing yanshou qi Yun qingxing you,” 奏為續報海運米船到津並驗收起運情形由 National Palace Museum, Taipei, No. 083962.

⁴⁸ The Treaty of Nanjing signed in 1842 with Britain and the Treaty of Tianjin in 1858 with Russia, the United States, Britain, and France.

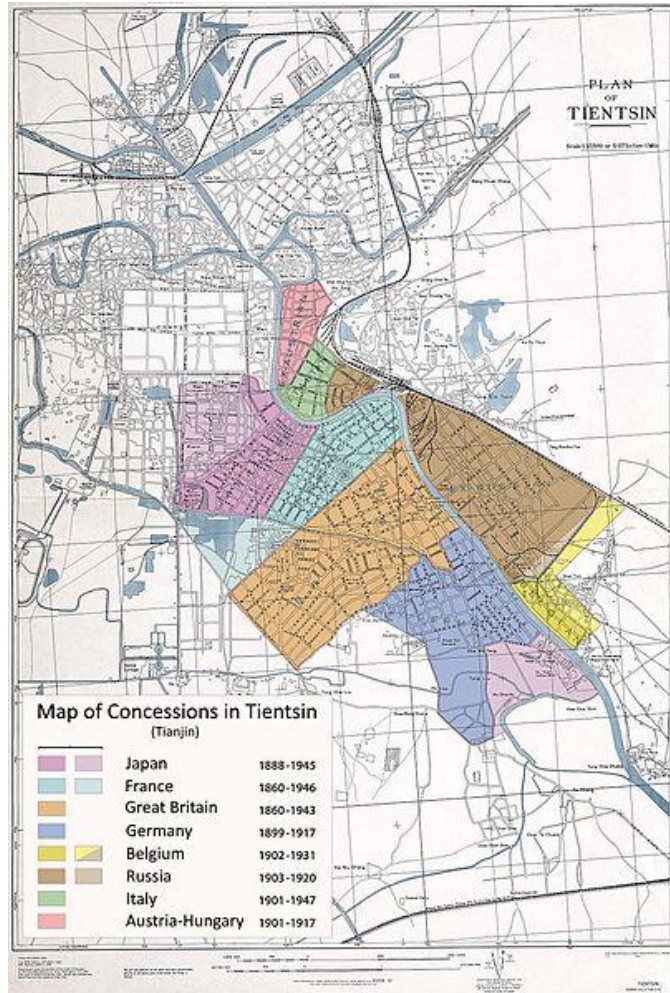


Figure 2 Foreign Concessions of Tianjin

As soon as Tianjin became a treaty port, steamships, a new transport technology, entered the Hai River. Steamships were first primarily used by foreigners in transporting domestic goods abroad or importing foreign goods. In 1861, due to the increasing demand for and practices in employing steamships in domestic trade, the Chinese Maritime Customs system updated its policies to allow foreign-flag ships to carry Chinese-owned goods traded within China.⁴⁹ The attraction of this new form of

⁴⁹ Anne Reinhardt, "Treaty Ports as Shipping Infrastructure," in Robert Bickers, Isabella Jackson, ed., *Treaty Ports in Modern China: Law, Land and Power* (London and New York: Routledge, 2016), 103.

transportation was that the steamships were both much faster and larger than traditional wooden boats that used masts to sail. Whereas it took traditional grain boats about twenty days to sail from Shanghai to Tianjin,⁵⁰ steamships could cover the same distance in only three to four days.⁵¹ The wooden boats previously used in transporting tribute grain on the sea, the so-called “*shachuan*” or “sand boats,” were mostly between 90 and 180 tons.⁵² By comparison, the average capacity of the foreign steamships arriving at Tianjin in 1861 was more than 245 tons.⁵³ In addition, hiring steamships from the foreign companies, the merchants could enjoy lower dues and insurance policies.⁵⁴ Steamships therefore had quickly become a favorable choice among the Chinese merchants. The trade report of the Tianjin customs⁵⁵ in 1866 indicated that foreign steamships and sailing boats had pushed the Chinese junks out of coastal trade in transporting the most important goods.⁵⁶

While westerners were the ones who introduced steamship into Tianjin’s waters and owned almost all of them during the city’s first decade as a treaty port,

⁵⁰ Li Wenzhi, *Qingdai caoyun*, 455.

⁵¹ Li Changli 李長莉, Min Jie 閔杰, Luo Jianqiu 羅檢秋, Zuo Yuhe 左玉河, and Ma Yong 馬勇, *Zhongguo jindai shehui shenghuo shi* 中國近代社會生活史 [Social and life history of Modern China] (Beijing: Zhongguo shehuikexue chubanshe, 2015), 97.

⁵² Matsuura Akira 松浦章, *Qingdai Shanghai shachuan hangyunye shi yanjiu* [2004] 清代上海沙船航運業史研究 [A study on the history of the sector of sand boat shipping in Qing Shanghai] (Nanjing: Jiangsu renmin chubanshe, 2012), 25, 329.

⁵³ Otto Rasmussen, *Tientsin: An Illustrated Outline History* (Tianjin: Tientsin Press, 1925), 300. The source calculates the overall tonnage of both steamships and sailing ships that come to Tianjin in 1861. The average tonnage of the foreign sailing ships was 210 according to the trade report for the year 1865. See Wu Hongming, 吳弘明 ed., *Jinhaiguan maoyi nianbao, 1865-1906* 津海關貿易年報 [Annual reports of the Tianjin Customs] (Tianjin: Tianjin shehuikexueyuan chubanshe, 2006), 8. Therefore, the average tonnage of the steamships should be larger than that of any other form of ship at the time.

⁵⁴ Lu Shih-chiang, 呂實強 *Zhongguo zaoqi de lunchuan jingying* 中國早期的輪船經營 (Nangang: Zhongyang yanjiuyuan jindaishi yanjiusuo, 1976), 133.

⁵⁵ The Tianjin Maritime Customs was established in 1861, and it since then compiled an annual trade report.

⁵⁶ *Jinhaiguan maoyi ninabao*, 10.

Chinese officials and merchants soon came to see the benefit of this new means of transportation. The first Chinese owned steamship company, the China Merchants Steamer Navigation Company (CMSNC), was established in 1872 under the governor-general Li Hongzhang's (李鴻章 1823-1901) supervision. The following year, a branch office of that company opened at Tianjin and had docks and warehouses built in the British Concession. In the beginning, to encourage merchants to invest in the company, the Qing government promised to let the company ship 100,000 *shi* tribute grain. A considerable portion of tribute grain transport therefore had switched to steamship use. From there, the CMSNC took more and more tribute grain until it eventually took over the transport of tribute grain altogether in 1902. The CMSNC grew fast and soon, while shouldering the tribute grain shipping along the coast, it engaged in sea transport among Shanghai, Tianjin, Hankou, Hong Kong, Shantou, and Nagasaki, Japan. Since 1876, the CMSNC had taken up the largest portion of the steamships coming to Tianjin. In 1877, it purchased the Russel & Co. and its steamships coming to Tianjin doubled. That year, 202 steamships of the CMSNC came to Tianjin, bringing 146,847 tons of goods, which counted for 60% of the total number of the arriving steamships and 55% of the overall tonnage.⁵⁷

In transporting passengers, steamships were also quickly replacing the wooden sailing boats. It was reported that Chinese passengers showed “the greatest confidence” in steamships and quickly adopted this new means of transportation. For example, officials proceeding south from Beijing gradually abandoned the land route. It is said that “scarcely a Steamer leaves the Port but some official of rank takes his

⁵⁷ *Jinhaiguan maoyi ninabao*, 98-99.

passage.”⁵⁸ A decade after Tianjin became a treaty port, steamships went between Tianjin and Shanghai very frequently; there was a steamship setting off from Shanghai to Tianjin every three days, and a steamship went from Tianjin to Shanghai every other day.⁵⁹ The civil service candidates from south also came to Beijing for the examination by steamships. For those who lived inland, to take advantage of the new transportation often meant that they had to first go to a seaport such as Hong Kong, Guangzhou, Xiamen, or Shanghai and then take a steamship to Tianjin. Other than saving time and money, what made this itinerary even more alluring was that it gave these officials and the civil service candidates opportunities to take a glimpse at the “Western scenery” in these treaty ports.⁶⁰ Passengers of steamships increased rapidly: the report of the customs of Tianjin shows that in 1877, 9,038 passengers arrived at Tianjin by steamships and 9,637 passengers left; in 1878, the figures were 6,938 and 7,539; in 1879, 14,749 and 12,430.⁶¹

Becoming one of the first cities that possessed docks for steamships was a historic opportunity for Tianjin, for it had allowed Tianjin to gain the upper hand in competing for a pivotal position in the expanding maritime trade and shipping network. From 1860 to the 1890s, Tianjin grew into the second largest seaport in China.⁶² Foreign goods imported in Tianjin increased by nearly eightfold from 1861’s

⁵⁸ W. M. Baker, “Report on the Trade at the Port of Tien-tsin for the Year 1865,” in *Reports on the Trade at the Ports in China Open by Treaty to Foreign Trade, for the Year 1865* (Shanghai: Imperial Maritime Customs’ Press, 1866), 31, Google Books.

⁵⁹ Leung Yuen-sang 梁元生, *Wanqing Shanghai: yige chengshi de lishi jiyi* 晚清上海：一個城市的歷史記憶 (Hong Kong: Chinese University Press, 2009), 194.

⁶⁰ Li Changli et al., *Zhongguo jindai shehui shenghuo shi*, 97-8.

⁶¹ *Jinhaiguan maoyi ninabao*, 99.

⁶² *Notes on the Foreign Trade of Tientsin during the Years 1900-03* (London: Harrison and Sons, 1904), 3.

5,014,071 taels to 1899's 39,300,000 taels. Export multiplied more than thirty times from 1861's 461,573 taels to 1899's 14,800,000 taels.⁶³ Factories of processing and packaging produce for export began to develop in Tianjin; by 1900, there were 18 such factories and six of them were Chinese-owned.⁶⁴ The foreign concessions benefited significantly from the steady development of shipping and commerce. The main sources of revenue for the Municipal Council of the British Concession were the bund rent and mooring fees charged on the ships entering the port on the Hai River;⁶⁵ in addition, the municipality also charged land taxes based on the value of the properties in question. As trade grew, the value of real estate surged. It was reported in 1897 that value of lots in the British and French Concessions were twenty times of what they were worth in the 1860s.⁶⁶

The new role of Tianjin as a terminal for steamships posed new requirements for the city and its environment, especially for the Hai River, which came to be the major shipping route for the port of Tianjin. Tianjin had become "one of the largest consuming ports for Foreign manufactures in China" since 1865, and the westerners at Tianjin had wished that it could "reach an importance such as to crush Shanghai and its other rivals, or at all events, to divert a considerable portion of their trade."⁶⁷ However, from 1860 to the 1880s, Tianjin had never seen a considerable amount of direct trade with foreign countries. Even within its direct trade with Britain, the

⁶³ Jinhaiguan maoyi nianbao, 199. Yao Hongzhuo 姚洪卓, "Jindai Tianjin duiwai maoyi de lishi zuoyong," 近代天津對外貿易的歷史作用 *Guoji jingmao yanjiu* 3, no. 2 (1994): 57-58.

⁶⁴ Yao Hongzhuo, "Jindai Tianjin duiwai maoyi," 57-58.

⁶⁵ *Ibid.*, 7. About the the different kinds of fees at the bund of the concessions, see "Wharfage Dues," *The Chinese Times*, March 21, 1891.

⁶⁶ F. A. Aglen, "Report on the Trade of Tientsin," in *Reports on the Trade at the Ports in China Open by Treaty to Foreign Trade, for the Year 1896*, 24.

⁶⁷ Rasmussen, *Tientsin*, 44. The author quotes Alexander Michie's work.

biggest foreign trading partner of Tianjin, amongst the 200 to 400 foreign ships coming to Tianjin each year from 1868 to 1872, only 2 to 8 of them arrived directly from Britain. Most of the foreign goods that arrived at Tianjin were transshipped from Shanghai, the “headquarters of the import trade.”⁶⁸ In the customs’ analysis, the insufficient direct trade of Tianjin was due to several reasons. First, Tianjin was inferior to Shanghai in its conditions of transportation and hinterland. Shanghai was located at the river mouth of the Yangzi River, distributing high-value manufactured goods such as silk and porcelain produced from the Jiangnan region or shipped to Shanghai through the Yangzi River while importing a considerable amount of foreign goods for the consumption of the most well-off population of China residing in the Lower Yangzi Delta. By comparison, Tianjin and its hinterland produced very few goods that were high in value or in high demand in foreign trade. Secondly, it took five more days for a ship from Britain to go to Tianjin than to Shanghai. If a British ship indeed came to Tianjin directly, it could not load enough valuable goods at Tianjin and would have to make another stop at Shanghai or Fuzhou to buy high value goods such as silk, porcelain, or tea before it could return to Britain. It was reported that the kinds and value of the goods that they could purchase at Tianjin were so limited that the profit that they could make from selling these goods could not even compensate for the shipping cost for their extra trip from Tianjin to Shanghai or Fuzhou. In addition, there were not many foreign banks at Tianjin that could provide financial support for the costly long-distance direct trade between

⁶⁸ Thomas Dick, “Report on the Trade at the Port of Tien-tsin for the Year 1867,” in *Reports on the Trade at the Ports in China Open by Treaty to Foreign Trade, for the Year 1867* (Shanghai: Imperial Maritime Customs’ Press, 1868), 21

Tianjin and Europe.⁶⁹ These disadvantages could be improved over time as foreign businessmen discovered more goods in north China for export and more foreign banks opened branches in Tianjin, but there was another obstacle for the growth of direct trade in Tianjin that the customs' report pointed out was the most serious and urgent: the navigation conditions of the Hai River forbade the large ships from sailing through the river and using the port in the concessions.⁷⁰

In order to understand the challenges that the steamship transportation posed to the Hai River, we have to examine the river's conditions in the late nineteenth century. The Hai River's supporting function to the Grand Canal gave it a particular physical shape. In contrast to the carefully defined and maintained water course of the Grand Canal, the Hai River appeared to be a "wild" river meandering over fifty miles toward the sea. Tianjin, the starting point of the Hai River, is only thirteen feet higher than sea level,⁷¹ and the river itself flowed slowly through the gentle slope eastward and formed numerous bends and shoals.⁷² While the straight-line distance between Tianjin and the river mouth was only 28 miles, the windings and bends made the length of the Hai River nearly twice as long in reality.⁷³ When traveling on the

⁶⁹ *Jinhaiguan maoyi ninabao*, 25-26.

⁷⁰ *Jinhaiguan maoyi ninabao*, 25-26.

⁷¹ Constantin Christopoulos, "Great Plain-Building in North China," *Bulletin of the Geological Society of China* 27, no. 1 (November 1947): 314-315.

⁷² Christopoulos, "Great Plain-Building," 299-320. Tan Qixiang 譚其驤, "Lishi shiqi Bohaiwan xi'an de da haiqin" 歷史時期渤海灣西岸的大海侵 [The historical sea transgression on the western bank of the Bohai Gulf], in *Changshui ji* vol. 2 長水集 [Changshui collected works] (Beijing: Renmin chubanshe, 1987), 93-95 (first published in 1965), and "Haihe shuixi de xingcheng yu fazhan" 海河水系的形成與發展 [The formation and development of the Haihe Watershed], in *Changshui ji xubian* 長水集續編 [A continuation of Changshui collected works] (Beijing: Renmin chubanshe, 1994), 414-462 (first published in 1986).

⁷³ *Reports on the Trade at the Ports in China Open by Treaty to Foreign Trade, for the Year 1865* (Shanghai: Imperial Maritime Customs' Press, 1866), 31. *Hai-Ho Conservancy Board, 1898-1919: A Resume of Conservancy Operations on the Hai Ho and Taku Bar Compiled by Order of the Board*,

serpentine river, according to several accounts, one could hardly see the watercourse far ahead. Reeds in the shallows of the river and the fields on the banks blocked the view of the travelers, and boats, or rather the sails and the masts of the boats, looked as if they emerged in the midst of the vast, grassy plain.⁷⁴ A poet once described the river as full of shallow spots covered with reeds, which made it very hard to find an anchorage for his boat.⁷⁵ The bends and shoals of the Hai River were left untouched because the state took a laissez-faire attitude toward the Hai River; as such, freshets from the Grand Canal and tributaries could easily raise the water of the Hai River to a level that it could not contain. When strong freshets coincided with astronomical tides, disastrous floods happened.⁷⁶ From 1736 to 1911, the Hai River flooded about every two years.⁷⁷ It had almost become an annual routine that the government exempted Tianjin and nearby counties from land tax and other dues or reserved some tribute grain at Tianjin for flood relief. To reduce the severity of floods, the government dug some ditches on the Hai River to divert water away from it;⁷⁸ these

(Tianjin: Tientsin Press, unknown), 1. It was published between 1920 and 1923. Hereafter, I refer to it as *Resume*.

⁷⁴ *Tianjin fengwushi xuan*, 28. Ellis Henry, *Journal of the Proceedings of the Late Embassy to China* (London: John Murray, 1818), vol. 1, 125.

⁷⁵ *Tianjin fengwushi xuan*, 23.

⁷⁶ Cui Naihui 崔乃翠, “Wudahe zongshuo” 五大河總說 [A general account of the five great rivers], in *Chongxiu Tianjin fuzhi*, 重修天津府志 [A revised gazetteer of the Prefecture of Tianjin] ed. Shen Jiaben 沈家本, 923. Originally published in 1899. Reprinted in *Tianjin tongzhi jiu zhi dianjiao juan*, vol. 1. Already obstructed by the Dagu Bar, the water draining into the sea collided with the strong tides twice a day and sometimes was forced to flow backward, inundating the banks of the Hai River.

⁷⁷ Shuili shuidian kexueyanjiuyuan 水利水電科學研究院 [China Institute of Water Resources and Hydropower Research], *Qingdai Haihe Luanhe honglao dang'an shiliao* 清代海河灤河洪澇檔案史料 [The Qing archival source of the floods of the Hai River and the Luan River] (Beijing: Zhonghua shuju, 1981), 13.

⁷⁸ Canals were also built for irrigation or draining the water from lagoons and marshes into the Hai River. See Jiang Yuhong and Wu Huiyuan, *Xu Tianjin xian zhi*, *juan 7* for a list of the distributary canals and water locks that had been built from the Ming to the Qianlong times.

ditches represented the extent of the Qing state's water management action on the Hai River before the mid-nineteenth century.

Another important factor in shaping the Hai River's physical features was the large quantity of silt it received from the Grand Canal. Due to the river's small degree of elevation from sea level and its many bends, the water flowed rather slowly and did not have enough velocity to flush the silt into the sea, and instead deposited it along the watercourse and near the river mouth. The unloaded sediment formed a mud flat extending for about five miles outside of the river mouth. At the edge of the flat, the sediment from the river and the sand from the sea that the flood tide carried accumulated and gave rise to a bar that extended seaward for a mile.⁷⁹ This bar was known as the Dagu Bar. On the Dagu Bar, the water was very shallow and there was only one channel across the bar that had some depth. The deepest water in the channel was usually 9 to 12 feet at high tide, while the depth at the river mouth was 16 feet; at low tide, meanwhile, the water was only 2 feet deep in the channel on the Dagu Bar and outright dry in other places.⁸⁰ Because the Dagu Bar could sometimes block the entrance from the sea to the Hai River, the Chinese considered it "a fortress guarding the mouth of the river" that could not be altered for the sake of military defense.⁸¹

These physical features of the Hai River were no longer desirable as the Grand Canal was cut off after 1853. The conditions of the river became even more

⁷⁹ Tianjin Municipal Archives, Archive of Haihe Conservancy Commission, W0003-1-000021, 130. *Resume*, 44-45.

⁸⁰ See *Resume*, 44-45, and Sherard Osborn, "Notes, Geographical and Commercial, Made During the Passage of HMS Furious, in 1858, from Shanghai to the Gulf of Pecheli and Back," *Proceedings of the Royal Geographical Society of London* 3, no. 2 (November 22, 1858): 69.

⁸¹ Shen Jiaben 沈家本 et al., *Chongxiu Tianjin fuzhi*, 61. Cui Naihui, "Wudahe zongshuo," 923.

unsuitable after 1860 as steamships were introduced to Tianjin. As mentioned above, steamships were much larger than the wooden junks that used to be the main vessels in the Hai River. Furthermore, the size of steamships increased over time as ship-building technology advanced. The average tonnage of the steamships that arrived in Tianjin was more than 500 in 1875,⁸² and had risen to 700 in 1889.⁸³ The number of steamships that came to Tianjin was also growing: In 1869, 136 steamships and 199 sailing ships entered the Hai River,⁸⁴ whereas after 1877, the annual number of steamships navigating on the Hai River was always more than 300. A decade later, more than 500 steamships entered the Hai River every year. By the 1890s, on average, 700 steamships traversed the Hai River each year.⁸⁵ The increasingly larger number of steamships in the Hai River soon revealed that the river had many problems and was ill equipped to accommodate modern transportation. The first obstacle that steamships would encounter when attempting to enter the Hai River was the Dagu Bar. This difficulty had begun to be noted in 1867: a newspaper report said that the channel on the Dagu Bar was too shallow for vessels of more than four or five hundred tons to go through.⁸⁶ As the ships coming to Tianjin became larger, the issue posed by the Bar only became more serious. In 1875, since the average tonnage of steamships coming to Tianjin was by then over five hundred, more than half of the steamships could not cross the Dagu Bar and were thus detained outside the bar. These steamships had to line up outside the Bar and attempt to cross it at flood tide

⁸² *Jinhaiguan maoyi nianbao*, 92.

⁸³ *Jinhaiguan maoyi nianbao*, 154.

⁸⁴ *Jinhaiguan maoyi nianbao*, 67.

⁸⁵ Data gathered from *Jinhaiguan maoyi nianbao* and Rasmussen, *Tientsin*, 300-301.

⁸⁶ "The Northern Ports," *The North - China Herald and Market Report*, September 28, 1867, ProQuest Historical Newspapers: Chinese Newspapers Collection.

every twelve hours. As the Shanghai-concession-based newspaper *North-China Herald* reported regarding the issue in 1875, “the loss of time to the steamers is very great, to say nothing of the consumption of fuel.” Many steamships had to unload some of their goods onto barges in order to make themselves lighter and able to cross the bar.⁸⁷ The Taku Tug and Lighter Company, founded a year earlier in response to the demand of towing and lightening service at the river mouth, made a good fortune in 1875, and was even reported to be the “richest company in China, thanks to the bar.”⁸⁸ At times, the depth of water at the Dagu Bar was so shallow that even tugboats and barges were unable to cross, leaving the steamships no choice but to wait. For instance, in the spring of 1889, as many as twenty-four vessels waited to be towed or lightened upon the Dagu Bar at the same time. The delay of shipping was only relieved when the summer monsoon brought stronger tides that made it possible for ships to cross the bar at high water.⁸⁹

For those ships that could cross the Dagu Bar, the next impediment they faced was the Hai River’s treacherous course, which was fraught with numerous bends and shallows. Some of the bends were so sharp that the radius was only 400 feet, whereas the ideal radius for a river frequented by steamships should be at least five times larger. To negotiate the bends and shallows, steamships had to sail very slowly and often needed to further lighten themselves by discharging part of their goods onto barges. In theory, a steamship could cover the trip from the river mouth to the port in the concessions in five hours and ten minutes. However, in most cases, the trip took

⁸⁷ “Tientsin,” *The North-China Herald*, November 11, 1875.

⁸⁸ “Tientsin,” *The North-China Herald*, November 11, 1875.

⁸⁹ R. S. Yorke, “Report of the Trade at Tientsin,” in *Report on the Trade of the year 1889* (Shanghai: Imperial Maritime Customs’ Press, 1890), 19.

much longer because the barges and tugboats were not always available. For example, sometimes a steamship would arrive at the river mouth of the Hai River from Shanghai in three days but then had to spend two days on unloading and navigation before it could reach Tianjin.⁹⁰ In addition to the many bends, the silt created another danger for navigation. The gentle slope and sinuous course reduced the tidal range in the river – that is, the difference between the rise and fall of tides – resulting in the silt that could have been scoured away by the alternation of tides instead remaining in the river and forming shoals, which significantly increased the ships’ chance of running aground. There had been reports about steamships “getting aground over and over again” since 1865.⁹¹ Once they had run aground, the ships had to further discharge their cargo to smaller boats and then wait to be towed. Quite often, when silt from the tributaries was too heavy and the upper reaches of the Hai River were severely silted up, most ships were unable to reach the port in the foreign concessions. Several small ports were therefore opened near the river mouth or at some distance below the foreign concessions as backup anchorages.⁹² As time went on, the danger of steamships running into shoals become more serious. Flags with “B.D.J.,” the code signaling for being aground, were frequently seen on ships in the river.⁹³ Shipping companies, accordingly, had to pick ships to meet the specific conditions of the Hai River. In 1889, a manager of the China Merchants Steamer

⁹⁰ Zheng Xiaoxu 鄭孝胥, *Zheng Xiaoxu riji*, volume 1 鄭孝胥日記 [Diary of Zheng Xiaoxu] (Beijing: Zhonghua shuju, 1993), 59. Diary input from June 16 to 22, 1885.

⁹¹ *Resume*, 17.

⁹² For example, Tanggu and Dagou, which were located about 30 miles below the foreign concessions, and Baitangkou, about 14 miles downriver.

⁹³ “The Peiho River,” *The North-China Herald*, July 20, 1895. The meaning of codes of signals, see Hydrographic Office of U.S.A., *The International Code of Signals for the Use of All Nations* (Washington: Government Printing Office, 1882), 5.

Navigation Company pointed out the principle of selecting ships: “Ships for the Northern Sea need not be too speedy; the priority is that they have a shallow draft.”⁹⁴ Some companies even tried to build ships with creative designs to avoid being stuck on shoals, with one company even making an unsuccessful attempt to build a craft with an M-shaped bottom and a propeller that could send a backwash underneath the ship to scour away the mud.⁹⁵ In summation, the “natural” conditions of the Hai River could not meet the demand of modern transportation, and the river proved itself to be a risky and unpredictable channel for steamships to maneuver across.

The difficulties of the Hai River accommodating steamships had driven the merchants and shippers to search for alternative ports. Since the 1880s, the option of moving the port to Tanggu or Dagou, places that were closer to the river mouth and more accessible to steamships, was brought up again and again.⁹⁶ Following the flooding of 1885, which deposited a great deal of silt in the Hai River, *Shen bao*, an influential Chinese newspaper in Shanghai, reported that there was an ongoing discussion in Tianjin about building a new city at or relocating the city to Tanggu.⁹⁷ The following year, the *North China Herald* reported in May that “the removal of the Settlement further down the river or to Taku [Dagou]” was being talked of.⁹⁸ After railroads had connected both Tianjin and Tanggu with Beijing in 1897, the idea of

⁹⁴ *Lunchuan zhaoshang ju*, 輪船招商局 [China Merchants Steamer Navigation Company] Sheng Xuanhuai dang’an ziliao xuanji, vol. 8 盛宣懷檔案資料選輯 [Selections of the archive of Sheng Xuanhuai], 282.

⁹⁵ For instance, the ship “Haeting,” which was in service from the 1880s to the early twentieth century. Rasmussen, *Tientsin*, 99.

⁹⁶ Further down the river from Tanggu, Dagou was on the other side of the Haihe. Before the railway reached Tanggu, as a military settlement, Dagou was where the cannons were located and was much more well-known than Tanggu. Sometimes these two place names were used interchangeably.

⁹⁷ “Jingyu yan xin” 津沽雁信, *Shen bao*, Sep. 14, 1885.

⁹⁸ “Outports: Peking,” *The North - China Herald*, May 14, 1886, ProQuest Historical Newspapers: Chinese Newspapers Collection.

relocating the port to Tanggu became more attractive. Worried that Tianjin might lose its status as a seaport in competition with Tanggu, in 1897, the *Peking and Tientsin Times*, a newspaper based in the British Concession, asked the westerners to take action to preserve Tianjin as the terminus of steamers.⁹⁹ The same year, two leading companies in Tianjin, the China Mining Company and the China Merchants Steamer Navigation Company, bought land in Tanggu and were going to build wharves and warehouses there, which aroused suspicion from the concessions. the *Peking and Tientsin Times* expressed the concern that more steamship companies would “follow the example” of these two companies and “make themselves independent of the river,” which would deprive the port in the foreign concessions of its business.¹⁰⁰

Engineering the Hai River

With their commercial interests at stake, the westerners at Tianjin had been clamoring for engineering projects that could improve the navigation on the river from the 1860s to the 1890s. The science of hydraulic engineering had advanced greatly in the eighteenth and nineteenth centuries, so they were confident in their ability to reshape the river at will with the help of modern technology. After the mid-nineteenth century, steam-powered machines were being widely applied in dredging and other operations on rivers and ports, bringing the scale and speed of river works to a new level. By the late nineteenth century, rivers had been improved and great canals had been excavated in France, Holland, Germany, and Britain. For example, in

⁹⁹ “Tientsin a Seaport,” *Peking and Tientsin Times*, April 2, 1897.

¹⁰⁰ *Peking and Tientsin Times*, July 24, 1897.

Germany, throughout the years from the 1810s to the 1870s, the once winding course of the Upper Rhine had been shortened a quarter of its length by making dozens of cuts and removing more than 2,200 islands.¹⁰¹ Many of the river projects were aimed to make inland cities accessible for steamships. Such projects were executed on rivers ranging from the Seine in France, which enabled Paris and Rouen to become steamship termini, to the Brussels-Antwerp Canal of Belgium, which transformed Brussels into a seaport. The most successful project was probably the engineering works on the river Weser, which made Bremen a seaport despite being 50 miles away from the ocean.¹⁰² All these undertakings had become a source of ideas and confidence for the westerners at Tianjin when they proposed plans for the “improvement” of the Hai River.

The first proposal was drawn up in 1890 by Gustav von Detring (1842-1913), Commissioner of the Tianjin Custom, whose duties included promoting maritime trade. Detring was very close to the General-Governor of Zhili Province, Li Hongzhang, and often acted as a consultant for Li on foreign affairs.¹⁰³ After the disastrous floods of 1890, he persuaded Li Hongzhang to allow Albert de Linde, a Danish engineer, to make a hydrographic survey of the Hai River.¹⁰⁴ Based on the

¹⁰¹ David Blackbourn, *The Conquest of Nature: Water, Landscape, and the Making of Modern Germany* (New York: Norton, 2006), 97. On the Rhine, also see Mark Cioc, *The Rhine: An Eco-Biography, 1815-2000* (Seattle and London: University of Washington Press, 2002).

¹⁰² “Tientsin a Seaport,” *Peking and Tientsin Times*, April 2, 1897.

¹⁰³ Robert Hart’s letters and diaries, indicating that Detring and Li interacted often. See *The I.G. in Peking: Letters of Robert Hart, Chinese Maritime Customs, 1868-1907* (Cambridge, MA: Harvard University Press, 1975), 1041, 1053, 1055, 1056, 1068, 1069. Also see Wang Wenshao 王文韶, *Wangwenshao riji* 王文韶日記 (Beijing: Zhonghua shuju, 1989), 939; Rasmussen, *Tientsin*, 76-77.

¹⁰⁴ Rasmussen, *Tientsin*, 77. Tianjin Municipal Archives, ed., *Jinhaiguan midang jieyi* 津海關秘檔解譯 [Translation of the classified archive of the Tianjin Customs] (Beijing: Zhongguo haiguan chubanshe, 2006), 50.

survey, Detring proposed to build locks at all the tributary channels and cut through the necks of the largest bends of the Hai River, as well as to establish a permanent commission for the improvement of the Hai River.¹⁰⁵ Detring submitted his proposal to Li Hongzhang, who was also interested in promoting Tianjin's commerce and had by then already begun to implement measures to improve the shipping conditions of the Hai River. For example, Li had mechanical dredgers imported from Europe in 1877 to remove silt at Sanchahekou and the Hai River;¹⁰⁶ in 1880, he also authorized to have a two-mile-long section of the river near the river mouth dug deeper.¹⁰⁷ In the meantime, however, more distributary ditches were excavated to divert water away from the Hai River,¹⁰⁸ as Li Hongzhang also had to consider the other functions of the river such as irrigation and flood prevention. Upon receiving Detring's proposal, Li Hongzhang dispatched several of his subordinates to investigate the feasibility of the plan, ultimately deciding not to carry it out following their report.¹⁰⁹ The reason why the scheme wasn't carried out was recorded differently. On the part of the westerners, Linde recalled that in the early 1890s, the foreign community was "somewhat indifferent and generally holding the view that the bad state of the river was merely a periodical and temporary deterioration of the channel."¹¹⁰ On the part of the Chinese,

¹⁰⁵ Detring proposed to build locks at all the tributary channels and cut through the necks of the largest bends between Guajiasi and Jiagiagudao. His plan also included the establishment of a permanent commission for the improvement of the Hai River. See *Shiwu bao* 時務報, no. 26 (1897): 10 a. Also see *Jinhaiguan midang jieyi*, 87.

¹⁰⁶ "Shujun shuidao," 疏浚水道 *Shen bao*, August 28, 1877.

¹⁰⁷ "Junhe jiang jun," 濬河將竣 *Shen bao*, November 19, 1880.

¹⁰⁸ For example, in 1874, a silted-up distributary canal was dredged and put back to work. More irrigation ditches were also dug from 1873 to 1880 in order draw water from the Hai River into rice paddies. In 1890, a new distributary canal was excavated.

¹⁰⁹ "Jin qiao chun wang," 津橋春望 *Shen bao* 申報 April 24, 1891. The reason why this proposal was not carried out was recorded differently in various sources, but apparently, improving the navigation of the Hai River was not Li Hongzhang's priority.

¹¹⁰ Tianjin Municipal Archives (hereafter TMA) W0003-1-000603, 6.

some claimed that “a strong opposition on the part of the local Chinese Officials, who feared that the free navigation of the river might interfere with their private interests, succeeded in defeating the scheme.”¹¹¹ Some reported that the local people were against the works due to the risk of their land and cemeteries being affected.¹¹² Some others recorded that the Chinese feared that the execution of a westerner proposed plan might cause China to lose the jurisdiction over the river to foreign powers.¹¹³ Perhaps due to all these reasons above, Li Hongzhang was not genuinely interested in Detring’s radical proposal in improving the navigation on the Hai River. Moreover, even if he would like to advocate for this plan, the court was likely to reject it. At the time, his plan of building the Tianjin-Beijing railroad was stranded, as the court remained suspicious of the prospect of building a railroad for commercial benefit. The improvement of the Hai River was also a plan that would mainly benefit the commercial interests, which the Qing court was not ready to embrace.

It was not until after the Sino-Japanese War that an opportunity emerged for improving the navigation in the Hai River. The shocking defeat by the Japanese in the war of 1894 and 1895 propelled the Qing government to realize that to build a stronger state, industrialization and commercial wealth were the foundation. In 1895, as part of an edict ordering the provincial governors to make practical plans for strengthening the state, the Guangxu Emperor pointed out that the most urgent works were the ones that “take raising funds for training army as urgent matters, and

¹¹¹ W0003-1-000015, 72.

¹¹² “Jin qiao chun wang,” *Shen bao*. Rasmussen recorded that “when Mr. Detring, Mr. de Linde and the Customs’ Taotai rode to the proposed First Cutting in the summer of 1892, they were attacked by five or six hundred villagers, who pulled up the pegs and threatened the three with bodily harm.” (*Tientsin*, 102)

¹¹³ *Shiwu bao*, no. 26 (1897), 10a.

relieving merchants and promoting commerce manufacturing as starting point.”¹¹⁴

The resistance within the court against improving the navigation on the Hai River had subsequently dissolved. Besides this internal motivation, the Qing court also received more pressure from Western powers to improve navigation conditions in the Hai River. Following the Sino-Japanese War, foreign concessions significantly expanded in Tianjin. Japan and Germany acquired their concessions in Tianjin in 1895 and 1896, both located on the bank of the Hai River near the existing concessions. Later by 1897, the British Concession expanded to four times larger towards the west. The interests of the imperialist powers were more heavily concentrated on the section of the Hai River extending for about 9 miles from the walled city.

In July 1896, the General Chamber of Commerce of the foreign merchants in Tianjin hired Linde to prepare a plan of the practical ways to prevent silting of the Hai River.¹¹⁵ Meanwhile, the concession businessmen appealed to the foreign consuls at Tianjin, and through these consuls, they persuaded the diplomats representing their country in Beijing to urge the Qing government to cooperate. In September 1896, the British Minister and German Minister at Beijing were said to be “doing their best to bring pressure upon the Tsung-li Yamen [Zongli yamen] with the object of waking up the apathetic officials concerned.”¹¹⁶ Soon, the Zongli Yamen instructed Wang

¹¹⁴ Zhu Shoupeng, 朱壽朋 *Guangxuchao donghua lu*, 光緒朝東華錄 volume 4 (Beijing: Zhonghua shuju, 1958), 3631.

¹¹⁵ “Report of the British Municipal Council, Tientsin, for the year ending 31st December, 1896,” *Peking and Tientsin Times*, January 23, 1897. Letter from Sheridan P. Read to W. W. Rockhill on July 3, 1896. June 17, 1896 - Dec. 13, 1899. MS Despatches from U.S. Consuls in Tientsin, China, 1868-1906: Despatches from U.S. Consuls in Tientsin, China, 1868-1906, Volume 6. National Archives (United States). *Nineteenth Century Collections Online*, <http://tinyurl.galegroup.com/tinyurl/3TisK1>. Accessed 14 Mar. 2018.

¹¹⁶ “The River,” *Peking and Tientsin Times*, September 12, 1896.

Wenshao, the new Governor-General of Zhili, to take up the issue of the Hai River improvement and cooperate with the concessions.¹¹⁷

The report by Linde made on request of the foreigners' Chamber of Commerce was presented to the Chinese authorities in February 1897.¹¹⁸ While the investigation and negotiation with the concessions about a work plan were taking place, Wang Wenshao memorialized the court in June 1897, emphasizing on the importance of the Hai River to the general functionality of the rivers in North China:

Dealing with Haihe is not only in consideration for one river, but a crucial opportunity for Yongding River, the Grand Canal, Daqing River, and Ziya River. Benefiting the people and profiting the merchants are both depended on this. This is the most important project that should be done this year.¹¹⁹

This was a clear official acknowledgement of the change of the river's function from serving the Grand Canal to benefiting commercial interests. This view provoked criticism from suspicious officials, one of whom criticized that Wang failed to grasp the problems that really mattered to the rivers in North China and concluded that his plan "did not seem to be a means to arrange the overall situation."¹²⁰ Criticism like this, however, did not undo the court's decision of cooperating with the foreign concessions in improving the navigation of the Hai River.

¹¹⁷ The letters from the Zongli Yamen are not found, but Wang Wenshao mentioned that Zongli Yamen had sent several telegrams to advise the Chinese and foreigners to cooperate in improving the Hai River in a proclamation. See *Jin haiguan mi dang jieyi*, 52-54, and "The Viceroy's Proclamation," *Peking and Tientsin Times*, May 8, 1897.

¹¹⁸ "The Pei-ho," *Peking & Tientsin Times*, February 20, 1897.

¹¹⁹ Wang Wenshao's memorial to the throne in June, 1897, in *Zhongguo diyi lishi dang'anguan* 中國第一歷史檔案館, *Guangxu chao zhupi zouzhe, di 99 ji* 光緒朝硃批奏折第 99 輯 (Beijing: Zhonghua shuju, 1996), 844.

¹²⁰ *Guangxu chao zhupi zouzhe di 100 ji*, 26.

Even after it was determined that the Hai River should be worked on, there were still disputes regarding how the improvement of the Hai River should be carried out. Linde's plan consisted of closing the major diverging canals, training two reaches that were too wide, and cutting several bends. It focused on promoting the concessions' commercial interest by improving the navigation and giving up on the other functions of the river including flood control and irrigation. The concessions authorities considered that Linde's plan sufficient in improving navigation at a reasonable cost and were very pleased. *The Peking and Tientsin Times* commented that Linde's proposal proved that "the prevention of floods and obtaining a navigable depth of say 11' in the Peiho are two very different questions; the former being one involving millions, the latter requiring a sum of money not larger than the trade of this port would justify." The Chinese authorities, however, were not equally pleased by a plan that neglected the needs of agriculture and flood control. In October 1897, the Chinese authorities agreed to close some of the diverting canals and train some sections of the waterway but refused to implement the more drastic changes of cutting straight channels through the bends of the river. Wang Wenshao explained to the foreign consuls that such work would require acquiring further land, moving tombs, and challenging popular beliefs in geomancy, and thus "would meet with objection from the people."¹²¹ Despite the disagreement on the exact plan, as a gesture to demonstrate their willingness to work with the foreign merchants and concession authorities, the Qing officials agreed to organize the Sino-foreign joint Haihe

¹²¹ Letter from Wang Wenshao to the Senior Consul (Sheridan P. Read, U.S. Consul) on September 16, 1897, W0003-1-000603, 7. The letter can also be found in "MS Despatches from U.S. Consuls in Tientsin, China, 1868-1906," volume 6, National Archives of United States, 364, *Nineteenth Century Collections Online*, <http://tinyurl.galegroup.com/tinyurl/3TisK1>, accessed March 14, 2018.

Conservancy Commission in 1898. The Commission included members representing the Qing government, foreign concessions, and foreign merchants.¹²² The executive board of the commission was constituted of three Chinese officials and one westerner who was an employee of the Chinese government within the Maritime Customs.¹²³ To fund the commission's efforts, Wang Wenshao authorized 100,000 taels to be granted as government funding, and on the Westerners' side, the British Concession took out a bank loan of 150,000 taels.¹²⁴ Across the next two years, three water locks were built to close distributary canals in order to adjust the width of the river at certain places where the river was too wide and shallow. As a result, the volume of water in the Hai River increased by 65%, and the water level was raised by one foot eight inches.¹²⁵ Across the majority of the year 1900, the Hai River maintained at a depth of ten feet.¹²⁶

If the Chinese government had continued to control the commission, the Hai River would likely have been moderately improved for navigation purposes without

¹²² The members were: the Tianjin Customs Circuit Intendant, two Chinese officials representing the China Merchants Steam Navigation Company and Chinese Engineering and Mining Company, the Commissioner at Tianjin of the Chinese Imperial Maritime Customs, four representatives of the different foreign shipping and lighter companies (the Indo-China S. N. Co., Ltd, the China Navigation Co., Ltd, the Nippon Yusen Kaisha, and the Taku Tug & Lighter Co.), three representatives of the foreign concessions (French, British, and German), and a representative of the foreigners' General Chamber of Commerce of Tianjin. See *Resume*, 9, and "MS Despatches from U.S. Consuls in Tientsin," 371.

¹²³ They were Li Minchen, the Customs Circuit Intendant (and president of the Commission), Huang Jianyuan, the Circuit Intendants working for the China Merchants Steamer Navigation Company, Zhang Yi, the Circuit Intendants working for the China Engineering and Mining Company, and Alfred E. Hippisley, the Commissioner of Chinese Imperial Maritime Customs.

¹²⁴ "Inclosure 4 Translation," *Report of William W. Rockhill, Late Commissioner to China, with Accompanying Documents* (Washington: Government Printing Office, 1901), 261, and "Choukuan xiuban Haihe zhe," 籌款修辦海河摺 *Shen bao*, October 1, 1898. Also see *Guangxu chao zhupi zouzhe*, volume 100 光緒朝硃批奏折 (Beijing: Zhonghua shuju, 1996), 135-136.

¹²⁵ *Resume*, 16.

¹²⁶ "The Port of Tientsin, Progress of the River Improvement Scheme," reprinted from *The China Times*, October 23, 1901, W0003-1-000016, 21.

drastically changing its physical condition. The Chinese authorities might even had taken actions to further facilitate the port at Tanggu, which by the end of the nineteenth century had been built into a small seaport and was utilized when steamships had difficulty accessing the port in the concessions. The fear that Tanggu might take place of Tianjin was so prevalent that when Linde justified his proposal in 1897, he had to explain why river transport was still desirable where railways had been built and the advantage of an inland port over a port immediately on the coast.¹²⁷

However, in the summer of 1900, the Boxer Uprising broke out. In their effort to suppress the uprising, the eight foreign powers occupied Tianjin, and maintained control of it for the next two years under the “Provisional Government of the District of Tianjin”. The Provisional Government immediately reorganized the Haihe Conservancy Commission into an institution with only foreign members representing the Provisional Government, the foreign consuls, the Maritime Customs at Tianjin, the foreign concessions, the foreigners’ Chamber of Commerce, and the shipping companies.¹²⁸ Chinese were excluded from the commission entirely. Moreover, the foreign powers made sure that the Boxer Protocol included a provision requiring the Qing government’s cooperation with the concessions in improving the navigation on the Hai River and providing funds for the related works.¹²⁹ After the Qing

¹²⁷ W0003-1-000603, 1. Similar content can also be found in “Tientsin a Seaport,” *Peking and Tientsin Times*, Apr 2, 1897.

¹²⁸ The commission members included a member of the Provisional Government, a member of the Consular Body, and the Commissioner of Customs. The consultative representatives were consular representatives of the various concessions, the Chairman of the Tianjin General Chamber of Commerce, and a representative of the shipping companies. See *Resume*, 10.

¹²⁹ This was inserted into the Peace Protocol signed at Peking on September 7, 1901, under Article XI, second Section. Specifically, was agreed that “as soon after as the administration of Tientsin shall have been remitted to the Chinese Government, that government may be represented in that commission, and shall pay each year a sum of sixty thousand Hai-Kuan taels for the up-keep of the works.” See W0003-1-000611, 3-4. Also see Wang Tieya, 1007.

government resumed control over Tianjin in 1902, only the member that represented the Provisional Government was replaced by a Chinese official, with the rest of the commission remaining the same.¹³⁰

With the foreign concessions and merchants now in charge of the Haihe Conservancy Commission, they promptly undertook projects to cut river bends—in other words, the kind of work they had always sought to do. The cutting of bends was viewed as the most important step to improve navigating condition on the Hai River as it was the consensus amongst Western civil engineers at the time regarding dealing with tidal rivers that “all obstructions to the inflow of the tide must be removed, and sharp bends rounded off to a large radius.”¹³¹ Concession authorities believed that getting rid of some of the sharp bends could create a straighter waterway and shorten distance between their port and the sea, and thus render navigation on the Hai River both safer and easier. Furthermore, the cuttings would significantly increase the current velocity and tidal range in the upper reaches, so that more silt in the river would be carried away.¹³² The new commission’s plan was to cut three large bends and eliminate some of the shallow reaches that were most difficult for navigation.¹³³ The work began in 1901 with the cutting of two bends that were the nearest to the concessions, with two straight canals, 0.75 mile and 1.1 miles long respectively and 23 feet deep, being dug simultaneously to replace the two bends. The two cuttings

¹³⁰ *Resume*, 10.

¹³¹ W0003-1-000015, 28. Linde quotes from the proceedings of the Institution of Civil Engineers regarding a discussion on tidal rivers.

¹³² W0003-1-000016, 21. The engineer who designed the cuttings warned against any wholesale straightening of the river based on the European experience, as “the increased fall per mile resulting from materially shortening a river, and the consequent rapid current, may render it difficult to prevent the erosion of the banks of the new channel.” *Resume*, 17.

¹³³ W0003-1-000015, 28. W0003-1-000059, 8. *Resume*, 18-19.

were opened to shipping in August and September of 1902 respectively. The third cutting, which would create a two-mile-long straight channel, was commenced in September 1903 at a location that was ten miles downriver from the concessions, and was finished in June 1904.¹³⁴ (Figure 3) To carry out these large projects, the Commission spent a total of 570,000 taels and employed as many as 15,000 workers at one time.¹³⁵ Part of the funding came from the Provisional Government's allocation of 5000 taels per month from the taxes they collected at Tianjin;¹³⁶ even after foreign occupation ended in 1902, the Chinese government continued to provide that funding. Another portion of funding was obtained through the British Concession's issuing of public bonds, of which the payment was secured by the dues that the customs house charged on all the ships entering the river.¹³⁷

¹³⁴ "History of the Hai Ho Conservancy Commission," W0001-1-007692, 13-15.

¹³⁵ *Resume*, 22.

¹³⁶ *Baguolianjun zhanling shilu: Tianjin linshi zhengfu huiyi jiyao* 八國聯軍佔領實錄：天津臨時政府會議紀要 [A true record of the occupation of the Allied Troops of the Eight Nations: memorandums of the meetings of the Provisional Government of the District of Tianjin] (Tianjin: Tianjin shehuikexueyuan chubanshe, 2004), 317.

¹³⁷ Jiaotongbu jiaotongshi bianzuan weiyuanhui 交通部交通史編纂委員會 and Tiedaobu jiaotongshi bianzuan weiyuanhui, 鐵道部交通史編纂委員會 ed., *Jindai jiaotongshi quanbian*, volume 5 近代交通史全編 (Shanghai: Minzhi shuju, 1931; Beijing: Guojia tushuguan chubanshe, 2009), 143. "Customs Notification No. 156," W0003-1-000059, 17.

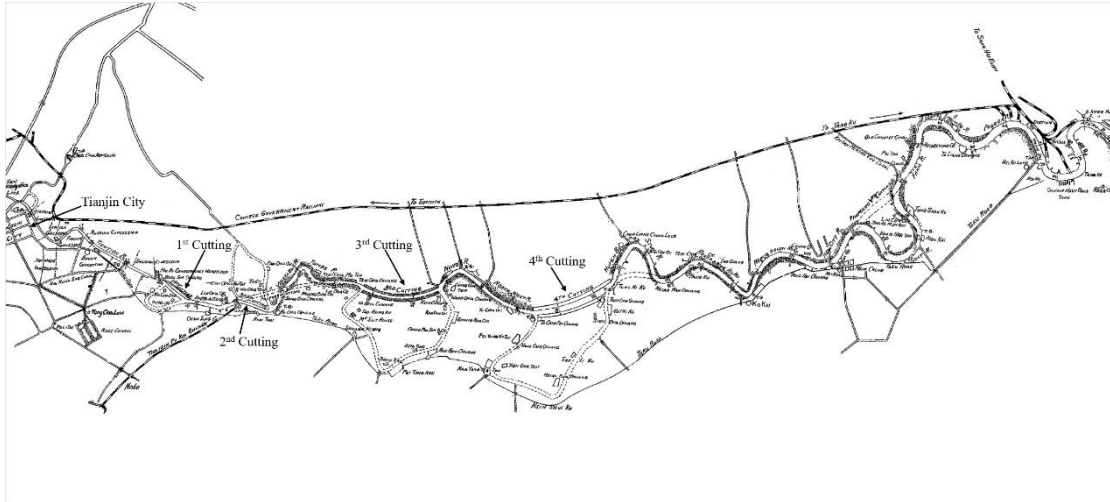


Figure 3 The cuttings on the Hai River

The Commission had hoped for these projects to enable steamships drawing at least 10 feet 6 inches to reach Tianjin,¹³⁸ and the result of the cuttings ably surpassed that expectation. After these three cuttings, the length of the river was shortened from 58.2 to 49.3 miles, and the sailing time from the river mouth to the Tianjin port was shortened by one hour to 4 hours 10 minutes.¹³⁹ For most of the year 1906, steamships drawing 12 feet of water could come up to Tianjin at high water,¹⁴⁰ and by 1911, vessels that had a draft of 13 feet and over could come to the port.¹⁴¹ The cuttings had also improved the tidal range; a larger tidal range meant that the tides possessed a greater capability to scour away the silt in the lower reaches of the river. Upon the completion of the three cuttings in 1905, the tidal range had grown from 1.52 feet to 2.58 feet,¹⁴² and in 1910, the tidal range further increased to 4.05 feet.¹⁴³

¹³⁸ *Resume*, 19.

¹³⁹ *Resume*, 23.

¹⁴⁰ *Resume*, 24.

¹⁴¹ *Resume*, 28.

¹⁴² *Resume*, the notes on "Plan E," no page number. The numbers represent the average rise and fall of the tide during May and June, the period of the greatest tidal range.

¹⁴³ *Jinhaiguan maoyi nianbao*, 321. It is recorded as 15 feet in *Resume*, 33.

Despite the merits of the cuttings, these projects caused more rapid erosion of the bank, so from 1910 onwards, the Commission began to place groins built with rocks and fascines against the concave side of the cuttings in to protect the banks.¹⁴⁴ In 1911, the new engineer-in-chief of the Commission proposed a fourth cutting, which, with the help of a dredger, was finished in 1913, and served to further shorten the river down to 41.5 miles and increase its tidal range to 4.38 feet.¹⁴⁵ After the fourth cutting, in the summer of 1914, the record draft of ships arriving at the concessions' harbor was increased to 14 feet 8 inches.¹⁴⁶

While working on the improvement of the river body, the Haihe Conservancy Commission also attempted to make a deeper channel across the Dagu Bar. Before the river reached the bar, its course through the mud flat was relatively stable. However, due to the complex combination of wind, tides, and currents, there were no permanent natural channels across the Bar.¹⁴⁷ Furthermore, as an engineer of the Commission had observed, any navigable channel over the Dagu Bar was “subject to shoals through a sudden transport of sand from the River, and the out-rush of water will create of its own create a new channel in a different direction and position.”¹⁴⁸ Beginning in 1906, the Commission experimented with different ways of creating a permanent channel across the bar for a decade. The channels that the Commission created over the years as a result of those trials could enable ships drawing more than 17 feet to pass at high water for several years; unfortunately, none of the channels

¹⁴⁴ The groines built with gravel were called “gabbioni,” whereas those with brushwood were referred to as “zinkstuks.” See *Resume*, 29-30.

¹⁴⁵ *Resume*, “Plan E.”

¹⁴⁶ *Resume*, 33.

¹⁴⁷ *Resume*, 109-110.

¹⁴⁸ *Resume*, 111.

could survive a major flood.¹⁴⁹ A channel constructed by rolling rakes was silted up during the flood of 1912, and another channel created by a dredging plant was similarly filled up following the flood of 1917.

Aside from the cuttings of the river bends and attempts to make a stable channel over the bar, the Haihe Conservancy Commission also improved the Hai River's navigability in other ways. Early on, the Commission made it a routine to dredge out the river at places that were being silted up. In the beginning, the commission simply dumped the dredged spoil at the banks or back into the river, which soon proved to be detrimental to navigation. After 1906, the difficulties of getting rid of the spoil was solved by using the deposit to fill up ponds and low land within the foreign concessions.¹⁵⁰ From 1902 to 1937, the Commission dredged 15,168,378 cubic yards of silt in the river, most of which was used to fill low land.¹⁵¹ Another significant achievement of the Commission was that the three-month long freezing period of the port was eliminated. In 1913, the Commission began to use icebreakers to keep the port open in winter; in 1916, for the first time, the Hai River was open the entire year.¹⁵²

The improvements to the navigation conditions of the Hai River energized commerce and trade in Tianjin. An observer stated that "Tientsin was poorly endowed by nature as a port site, and it has been only by constant improvement that the growing trade has been accommodated."¹⁵³ The success of river engineering

¹⁴⁹ *Resume*, 105-117.

¹⁵⁰ *Resume*, 163-164.

¹⁵¹ Calculated using the statistics from the Commission's 1942 report 1942, W0001-1-001600, 492.

¹⁵² *Resume*, 290.

¹⁵³ Margaret Hitch, "The Port of Tientsin and its Problems," *Geographical Review* 25, no. 3 (July 1935): 370.

enabled more vessels to sail through the river and arrive at Tianjin. In 1898, when navigation conditions were at their worst, none of the 744 ships arriving at the Dagu Bar could make it to the port in the foreign concessions; only 2 ships out of 846 in 1899, 4 out of 424 in 1900, and 15 of 689 in 1901 successfully made the trip. After the efforts of the Haihe Conservancy Commission commenced, this number surged. In 1904, among the 707 inbound ships, 374 of them could get to Tianjin, in 1914, 814 of the 1147 inbound ships reached Tianjin, and finally in 1925, 1311 ships arrived at Tianjin out of the 1896 inbound vessels. The record draft at the port of Tianjin increased from 11.5 feet in 1903 to 14.5 feet in 1914, and in 1925, the record was further improved to 18 feet 3 inches.¹⁵⁴ The increased capacity of the Hai River enhanced Tianjin's status as the second largest port in China.¹⁵⁵ From 1904 to 1918, the total number of vessels arriving and leaving Tianjin varied between 1500 and 2000. Throughout the decade from 1919 to 1928, this number doubled to more than 4000, and the annual tonnage of the ships grew from 2,000,000 to 5,500,000.¹⁵⁶ Tianjin's trade value in 1900 was 31,920,658 taels; in 1928, it had increased tenfold to 353,000,000 taels.¹⁵⁷ Among the various types of trade, direct trade with foreign countries was more liable to be influenced by the navigability of the river, as the ships used in direct foreign trade were usually larger than the rest. This direct trade counted

¹⁵⁴ *Resume*, Table I "Return of Vessels at Tientsin Bund, 1898-1919." Hitch, "The Port of Tientsin," 373.

¹⁵⁵ Rasmussen, 283. Shinkoku chutongun shireibu 清国駐屯軍司令部, *Tenshinshi* 天津志 [A record of Tianjin] [1909], trans. Hou Zhentong 侯振彤 (Tianjinshi difang shizhi bianxiu weiyuanhui zongbianji shi, 1986), 266. The Chinese title is *Ershi shiji chu de Tianjin gaikuang* 二十世纪初的天津概况.

¹⁵⁶ Rasmussen, 301. *Jinhaiguan maoyi nianbao*, 471.

¹⁵⁷ Rasmussen, 298-299. *Jinhaiguan maoyi nianbao*, 470.

for about one third of the total trade in 1899,¹⁵⁸ and slightly more than half of the overall trade value by 1905.¹⁵⁹ Eventually, in the 1920s, nearly 70% of the trade at Tianjin was composed of direct trade with foreign countries.¹⁶⁰ Such a volume of trade would have been unthinkable if the Hai River and the Dagu Bar had not been intensely improved for commercial shipping.

The Prospects of Tianjin Remaining a Seaport

The Haihe Conservancy Commission's achievements notwithstanding, the Hai River could only be managed without regard for its larger environment up to a point under the political and technological circumstances. Whenever the Hai River's continuous service to the port in the concessions was questioned due to environmental challenges, the future of Tianjin as a seaport would be called into question. In 1912, a major source water of the North Canal, the Chaobai River, broke through its dike at a location approximately twenty miles to the north of Tongzhou. (Figure 4)

¹⁵⁸ Yao Hongzhuo 姚洪卓, "Zouxiang shijie de Tianjin yu jindai Tianjin duiwai maoyi" 走向世界的天津與近代天津對外貿易 [The open-to-the-world Tianjin and the foreign trade of modern Tianjin], *Tianjin shehuikexue* 天津社會科學 6 (1994): 91.

¹⁵⁹ *Tenshinshi*, 268.

¹⁶⁰ Calculated with data from Tenshin kyoryū mindan ed., 天津居留民團 *Tenshin kyoryū mindan nijisshūnen kinenshi* 天津居留民團二十週年紀念誌 (Tianjin, 1930), 138, 168.

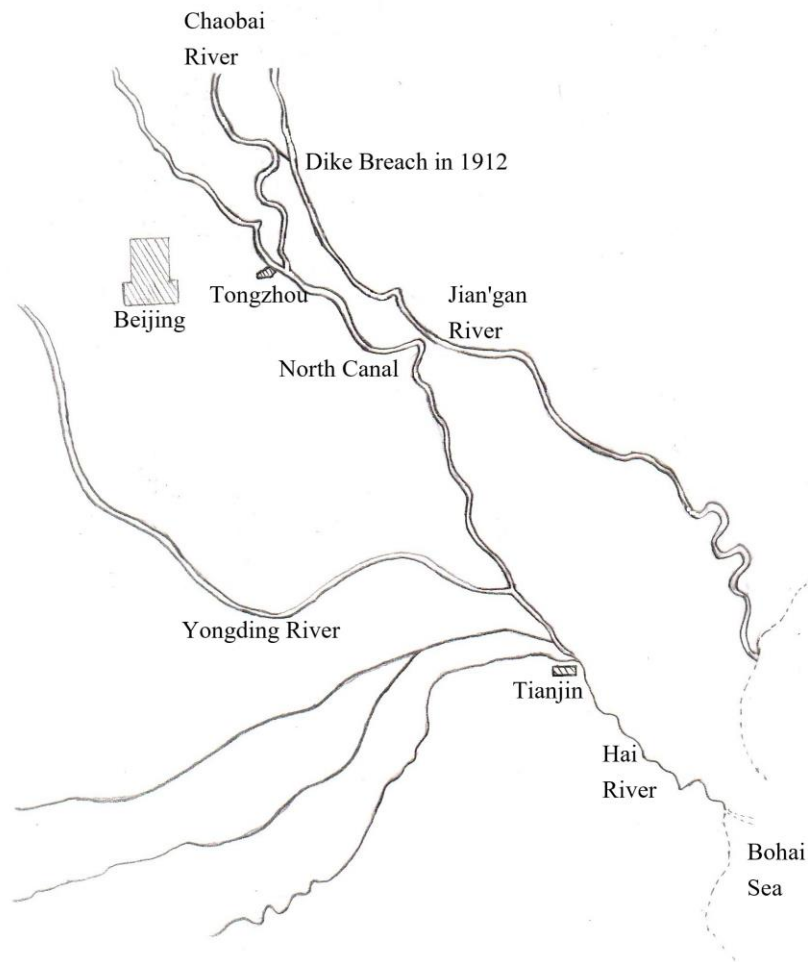


Figure 4 The dike break on the Chaobai River

Following the break, only about 6.4% of the water from the Chaobai still flowed into the North Canal.¹⁶¹ This was to have serious consequences, as the Chaobai River contributed nearly thirty percent of the total water discharged into the Hai River,¹⁶² and with the inflow from the Chaobai River, the North Canal could maintain a higher water level than the Yongding River and thus was able to deter the Yongding River's water from rushing into the canal too fast and bringing too much

¹⁶¹ "The Hai Ho and the Taku Bar: Memorandum annexed to the report laid before the Commission," W0003-1-001874, 74.

¹⁶² W0001-1-007696, 33-34.

silt with it. The Chaobai River also provided a sufficient volume of water and velocity of current in the North Canal to carry off the silt that the Yongding River brought into it.¹⁶³ As the water level of the North Canal dropped following the break, it could no longer restrain the inrush of the Yongding River, nor could it carry away much of the silt brought by the Yongding River. Therefore, more and more silt from the Yongding River was gradually deposited on the beds of the North Canal and the Hai River. By 1915, the effect of the breach of the Chaobai River on the Hai River had become very obvious; the percentage of silt in the water of the Hai River increased to the highest level since 1900.¹⁶⁴ To maintain the depth of the Hai River at its pre-breach level, the Commission's dredgers had to remove about 30,000,000 cubic feet of silt, more than seven times the quantity they had taken away in previous years.¹⁶⁵ As much as the Commission was eager to recover the amount of water that the Hai River once received from the Chaobai River, the Chaobai River was simply out of its reach, and it ultimately had to persuade the Chinese government to close the breach.

The Chinese government at the time, the Beiyang Government, took a very different approach in dealing with the dike breach. Rather than trying to ensure the Hai River's navigability, Chinese officials instead gave high priority to flood prevention in their management of rivers in north China. In their analysis, the root cause of the frequent floods in this region was the stark difference between the

¹⁶³ W0003-1-000200, 88.

¹⁶⁴ In 1912, the sediment concentration was 1.20 kg/m³; in 1913, 0.91; 1914, 0.75. The record for 1915 was 2.12. See the table for "Hai Ho Silt Measurements in Kg. per Cub: Metre," *Haihe Conservancy Commission Report for the Year 1923*, in Tianjin Municipal Archives, Archive of the Tianjin Customs, W0001-1-001600, 154.

¹⁶⁵ *Resume*, 34.

sudden rise in water volume during periods of heavy rainfall and the limited carrying capacity of the river channels. For example, during freshets, water in the Yongding River could rise quickly and rush at 150,000 cubic feet per second, yet the North Canal could only discharge water at a rate of 90,000 cubic feet per second,¹⁶⁶ and as the main outlet of several rivers in the Zhili Province, the Hai River's maximum discharging capacity was only 30,000 cubic feet per second.¹⁶⁷ Therefore, in 1914, the National Conservancy Bureau of the Beiyang Government approved a proposal of letting the Chaobai River remain in its current course and creating a new outlet for the North Canal to join the sea.¹⁶⁸ The work of digging a channel to divert the North Canal away from the Hai River commenced immediately.¹⁶⁹ The North Canal diversion project of the Beiyang Government might have relieved the pressure of flooding for rivers in the Zhili province, but it would also remove one third of the Hai River's water supply. The Haihe Conservancy Commission, accordingly, viewed this project as an "imminent disaster" and expressed strong opposition to it. The head of the Commission wrote to Western diplomats in Beijing, saying that convincing the Chinese government giving up the project was "a matter of life and death" for the port of Tianjin.¹⁷⁰

While the Haihe Conservancy Commission and the westerners at Tianjin were determined to retrieve the Chaobai water in order to keep the seaport of Tianjin alive and prospering, the river authorities of the Beiyang Government and their supporters

¹⁶⁶ W0003-1-000210, 253.

¹⁶⁷ W0001-1-007696, 30.

¹⁶⁸ "Report No. 1004," W0003-1-000200, 49.

¹⁶⁹ "Re Hai Ho Tributaries and Silts carried down on the River bed and the Bar," dated Oct 15, 1915, W0003-1-000200, 86.

¹⁷⁰ Letter dated November 19, 1915, W0003-1-000200, 88.

had a very different view about Tianjin's future. The Dutch engineer Van der Veen, who made the plan of diverting North Canal for the Beiyang Government, believed that the end of Tianjin as a port was foreseeable because of the fast elevation of the Hai River's bed.¹⁷¹ The *Peking Daily News*, a Chinese-owned-and-ran English language newspaper also considered Tianjin a port that would disappear anyway. Even the Gulf of Zhili, according to this newspaper, would in time cease to exist as "the deposit that the many rivers debouching into it carried along would eventually fill it up."¹⁷² Therefore, Van der Veen argued that although his plan would affect the navigability of the Hai River and the prosperity of Tianjin, "the harm done by the diverting of the waters of the Pei Ho [North Canal] into the other river is very small compared with the benefit obtained elsewhere."¹⁷³ He criticized the Haihe Conservancy Commission by stating that it had only one object in view, namely the welfare of Tianjin, and that it failed to realize that "the interests of Chihli [Zhili] are as great, if not greater, than the interests of this northern seaport."¹⁷⁴

As the work of directing the North Canal into a separate course to join the sea progressed, the navigation conditions of the Hai River deteriorated. In March 1916, the dredging plant was unable to cope with the rapid silting up of the river and many steamships could not come up to Tianjin.¹⁷⁵ In May, at some sections of the river, the riverbed had risen no less than eight feet as compared to what it was a year earlier.¹⁷⁶

¹⁷¹ W0003-1-000200, TMA, 248.

¹⁷² "Chihli Conservancy," April 1, 1916, *The Peking Daily News*, newspaper clip in W0001-1-007694, TMA, 35.

¹⁷³ "Conservancy in Chihli," March 23, 1916, *The Peking Daily News*, newspaper clip in W0001-1-007694, TMA, 22.

¹⁷⁴ "Conservancy in Chihli," March 23, 1916, *The Peking Daily News*, newspaper clip in W0001-1-007694, TMA, 22.

¹⁷⁵ W0003-1-000200, TMA, 124.

¹⁷⁶ W0003-1-000200, TMA, 302.

If this project continued, the water level would drop further, and with fewer and fewer steamships coming, Tianjin might lose its status as a seaport. Eventually, the diplomats from countries that had concessions in Tianjin met with high-ranking officials in Beijing and reminded them of the Beiyang government's treaty obligation to cooperate with the conservancy of the Hai River.¹⁷⁷ Under such diplomatic pressure, the Chinese government agreed to call off the North Canal diversion project, and spent 300,000 *yuan* to restore the old course of the Chaobai River. In 1917, a weir was built at the site of the breach to guide water into the old channel but was destroyed soon afterwards during a severe flood.¹⁷⁸

The definitive solution arrived much later. Because the views on Tianjin's future and the priority in river management of the concessions authorities and the Chinese government were in serious conflict, in order to facilitate negotiation and collaboration between the two parties, in 1918 the Chinese government and the Haihe Conservancy Commission agreed to each appoint three representatives in order to form the Commission of the Improvement of the River System of Zhili (the Zhili River Commission). After a long negotiation, in 1921, the representatives reached a compromise: to build a control weir near the breach point of the Chaobai River and use it to direct a limited amount of water into the North Canal. The control weir was completed in 1925. When the velocity of the Chaobai River was under 600 cubic meters per second, all its water was directed into the North Canal; when the velocity was larger than that, 600 cubic meters per second of water were funneled into the

¹⁷⁷ Letter from H.B.M's Minister to Minister for Foreign Affairs, dated April 27, 1916, W0003-1-000200, 141.

¹⁷⁸ Letter from engineer-in-chief to the Haihe Conservancy Board, "Re the Pei Yun Ho," dated July 26, 1917, W0003-1-000200, 233. "Report No. 1103," dated August 15, 1917, W0003-1-000200, 341-353.

North Canal, and the rest was directed into the Jiang'gan River.¹⁷⁹ This partial reversion restored some of the North Canal's capability in reducing the silt from the Yongding River for the Hai River.

The eight years during which the North Canal was too tenuous to restrain the Yongding River happened to also be a period of abundant rainfall and fewer environmental disasters on the North China Plain. During this period, the Haihe Conservancy Commission continued to work on the Hai River and assist the Zhili River Commission in carrying out river works on the tributaries. The Zhili River Commission cut two straight channels through bends on the North Canal and the South Canal near the Sanchahekou in 1918 and 1919, which served to increase the velocity and tidal range in the upper reaches of the Hai River, and thereby improved the scouring effect of water on sediment and deepened the river course.¹⁸⁰ The Haihe Conservancy Commission further shortened the Hai River by 5,000 feet by cutting a fifth bend in 1923, and also purchased a dredger of greater capacity for more intense cleansing of the riverbed.¹⁸¹ From 1919 to 1924, ships drawing 16 to 17 feet could come to the port at Tianjin.¹⁸² Despite the stable condition of the river as a shipping channel in this period, it was becoming obvious that the potential of the Hai River was steadily being exhausted. The Commissioner of the Tianjin Custom commented

¹⁷⁹ *Jindai jiaotongshi quanbian*, 1717.

¹⁸⁰ *Jindai jiaotongshi quanbian*, 1714.

¹⁸¹ "Report for 1923," W0003-1-000608, 4.

¹⁸² North China River Conservancy Commission ed., *Haihe fangyu gongcheng baogaoshu* 海河放淤工程報告書 [Report of silt discharging project of the Hai River] (Tianjin: North China River Conservancy Commission, 1935), 6.

in 1924 that after the fifth cutting, there was not much room left for further improvement on the body of the Hai River.¹⁸³

Although there was not much left to undertake regarding the Hai River itself, the Haihe Conservancy Commission did not abandon the idea of continuously improving Tianjin as a seaport. Instead, its efforts now came to focus on making a deep and stable channel on the Dagu Bar. For the purpose of increasing the capacity of the port of Tianjin, the Commission attempted to use engineering technology to overcome the natural phenomenon of frequent course changing on the Dagu Bar. In 1922, the engineer-in-chief of the Commission proposed to dig a permanent channel that was twenty feet deep across the bar and to build two dikes on the sides of the new channel to protect it from siltation.¹⁸⁴ (Figure 5) The Commission was convinced that the scheme of building dikes to obtain a permanent channel could not only enable vessels drawing twenty feet to cross the bar, but furthermore, with the help of more advanced dredgers, “the channel could be made navigable for vessels of twenty-five feet draft.”¹⁸⁵ Unfortunately, what started as a promising project soon became a significant failure of the Haihe Conservancy Commission. The actual excavation of the new channel and the construction of the retaining dikes began in 1926. By the end of 1928, the dikes on both sides of the proposed new channel were completed and the digging of the channel was halfway through. However, huge amount of silt from the

¹⁸³ *Jinhaiguan maoyi nianbao*, 412.

¹⁸⁴ W0003-1-001874, 110. To confine the tides within the new channel so that the channel could maintain itself, the engineer-in-chief of the Commission, Pincione, planned to build a dike to one side of the proposed channel as retaining wall for the mud discharged by the dredger while the channel was being dug; after the completion of a 300 feet wide channel, another dike would be built on the other side to protect the channel. See W0003-1-000161, 2.

¹⁸⁵ W0003-1-000161, 189.

Yongding River began to be transmitted into the Hai River since March 1927, and the half-finished channel was almost entirely silted by the end of April 1929. This failure re-confirmed to the Commission that their works could “never be consistently efficient until the Hai Ho and Taku Bar [Dagu Bar] are rid of periodical colossal influxes of silt from the Yung Ting Ho.”¹⁸⁶ It finally arrived at the conclusion that “the conservation of the Hai Ho was commenced at the wrong end,” and decided that no major works would be carried out until the detrimental effects of the Yongding River were removed.¹⁸⁷

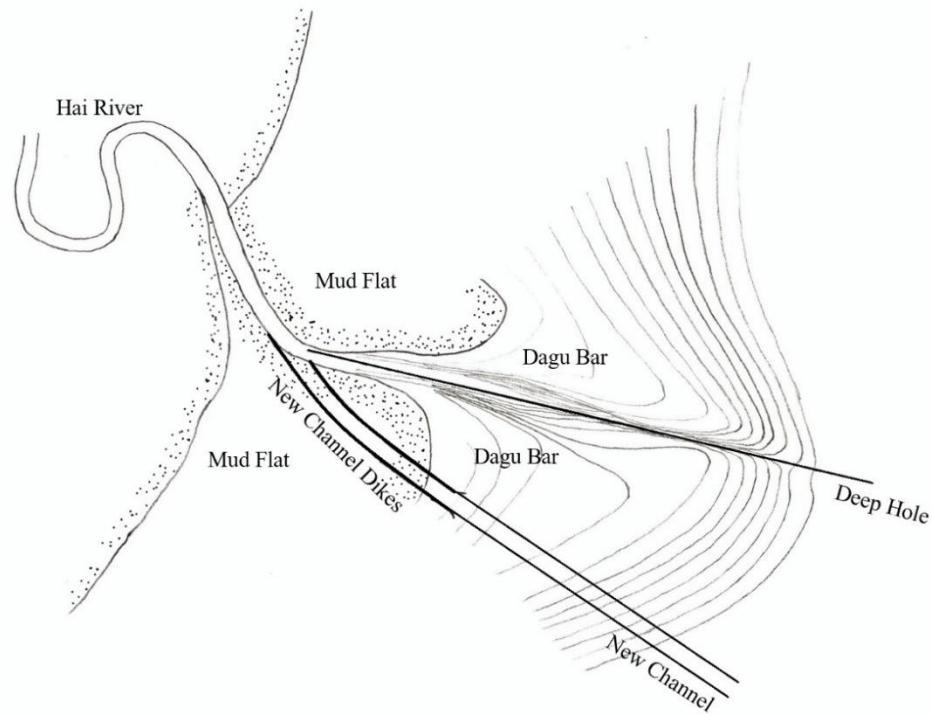


Figure 5 The Dagu Bar new channe

¹⁸⁶ W0001-1-001430, 3

¹⁸⁷ W0003-1-000040, 159.

When the silt in the Hai River was culminating and yet it seemed impossible to completely solve the problem with the Yongding River any time soon, the Haihe Conservancy Commission proposed a more practical plan in 1927, known as the Palliative Scheme, in order to temporarily relieve Tianjin from the excessive silt of the Yongding. The strategy involved utilizing a large area on the left bank of the North Canal as a settling basin for the silt of the Yongding River. When the percentage of silt in the Yongding River was high—usually in July and August—a regulator would be opened, and water from the Yongding River would be released into the settling basin through a newly dug channel. After the silt was settled, the clarified water would then be divided in two channels: one portion of it would return from the settling basin to the North Canal, and from there to the Hai River, while another portion would flow through a different river and into the sea. This periodic diversion of the Yongding River was carried out regularly from 1932 to 1939; during that period, the water diverted from the Yongding River deposited a total of 148,400,000 cubic meters of sediment into the settling basin.¹ A settling basin alone, however, could not solve the problem of the Yongding River permanently. An engineer of the Haihe Conservancy Commission pointed out in 1933 that “the Palliative Scheme should not be regarded as a finite work but as a link in a series of further works.”² He established that until the Yongding River problem was dealt with via a comprehensive plan, the Hai River would remain threatened by it. Indeed, once the settling basin was filled up, a new basin had to be found in order to continue receiving

¹ Yang Guangxiang 楊光祥 “Haihe fangyu gongcheng shimo,” 海河放淤工程始末 in *Tianjin Jin Chen shiji* 天津津辰史跡 (Tianjin: Tianjin guji chubanshe, 2007), 48.

² W0001-1-001430, 6.

the silt from the Yongding River. The settling basin was 116 square kilometers large, and it was very difficult to find another area of the same size where the farmers would agree to have their fields inundated once or twice a year. Even if the settling basin functioned well, the course changing of the Yongding River still frequently rendered the system of directing river into the basin invalid.

The proposal of the Palliative Scheme in 1927 signaled a turning point of the attitude of both the westerners and the Chinese toward Tianjin's prospect of being a seaport. Prior to that time, despite the periodic discussions about Tianjin's unfavorable conditions, the concessions and the Chinese authorities were still confident in keeping Tianjin's prosperity as long as proper conservancy works could be implemented, which proved difficult but not impossible. When the Palliative Scheme was proposed during the implementation of the troubled New Dagu Channel project, however, both the westerners and the Chinese came to the conclusion that it was only a matter of time when the end of Tianjin's service as a seaport would come. The changing attitude of the concession authorities was best embodied in a speech given by S. Kato, the head of the Haihe Conservancy Commission as well as the Japanese Consul-General, in front of the Tianjin Rotary Club in September 1928.³ He spoke of the final resolution of the threats to Tianjin's port in a very uncertain manner: "This [the Radical Scheme of the Yongding River], or any other radical scheme which may be devised completely to eliminate this

³ In 1928, the Tianjin Rotary Club had 54 members comprised of representatives from official, professional, and mercantile sections of the foreign concessions. The nationalities of the members included American, British, Chinese, Danish, Italian, Japanese, Norwegian, and Swiss. See John Cowen, "Misleading ... Inaccurate," *The Rotarian* 32, no. 6 (1928): 63. Jiang Pei and Geng Keyan, 江沛 耿科研 "Minguo shiqi Tianjin zujie waiqiao jingying shetuan: Fulun she," 民國時期天津租界外僑精英社團——扶輪社 [Study on the Alien Elite Societies in Modern Tianjin's Foreign Concessions: Rotary Club of Tianjin] *Lishi jiaoxue*, no. 12 (2013): 5.

damaging feature to the Port, can only be effected at great expense and after protracted negotiations.” Therefore, according to him, it was vital to immediately carry out the Palliative Scheme, a scheme that could not solve the problems once and for all but could “restore the navigability of the Hai Ho right up to Tientsin for a period ranging between 17 and 25 years to come.” He addressed the conditions of the river to be “so serious that the very existence of the port” was threatened.⁴ Soon after Sato’s speech, the foreign concessions in Shanghai responded to the dire situation of Tianjin. The *North-China Herald* commented, “it would be a very sad occasion, indeed, on which one heard the funeral strains of ‘Tientsin no more,’ and it seems somewhat strange that the widespread announcement of the imminent possibility of Tientsin’s demise has been accepted in a very casual manner and apparently has caused very little excitement, even in Tientsin.” The author of this piece called for “a real concern over Tientsin’s predicament, for the circumstances of it are identical almost with those we face here...”⁵

Part of the reason why the worry of Tianjin’s existence was so widespread among the foreigners was the Nationalist Party’s successful Northern Expedition in 1928. It was unclear to the foreigners at Tianjin what would happen once the Nationalist Party took over North China. Foreign concessions authorities in Tianjin were afraid of losing control of the river and port. Indeed, as soon as the Nationalist Government assumed control of North China, it established a North China Conservancy Commission to replace the Zhili River Commission; and starting in 1929, it viewed the reorganization of the Haihe Conservancy Commission as a step in the movement to end the unequal treaties and

⁴ “Mr. S. Kato’s (Japanese Consul-General) speech given before the Rotary Club on 9/10/28,” W0003-1-000004, 40-42.

⁵ “The Tientsin River,” *The North-China Herald*, Oct 27, 1928.

extraterritoriality. The costly failure of the Haihe Conservancy Commission on the New Dagu Bar Channel provided the most useful material for the Nationalist Government's campaign for regaining control over the Hai River. The Chinese Chamber of Commerce of Tianjin and the Chinese inspector of the Maritime Customs at Tianjin criticized the Haihe Conservancy Commission for wasting enormous amount of money yet ultimately accomplishing nothing. They made a proposal to the Hebei Provincial Government to dismiss the foreigner-dominated commission and take control of the conservancy of the Hai River; the Hebei government, in turn, petitioned the central government to do so.⁶ The Nationalist Government agreed and ordered the North China Conservancy Commission to make plans for reorganizing the Haihe Conservancy Commission into an institution under the authority of the Chinese government.⁷

In the meantime, different contemplations of the future of the largest port of north China were put forward. One approach was of course to invest more on conservancy projects that could keep the port on the Hai River accessible. To achieve that goal, as the Zhili River Conservancy Commission had pointed out, the Yongding River had to be given a separate channel, and the Hai River and its connecting rivers had to be redesigned. This plan was really a long shot for both the foreign concessions and the Chinese government due to its prohibitive cost. Another approach was to build a new seaport to replace Tianjin. Tanggu and Dagu, small ports closer to the river mouth, were the obvious candidates. A Chinese engineer of the North China River Commission proposed to build a new port near the river mouth as the commercial center while making

⁶ "Shuili xinwen," 水利新聞 *Huabei shuili yuekan* 2, no. 7 華北水利月刊 [Monthly of North China River Conservancy] (July 1929): 137.

⁷ "Gongwen hanjian," *Huabei shuili yuekan* 2, no. 8 (August 1929): 50.

Tianjin the industrial center. He believed that moving the commercial center toward the sea was “a long-term strategy for maintaining the prosperity of Tianjin and the situation is already tending in this direction,” and this could kill three birds with one stone: getting rid of the burden of the Hai River, solving the disputes around foreign concessions, and unifying the power of governance over the entire watershed of the Hai River.⁸ At the time, it indeed had become more practical to make Tanggu the main port. Tanggu had been facilitated into a port that stretching 8000 feet on the north bank of the Hai River. It was a stop on the Beijing-Mukden railroad, and various companies, Chinese and foreign, had built and operated about twenty docks at Tanggu. There were also modern factories and villages of dormitories for industrial workers, the biggest factory being the Jiuda Salt Refinery, which had developed in Tanggu for 14 years.⁹

The idea of building a new port at Tanggu was, however, unpopular among many stake holders of the port at Tianjin. The *North-China Herald* ridiculed the idea of replacing the port in the foreign concessions with a new port: the new port could not be built “by the waving of a fairy wand,” and in the meantime of building this new port, if all the trade of Tianjin had been redistributed to other ports, “would the new Tientsin be able to recapture it?” It also doubted whether it would really be cheaper to “build a new port and reduce all the fine buildings of the Tientsin Concessions to a tithe of their value” rather than to spend the money on the conservation of the Hai River and the Yongding River.¹⁰ The vested interest on the port in the foreign concessions not just concerned

⁸ Zhu Yanping, 朱延平 “Huabei shuili chubu sheshi lice tan,” [Humble Speculations on the basic plan of the river conservancy of North China] 華北水利初步設施蠡測談 *Huabei shuili yuekan* 1, no. 1 (January 1928): 21-22.

⁹ Song Yunpu, 宋蘊璞 *Tianjin zhi lue* 天津志略 (Taipei: Chengwen chubanshe, 1969), 221-222. Originally published in 1931.

¹⁰ “The Tientsin River,” *The North-China Herald*, Oct 27, 1928.

foreigners, but also Chinese. Following the WWI, the Chinese government regained sovereignty over the former Germany, Austro-Hungarian, and Russian Concessions for years. Therefore, the Chinese government and merchants also possessed a significant share of the interests related to shipping in the Hai River. As for the residents of the foreign concessions, starting in 1912, many retired politicians moved their residences there because of Tianjin's proximity to Beijing and the security of the foreign concessions. In 1928, the overall population of the remaining four foreign concessions and the three concessions-turned special administrative districts was 171,448, of which 161,753 were Chinese.¹¹ This group was comprised of wealthy Chinese politicians, comparators, high-level employees of Chinese firms, and office personnel of foreign firms, as well as the servants and other service providers for the foreigners and wealthy Chinese.¹²

Although the foreign concessions enjoyed the greater share of the profit from the port on the Hai River, the parts of the city that under the administration of the Chinese government also benefited from the vibrant economy that the smooth operation of the port helped create. The old center of transportation and commerce, the Sanchahekou area, had been surpassed by the British and French Concessions, but it remained a hub for river transport and a center for local business. Not far from it, a center of manufacturing had developed, where numerous blacksmith shops, machinery shops were concentrated. To the northeast of the old Chinese city, a new Chinese city had been designed and built to accommodate the local government, model factories, schools, exhibition grounds, and

¹¹ *Tenshin kyoryū mindan*, 68.

¹² Gail Hershatter, *The Workers of Tianjin, 1900-1949* (Stanford, California: Stanford University Press, 1986), 21.

parks since 1907. Areas to the south and west of the old Chinese city that used to be low-lying wasteland had been transformed into residential areas where wealthy Chinese liked to invest in land and properties.¹³ Throughout the city, there were urban infrastructures and facilities that had cost a huge sum to build and could not be easily moved. Tap water of both the Chinese city and foreign concessions was provided by the German-founded Tientsin Native City Water Works Company. The British, French, and Japanese Concessions had their independent electricity plant, and a Belgian company supplied the rest of the city with electricity. The railway stations and the tramway system, too, were centered on Tianjin.

Almost all the important sectors of Tianjin relied upon the city's special status as a market and a gateway to many other markets. Chinese officials, warlords, and merchants were primarily interested in investing their wealth not only in urban real estate, but also in pawn shops, banks, grain shops, and other commercial enterprises. In 1928, there were 30,000 restaurants, shops, and companies engaging in all kinds of commerce in Tianjin, 20,000 of these were in the Chinese area and more than 25,000 were Chinese-owned.¹⁴ Some political elite and warlords began to invest in modern industry in the 1910s, such as in cotton mills, flour mills, and carpet factories. Chinese merchants in the twentieth century also began to invest in handicraft workshops that made textile products such as military uniforms and towels. Foreigners controlled the vast majority of import: the goods were taken to Tianjin on foreign ships and the trading was conducted by the

¹³ Qiao Hong, 喬虹 *Tianjin chengshi jianshe zhi lue* 天津城市建設志略 (Beijing: Zhongguo kexuejishu chubanshe, 1994), 51-52

¹⁴ Luo Shuwei, 羅澍偉 *Jindai Tianjin chengshishi* 近代天津城市史 (Beijing: Zhongguo shehuikexue chubanshe, 1993), 375-377.

foreign trading firms. Foreign investment also went into export-processing plants specialized in sorting and packing eggs, nuts, soybeans, straw-braids, pig bristles, and bird feathers.¹⁵ The number of foreign trading companies, shipping companies and banks increased from 40 in 1902 to 2686 in 1936.¹⁶ In the early 1930s, Japanese, British, and American capitals increased investment in textile, chemical, and food industries in Tianjin. These businesses constituted most Tianjin inhabitants' livelihood: the earlier demographic survey on occupations is absent but in 1936, 79% of the Chinese population worked in the sectors of industry, commerce, and transportation.¹⁷

Given that the key interest of both Chinese and foreigners was indivisible from the port at Tianjin, moving the port to or building a new port at Tanggu would certainly met with many obstacles. Furthermore, when the Nationalist Government designated Tianjin as a Special Municipality that was under the direct administration of the central government in 1928, Tanggu was not included as part of the municipality. Therefore, there were also debates about how the boundaries of the municipality should be drawn surrounding the proposal of relocating the port to Tanggu. Instead, the municipal government was more interested in developing the banks of the Hai River, where it had regained control over some former concessions. The municipal government called for proposals for city planning in 1930, and the most highly rated plan took the foreign concessions into consideration and proposed to eventually construct the former Belgian Concession into the center of the port to replace the British Concession.¹⁸ The municipal

¹⁵ Gail Hershatter, *The Workers of Tianjin*, 25-34.

¹⁶ Luo Shuwei, *Jindai Tianjin*, 371.

¹⁷ Li Jingneng, *Tianjin renkou shi*, 251.

¹⁸ Liang Sicheng 梁思成 and Zhang Rui, 張銳 *Tianjin tebieshi wuzhi jianshe fang'an* 天津特別市物質建設方案 [Plan for material construction of the Special Municipality of Tianjin] (Tianjin: Beiyang meishu yinshuasuo, 1930), Section 10, no page number.

government had indeed put investment and work into the former Germany, Austro-Hungarian, and Belgian Concessions. From 1928 to 1936, the municipal government achieved some progress in paving the roads, water works, and building houses for residential and commercial uses, embankment, parks, and bridges in the former-concessions-turned-special-districts.¹⁹

However, Tianjin's status as the biggest seaport in the north was still under the shadow of being replaced. The North China Conservancy Commission established in 1928 had another crucial task, which was to build the Great Northern Port according to a plan drawn up by Sun Yat-sen in 1919, the "International Development of China."²⁰ In Sun's plan, the Great Northern Port would "serve as a base of operation of this International Development Scheme, as well as a connecting link of transportation and communication between China and the outer world." Sun deliberately bypassed Tianjin and instead proposed to build this Great Northern Port midway on the coastline between Tanggu and Qinhuangdao. According to Sun, the new site, because of its proximity to the deep water of the Gulf of Zhili, would provide an ice-free port, whereas Tianjin and Qinhuangdao were "too far from the deep water line and too near to fresh water which freezes in winter." He claimed that with its broad hinterland, proximity to Tianjin, and superior natural conditions, this Great Northern Port would be developed "as large as New York in a reasonable limit of time."²¹ There were other reasons why Sun would rather develop a northern port anew instead of Tianjin: he had located the capital of

¹⁹ Tianjinshi difangzhi bianxiu weiyuanhui bangongshi 天津市地方志編修委員會辦公室 and Tianjin tushuguan, ed., 天津圖書館 *Yishi bao Tianjin ziliao dianjiao huibian* (Tianjin: Tianjin shehuikexueyuan chubanshe, 1999), vol. 2, 1284, 1296, 1304, 1310, 1312, 1316, 1318; vol. 3, 1374-5, 1376.

²⁰ Sun Yat-sen, *The International Development of China* (New York and London: G.P. Putnam's Sons, 1922), 12-13.

²¹ *Ibid*, 13-15.

China's Republic in Nanjing, and once Beijing lost its status as the capital of the state, the importance of Tianjin would also drop. An engineer-official mentioned another reason why Sun avoided Tianjin: to curtail the established western powers at the treaty port.²² In 1928, the North China Conservancy Commission began the preparation for this ambitious scheme that had been divided into three phases and was expected to be completed in 50 years. Unfortunately, soon after the Japanese troops invaded Manchuria, the project of the Great Northern Port came to a *de facto* halt in 1932 due to the political instability.²³

After 1927, no matter how hard the Haihe Conservancy Commission tried, the Hai River could not continue to be improved as it had been since 1900. The navigation condition of the Hai River reached its peak in the 1920s and declined after 1927 and into the 1930s. From 1921 to 1927, the largest drafts of the ships that could come to Tianjin were sixteen to eighteen feet. From 1929 to 1937, the record dropped to thirteen to fifteen feet. Despite more ships approaching Tianjin from the sea in the decade between 1927 and 1937, the number of vessels that could navigate through the Hai River and reach the port in the concessions decreased significantly. From 1921 to 1927, the number varied between 1,000 and 2,000, but on average about 1,370 ships arrived at the port in the concessions each year. By contrast, the statistics for the next decade were rarely above 1,000, and the average number of ships that arrived at the concessions was 889.²⁴ As the shipping conditions in the Hai River deteriorated after 1927, it was unclear what Tianjin's

²² Li Shutian, 李書田 “Beifang dagang zhi chubu jihua,” 北方大港之初步計劃 *Huabei shuili yuekan* 2, no.9 (1929): 122-123. Li Shutian, “Tianjin tonghai hegang yu Dagu xingang,” 天津通海河港與大沽新港 *Shuili tongxun* 14, no. 3 水利通訊 (1946): 81.

²³ “Beifang dagang gongzuo tingdun” 北方大港工作的停頓 *Shen bao*, May 28, 1932.

²⁴ Report of the Haihe Conservancy Commission for 1937, W0001-1-001600, 285.

future would become. Fortunate for Tianjin, it had acquired another key position in the land transportation system.

CHAPTER II The Railroads and the Growth of Tianjin



Figure 6 A map of Tianjin dated 1899

On a map of Tianjin drawn by a Chinese painter in 1899 (Figure 6)¹, the tracks of two railroads and the trains running on them were depicted disproportionately large. These two railroads, one connecting Tianjin with the empire's capital, Beijing, and the other linking Tianjin and another important garrison on the east coast of China, Shanhaiguan, were indeed critical to the city. Before the introduction of railroads to Tianjin, throughout the Ming and the first two centuries of the Qing, the prosperity of Tianjin was dependent on the Grand Canal, the artery for transporting tribute grain and all kinds of goods from the south to Beijing. As I demonstrated in the previous chapter, in 1853, the Taiping Rebellion blocked the Grand Canal, and as a result, many bustling ports of the Grand Canal began to decline. Fortunately for Tianjin, it became a seaport which received tribute grain shipped through the sea route, thereby preventing it from declining like

¹ Library of Congress, collections of the Geography and Map Division.

many other cities and towns along the Grand Canal. Tianjin's fortune in the late nineteenth and the early twentieth century, however, was not solely due to it being a major seaport; it also benefited from the introduction of another new means of transportation into China, the railroad, during that period. In 1888, Tianjin was the first port city to be linked to railroads in China. As more railway lines were built connecting Tianjin with the rest of China, such as the two appearing on the above map, the status of Tianjin steadily rose on the emerging new hierarchy of cities. Tianjin was transformed into a railway hub as well as a metropolis of north China in the late Qing and remained so throughout the Republican era.

The existing scholarship on Tianjin has established the positive effect of the railway system on Tianjin's development, but it has not yet questioned why Tianjin became the first city to be connected to the railroad and how its status changed as the railway system expanded.² In the recent decade, there is a rising body of Chinese scholarship on the Chinese railroads and their regional economic and social impact.³ This scholarship has advanced our understanding about new transportation and China's modernization. However, the common pattern is to treat the railroad system as a given

² See Lai Xinxia 來新夏, *Jindai Tianjin chengshishi* 近代天津城市史 (Beijing: Zhongguo shehuikexue chubanshe, 1993); Liu Haiyan 劉海岩, *Kongjian yu shehui: jindai Tianjin chengshi de yanbian* 空間與社會：近代天津城市的演變 (Tianjin: shehuikexueyuan chubanshe, 2003).

³ A number of books on railroad and regional development have been published in the recent decade in China. These works cover Neimenggu (Inner Mongolia), North China, Shaanxi, Shandong, Jiangsu, Anhui, and Guangdong. For example, see Xiong Yaping 熊亞平, *Tielu yu Huabei xiangcun shehui bianqian* 鐵路與華北鄉村社會變遷 (1880-1937) (Beijing: Renmin chubanshe, 2011); Guo Haicheng 郭海成, *Long-hai tielu yu jindai Guanzhong jingji shehui bianqian* 隴海鐵路與近代關中經濟社會變遷 (Xi'an: Xinan jiaotong daxue chubanshe, 2011); Ge Yuhong 葛玉紅, *Hu-Ning tielu yu Jiangsu shehui* 滬寧鐵路與江蘇社會 (1903-1927) (Nanjing: Jiangsu daxue chubanshe, 2014); Yue Qintao 岳欽韜, *Yi Shanghai wei zhongxin: Hu-Ning Hu-Hang-Yong tielu yu jindai Changjiang sanjiaozhou diqu shehui bianqian* 以上海為中心：滬寧、滬杭甬鐵路與近代長江三角洲地區社會變遷 (Beijing: Zhongguo shehuikexue chubanshe, 2016).

and neglect the mutual constitution of the emerging transportation system and the cities along the tracks. Therefore, it remains unclear how the adoption of railroad reconfigured the positions of cities in a period of drastic socio-political change. This chapter intends to explore this question and explain why railroad was introduced to Tianjin earlier than other cities of China and how railroad helped Tianjin avoid the misfortune of decline.

Becoming the First City Connected to the Railroad

Following the Second Opium War, the Treaty of Beijing opened Tianjin as a treaty port and granted the Western powers the privilege of renting land permanently in Tianjin. Britain, France, and the United States in 1860 and 1861 selected their parcels of land to the southeast of the Chinese walled city, along the west bank of the Hai River. Faced with the increasingly complicated political spectrum of Tianjin, the newly established Zongli Yamen (總理衙門), or the Office of Foreign Affairs, proposed to appoint at Tianjin a new position, Sankou tongshang dachen (三口通商大臣), the Commissioner of the Trade of the Three Ports, to oversee the trade and foreign relations of Tianjin and two other treaty ports, namely Niuzhuang in Liaoning and Dengzhou in Shandong. This appointment, however, was only seen as a temporary one. The Minister of the Zongli Yamen, Prince Gong, pointed out in a memorial to the throne:

Now, in the port of Tianjin, we will soon conduct foreign trade. There are only imports and no export of any significance. If after a long time, trade does not thrive, they [the foreigners] will certainly despair and consider returning home. If that happens, we plan to evaluate the situation and we may eliminate the appointment of Trade Commissioner to reduce excess personnel.⁴

⁴ Jia Zhen 賈禎, *Chouban yiwu shimo* 籌辦夷務始末 (Beijing: Zhonghua shuju, 1979), 2677.

In his plan, the appointment of the Trader Commissioner in Tianjin was contingent on the foreign trade at this port, which he anticipated to be of no significance. As such, this new position, despite its arduous responsibilities, was not one of a high rank. He appointed Chonghou (崇厚), the former Changlu Salt Supervisor (長蘆鹽務), to this position. With few resources at his disposal, Chonghou could only act as the Zongli Yamen directed.

Meanwhile, the Qing's continuous defeats at the hands of the Western colonial powers since 1840 had driven a number of high officials to search for solutions. They gradually came to the conclusion around 1860 that the secret of the Western powers' strength was their "solid ships and effective guns."⁵ To make China equal to the West and to eventually surpass the Western powers, these officials decided that China first had to learn technologies from the West. A group of officials launched a series of modernizing projects aimed to strengthen the defense power of China.⁶ Their efforts roughly from 1861 to 1895 were known as the "Self-strengthening Movement." These modernization projects proved incredibly expensive for the Qing government; in the mid-nineteenth century, the Qing government was deeply in debt due to a huge amount of war indemnities, and so it could only sponsor the modernizing projects such as establishing arsenals and shipyards within a selected few treaty ports and provincial capitals. Without an enthusiastic reformist provincial governor or resourceful local officials, Tianjin appeared rather late on the map of Self-strengthening Movement. By the early 1860s, the reformist officials had already established arsenals and ship yards in Shanghai, Fuzhou,

⁵ Jonathan Spence, *The Search for Modern China* (W. W. Norton & Company, 1991), 197.

⁶ Immanuel C. Y. Hsü, *The Rise of Modern China* (New York: Oxford University Press, 1975), 348. William Rowe, *China's Last Empire: The Great Qing* (Cambridge, Massachusetts: 2009), 215.

and Hankou.⁷ It was not until 1867 did Chonghou found the first arsenal in Tianjin under the direction of the Zongli Yamen, which set Tianjin within the orbit of the Self-strengthening Movement. A second arsenal was added in 1868, when Zeng Guofan assumed the position of the Governor-General of Zhili.

Ten years after Tianjin's opening as a treaty port, the munitions industry in Tianjin had just begun. The first decade of the foreign concessions in Tianjin was marked by very limited development as well.⁸ From the perspective of the Qing government, to make concessions on foreign settlements was a political gesture to show its own generosity and to pacify the Western powers. More importantly, the Qing government also considered foreign concessions as a tool of governance that could effectively separate foreign communities from the local society, thus reducing the chance of conflict and western assimilation.⁹ Therefore, the foreign concessions were located away from the prosperous part of the city and the population there was scarce. Across the 4853 square-yard-large concession areas, 218 Chinese households were scattered. The density of population there was only 5.7% of that in the walled city.¹⁰ The first foreign settlers coming to Tianjin were merchants seeking wealth who saw better opportunities for their businesses in the more densely populated Chinese city than in the underdeveloped concessions. In addition to the foreign traders, foreign diplomats and missionaries also

⁷ In 1861, Zeng Guofan had established the first modern arsenal in China at Anqing. Zeng moved the Anqing Arsenal to Nanjing in 1864. In 1865, Li Hongzhang established the Jiangnan Arsenal in Shanghai. Soon in 1866, Zuo Zongtang founded the first modern shipyard in Fuzhou.

⁸ Otto Rasmussen, *Tientsin: An Illustrated Outline History* (Tianjin: Tientsin Press, 1925), 40.

⁹ Marie-Claire Bergère, *Shanghai: China's Gateway to Modernity*, trans. Janet Lloyd (Stanford: Stanford University Press, 2009), 20-21. John Fairbank, *The Chinese World Order* (Cambridge, Massachusetts: Harvard University Press, 1968), 261.

¹⁰ Gao Yanlin 高艳林, *Tianjin renkou yanjiu* 天津人口研究 (Tianjin: Tianjin renmin chubanshe, 2002), 65.

chose to reside in the Chinese city. Consequently, between 1860 and 1870, most of the foreign traders “continued to have their places of business in the city,” and “even those who built in the concessions, still maintained agents and godowns [warehouses] in the city suburb.”¹¹ Not surprisingly, by 1870, with the exception of several blocks and the waterfront in the British Concession, a large portion of the concession areas had not been significantly transformed after the arrival of the westerners. A British reporter described the American settlement as “up to 1870, without a house, and the land was mostly used for ice-pits.” According to him, the French settlement “was a wretched terrain given up to pools, cabbage gardens, hot pits for storing fruit and vegetables.”¹²

A violent Sino-foreign conflict in 1870 interrupted the concentration of foreigners in the Chinese city and the slow development of the concessions. At the time, the French were probably the most visible foreigners in the Chinese city due to the presence of the French Consulate, the French Catholic Church named Notre Dame des Victoires, and the convent of the Sisters of Charity of St. Vincent de Paul. Next to each other, the French Consulate and the Catholic Church were located at a highly symbolic place for the Chinese: the so-called Sanchahekou (三岔河口), the confluence of the North Canal, the South Canal, and the Hai River. Sanchahekou was the commercial center of Tianjin. On the sites of these two French properties, a watch tower and a Daoist temple had once stood and had been visited several times by Qianlong, the great emperor of the Qing. The Anglo-French allied troops occupied these two buildings in 1858 when they forced themselves into Tianjin during the Second Opium War, and converted them into their

¹¹ Rasmussen, *Tientsin*, 40.

¹² Rasmussen, *Tientsin*, 44.

own lodges and headquarters.¹³ After peace was settled in 1861, the French Consul refused to return the two properties and managed to rent from China the land on which they stood in 1862.¹⁴ The French made the watch tower into their consulate and demolished the original buildings of the temple to build the Catholic church. In 1870, one year after the church was erected, a rumor that the missionaries were kidnapping children in order to harvest their organs for making medicine spread across in Tianjin. In the afternoon of June 21, 1870, directly instigated by the rumor and also driven by a general resentment towards the French power and their missionaries, a crowd of local people attacked the French Consulate, Catholic church, and convent, and killed sixteen foreigners including diplomats, nuns, businessmen and their wives.¹⁵

Following this incident, the French demanded an apology, reparations, and death penalties to the responsible commoners and officials. They gathered their warships at the coast of Tianjin and threatened to evacuate nationals and declare war.¹⁶ The Qing court was shocked by the most severe case related to Christianity to date had occurred at a place so close to the state's capital. Fearful of another war against the French, the Qing government instructed Zeng Guofan, the Governor-General of Zhili, to go to Tianjin to settle this case. Zeng Guofan understood that this was a formidable task, even going so far as to write a will before departing from Baoding. Pressured by the French and criticized by his colleagues, Zeng Guofan soon fell ill. In August, the court sent Li

¹³ Laurence Oliphant, *Narrative of The Earl of Elgin's Mission to China and Japan, in the Years 1857, '58, '59* (New York: Harper & Brothers, 1860), 327-330.

¹⁴ The Archive of Zongli Yamen, collected in Academia Sinica, Taiwan. No. 01-03-001-04-013.

¹⁵ Spence, *The Search for Modern China*, 205.

¹⁶ Tou Tsung-I 寶宗一, *Li Hongzhang nianpu* 李鴻章年譜 (Kowloon, Hong Kong: Union Press Circulation Company, 1968), 78-79.

Hongzhang to Tianjin to carry on the negotiation and to succeed the position of Governor-General of Zhili.¹⁷

Li Hongzhang was born to a Han scholar family in Hefei, Anhui Province in 1823. He earned the rank of *Jinshi* in 1847.¹⁸ After serving several official posts, he was assigned to his home province Anhui in 1853 to assist organizing a local militia to fight against the Taiping troops.¹⁹ During the battles against the Taiping troops and the Nian rebels in the 1850s and 1860s, Li consolidated his Huai Army. His collaboration with the foreign troops in oppressing the rebellions made him respect the power of the Western guns and ships.²⁰ On account of his great contributions to Qing victories in suppressing the rebellions, Li was promoted to the position of Governor-General of Hubei and Hunan in 1869. While in this position, he settled two cases of conflicts between Christian missionaries and local Chinese communities.²¹

After arriving at Tianjin, Li Hongzhang settled the case, which was known as the “Tianjin Massacre” in western sources, by having sixteen Chinese executed and the prefect and magistrate of the Tianjin region exiled. The Qing court also paid a compensation of 250,000 taels to the French. The fact that French did not pursue harsher terms was primarily due to the outbreak of the Franco-Prussian War, which distracted France from Asian affairs.²² This incident, according to a British reporter, caused “a general exodus of foreigners from the [Chinese] city,” and since then, very few

¹⁷ Tou, *Li Hongzhang nianpu*, 80.

¹⁸ Tou, *Li Hongzhang nianpu*, 12.

¹⁹ Tou, *Li Hongzhang nianpu*, 14.

²⁰ Hsü, *The Rise of Modern China*, 346.

²¹ Tou, *Li Hongzhang nianpu*, 75.

²² Spence, *The Search for Modern China*, 205.

westerners chose to reside in the Chinese city.²³ The French Consulate was moved to the concessions in 1871, and many foreign traders relocated their residences and businesses to the concession areas.²⁴ Moreover, this incident drew the attention of the Qing court to the intensity of Tianjin's situation and brought Li Hongzhang to Tianjin, whose arrival soon proved to be a game changer for the city.

After this incident, the Qing government terminated the appointment of the "Commissioner of the Trade of the Three Ports," and assigned Li Hongzhang the position of the Governor-General of Zhili Province and the newly minted title "Commissioner of the Trade of the Northern Ocean (北洋通商大臣)." Unlike the Commissioner of the Trade of the Three Ports, who held no authority over the officials on the levels of circuit, county, and prefecture, the dual appointment made certain that the commissioner in charge of trade and foreign affairs could mobilize all the local officials as well as the military commanders. The Qing government in the edict of appointment described the responsibilities and expectation of this dual appointment as follows.

All the issues about foreign affairs and coastal defense are to be placed under the control of the Zhili Governor-General. Following the precedent of the Commissioner of Trade of the Southern Ocean, he is to be given the stamp of Imperial Inspector-General to display his credibility and authority. The Donghai Customs within the jurisdiction of the Circuit Intendent of Denglaiding in Shandong and the Niuzhuang Customs within the jurisdiction of the Circuit Intendent of Fengjin in Fengtian are to be placed under the Commissioner's supervision. Since the position of Trade Commissioner has been

²³ Rasmussen, *Tientsin*, 44.

²⁴ Rasmussen, *Tientsin*, 56.

eliminated, it stands to reason that the Governor-General should take up long-term residence at Tianjin, so that he will be close at hand to suppress and to respond swiftly to any disturbances. Additionally, I approve the recommendation that the office of the Trade Commissioner be converted into the temporary residence of the Zhili Governor-General, that the Governor-General move to Tianjin every spring when ice at the port has melted, and that the Governor-General return to the provincial capital when the rivers freeze in winter. If an important matter were to arise in Tianjin, the Governor-General would not be bound by the regulation that he returns to the provincial capital when the rivers freeze.²⁵

The arrangement that the Governor-General spent most of the time at Tianjin, instead of the provincial capital showed the Qing government's concern regarding Tianjin's intense situation. The most competent of the reformist officials, Li Hongzhang, was now in charge of the administration, defense, trade, and foreign relations of the Zhili Province as well as the trade and foreign relations within the treaty ports in Shandong and Liaoning. From this moment on, Li Hongzhang gradually secured Tianjin as his base for the Self-strengthening projects and significantly enhanced the status of the city.

Before he came to Tianjin, during his time as the Governor-General of Jiangsu, Anhui, and Jiangxi, Li Hongzhang had supervised the Jinling Arsenal in Nanjing and founded the Jiangnan Arsenal in Shanghai under a belief in China's urgent need for military strength. He had earned the fame among the foreigners as the most enthusiastic reformer as well as recognition of his diplomatic ability from Prince Gong, who was the

²⁵ Gu Tinglong 顧廷龍, and Dai Yi 戴逸, eds. *Li Hongzhang quanji* 李鴻章全集, Volume 4 (Hefei: Anhui jiaoyu chubanshe, 2008), 111.

head of the Zongli Yamen. His strategic talent in fighting against the Taiping and Nian rebels and his loyalty showed by his voluntary disarmament of the Huai Army after the victory also earned him the trust of the Empress Dowager Cixi. When he stepped into his position in Zhili, he brought along his ambitions of strengthening China's military and all his political and personnel resources to Tianjin.

Immediately, he asked the court to add a staff as the Customs Circuit Intendent (海關道臺) in Tianjin to attend to foreign affairs and issues within maritime and native customs, and he also nominated a candidate for this position. In the past, the Commissioner of the Trade of the Three Ports used “*zhaohui*” (照會) to communicate with foreign consuls, which was a form of official document among equals. With his high status as Governor-General and Imperial Inspector-General, Li Hongzhang argued that “it would harm the ‘dignity of the state’ (國體) and incite arrogance in the foreigners” if the court let him to interact with the foreigners as equals.²⁶ According to Li, this problem could only be solved by adding a Circuit Intendent of Customs. More importantly to Li Hongzhang, a new circuit intendent would improve the mechanism of mitigation with the foreigners. In a memorial to the throne, he said:

In cases of Sino-foreign communication, foreigners often pretend to be tough. If there were a Circuit Intendent who took orders from me, passed them down to the foreigners, gave them instructions and negotiated with them, then I would have more flexibility.²⁷

²⁶ *Li Hongzhang quanji*, volume 4, 108.

²⁷ *Li Hongzhang quanji*, volume 4, 108.

His request was unusual because the quota of local appointments had remained stable since the eighteenth century; whenever a position was added, another position would be eliminated or combined with the new one. In this case, however, Li argued that “all the circuit intendent positions in Zhili Province were at important locations, so it was impossible to reassign or combine any of them.” For example, he went on, “the Tianjin circuit intendent manages the sea transportation of tribute grain; it is already extremely complicated and difficult to successively transfer millions of *shi* of southern tribute grain to Tongzhou each year.”²⁸ In other words, the Tianjin circuit intendent could not attend to foreign affairs concurrently. The court made an exception and approved his request in regard to the special requirements in Tianjin. With a Customs Circuit Intendent acting as a mediator and communicator between Li Hongzhang and the westerners at Tianjin, Li acquired more wiggle room in negotiating with the Western powers.

In Li Hongzhang’s understanding, armament and warships were fundamental to the power of a state. In order to produce more powerful and refined armaments without purchasing resources such as iron and steel from overseas, he advised the court that China had to adopt western techniques to mine the coal and iron in its territory.²⁹ In addition to a well-equipped army and navy, he also suggested that China should build telegraph lines and railways so that during wartime, intelligence could be transmitted and troops could move rapidly.³⁰ He knew the Qing court and the conservative clique well enough that he did not expect them to accomplish all of these at once, and therefore moved carefully bit by bit towards his goal of strengthening defense.

²⁸ *Li Hongzhang quanji*, volume 4, 108.

²⁹ *Li Hongzhang quanji*, volume 6, 162.

³⁰ *Li Hongzhang quanji*, volume 6, 165.

His first move was to expand the Tianjin arsenals and empower the coastal defense. In 1871, he brought Shen Baojing to Tianjin to administer the arsenals, whom he had known for nearly thirty years and once deputed to manage the Jiangnan Arsenal in Shanghai.³¹ The same year, he had foreign canons installed at the Dagu fort³² and built a magazine at the confluence of the Daqing River and the North Canal in order to facilitate the delivery of arms.³³ In 1872, he backed the establishment of the earliest enterprise of “government supervision and merchant management (官督商辦),” the China Merchants Steam Navigation Company in Shanghai.³⁴ The next year, a branch of this company was opened in Tianjin. In 1874, one more step toward his goal of strengthening the military, he obtained the court’s authorization to train a new navy and purchase warships.³⁵

Seeking fuels for his newly established defense industry and the recently imported warships, Li Hongzhang requested the Qing government to open coal and iron mines.³⁶ At the time, it was already known that China had a rich deposit of coal, yet its mining techniques limited the production, and thus, to meet domestic demands, China had to import coal from Japan and Britain.³⁷ Once his request was approved, Li Hongzhang sent staff to investigate several potential sites for coal mines, and ultimately picked the Kaiping district as the location for his mining scheme. Kaiping was a place in

³¹ *Li Hongzhang quanji*, volume 4, 113.

³² Tou, *Li Hongzhang nianpu*, 82, 87.

³³ Wu Rulun 吳汝綸, eds., *Li Wenzhong gong quanji* 李文忠公全集, volume 1 (Taipei: Wenhai chubanshe, 1962), 591.

³⁴ Spence, *The Search for Modern China*, 218-9.

³⁵ Tou, *Li Hongzhang nianpu*, 99.

³⁶ Tou, *Li Hongzhang nianpu*, 99.

³⁷ Percy Kent, *Railway Enterprise in China: An Account of its Origin and Development* (London: Edward Arnold, 1907), 23. Mi Rucheng 宓汝成, *Zhongguo jindai tielu shi ziliao* 中國近代鐵路史資料 (Beijing: Zhonghua shuju, 1963), volume 1, 122.

the Zhili Province, located midway between Shanhaiguan, where the Great Wall meets the sea, and Dagu at the mouth of the Haihe River.

In 1876, Li Hongzhang sent Tang Tingshu (唐廷樞), the Director General of the Chinese Merchants Steam Navigation Company, to further examine the mines in Kaiping. Tang reported that the coal and iron from Kaiping were of excellent quality, but the transportation of the minerals was problematic. The major destination of the Kaiping coal was Tianjin. In order to reach Tianjin, the coal had to first be transported for about 30 miles to Lutai with carts pulled by mules or horses; at Lutai, the Ji Canal could take the coal for another 5 miles to the mouth of the Beitang River where the coal could be shipped to Tianjin along the coast through the sea. This method of transportation had already rendered expenses higher than simply obtaining coal from Japan and Taiwan. Once the western mining technique was adopted, the productivity would rise to 5000 to 6000 *dan* per day, an amount would require three hundred carts to transport. By then, the shipping of the coal would be even more expensive, because there would not be enough carts to employ and the expense of employing each cart would also be driven up. To keep the shipping cost reasonably low and make the Kaiping coal competitive, Tang Tingshu suggested in a report to Li Hongzhang in 1877 that “if we are to transport coal and iron, we must build a railroad ourselves, only then will we be able to see great profit.”³⁸ At the time, a Chinese official whose name was Ding Richang had built a one-mile long railway at a coal mine in Taiwan in 1876 and hired horses to pull the carts of coal on it. Tang proposed to build a similar 35-mile-long railway from the collieries of Kaiping to the mouth of Jianhe River, where boats could take the coal directly to Tianjin.

³⁸ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 123.

Li Hongzhang had been looking for an opportunity to build railroad and Tang's proposal stroke great interest in him. Known the opposition that he might encounter at the court, Li did not memorialize Beijing regarding this plan and instead decided to try to float shares among Chinese merchants first. In 1878, he established the Kaiping Mining Bureau in the British Concession in Tianjin and allowed Tang Tingshu to raise funds and carry out his plan for the tramway with the help of British railway and mining engineers. Tang managed to attract merchants' investment for 300,000 taels and Li Hongzhang made the Tianjin arsenals and navy cooperation office to provide 50,000 taels in the form of prepayments for coal.³⁹ Due to the difficulty of acquiring land for this considerably long railway, Tang's plan was soon revised into building a railway of 6.5 miles (20 *li*) long from Kaiping to Xugezhuang and excavating a canal of 23 miles (65 *li*) from Xugezhuang to Lutai.⁴⁰ (Figure 2)

The decision to withhold the railway plan from the court turned out to be a wise one. In 1879, the court circulated among the officials in Beijing and the Commissioners of Southern Ocean and Northern Ocean a memorial regarding building a railroad between Qingjiang and Beijing, and requested their opinions on it. Li Hongzhang enthusiastically supported the proposal and replied with a statement about nine positive effects of building railroad including the benefit on defense and mining.⁴¹ However, the Commissioner of the Southern Ocean, Liu Kunyi (劉坤一), as well as most of the court officials including Liu Xihong (劉錫鴻), who had been ambassador to Britain and

³⁹ Cai Jianzhong, 蔡建忠 “Kaiping kuangwuju chuchuang shiqi de rongzi zhi dao,” 開平礦務局初創時期的融資之道 *Zhongguo dang'an bao* 中國檔案報, August 3, 2018.

⁴⁰ Mi, Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 124, 126.

⁴¹ *Li Wenzhong gong quanji*, vol. 2, 487.

Germany, replied with opposition. They argued that the railroad would impoverish people, drain the coffer of the state, and make China vulnerable if the foreign powers attacked.⁴² In the end, the court decided to reject this proposal.⁴³

Unlike this aborted proposal, the railway at Kaiping, being kept away from the attention of the court, was completed in 1881. Only when operation of the Kaiping coal mine started did Li Hongzhang reveal some details about this railway to the court. He explained the necessity of cultivating a new way of transporting the coal: “To go to Tianjin from Tangshan, one must pass by Lutai. The land transport was difficult. In summer or autumn, if the water from the mountain flooded, hindering the land transport all along the way, even the horse carriages cannot pass through.” Noticeably, throughout his report, he used “horse road” (*malu*, 馬路), instead of “iron road” (*tielu*, 鐵路) to refer to the railway.⁴⁴ It was probably acceptable to name the railway a “horse road” since in the beginning, carts filled with coal were indeed pulled by horses on the tracks. However, this would soon be changed. C.W. Kinder, the English engineer who built this railway, under the impression shared by many westerners that the short railway in Kaiping would become part of a grand railroad system of China, conducted the project as if it were a normal railway; he insisted in adopting the English standard tracks of a width of 4 feet 8 inches. It was said that he even manufactured a locomotive with a boiler of a portable winding engine and iron scraps and named it the “Rocket of China.”⁴⁵ Whether the locomotive was indeed built with scraps or not, when it was first put into use, it scared

⁴² Mi, Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 96-102.

⁴³ Mi, Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 103.

⁴⁴ *Li Wenzhong gong quanji*, vol. 2, 520.

⁴⁵ Kent, *Railway Enterprise in China*, 25.

some local Chinese and incited criticism among the Beijing officials, and so the locomotive was then suspended for several weeks. Once the criticism faded out, the Kaiping Mining Bureau put the locomotive back to work and imported two more from Britain in 1882.⁴⁶ The court did not force the demolishing of this railway, but instead acquiesced to its existence and operation.

This “horse road” at the Kaiping coal mine was only the beginning for the Chinese railway. The strategy that Li Hongzhang agreed to with his ally in the court, Prince Chun, (醇親王 or Yixuan 奕譞), was as follows:

If we were to begin operating railroads at coal and iron mines, areas recently opened up for cultivation, and one or two ports where garrisons are stationed and defense is set up, people could become familiar with them; then we could gradually expand the railroads to a broad area.⁴⁷

Li Hongzhang was indeed preparing to expand the railroad. By the time the Kaiping coal mine went into operation, Li Hongzhang had purchased foreign warships to equip the navy. The warships and the arsenals in Tianjin required coal to fuel their engines and furnaces.⁴⁸ Now that the Kaiping coal mine could produce sufficient coal, but possessed only a 6.5-mile long railroad, the transportation of the coal was far from ideal. To more conveniently feed his headquarters of modern navy and munitions industry, Li Hongzhang’s next step in expanding the railroad was to bring it into Tianjin.

To achieve this goal, Li Hongzhang used foreigners’ complaints about the transportation problems of the concessions in Tianjin to gain support from the court. In the 1880s, Tianjin began to have trouble with its major way of transportation. The Hai

⁴⁶ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 125.

⁴⁷ *Li Hongzhang quanji*, vol. 33, 5.

⁴⁸ *Li Wenzhong gong quanji*, vol. 2, 574.

River, connecting the foreign settlements with the sea, was silted up and only vessels of shallow draft could reach the port in the foreign settlements. The interests of the British and French concessions were affected, and they began to advocate for a railroad between Tianjin and Dagu in order to substitute for transportation on the Hai River. The English newspaper *North-China Herald* published in the Shanghai British Concession covered this issue extensively.⁴⁹ On March 1, 1882, as it reported, the Japanese consul at Tianjin had sent to Li Hongzhang an estimate of the costs of building a railway from Dagu to Tianjin,⁵⁰ but the Japanese proposal faced tremendous opposition from Chinese officialdom.⁵¹ Another report in March claimed that a railway from Dagu to Tianjin and Beijing had been approved, and Li Hongzhang “floated a Joint-stock Company, and a capital amounting to about ten millions of taels having been already subscribed by native capitalists.”⁵² In the May of 1882, the newspaper’s correspondent in Tianjin asserted that “if we cannot have it [the communication between Dagu and Tianjin] by water we must insist on having it by land.” This correspondent believed that the difficulties of navigating the Hai River would accelerate the building of the railway.⁵³ In 1883, another report claimed that Li Hongzhang had confirmed that the railroad would soon be built, and that he recognized the value of the railroad to the development of Tianjin and would “doubtless push it along as fast as the Government will permit.”⁵⁴

⁴⁹ The British Concession in Tianjin had not begun publishing their own newspaper yet.

⁵⁰ “Outports: Peking,” *The North-China Herald*, Mar 1, 1882, ProQuest Historical Newspapers: Chinese Newspapers Collection.

⁵¹ “Summary of News,” *The North-China Herald*, Mar 1, 1882.

⁵² “Summary of News,” *The North - China Herald*, Mar 7, 1882.

⁵³ “The Peiho,” *The North-China Herald*, May 19, 1882.

⁵⁴ “Tientsin,” *The North-China Herald*, Sep 8, 1883.

In fact, however, Li Hongzhang had not forwarded the request from the Westerners in Tianjin to the court until 1885. In 1884, Yixuan, who had been supportive to Li's Self-strengthening agenda, became the Minister of the Zongli Yamen. In September 1885, the court ordered to establish a Navy Office to strengthen the coastal defense and appointed Yixuan as the head and Li Hongzhang as associate minister.⁵⁵ Li went to Beijing to attend the ceremony of the establishment of the Navy Office in the September of 1884. During his stay, he had three audiences with the Empress Dowager Cixi and he took these opportunities to persuade Cixi to build a railway between Dagu and Tianjin. Little was known regarding the audiences that led to the first official consent to build a railroad. Recalling these audiences, Li Hongzhang only wrote:

Last Autumn, I intended to build a small one-hundred-and-twenty *li* railroad between Dagu and Tianjin. When I had an audience in front of the curtain [the Empress Dowager Cixi], I briefly described it. I had the good fortune to obtain her majesty's approval.⁵⁶

His account of how he obtained Cixi's approval was rather vague, but it was clear that the route of the railroad that he proposed was the same as what the Westerners at Tianjin asked for. It was likely that he used the strong demand of the westerners at Tianjin for the railroad and the frequent "rumors" regarding the railroad circulated in both Tianjin and Shanghai in order to persuade Cixi.

By obtaining Cixi's approval, Li Hongzhang muted the opposition to building the railroad in Tianjin, but he did not begin construction on the railroad immediately. He

⁵⁵ Tou, *Li Hongzhang nianpu*, 184.

⁵⁶ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 127.

claimed that the delay was due to the difficulty of raising fund among Chinese merchants,⁵⁷ and he insisted on not borrowing foreign capital to build this railroad:

Occasionally, there were foreign merchants who wanted to lend money and buy shares, and I always vehemently refused them. Because the railroad is closely connected to the state's economic rights, once it involves foreigners, it is easy to bring about long-term harm.⁵⁸

In his opinion, China had to control the railroad and the railroad had to be built for China's interest. It was not worth taking the risk of allowing western investment if he had to rely on the capital from the west to build the railroad.

That is only part of the reason why he postponed the building of the railroad between Dagu and Zizhulin. More importantly, it soon proved that Li Hongzhang might not be truly enthusiastic about bringing railroad to the foreign settlements since it had little benefit to his endeavors in Tianjin. In 1886, several Chinese merchants who had invested in the Kaiping coal mine proposed to expand the existing railway for 23 miles to Yanzhuang, where the coal transported on the railway could be directly transshipped through the Ji Canal to Tianjin. In this proposal, the merchants complained the poor conditions of the canal excavated in 1881 for transporting coal between the railway and the Ji Canal:

Military and commercial steamships want to buy more coal, but the transportation is insufficient. In the mine, the coal is piling up higher every day; we want to deliver the coal, but the road is blocked.

⁵⁷ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 127.

⁵⁸ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 127.

The merchants also expressed their concern regarding the supply of coal to the defense industry if the situation continued:

As we examined, the warships of the navy in the north and south, the steamships of the China Merchants' Steam Navigation Company, and the furnaces of each arsenal all depended on the coal from the five mine shafts of Kaiping to help their operation, and this directly concerns the current security issues. In case there were an emergency on the sea, the navy, the steamships, and the arsenals would heavily rely on the coal from Kaiping as the first priority of its war reserve.

For the sake of “maintaining and reviving” the defense industry as well as making more profit, these merchants proposed a detailed plan of funding this railroad without borrowing from the state or foreigners. They proposed to gather 250,000 taels to establish a joint-stock Kaiping Railway Company. By using the land along the canal that the Mining Bureau owned, the new railway would thus not entail additional land purchases. The income from transporting the coal each year would be 30,000 taels, enough to cover the expenses of repair and maintenance of the railroad. In addition, the transporting of passengers and goods on this railroad would bring an extra income of 20,000 to 30,000 taels.⁵⁹ Li Hongzhang was pleased by this plan, because expanding the railway of the Kaiping coal mine southward to Yanzhuang provided an opportunity to further extend it to connect the coal mine directly with Tianjin. He swiftly approved the merchants' proposal. In the meantime, he was preparing for his next move in railway building: expanding the railway from Yanzhuang to Tianjin.

By the end of 1886, Li Hongzhang and Yixuan had decided to package the railroad between Yanzhuang and Tianjin as a proposal of the Navy Office for facilitating

⁵⁹ Mi, *Zhongguo jindai tielu shi ziliao*, vol.1, 126.

the moving of troops and arms.⁶⁰ Probably dictated by Li Hongzhang, the local officials of Tianjin jointly proposed to build a defensive railroad system on the northern coast.

It [the Kaiping-Yanzhuang line] can serve as the middle section of the line from Beitang to Shanhaiguan, and it is an artery for transporting soldiers. If this railroad is extended to the south up to the north bank at Dagu, and extended north to meet Shanhaiguan, the ten thousand soldiers [. . .] within this distance of several hundred *li*, could race back and forth to serve as needed, as if they numbered several times more. [. . .] Moreover, the Beiyang battleships use coal and are entirely dependent on the Kaiping colliery, which would make it the lifeline of the navy. If the Kaiping railway is extended to the north bank of Dagu, then the coal from the mine could be loaded on to battleships in half a day. If the railroad is extended from Dagu to Tianjin, it is most convenient for merchants to transport goods. We can charge transporting fees to foreign merchants, to offset the cost of maintenance of the railroad.⁶¹

This plan put the railroad connecting Dagu with Kaiping as a crucial section of a strategic transportation line among the garrisons on the northern coast, and the railroad between

Dagu and Tianjin as a necessary means to provide for the operation of the defensive line.

In March 1887, Li Hongzhang, Yixuan, and their colleagues at the Navy Office forwarded this proposal to the court and asked for approval. They reassured the court that the entire line was behind the garrisons and was still miles away from the sea, so there would thus be no risk of losing it to the enemy or helping the enemy move their troops.⁶²

The court quickly approved this plan of extending the Kaiping railway to Dagu and Tianjin.

The proposal passed the court's scrutiny, but the funding of expanding the railroad to Dagu remained a big problem. Li Hongzhang had been fully aware of the financial difficulty and he talked about his concern in a letter to Yixuan that the railroad

⁶⁰ *Li Wenzhong gong quanji*, vol. 4, 531.

⁶¹ Zhongguo kexueyuan jindaishi yanjiusuo shiliao bianjishi 中國科學院近代史研究所史料編輯室 ed., *Yangwu yundong* 洋務運動 (Shanghai: Shanghai renmin chubanshe, 1956), vol. 6, 186-187.

⁶² *Yangwu yundong*, vol. 6, 186-187.

from Yanzhuang to Dagu “passes through a remote area where there are few commercial goods, so there is no profit to be made and we are unable to attract investors to buy shares.”⁶³ Notwithstanding the concern, Li Hongzhang still made great effort to try to raise funds among the Chinese merchants right after the proposal was approved. He changed the name of the Kaiping Railway Company to the China Railway Company to show the ambition of the railroad company in advancing its business to the entire country.⁶⁴ Then, he allowed the company to issue a prospectus to invite subscriptions of stocks worthy of one million taels and advertised in both Chinese and foreign newspapers about the credibility of the company.⁶⁵ However, just as what he was worried about, the prospectus met with little success. The fund that the state could provide was also very limited. He then decided to turn to foreign capital. Li Hongzhang borrowed 630,700 taels from Jardine Matheson & Co. and 430,900 taels from Germany.⁶⁶ The Tianjin Bursary of Coastal Defense (海防支應局) provided 160,000 taels. The shares of Chinese merchants were only 108,500 taels.

This move of borrowing from foreign banks and company showed Li Hongzhang’s determination of bringing railroad into Tianjin. When his previous attempt of building the Tianjin-Dagu line fell through in 1885, Li Hongzhang claimed that it was because he did not raise enough funds among Chinese merchants and he declined foreigners’ offer of investment. The similar attempt to attract Chinese capital in 1887 failed again, and yet he managed to negotiate loans from foreign company and bank. The

⁶³ *Li Wenzhong gong quanji*, vol. 4, 531.

⁶⁴ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 133.

⁶⁵ Mi, *Zhongguo jindai tielu shi ziliao*, vol.1, 132-134. Kent, *Railway Enterprise in China*, 29.

⁶⁶ *Yangwu yundong*, 293

contrast between the two attempts in 1885 and 1887 makes it clear that he was much more interested in expanding the Kaiping line to Tianjin than building a stand-alone railroad between Dagu and Tianjin, since the former could provide a stable supply of coal for the navy and the defense industry that he had painstakingly built up in Tianjin. Even though he had to borrow western capital, it was still worthwhile to build this line of strategic importance because it would give the industry and military setup a secure source of energy rather than force a heavy dependence upon foreign supply.

The routing of the railroad in the 1887 plan that the local officials proposed differed from what Li Hongzhang got approved of in 1885. In the plan of 1885, the two ends of the proposed railway, Dagu and Zizhulin, were on the south bank of the Hai River; in the plan that the local officials submitted to Li in 1887, the northern terminal had been changed to Tanggu, a place on the north bank of the Hai River.⁶⁷ (Figure 7) One of the reasons for this modification was that the Tianjin East Arsenal was on the north bank, and Yanzhuang was also north to Tianjin. Thus, to deliver the coal from Kaiping to the arsenal, there was no point of extending the railroad across the river to reach Dagu. This new routing also made sense regarding cost control and commercial interests. Kinder, the engineer-in-chief of the Kaiping Railway Company, pointed out that if the line were to be built on the south bank, more bridges and ferry service would be required. So, he “urged the adoption of a route to Tientsin on the left bank or north side of the river.”⁶⁸

⁶⁷ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 131.

⁶⁸ Kent, *Railway Enterprise in China*, 31.

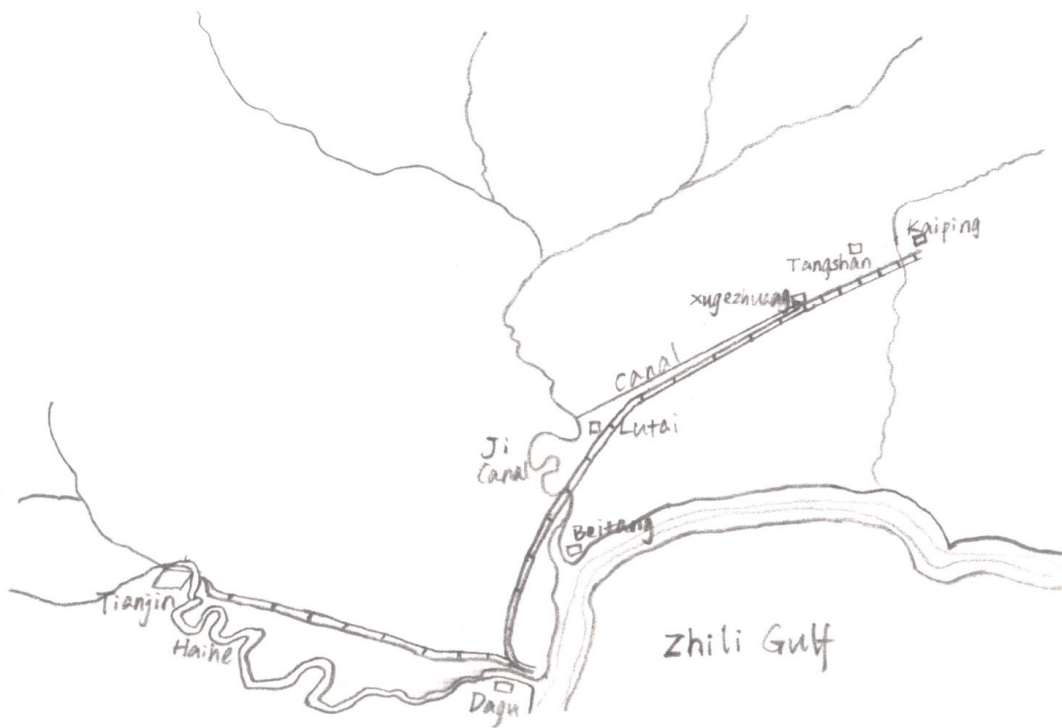


Figure 7 Tianjin-Kaiping line

A railroad on the north bank of the river would not pass through the foreign concessions, but the Englishmen and perhaps French and other westerners at Tianjin, who cared more about their commercial interests, also considered it as a fair plan:

The line from Taku [Dagu] to Tientsin [Tianjin], if on the south bank of the Peiho [Beihe], would obtain much passenger traffic, but would lose freight. The railway, probably, will be made on the north side, and in such case it will carry coal, the demand for which is now very great in Tientsin, and as gas works, factories, and trunk railways are in the future, a coal supply, quick, regular and cheap, will be of great moment. The quantity of stone to be brought from the Kaiping hills for house building will be enormous, and will give a railway on the north side much revenue. Finally, a line on the north side which will tap the salt works which supply the whole of Chihli [Zhili], part of Shansi [Shanxi], all Mongolia, and part of Manchuria, will give an immense freightage to the railway company. The iron road will, for these reasons, probably keep to the North.⁶⁹

⁶⁹ "Outports: Tientsin," *The North - China Herald*, Mar 30, 1887.

The westerners agreed with this alteration of the plan after a careful calculation of the pros and cons. Satisfying the Chinese officials and the foreign commercial interest, the building of the railway between Tianjin and Tanggu proceeded rapidly. In early April of 1888, the railway reached Tanggu. In four months, the line between Tanggu and Tianjin was completed. In Tianjin, the railway station was temporarily fixed at a place named Wangdao Zhuang on the east bank of the Hai River, to the opposite side of Zizhulin. On October 9, Li Hongzhang rode the train with his subordinates, inspecting the entire line from Tianjin to Tangshan. He recorded with excitement that the journey of 260 *li* only took 3 hours.⁷⁰

Building the railway on the east bank of the Hai River secured the supply of coal to the defense industry and warships at Tianjin and avoided foreign control of the railroad. However, since the Tianjin-Dagu line also had to transport goods in order to provide for the maintenance expenses of the railroad, Li Hongzhang agreed to build an iron bridge across the Hai River into the concessions. In addition, the China Railway Company was located on the other side of the river, and a bridge into the concession would also make it convenient for the company to oversee the station. In April 1889, the iron piers of the bridge had been hammered into the riverbed and the iron bars and blocks required to build the body of the bridge had been imported. Soon after, however, when the tribute grain junks from the south arrived at Tianjin, for fear of passing the river between the piers, the junks jammed in the river and the supervisor of the grain junks demanded the railway company to tear down the bridge. It was so reported by *Shen bao* that Li Hongzhang at first refused to comply, but when the Grain Tax Circuit of Jiangsu

⁷⁰ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 146.

came to investigate the situation and said to Li Hongzhang, “it really doesn’t matter whether we build the bridge or not, but grain is the primary tribute to the state’s granary, if something unexpected were to occur, there could be serious consequences,”⁷¹ Li Hongzhang gave in. The fifty wooden abutments and four iron piers were subsequently removed, albeit with great trouble; a crane was borrowed from the Kaiping coal mine to lift the heavy iron structure.⁷²

For Li Hongzhang, the demolishing of the iron bridge and many of his unsuccessful efforts alike represented a necessary compromise. He was exceptionally skillful in turning failure into opportunity; it was even possible that he used this failure to gain the trust of the westerners at Tianjin without actually building the unremovable bridge to connect the foreign concessions with the railway station. Soon after the removal of the iron bridge, *Shen bao* reported that the Salt Distribution Commissioner would build a movable bridge at the same location as a compensation to the Railway Company.⁷³

As the railway expanded to Tianjin in 1888, Tianjin became the first city equipped with a permanent railroad in China,⁷⁴ and the status of the city was significantly improved. Having acquired a stable coal supply through the railroad, Tianjin became a solid base for coastal defense and industry. Linked with this railroad, Tianjin had anchored itself to the critical position in the expanding railway system. Later, several

⁷¹ *Shen bao*, April 26, 1889.

⁷² *Shen bao*, May 7, 1889.

⁷³ “Xi Jin suo yu” 析津瑣語, *North-China Herald*, June 16, 1890.

⁷⁴ For a short time from 1876 to 1877, Shanghai had a small railroad, which was built by British merchants without the authorization from the Qing government. The Qing government purchased this railroad and then demolished it.

other railway lines made Tianjin a station and Tianjin became the most important railway hub in north China.

Connecting Tianjin with the Capital

Though the first line put Tianjin on the map of China's emerging modern transportation system, it was the next railroad project that really gave Tianjin the strategic importance. According to the plan of a railroad system for coastal defense that the court approved in 1887, following the construction of the Tianjin-Dagu line, the next project would involve expanding the railway to Shanhaiguan. However, the shareholders of the Chinese Railroad Company requested to instead build the railway between Tianjin and Tongzhou, the latter being twelve miles to the east of Beijing and the last stop on the Grand Canal for tribute grain transport. In their proposal, the reasoning was that the Shanhaiguan-Tianjin railway would not be as profitable as a railway between Tongzhou and Tianjin, and it would therefore be far more difficult to raise funds for a railroad to Shanhaiguan.⁷⁵ At the time, the Tangshan-Tianjin line had an annual income of 120,000 taels, but its upkeep ran up to 108,000 taels per year. The remaining barely sufficed to address the interest from the foreign loans, not to mention paying off the loans, the interest of the commercial stocks, and the expenses of maintenance.⁷⁶ Expanding the railway from Tianjin to Beijing would no doubt be more profitable than building the Tianjin-Shanhaiguan line. Moreover, these shareholders also offered to donate one tenth of their dividends to the navy if the Tongzhou railway was built. This was a very

⁷⁵ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 143.

⁷⁶ *Yangwu yundong*, 294.

attractive offer as the navy was constantly underfunded; the designated annual funds for the navy in south and north was 4 million taels, but in the eleventh year of the reign of Guangxu (1885-1886), the Beiyang Navy only received 600,000 taels and the navy in the south had received even less.⁷⁷ In 1887, Jiangsu, Zhejiang, and Jiangxi all owed the coastal defense funds that they were supposed to provide.⁷⁸ As such, the proposal of the Tianjin-Tongzhou railroad was so well demonstrated that it was approved by the Guangxu emperor.⁷⁹ Once obtaining the sanction from the court, Li Hongzhang sent staff to survey the proposed route between Tianjin and Tongzhou, and began to raise funds and purchase materials.

The news excited the westerners in Tianjin. The commissioner of the Maritime Customs at Tianjin described the opportunities that this railroad would bring to the city:

When we consider the vast tracks of thickly populated country which stretch away from this port in all directions, and for which it forms the only outlet, it becomes at once apparent how enormous are the potentialities involved. [. . .] it will be at once admitted that the prediction of a brilliant future for Tientsin trade rests on sure and solid foundations.⁸⁰

Though it was approved by the court and welcome by the western powers, this proposal stirred up opposition among the officials in Beijing. Some were afraid that expanding the railway to a place that was so close to Beijing would cause the capital to immediately fall prey to the western powers if they seized the railway. Some argued that the railway would impoverish the people whose livelihood was dependent upon the Grand Canal transportation. Some memorials made Li Hongzhang their target of

⁷⁷ Tou, *Li Hongzhang nianpu*, 186.

⁷⁸ Tou, *Li Hongzhang nianpu*, 209.

⁷⁹ Mi, *Zhongguo jindai tielu shi ziliao*, vol.1, 146.

⁸⁰ Gustav Detring, "Tientsin Trade Report for the Year 1888," in *Returns of Trade and Trade Reports for the Year 1888* (Shanghai: Statistical Department of the Inspectorate General of Customs, 1890), 21.

criticism; they claimed that hundreds of people wept at the door of the office of the Tianjin local government, petitioning that their family graves not to be demolished, and yet Li Hongzhang showed little sympathy.⁸¹ Li Hongzhang refuted all the accusations and asked the court to forward the question of whether the Tianjin-Tongzhou line should be built to the governors-general of the provinces on the coast and the Yangzi River.⁸² However, except one governor-general, none of the rest explicitly supported the plan of the Tianjin-Tongzhou railroad. Instead, Zhang Zhidong, the Governor-General of Hunan and Hubei, proposed to build a railway between Hankou and the Lugou Bridge, about nine miles to the southwest of Beijing. In his proposal, this grand scheme across three provinces, Zhili, Henan, and Hubei, would take eight years to finish. Zhang's proposal solved the dilemma of the court between its previous approval of the Tianjin-Tongzhou line and the enormous oppositions of the officials. As a result, the court decided to postpone the Tianjin-Tongzhou line and build this Lugou-Hankou line instead in early 1889. It remains a question why there were so many oppositions against the Tianjin-Tongzhou railroad.⁸³ At the time, Li Hongzhang certainly took some of the oppositions personal; he lamented in a letter that he had been "the target of rumor and slander every day for thirty years."⁸⁴

⁸¹ Mi, *Zhongguo jindai tielu shi ziliao*, vol.1, 148-156.

⁸² *Li Wenzhong gong quanji*, 542-546.549

⁸³ Li Guoqi argues that it was a scheme of the beneficiaries of tribute grain transportation on the river between Tianjin and Tongzhou whose interest would be harmed if the railroad was built. Li Guoqi, 81. Another scholar argues that Zhang Zhidong competed with Li Hongzhang with his railroad proposal and he held a grudge against Li because the Beiyang Navy did not come to rescue the navy in the south during the Sino-French War in 1884 when Zhang was the Governor-General of Guangdong and Guangxi. Ni Hannong 倪寒農, "Qingchao monian de Jin Tong tielu zhi zheng 清朝末年的津通鐵路之爭," in *Zhongguo tielu lishi gouchen* 中國鐵路歷史鉤沉, ed. Tiedaobu dang'an shi zhi zhongxin (Beijing: Hongqi chubanshe, 2002), 303.

⁸⁴ *Li Hongzhang quanji*, vol. 34, 541.

As the plan of Tianjin-Tongzhou line was canceled, Li Hongzhang worried that the Tangshan-Tianjin line might not survive if it could not pay the loan on time. After all, the reason that Li Hongzhang prioritized the building of the Tianjin-Tongzhou line was that it could bring considerable returns to provide for the Tangshan-Tianjin line, the lifeline for his defense industry and navy in Tianjin. After the plan for the Tianjin-Tongzhou line was aborted, he wrote in a letter to Yixuan:

If we do not come up with a plan to save the situation immediately, we will not be able to keep the Tianjin-Dagu railroad that has already been built, and we will not be able to build the planned Shanhaiguan railway. The foreign loan is due in a blink of eye and payment cannot be delayed. As it is often said, things that begin well rarely end well. We will become a laughingstock for Chinese and foreigners. This is what I am worrying about day and night. I cannot get it off my mind. [. . .] Tianjin-Dagu line is relevant to the important matter of transporting troops on the coast. Since your highness have proposed to build it and it has been completed, we have to try our best to preserve it intact, so that our previous effort won't be wasted.⁸⁵

Facing the enormous criticism from the court against the Tongzhou line and as well as Li Hongzhang, Yixuan realized the danger of insisting upon the construction of the Tianjin-Tongzhou line and persuaded Li Hongzhang to temporarily set aside the plan and work together to carry out Zhang Zhidong's proposal. He wired Li Hongzhang, saying:

Zhang [Zhidong] breaks a new ground, in a different approach but with similar purpose of ours. If the west line could indeed be built, the east line is possible. It's only a matter which one will be built first. The Railroad Company is certainly unhappy, but I think we should keep calm and pay attention. Unless another route opens up, the door will be hard to open.⁸⁶

Li Hongzhang accepted Yixuan's suggestion of handling this difficult situation:

"We can use Zhang's general plan, but the details are up to us."⁸⁷ Indeed, although this

⁸⁵ *Li Hongzhang quanji*, vol. 34, 540.

⁸⁶ *Li wenzhong gong quanji*, vol. 6, 297.

⁸⁷ *Li wenzhonggong quanji*, vol. 6, 298.

railroad was proposed by Zhang Zhidong, Li Hongzhang was still the obvious advisor since he was the only high official who held experience in building railroads.

Even for Li Hongzhang, to build this line across both northern and southern provinces was not an easy task. He anticipated it would be difficult to conduct survey and commence the construction at Hankou, as it was so far from the Navy Office and Tianjin that it was “beyond the reach of his whip.”⁸⁸ To gain more control, he not only inserted officials that he trusted to work on this railroad, but also managed to have the work started simultaneously from the two ends, namely Hankou and the Lugou Bridge. Hankou was located on the Yangzi River, and so the transportation of construction materials was quite convenient there. Once a section of railway was finished, it could be immediately put into use to transport materials for the work of building the next section. In the north, there was no such convenient water transportation, and the expense of transportation on land was significantly more expensive, but Li Hongzhang promised that he could deal with the hardship in order to speed up the progress. He said: “It is in the region I am governing, I dare not to excuse myself even if [the task] is formidable.”⁸⁹ Therefore, he convinced the court to start the work on both ends, and the court appointed him to work together with Zhang Zhidong and the Navy Office on this project.⁹⁰

Before the actual construction work of the Lugou-Hankou line could begin, however, in 1890, Qing state’s conflicts with Russia and Korea increased the tension at the northeast borders, which gave Li Hongzhang an opportunity to once again bring up the plan of building a defensive railroad between Shanhaiguan and Dagu. Although this

⁸⁸ *Li Hongzhang quanji*, vol. 34, 539.

⁸⁹ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 177.

⁹⁰ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 182.

plan had not been carried out after the court approved it in 1887, it had never been forgotten. In 1889, Li Hongzhang reiterated the importance of extending the Tianjin-Tangshan railway from Tangshan to reach Shanhaiguan. He claimed that only by connecting the railroad to Shanhaiguan, “will the Beiyang Navy be strong and impressive, and the defensive plans approach completion.”⁹¹ As a preparation for potential warfare at the northeast border, the court decided to return to completing this defensive line and ordered the construction of the Tangshan-Shanhaiguan section in 1890. When the railway reached Shanhaiguan in the spring of 1893⁹², five years had passed since Li Hongzhang first proposed the coastal defense railway between Tianjin and Shanhaiguan. From 1893 onward, the armament produced in the Tianjin arsenals and the troops stationed at Tianjin and Dagu could move faster than ever along the coast between Dagu and Shanhaiguan.

Unfortunately, the Beiyang Navy, Li Hongzhang’s proudest achievement, was entirely defeated by the Japanese in 1895 during the First Sino-Japanese War. Li Hongzhang went to Japan to settle a peace treaty. During his stay in Japan, a Japanese assassin shot Li Hongzhang on his face. Li Hongzhang took home, along with the bullet wound, the Treaty of Shimonoseki.⁹³ After signing this humiliating treaty, Li Hongzhang was removed from his post at Tianjin and was placed in the Grand Council of the central government. For governors-general who had real power in provinces, this was in fact a

⁹¹ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 174-5.

⁹² Li Guoqi 李國祁, *Zhongguo zaoqi de tielu jingying* 中國早期的鐵路經營 (Taipei: Zhongyang yanjiuyuan jindaishi yanjiusuo, 1961), 93.

⁹³ The clauses of the treaty include that China recognize Korea’s independent status; that China cede to Japan the eastern portion of the bay of Liaodong Peninsula, Taiwan, and the Pescadores group; that China agree to pay a war indemnity of 200,000,000 kuping taels to Japan; that China open Shashi, Chongqing, Suzhou, and Hankou to Japan; and that China agree to grant Japan most favored nation status.

political penalty. This bitter defeat in the hands of Japanese propelled the Qing government to seek quick ways to enrich the country and improve the military. In response, officials submitted memorials to the throne with advice of building railroads, strengthening the army, establishing schools, etc. On July 19, 1895, the Guangxu Emperor proclaimed an edict of reformation including fourteen “pragmatic policies,” among which building railway was the first. At the time, the most prominent proposal of railway was the Lugou-Hankou railway that Zhang Zhidong proposed.

Tianjin was not included in the original designing of the Lugou-Hankou railroad, but this would soon change. In August, Liu Kunyi, soon to reassume the position of Governor-General of Jiangsu, Anhui, and Jiangxi and of the Commissioner of the Trade of the Southern Ocean, requested to alter the route of the Lugou-Hankou line to include a railway between Tianjin and the Lugou Bridge and to make Jiangpu, a county in Jiangsu Province, instead of Hankou, the southern terminal. Liu used to be reluctant in regard to building railroad in 1880, his major concern then being the livelihood of people who earned a living from traditional transportation.⁹⁴ In 1895, his judgement about the urgency of building railroad entirely changed. This change happened over time as he came to manage the foreign affairs, trade, and defense in Jiangnan since 1890, and also as he witnessed how the Tianjin-Shanhaiguan railway made profit and facilitated the transport of arms and troops when he stationed at Shanhaiguan to deploy defense against the Japanese troops during the First Sino-Japanese war.⁹⁵

⁹⁴ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 97.

⁹⁵ His letters written between April and August in 1895 showed his recognition of the importance of railroad. He talked about numerous times how railroad transported arms and troops as well as his own rides on the railroad between Tianjin, Tangshan, and Shanhaiguan. He was even considering building railroad in

Liu Kunyi's proposal of building the railway between Tianjin and Beijing could be inspired by his interaction with Zhang Yi (張翼), the administer of the Railroad Company and the Kaiping Mining Bureau. He wrote in his memorial to the throne that he discussed profoundly about railway with Zhang Yi. Another reason that Liu proposed to draw Tianjin and Jiangpu into a north-south trunk line was the enormous commercial benefit that this design would bring about. Compared to Zhang Zhidong's proposal, which was an entirely inland railway, Liu Kunyi's plan relocated the two ends of the trunk line to the southern and northern coast. He was very confident in the profitable potential of this railway:

As I investigated, the three-hundred-*li* commercial railroad [the railroad was operated by a commercial company] between Tianjin and Shanhaiguan doesn't transport much goods, but the annual income has increased to 500,000 to 600,000 [taels]. An estimate of [the income of] the trunk line should be 5,000,000 [taels] per year. Given that the goods of this road would be three times larger than what on the commercial railroad, an annual income of 10,000,000 to 20,000,000 [taels] should not extravagant hopes.⁹⁶

On December 6, 1895, although it did not accept Liu Kunyi's request to make Jiangpu the southern terminal, the court approved his proposal of adding the Tianjin-Lugou line to the Lugou-Hankou railway. The edict ordered to first make arrangements near the capital for the shorter railroad while planning for the long and expensive trunk line.⁹⁷ In order to put this critical railway between Tianjin and Beijing under control of the state, the court ordered that the Beiyang Navy and the Ministry of Revenue each

Jiangsu. For example, see Liu Kunyi 劉坤一, *Liu Zhongcheng gong yiji* 劉忠誠公遺集 (Taipei: Wenhai chubanshe, 1966), 6954, 6970-6971, 7032, 7036.

⁹⁶ *Liu Zhongcheng gong yiji*, 3327-3328.

⁹⁷ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 1, 205.

underwrote 1,000,000 taels. The remaining 400,000 taels was acquired through commercial bonds.⁹⁸

On June 30, 1897, the Tianjin-Lugou railway was opened. The journey from Tianjin to Beijing, which used to take a whole day, now only took 6 or 7 hours.⁹⁹ As the construction of the Hankou-Lugou line progressed, in 1898, the section between the Lugou Bridge and Baoding was completed, thus Tianjin was also connected with Baoding, the provincial capital of Zhili, by railroad through the Lugou station. The effects of railroad on the trade of Tianjin were phenomenal. The Tianjin-Lugou railroad quickly assumed larger and larger portion of transport. In 1902, nearly one fourth of the domestic commodity traded at Tianjin was transported through this railroad.¹⁰⁰ The speed of railroad made it most suitable for transporting valuable but perishable goods. For example, it was reported that thanks to the railroad, “already Peking fruit is sent direct to Tangku for shipment south and Peking is similarly supplied with southern fruit.”¹⁰¹ This railroad also took over a lot of passenger transport. As *Shen bao* reported:

For about twenty days, passengers came continuously one after another daily. Six carts departed at three different times, two carts each time, making 50 to 60 roundtrips per day. More than thirty passenger tickets were sold on each cart every day. The total number of passengers each day was counted by 10,000, and the profit has been quite munificent.¹⁰²

The contemporary Commissioner of Customs at Tianjin also wrote that “it is astonishing how speedily Chinese, despite their reputed conservatism, adapt themselves

⁹⁸ Zhang Hairong, 張海榮 “Cong Jin-Lu tielu kan Jiawu zhanhou Qingchao gaige de zaiqi” 從津蘆鐵路看甲午戰後清朝改革的再啟, *Anhui shixue* 4 (2014): 82.

⁹⁹ *Ibid.*, 83.

¹⁰⁰ *Jin haiguan maoyi nianbao*, 217-218.

¹⁰¹ Alfred Hoppisley, *Trade Report of Tianjin for the year of 1897*, 26.

¹⁰² “Dianche huoli 電車獲利,” *Shen bao*, June 11, 1899.

to a new environment and make the most of increased transport facilities offered them.”¹⁰³ The profit this railroad generated allowed the railroad company to double the tracks in 1899 to meet the high demand of railroad transport.

Before the First Sino-Japanese War, the Qing government had been reluctant about whether China should build railways. When the defeat of the Beiyang Navy at the hands of the Japanese in 1895 stimulated a boom of railroad construction, Li Hongzhang had already augmented Tianjin with a railway that could bring coal to the defense industry at Tianjin and connected the garrison at Dagu with other strategic points on the northern coast. The Tianjin-Lugou Bridge railroad built after 1895 further elevated Tianjin’s position on the urban hierarchy. Connected with the state’s capital, Tianjin became an even more important strategic point.

The year 1895 is often seen as the end of the Self-strengthening Movement, but at Tianjin, the important elements of the Self-strengthening Movement, the munitions industry and the railroad, persisted. William Rowe correctly points out that a majority of scholarship has concentrated on explaining the reasons of the failure of the movement without asking whether it indeed failed.¹⁰⁴ Recently, the scholarship has begun to question the historiography depicting the Self-strengthening Movement as a failure.¹⁰⁵ But the scholarship has not emphasized the successful planning and construction of railroad during the Self-strengthening Movement and the impact of the railroad upon the formation of a new urban hierarchy in the last decades of the Qing. This chapter so far

¹⁰³ Alfred Hoppisley, *Trade Report of Tianjin for the year of 1897*, 26.

¹⁰⁴ William Rowe, *China’s Last Empire*, 216.

¹⁰⁵ Benjamin Elman, *On Their Own Terms: Science in China, 1550-1900* (Harvard University Press, 2005), chap. 10. Chi-kong Lai, “Li Hung-chang and Modern Enterprise,” *Chinese Studies in History* 25 no. 1 (1991): 19-51; Juanjuan Peng, “Yudahua: The Growth of an Industrial Enterprise in Modern China” (PhD diss., Johns Hopkins University, 2008); Stephen Halsey, “Sovereignty.”

has revealed the relationship between the status of Tianjin and the expansion of railroad system, and has shown that the year 1895 turned out to be the beginning of another period of rise for Tianjin.

Connecting Tianjin with the Economic Center

Tianjin's rising status with the building of railroad was not a linear one. Soon after it was connected to Beijing, it faced another crisis caused by the Boxer Uprising. Scholars have examined the long-term impact of the Boxer Uprising mainly on the state level: It forced the Qing court into enacting more profound political reform – the New Policies (新政). In the case of Tianjin, the impact of the Boxer Uprising was critical and lasted far beyond the crisis itself. This crisis, like the local people's attack on the Christian church in 1870, while being destructive, also proved to be an opportunity for Tianjin. It brought to Tianjin another prominent figure, who further raised Tianjin's status by constructing a new railroad.

During the Boxer Uprising, the allied powers occupied Tianjin and organized the Provisional Government of the District of Tianjin in the August of 1900, administered by the Russian, British, and Japanese commanders. Soon, the allied army set off from Tianjin to attack Beijing. The Empress Dowager Cixi and the Emperor Guangxu fled to Xi'an. The allied powers looted the capital, raped and killed numerous innocent Chinese people in the city and the countryside.¹⁰⁶ Facing the dire situation, the fled court summoned Li Hongzhang, who was then the Governor-General of Guangdong and

¹⁰⁶Joseph Esherick, *The Origins of the Boxer Uprising* (Berkeley: University of California Press, 1988), 271-311.

Guangxi, to Beijing and entrusted him with the negotiation of a settlement with the allied powers. Occupying both Tianjin and Beijing, the allied powers forced the Qing into signing the Boxer Protocol in September 1901, which included penalties to the pro-Boxer officials, a war indemnity of 450,000,000 tael, and several military provisions targeting at disarming the Qing's military base at Tianjin and its vicinity, such as the removal of the Dagu forts and granting the allied powers the right to station troops at Tianjin, Tanggu and other places along the railroad from the coast to Beijing.¹⁰⁷ Part of the negotiation was about the returning of Tianjin from the Provisional Government to the Qing's control. Before the conditions of returning Tianjin could be finalized, Li Hongzhang suddenly passed away in 1901. Heard of Li's death, the court immediately appointed Yuan Shikai (袁世凱 1859-1916) as the Governor-General of Zhili to carry on the job that Li left behind in Tianjin.¹⁰⁸

Yuan Shikai held experience both in the army and in diplomacy. He showed his capability in military commanding and diplomatic maneuvering alike when he was first sent to Korea, the protectorate of the Qing, in 1882 with the Qing troops to suppress the coup in the Korean court and to prevent the Japanese intervention. He remained in Korea after the crisis was resolved, training the Korean army and strengthening China's influence on the military and foreign affairs of Korea under the direct commands of Li Hongzhang. He thus earned great fame in Korea and China and became the

¹⁰⁷ *North China Herald*, September 11, 1901.

¹⁰⁸ Liu Lusheng and Luo Baoshan ed., 劉路生 駱寶善 *Yuan Shikai quanji* 袁世凱全集 (Zhengzhou: Henandaxue chubanshe, 2013), vol. 10, 1. A contemporary account claimed that Li Hongzhang recommended Yuan Shikai to the court on his death bed. (Luo Chunrong 羅惇融, *Gengzi guo bian ji* 庚子國變記 (Taipei: Guangwen shuju, 1964), 18.) Liu Lusheng argues that such claim is baseless. (Liu Lusheng 劉路生, "Li Hongzhang yi pian baojian Yuan Shikai shuo zhiyi," 李鴻章遺片保薦袁世凱說質疑 *Shixue yuekan* 史學月刊 no. 11 (2004): 39-43.)

plenipotentiary of the Qing in Korea and maintained the tributary relation between China and Korea. As Japan waged war against China in 1895, Yuan retreated from Korea and was recommended by Li Hongzhang to train a new army at Tianjin and Baoding. In 1899, he was appointed the Governor of Shandong to deal with the Germans who had occupied the Jiaozhou Peninsula as well as the rising activities of the Boxers. He handled the Boxer trouble wisely amidst the conflicting positions of the court and avoided severe battles in Shandong. In 1901, it had become a consensus of many officials that Yuan Shikai would be a suitable successor to Li Hongzhang.¹⁰⁹

Even for an extraordinarily capable official like Yuan Shikai, the situation of Tianjin following the Boxer Uprising was extremely complicated. During the battles in 1900, the allied powers destroyed or occupied the munitions magazine, the Tianjin Arsenal, and the academies of navy, army, and artillery and sold the machines and armament. From 1900 to 1902, the powers continued searching for the remaining Boxers in Tianjin and the surrounding villages. They killed not only Boxers but also many innocent people and looted the private properties of many Chinese. The powers declared their control of the territory that they seized in Tianjin during the war according to the “right of conquest.” Then, during negotiations for the treaty, Russia, Italy and Austria-Hungary demanded concessions in 1901, and the existing concessions of Britain, France, Germany, and Japan expanded from 1900 to 1903. The allied troops of the eight powers also tore down the city walls and demanded the removal of the Dagu forts.¹¹⁰ With its

¹⁰⁹ Liu, “Li Hongzhang yi pian,” 42-43.

¹¹⁰ Wang Shousong 汪壽松 ed., *Baguo lianjun zhanling shilu* 八國聯軍佔領實錄 (Tianjin: Tianjin shehui kexueyuan chubanshe, 2004), 8-9.

defense industry destroyed and the city disarmed, Tianjin was turned into a defenseless area and an ideal headquarters for the allied powers.¹¹¹

Although in the Boxer Protocol, the allied powers had agreed to return the administration of Tianjin to the Chinese government, the details had yet been figured out.¹¹² Yuan had to first negotiate with the powers the conditions of returning Tianjin. The allied powers, however, came up with many excuses and strategies in order to delay the process. For example, the Provisional Government of the allied powers established judicial department, civil court, police force and offices of construction, and to some extent restored the order, cleaned up the ruins of the war, and built some houses and roads. The *Peking and Tientsin Times*, the newspaper published in the British Concession and had been called the “organ of the Provisional Government,” praised that “the Provisional Government has done more for the amelioration of native Tientsin in fifteen months than the Chinese administration would have done in fifteen centuries.” Thus, for “the safety of foreign life and property” and “the best civic interests of the Tientsinese [Tianjinese],” the newspaper argued that the giving back of Tianjin to the Chinese authorities should not be hurried.¹¹³ The powers also put forward harsh conditions to limit Chinese military control in Tianjin. For example, the commanders of the allied troops at Tianjin insisted on limiting the number of Chinese military guards under 200 within 30 kilometers of the city.¹¹⁴ As Yuan indicated, the commanders asked for this impossible condition in the name of returning, but in reality were trying to prolong the negotiation.¹¹⁵

¹¹¹ “The Tientsin Provisional Government,” *Peking & Tientsin Times*, January 4, 1902. British Museum Microfilm.

¹¹² *North-China Herald*, September 11, 1901. Article XI.

¹¹³ *Ibid.*

¹¹⁴ *Yuan Shikai quanji*, 325.

¹¹⁵ *Ibid.*

In response to the foreigners' excuses for delaying the return of Tianjin, Yuan Shikai expressed the Chinese confidence in maintaining order at Tianjin in February of 1901. According to a report of the *Peking and Tientsin Times*:

He [Yuan Shikai] is standing sturdily up to the foreign Ministers whose conflicting interests hardly make them so strong collectively as their ability does individually. Yuan apparently considers the surrender of Tientsin city a foregone conclusion, and in his brusque outspoken way declares that although the T.P.G. [Tianjin Provisional Government] has done remarkably well he himself can do much better.¹¹⁶

Finally, on July 12, the foreign consuls and Yuan agreed on the conditions of returning Tianjin to the Qing government.¹¹⁷ This agreement forbade Chinese warships from approaching Tianjin and Chinese troops from stationing within eight kilometers of Tianjin, and only allowed Yuan Shikai to keep 300 guards in the city and a police force to patrol the river.¹¹⁸ Yet, it allowed the powers to deploy troops at Tianjin and along the railroad from the coast to Beijing. In addition, it urged the Chinese authority to immediately demolish the Dagu forts and all the canons along the way from Tianjin to Beijing, and did not allow rebuilding the city walls of Tianjin. In order to regain control of Tianjin as soon as possible, Yuan Shikai convinced the court to accept the agreement.¹¹⁹ *Dagong bao*, a Chinese newspaper published in Tianjin commented on the difficulties that the agreement created for Yuan Shikai:

At Tianjin, everything is constrained by treaties. Even for someone as outstanding as the Zhili Governor-General Yuan, if he obeys the treaties, he will have almost no means to govern; if he does not obey the treaties, then the foreign countries will certainly step forward, and obstruct him. [. . .] Yuan Gongbao [Junior Guardian of the

¹¹⁶ "The Passing of the T.P.G.," *Tientsin & Peking Times*, February 1, 1902, Supplement.

¹¹⁷ The Qing government established a Ministry of Foreign Affairs to replace the Zongli Yamen in 1901.

¹¹⁸ *Dagong bao*, July 22, 1902, 36.

¹¹⁹ *Yuan Shikai quanji*, 346.

Heir Apparent^{120]} has always enhanced his own importance through the use of troops. Once he relocates to Tianjin, without the company of his army, he will be no different from a big fish out of water. Even though he has the prestige of a governor-general, he will simply be an ordinary man.¹²¹

While acknowledging the difficulties that Yuan faced, the newspaper doubted whether he would be able to control the situation at Tianjin. A commentator of *Dagong bao* reminded Yuan and other local officials to “succor the afflicted, empathize with their suffering, uphold the common good, and eliminate the long-established malfeasance;” otherwise, they would lose people’s support and push them to rebel. Moreover, if the officials carried on their old ways of governing, the foreigners would be laughing at the incapability of the Chinese government to even manage a city, let alone the entire army and state. The foreign powers thus would take advantage of the situation to further encroach upon China’s sovereignty.¹²² The commentator called on Yuan Shikai and his fellow officials: “Do not forget the lessons of the Gengzi incident [the Boxer Uprising]. Do not provoke criticism. Do not divide people’s hearts.”¹²³

The foreigners at Tianjin appeared to give Yuan more credit. A reporter wrote in the *Peking and Tientsin Times*:

If there be one single man in China competent to deal with this special villainy it is Yuan Shih-kai; and we hope that he will risk unpopularity with Peking and seek fame with posterity by dealing with it.¹²⁴

¹²⁰ The title the court bestowed on December 11, 1901. Prior to he was awarded this title, he was called Wei General (*Wei shuai*). Weiting is his adult name. Thereafter Yuan Shikai was often referred to as Yuan Gongbao.

¹²¹ *Dagong bao*, July 15, 1902, 1a

¹²² *Dagong bao*, August 7, 1902, 3a.

¹²³ *Dagong bao*, August 7, 1902, 3.

¹²⁴ *Peking & Tientsin Times*, August 2, 1902, 3.

These compliments and hopes from the foreigners constituted an intense pressure upon Yuan. Under the gaze of the Chinese people and the foreign powers alike, Yuan Shikai came to his post and began his planning of the city and railroad.

The date of returning was fixed at August 15, 1901. Prior to that day, Yuan Shikai had deputed his subordinate officials to meet with the commanders of the foreign troops and prepare to take over the city. He also sent a police patrol force of 2000 men that he had recruited and trained at Baoding to Tianjin. These patrols were deployed by the Customs Circuit Intendent Tang Shaoyi, whom Yuan Shikai brought to Tianjin as his close assistant. Yuan himself would only arrive on the day of the returning. He explained the reason of such arrangement in a letter to his friend Xu Shichang:

It is not suitable for the governor-general to arrive in advance before the set date. Because that place is still under the jurisdiction of the allied powers, not only will my orders not be implemented, but I will have to be restricted by others and obey the orders of the [foreign] countries; this will particularly harm the sovereignty of the state (國體).¹²⁵

Indeed, the governor-general was an embodiment of the authority and sovereignty of the dynasty, and the arrival of the governor-general at the railway station in Tianjin had accordingly been a performance of dazzling procession ever since the time of Li Hongzhang.¹²⁶ When Yuan Shikai came to step into the position of governor-general, however, situation had greatly changed. As Russia had selected an area near the railway station within which to establish their concession in 1901, the station was now sandwiched by the two parts of the Russian Concession. Across the river from the station,

¹²⁵ *Yuan Shikai quanji*, 345.

¹²⁶ *Shen bao*, June 7, 1894.

there was much larger an area that had been seized by the foreign powers as their concessions.

On the morning of August 15, 1902, the day of the returning ceremony, a squad of Indian soldiers escorted Yuan Shikai to and saw him off at the railway station in Beijing. At noon, he arrived at Tianjin and started the procedures of the taking over of Tianjin from the hands of the allied powers. The railway station was facilitated with rain shades and decorated with lanterns and ribbons.¹²⁷ A group of Chinese officials waited at the station. The allied powers also made arrangement to welcome Yuan at the station, but they took this opportunity to stage a show of power. A Chinese newspaper reported that

There were also an English officer leading 100 men from the Chinese police¹²⁸ infantry and 20 men from the Chinese police cavalry, a Germany officer leading 60 men from the squad of the guards of the Beiyang Viceroy, 100 police patrols, and 30 military bandsmen who all armed with gun and playing music to show their respect.

After a brief greeting with the Chinese and foreigners at the station, Yuan immediately went to meet the French Commander of the Provisional Government in the French Concession. When he exited the foreign concession after the meeting and entered the Chinese administered part of the city, it was reported that “the gentry of Tianjin set off fire crackers to respectfully welcome him,” and he “descended his cart and walked with high respect.” Afterwards, he went to the headquarters of the Provisional Government to attend the banquet that the foreign powers were hosting. Upon his arrival, “the policemen at the Provisional Government removed all the flags of the Provisional

¹²⁷ *Dagong bao*, August 15, 1902.

¹²⁸ Chinese policemen recruited by the administrations of the foreign concessions.

Government right away to signal that the Provisional Government had been removed and Tianjin had been handed back.”¹²⁹

Throughout the returning ceremony, the demonstration of foreign forces was ubiquitous, and this experience perhaps alerted Yuan Shikai of the reality. Facing a city that had been largely destroyed in the Boxer Uprising and occupied by foreign powers for almost three years, how would Yuan Shikai assert his plan and influence?

As a core member of the leadership of the New Policies reform, Yuan experimented in Tianjin modern institutions for urban administration and education. For example, he recruited a full-fledged police force, inherited the Provisional Government’s bureau of hygiene, and founded the most comprehensive school system from elementary level to professional education and universities. Even after he left Tianjin, he supported the establishment of the Bureau of Self-governance in Tianjin in 1907, then promoted it as a model to the rest of the state. Among all the measures, the building of the Tianjin-Pukou Railway under his supervision brought Tianjin to a new level on the urban hierarchy. Entrusted to the projects of the Tianjin-Pukou railway, the Beijing-Hankou railway, and the extension of the Tianjin-Shanhaiguan railroad (*Shanhaiguan neiwai* railway), he wielded his authority and resources to fix the hub of all the railroads passing north China at Tianjin.

Yuan’s first major undertaking in Tianjin was to build a new train station. The argument that Yuan used to support his proposal of a new station was that “the place [of the station] is close to the concessions, which creates many obstructions for expanding

¹²⁹ *Dagong bao*, August 16, 1902

and operation.”¹³⁰ There were other reasons for proposing this new station that he did not mention explicitly in the memorial to the throne. As new concessions were established after 1900, the existing railway station was encircled by the Russian Concession and the Italian Concession. Yuan Shikai, as the governor-general of Zhili, had to travel frequently by railroad between Beijing and Tianjin, and it was annoying that he and his company had to pass by foreign concessions every time he traveled. Another problem was that his office was too far from this station. Before he came to Tianjin, it was already clear that he would not want to stay too close to the foreign concessions. Since the office of governor-general that Li Hongzhang used had been occupied by the Provisional Government and would not be evacuated until after Tianjin was returned, Yuan Shikai chose another place for his office—the travelling palace to the north of the North Canal.¹³¹ To get to the railway station from Yuan’s office, one had to either take a boat or to cross two rivers if they took the shortest route.¹³²

The location he chose to build the new station was a short distance to the north to his office and four kilometers away from the existing station. Once the new station, named as the Xinkai Station, was built, Yuan Shikai or any other Chinese officials came to Tianjin by railroad did not have to pass by the foreign concessions and could get to Yuan’s office quickly. Moreover, Yuan made the new station a manifestation of the imperial authority of the Qing. On May 13, 1903, *Dagong bao* reported that the emperor bestowed Yuan a round fan and had it delivered to Tianjin by the railway. When the fan arrived, Yuan sent subordinates to pick up the fan, put it in a moveable “yellow pavilion

¹³⁰ Tianjin tushuguan, Tianjin shehuikexueyuan lishi yanjiusuo, ed., *Yuan Shikai zouyi* 袁世凱奏議 (Tianjin: Tianjin guji chubanshe, 1987), volume 2, 839.

¹³¹ *Yuan Shikai quanji*, 411.

¹³² *Dagong bao*, September 7, 1902, 5b.

(黃亭),”¹³³ and escorted it to Yuan’s office. After guns fired nine salutes, Yuan received the fan in his office.¹³⁴ The emperor and the Empress Dowager Cixi sent gifts and edicts to Yuan quite often. Only two months later, Cixi had twenty boxes of supplementary medicine delivered to Yuan through the railway.¹³⁵ Then in September, Cixi bestowed four bolts of fabric.¹³⁶ To show his respect to the court and establish a symbol for the imperial authority, in June of 1903, he ordered to build a permanent yellow pavilion at the Xinkai Station for receiving imperial edicts and sending greeting memorials to the court.¹³⁷

Accompanying the new station, a grand plan of building the northwest section of Tianjin into a modern Chinese city gradually unfolded. In 1903, right after the establishment of the Xinkai Station, Yuan Shikai proclaimed a plan for the development of the so-called “Hebei” area, which was encircled by the railroad to the east, the Northern Grand Canal to the west, the Jinzhong River to the south, and the Xinkai River to the north. Having already brought the railway to the Hebei area, he then created a police force, filled in ponds, removed graves, paved a grid system of roads, and installed streetlights.¹³⁸ To elevate the status of this area, he moved the offices of the Zhili Province and the Tianjin County here, as well as those of the native customs, Changlu

¹³³ A temporary sedan-like structure decorated with yellow silk. The yellow pavilions were often used in imperial ceremonies or to hold gifts and edicts from the court. See Li Xing 李邢, “Caizi ye 彩業,” in *Fengsu quwen* 風俗趣聞, ed. Beijingshi zhengxie wenshi ziliao weiyuanhui 北京政協文史資料委員會 (Beijing: Beijing chubanshe, 2000), 138-139. Kong Demao 孔德懋, *Kongzi jiagui quanshu: Jiazhu liyi* 孔子家規全書: 家族禮儀 (Shenyang: Liaohai chubanshe, 2000), 31.

¹³⁴ *Dagong bao*, May 13, 1903, 4a.

¹³⁵ *Dagong bao*, July 11, 1903, 3a.

¹³⁶ *Dagong bao*, September 29, 1903, 4a.

¹³⁷ *Dagong bao*, June 16, 1903, 3.

¹³⁸ Tianjinshi Hebeiqu difangzhi bianxiu weiyuanhui ed., *Hebeiqu zhi* 河北區志 (Tianjin: Tianjin shehuikexueyuan chubanshe, 2003), 1101.

Salt Administration, courts of the county and prefecture, river conservancy commission, and railway company. He also selected locations in the Hebei area to establish Western styled schools and factories. In addition, he built the *Quanye huichang* (勸業會場), an exhibition ground there as well. 200 *mu* large, the ground was a venue for industrial exhibition and public education on industry and commerce. In this fashion, he established a model of a Chinese-administered modern city at a location that was far removed from the foreign concessions.

Yuan Shikai's planning of the railway station and the new Hebei area was based on his confidence in the expanding railway system and Tianjin's status as a hub. Following the Sino-Japanese War, the railroad already connected Tianjin with Beijing and Shanhaiguan. Then, in 1899, for the purpose of constructing the Tianjin-Zhenjiang railway, the Chinese government agreed on a preliminary contract of loan with several German and British banks and companies.¹³⁹ This railroad, however, was not carried out immediately due to the eruption of the Boxer Uprising. When the negotiation about the loan for the Tianjin-Zhenjiang railway was reopened in June of 1902, the court appointed Yuan Shikai as the Administer for the Tianjin-Zhenjiang Railway.¹⁴⁰ As such, when he built the Xinkai Station and the Hebei area, Yuan was already aware of the possibility of making the new station and the new Hebei zone as the hub of the Beijing-Mukden (Tianjin-Shanhaiguan) line and the forthcoming Tianjin-Zhenjiang line.

Due to the considerable opposition to the loan from Zhili, Shandong, and Jiangsu, the three provinces that the line would pass by, Yuan Shikai and Zhang Zhidong worked

¹³⁹ Kent, *Railway Enterprise in China*, 151. German Syndicate, the Hongkong and Shanghai Banking Corporation, and the British and Chinese Corporation Limited.

¹⁴⁰ *Shen bao*, June 6, 1903.

together to negotiate better terms with the British and German capitalists. While the negotiations were occurring, in 1905 Yuan Shikai proposed a plan of using the profit the Beijing-Mukden railway and appointing Chinese engineers to build the Beijing-Zhangjiakou railway. He memorialized the court, pointing out that the Beijing-Zhangjiakou line was “of vital importance to the commerce of North China,” and that there was “urgent need to commence the work in time.”¹⁴¹ Opened for transportation in 1907 and fully completed in 1909, this railroad was the first one that the Chinese had designed and constructed independently. This railroad improved transportation between Tianjin and Mongolia and made Tianjin the outlet for hides and herbs from Mongolia and the transshipping center for tea and other goods that found market in Mongolia and Russia.

In 1908, the negotiation about the loan for the Tianjin-Zhenjiang line finally reached an agreement.¹⁴² By that time, since the construction of the Shanghai-Suzhou railroad had almost been finished, the southern terminal of Tianjin-Zhenjiang line was changed to Pukou, a more convenient location to connect to the Shanghai-Suzhou line.

Before the contract was signed and the work of the Tianjin-Pukou railway was commenced, in September of 1907, Yuan Shikai was removed from the position of Zhili governor-general and appointed at the central government the Minister of Foreign Affairs and Grand Minister of State. This placement was a move of the court to curb Yuan’s

¹⁴¹ Mi, *Zhongguo jindai tielu shi ziliao*, vol. 2, 914. Yuan Shikai’s argument of building railroad was already different from Li Hongzhang’s state defense initiatives. That was also relevant to the administrative changes of the Qing court. The Qing founded a Ministry of Commercial Affairs in 1903, which oversaw issues of railroad. (Spence, 242)

¹⁴² Mi, *Zhongguo jindai tielu shi ziliao*, vol. 2, 812. Zhonghang zong guanlichu jingji yanjiu shi, ed., *Zhongguo waizhai huibian* 中國外債彙編 (Shanghai: Wenrui yinshu guan, 1935), appendix 122-131.

power in North China, especially over army. Soon in 1908, he was dismissed by the new emperor. His influence on Tianjin continued nevertheless.

When Yuan left Tianjin, the location for a new railway station of the Tianjin-Pukou line had not been decided. In May of 1908, the German consul approached the Office of Foreign Affairs, asking to build a railway station in the German Concession in Tianjin.¹⁴³ Heard this request, the Chinese Chamber of Commerce at Tianjin immediately responded with opposition and suggested to build the station at Haiguangsi in South Tianjin instead.¹⁴⁴ Two days later, twenty-seven Chinese companies cosigned a petition, supporting the proposal of building a station at Haiguangsi. For some reason, the railroad administration did not reply as to whether they approved or rejected this petition. Perhaps it did not announce the location of the railroad in order to avoid conflict with the German consul as well as to prevent the rise of the price of land. However, this moment of uncertainty was used by Li Deshun, the executive manager of the northern section of the Tianjin-Pukou line to make fortune for himself. He founded a real estate company, which hoarded land near Haiguangsi and sold it back to the railroad company at much higher price.¹⁴⁵ This plot was soon brought to light. Li Deshun was dismissed, and the administer of the Tianjin-Pukou line was degraded.

The court then appointed Xu Shichang (徐世昌), who was an old friend of Yuan Shikai, to take the position of the administer of the Tianjin-Pukou railway. Xu and Yuan had known each other before Xu received government appointment and became allies

¹⁴³ Academia Sinica, Archive of Foreign Affairs, 02-03-001-02-003, 3.

¹⁴⁴ Tianjin Municipal Archives, the archive of the Chamber of Commerce, J0128-3-000915-001,12.

¹⁴⁵ Elisabeth Köll, "Chinese Railroads, Local Society, and Foreign Presence: The Tianjin-Pukou Line in pre-1949 Shandong," in *Manchurian Railways and the Opening of China: An International History*, ed. Bruce A. Elleman and Stephen Kotkin (Armonk, New York, London, England: M. E. Sharpe, 2010), 129.

during their long service to the Qing government. Xu Shichang was suspicious of the idea of locating the railway in Haiguangsi; the southern part of Tianjin had a low elevation and was too close to the Japanese, French, British, and German concessions, all within 2 *li* to the southeast. He proposed to instead build the railway station at Zhaojiachang, a place to the north of the South Canal, a considerable distance from the foreign concessions and with a good foundation of commerce and industry.¹⁴⁶ Moreover, to the west of Yuan Shikai's Hebei new zone and close to the Xinkai Station, a new station in Zhaojiachang would integrate these two areas together, forming a vibrant Chinese administered area.

The construction of the Tianjin-Pukou line and a new station, known as the West Station, was completed in 1911. The Tianjin-Pukou line came from the south would first pass the West Station and then reach the Xinkai Station. Thus, the Xinkai Station became the hub for Beijing-Mukden line and the Tianjin-Pukou line, and was renamed into the Tianjin Central Station (天津總站). (Figure 8) By the end of the Qing Dynasty, Tianjin was connected to Mukden, Zhangjiakou, Beijing, Shandong, Anhui, Jiangsu, and Shanghai by multiple railroads. It took 26 hours to get to Pukou from Tianjin through the Tianjin-Pukou Railway, and then, a further 8 hours ride on the Shanghai-Nanjing Railway would take the passenger to Shanghai. Linking Tianjin with the more developed region in the south, the Tianjin-Pukou line significantly boosted Tianjin's trade and commerce. Because of the routing of the railroad and the choice of the location of the

¹⁴⁶ Wang Shouxun 王守恂, *Tianjin zheng su yange ji* 天津政俗沿革記 [1938] (Tianjin: Tianjin shehuikexueyuan chubanshe, 2001), 23-24.

stations, the most important station that received traffic from multiple railroads was located in the Chinese administered area.



Figure 8 Locations of the three railway stations in Tianjin

By the end of 1909, Tianjin had already been linked to five different railroads and had railway connection with Beijing, Shanhaiguan, Zhangjiakou, Hankou, and Shanxi. Nearly half of the city's domestic trade value was brought by railways.¹⁴⁷ The improved transportation with inland regions led to significant increase in export of inland goods such as coal, pig bristles, cashmere, and sheep skins.¹⁴⁸ The establishment of the Tianjin-

¹⁴⁷ *Jin haiguan maoyi nianbao*, 256.

¹⁴⁸ *Ibid*, 280.

Pukou railroad in 1911 further enhanced Tianjin's significance as a commercial hub. Tianjin attracted a lot of goods that were formerly traded at other northern ports. For example, it was reported that peanuts used to be shipped to the south through Qingdao, but in 1912, due to Tianjin's more convenient connection with Shanghai, peanuts that were concentrated in Tianjin increased 30% from the year before.¹⁴⁹ The percentage of goods transported through the railroad to or from Tianjin was also improved once Tianjin was connected with Shanghai by railroad. Since 1914, the percentage was constantly above 55%.¹⁵⁰

The transformative impact of the Boxer Uprising and its aftermath to Tianjin has not been fully examined. Ruth Rogaski insightfully asserts that Tianjin was the most changed city in China after the crisis of 1900, and convincingly established that the concept and practice of "hygienic modernity," which was modeled by the foreign concessions, transformed the landscape of Tianjin. Her focus on the sanitary improvement of the city and the uneven distribution of such amenities all over the city convincingly illustrates how Qing's adoption of modernity after 1900 was partly forced by foreign guns.¹⁵¹ My study of Tianjin's railroad complicates this explanation by demonstrating the dominant role of the Qing officials in building railroads and making decisions about the associated urban development. In the beginning of the twentieth century, the Boxer Uprising left Tianjin devastated, and the subsequent military occupation by the allied powers intensified Western control in Tianjin. But the Qing government once again sent to Tianjin a capable official, Yuan Shikai, who skillfully

¹⁴⁹ Ibid, 304.

¹⁵⁰ Ibid, 323, 331.

¹⁵¹ Ruth Rogaski, *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China* (Berkeley, Los Angeles, and London: University of California Press, 2004), 190-191.

counter-balanced the influence of the western powers and managed to implement policies and modernization projects that elevated Tianjin's status and contributed to the state's wealth and power.

Yuan Shikai's achievement in building the new Chinese city and the railway station has been downplayed in scholarship. For example, Ruth Rogaski claims that Yuan Shikai's new Chinese city was too removed from the majority of the Chinese population so the influence it projected was very limited.¹⁵² She also characterizes Yuan's bringing in train station to the new Chinese city as adding "a Western municipal atmosphere to Yuan's model town." However, an in-depth examination shows that the new railway station in this new Chinese city certainly made the modernization efforts of Yuan visible to not only the residents of Tianjin but also the travelers, many of whom were Chinese officials. The fact that the railway was used to transfer imperial gifts and edicts and the building of the yellow pavilion also disprove the assumption that railway station necessarily stood for an embodiment of Western influence. On the contrary, it attested to Chinese ability of applying technologies originated from the West to secure the Qing's control over transportation and cities.

Therefore, the transformation of Tianjin during the Qing after 1900 should not be viewed as a reaction to imperial violence, but a continuation of the modernizing effort initiated by Chinese officials. This success of revitalizing the city of Tianjin by building railroads in the late nineteenth and early twentieth centuries proved to be of enduring

¹⁵² Rogaski, *Hygienic Modernity*, 200.

relevance to the emphasis on infrastructure building of the current regime, the People's Republic of China.

Railroads were important components of China's early modernizing effort. Scholars has recognized the effectiveness of the late Qing's reform and modernizing efforts and revealed the continuation of the modernizing process throughout late Qing and Republican periods.¹⁵³ The process of linking Tianjin to the first officially authorized railroad complicates this explanation of the relationship between the Qing state and China's modernization. The early stage of building railroad in China was in lack of planning and funding and faced the opposition of the conservative clique in the central government. As this chapter has shown, it was not under the instruction of the Qing court that the officials built railroads and connected them to Tianjin. In fact, it was not immediately evident to the Qing court that Tianjin was going to become an arena where Sino-Western interaction and competition were intense. The Qing court did not have a master plan of allocating more resources to Tianjin if not for Li Hongzhang and several other officials' clever artifices and timely resolutions. These officials had their own agendas and acted far beyond what the court dictated. They had firmly controlled the building of the railroad and skillfully maneuvered the railway projects to meet their goals of modernizing the city on their own terms, often as rivalries against the foreign powers.

¹⁵³ Kenneth Pomeranz made his influential assertion in 1993 that the Qing had shifted focus from maintaining an agrarian order in its hinterland to coastal regions such as the Yangzi Delta, or areas such as Beijing and Tianjin, where the foreign threat to sovereignty was intense. See Kenneth Pomeranz, *The Making of a Hinterland: State, Society, and Economy in Inland North China 1853-1937* (Berkeley: University of California Press, 1993), introduction. Anne Reinhardt and Stephen Halsey in their studies of official-supervised merchant-managed steamship enterprise highlight the roles of the key Chinese officials in reclaiming portion of shipping from the foreigners' hands but reinforce Pomeranz conclusion and attribute this success to state's sponsorship and an effort of preserving rights of economy and sovereignty. See Anne Reinhardt, "Navigating imperialism in China: Steamship, Semicolony, and Nation, 1860-1937" (PhD diss., Princeton University, 2002); Stephen Halsey, "Sovereignty, Self-strengthening, and Steamships in Late Imperial China," *Journal of Asian History* 48, no. 1 (2014): 81-111.

The continuous efforts of these officials throughout the Self-strengthening Movement and the New Policies reform had resulted in a railway hub in Tianjin consisting of three stations connected to three major railroads. Tianjin thus found itself at a key position in the new transportation network. Without much improvement after the collapse of the Qing, this superior position enabled Tianjin to develop into the largest metropolis of north China.

CHAPTER III Tramway: Politics of Technology and Urban Space

Electric tramway was introduced into Tianjin in the beginning of the twentieth century. At the time, it was the most prominent technology of urban transit and numerous cities in West Europe and the United States had only been equipped with this new utility not long ago. Following the chapter on how the adoption of steamship into Tianjin influenced the urban environment and the chapter on how the advent of railroad in Tianjin changed the city's status in the urban hierarchy and trade network, the current chapter focuses on how the Chinese city adapted to, resisted, and changed electric tramway. This chapter will explore why Tianjin was the first Chinese city that adopted tramway and in what way this background influenced the development of tramway in Tianjin. As a new form of urban transit, the adoption of tramway could interrupt with the lives of many people in Tianjin. This chapter will examine how different classes and entities, such as officials, media, merchants, laborers, and commoners, reacted to this new technology. Once tramway was put into operation, it created new social spaces while changing the dynamics on the roads. Staff, passengers on the tram, and policemen, pedestrians, and other vehicles were required to follow a set of new rules. Accidents involving tramway inevitably occurred and demanded new administrative procedures and legal explanations. This chapter will also cover how tramway interacted with the urban society during its operation. Tianjin was a treaty port where multiple foreign concessions coexisted with a Chinese administered quarter. In order to understand the Chinese and westerners' receptions of tramway overtime, the chapter will investigate the expansion of tramway across the districts under different jurisdictions from 1906 to 1937. It will

investigate the tramway company's proposals of expanding tramway and the responses of various political constituencies that were involved in reviewing these proposals.

Fear of the Unknown: Initial Reactions to the Tramway

Tramway was introduced to Tianjin not to meet any needs in mass-transportation; rather, it was a political gesture by Western colonial powers to impress the Chinese with their technological and civilizational superiority. The decision to build a tramway system was made in 1901, by the Provisional Government of the District of Tianjin (TPG hereafter) that was organized by the military commanders of the troops sent by eight colonial powers (Britain, France, United States, Japan, Russia, Germany, Italy, and Austria-Hungary) to invade north China in order to suppress the Boxers. This military government controlled Tianjin from 1900 to 1902, during which time it worked quickly to strip the city of defense capability and made plans that aimed at showcasing Western superiority. It ordered to tear down Tianjin's city walls that had been used by the Boxers to resist the troops of the eight powers, and it then cleared space to build a ring of boulevards that were 20 meter in width. As soon as the new streets were paved, the TPG approved a proposal sent by a British company to install electric tramways on them.¹

Electric tramway was the most advanced technology of passenger transportation at the time. Tramways for horse-drawn cars first appeared in America in the 1850s, and spread to Europe in the next two decades, convening the model of urban public transportation "carrying paying passengers along a predetermined itinerary within

¹ *Baguolianjun zhanling shilu: Tianjin linshi zhengfu huiyi jiyao* 八國聯軍占領實錄——天津臨時政府會議紀要 (Tianjin: Tianjin shehuikexue chubanshe, 2004), 8-10.

cities.”² Then, electric traction was experimented in American cities and proved a commercial success in the 1880s. In two decades, this innovation was quickly adopted in almost every large city in the U.S. and Europe where industrialization resulted in huge increase of urban population and urgent need for more effective mass-transit.³

The decision to build an electric tramway system in Tianjin was made abruptly not because Tianjin had a huge population in urgent need of this new mode of passenger transportation. In the beginning of the twentieth century, Tianjin remained essentially a “walking city.” In the Chinese quarter of the city, about one third of the population was concentrated in the walled city and the areas to its north, northeast, and east, so was the number of roads and lanes.⁴ Although the urban area of Tianjin had significantly expanded since the opening of foreign concessions in 1860, only the British and French concessions had seen major development by the end of the nineteenth century. Chinese residents in the Chinese city rarely had any reason to go to the foreign concessions. For the westerners in Tianjin, after the so-called “Tianjin Massacre” in 1870, foreign consulates, churches, and businesses moved into the concessions and most of the westerners confined their activities within the concessions, not risking becoming the target of anti-foreignism. The need for long-distance travel in the city was not great. When the Chinese authorities organized a Board of Public Works in 1883 and began to

² John McKay, “Comparative Perspectives on Transit in Europe and the United States, 1850-1914,” in *Technology and the Rise of the Networked City in Europe and America*, edited by Joel A. Tarr and Gabriel Dupuy (Philadelphia: Temple University Press, 1988), 3.

³ John McKay, *Tramways and trolleys: the rise of urban mass transport in Europe* (Princeton, N.J.: Princeton University Press, 1976), 40-74.

⁴ According to the censuses of 1840 and 1910. See Li Jingneng 李竞能, *Tianjin renkou shi* 天津人口史 [Demographic history of Tianjin] (Tianjin: Nankai daxue chubanshe, 1990), 83, 85. Number of roads and lanes, see Gao Yanlin 高艳林, *Tianjin renkou yanjiu* 天津人口研究 [A study of the population of Tianjin] (Tianjin: Tianjin renmin chubanshe, 2002), 63.

pave roads, the board worked on numerous roads within the walled city and the busy roads to the north and northeast of the city. But it had only paved one road connecting the Chinese city with the foreign concessions, a thoroughfare tracing the right bank of the Hai River and linking the Japanese, French, British, and Germany concessions.⁵

Before the 1880s, passenger and goods transportation in the city relied on carts drawn by horses, mules, or donkeys, and sedan chairs, hand carts, and wheelbarrows carried by men. These vehicles were compatible with the roads, most of which were rammed with dirt, and were narrow, winding, and muddy.⁶ In 1882 or 1883, a semi-modern vehicle, rickshaw, was introduced into Tianjin from Shanghai. Rickshaw is a two-wheeled man-pulled passenger vehicle equipped with inflatable rubber tires and ball bearings. Rickshaws were first owned by private Westerners and used mainly in the foreign concessions. At the time, major roads in the British and French concessions had been macadamized. Macadamized roads were supported with layers of crushed granite and covered with a surface of light stone and had drainage ditches to its sides. Soon, the use of rickshaw expanded in tandem with the improvement of roads in the Chinese city. The aforementioned board of public works, in the beginning, mainly collected wharfage

⁵ The maintenance was also the responsibility of the Chinese authorities. The board dispatched soldiers to patrol the road day and night and janitors to spray water and sweep it whenever needed. See Zhang Tao 張燾, *Jinmen za ji* 津門雜記 [1884] (Tianjin: Tianjin guji chubanshe, 1986), *juan xia* (volume 3), 21. Shen Jiaben 沈家本, *Chongxiu Tianjin fuzhi*, 重修天津府志 [A revised gazetteer of the Prefecture of Tianjin], 504. Originally published in 1899. Reprinted in *Tianjin tongzhi jiuzhi dianjiao juan*, vol. 1. The road was 4.7 kilometers long and 13 to 15 meters wide. Laborers transporting goods between the docks in the foreign concessions and the Chinese city with horse carts or wheel barrows used this road. “at certain places the road is almost blocked.” But this was reported as very unusual scenario when the trolleys were not taxed. (W0001-1-001457)

⁶ Wang Shouxun 王守恂, *Tianjin zheng su yange ji* 天津政俗沿革記, vol. 3 of *Tianjin tongzhi jiu zhi dianjiao juan zhong* 天津通志旧志点校卷, ed. Guo Fengqi (Tianjin: Nankai daxue chubanshe, 2001), 13. Shinkoku chutongun shireibu 清国駐屯軍司令部, *Tenshinshi* 天津志 [A record of Tianjin] [1909], trans. Hou Zhentong 侯振彤 (Tianjinshi difang shizhi bianxiu weiyuanhui zongbianji shi, 1986), 100. The Chinese title is *Ershi shiji chu de Tianjin gaikuang* 二十世紀初的天津概况.

dues to fund its projects. Later, when rickshaws became a significant transit force and the prefectural government found it necessary to restrain the growth of the number of rickshaws, the board also taxed the rickshaws as its revenue.⁷ In 1884, it was recorded that the number of rickshaws had increased to over one hundred and was still going up.⁸ The number of rickshaws increased to four to five thousand in the 1890s. Numerous rickshaw garages were opened, and local craftsmen duplicated rickshaws successfully and could manufacture the vehicles on their own.⁹ According to a survey conducted in the autumn of 1906, there were nearly 7000 rickshaws (6127 for rental and 611 privately owned) operated in Tianjin and the population engaging in manufacturing, leasing, and pulling rickshaws reached 10,000.¹⁰ Because the fares of rickshaws were expensive, the clientele of rickshaws was the well-off classes. Wealthy households normally owned their own rickshaws. Other people that could afford hiring rickshaws for regular or occasional trips would just offer a one-time job to the rickshaw pullers soliciting on street. Similar to the rickshaws in Beijing in the late nineteenth and early twentieth centuries, rickshaws of Tianjin also became emblem of social status and served a conspicuous means of traveling in the city.¹¹

In the beginning of the twentieth century, for the majority of the inhabitants, walking was the principal way of getting around in the city. Rickshaws were a faster and more comfortable option for the affluent groups. At the time, this structure of urban

⁷ Shen Jiaben, *Chongxiu Tianjinfu zhi*, 504.

⁸ Zhang Tao, *Jinmen za ji*, 22a.

⁹ Yangcheng jiuke 羊城舊客, *Jinmen jilue* 津門紀略, in Tianjin Huanghui kao Tianjin Huanghui kaoji Jinmen jilue 天津皇會考 天津皇會考紀 津門紀略, ed. Lai Xinxia (Tianjin: Tianjin guji chubanshe, 1986), 75.

¹⁰ *Ershi shiji chu de Tianjin gaikuang*, 100.

¹¹ On rickshaws in Beijing, see David Strand, *Rickshaw Beijing: City People and Politics in the 1920s* (Berkeley: University of California Press, 1993).

transit was still the norm in East Asian cities, even those that were much larger than Tianjin. In Shanghai, for example, the population had reached 1,000,000 in the beginning of the twentieth century, three times larger than Tianjin's population.¹² But Shanghai had not adopted any forms of electrified mass transportation yet. Even in Japan, the country that led the race in adopting western technology in Asia, electric tramway only existed in Kyoto. Tokyo had a population of 1,500,000 by the end of the nineteenth century but had not electrified its horse tramways. As for Tianjin, rickshaws could suffice the need for traveling within the city. With the 7,000 rickshaws servicing the city, there was no obvious demand to increase the speed and capacity of public transportation in Tianjin.

The motivation for the TPG to approve a tramway system was more likely to be political. Bringing electric tramway to Tianjin therefore could serve a greater mission of the western powers: demonstrating the most recent achievement of the Western civilization and technology. Because this would be the very first electric tramway in China as well, the stake hinged on the question of who was going to build it was even higher. From the point of view of the western powers, the task of enforcing a new technology that was invented in the West and demonstrated the western superiority shall be entrusted to westerners. When the British company proposed to build a tramway system, the Japanese were also making effort to obtain the franchise. In fact, the Japanese submitted the first tramway proposal in Tianjin in 1899 and was approved by the Qing government.¹³ However, Japan, though joining the force of the western powers, was not

¹² Zou Yiren 鄒依仁, *Jiu Shanghai renkou bianqian de yanjiu* 舊上海人口變遷的研究 (Shanghai: Shanghai renmin chubanshe, 1980), 90.

¹³ In 1899, already seizing a concession between the Chinese city and the French concession on the right bank of the Hai River, the Japanese demanded for a waterfront area to the east of the Germany concession on the term that their concession was not always accessible for steamships. In order to connect their concession with this wharf, they proposed to build a 3-mile long horse tramway from the west or south gate

seen as equal by the other powers. In the end, although the Japanese consul presented evidence showing that the Qing government had already granted the franchise of city tramway to Japanese merchants and asked the TPG not to bleach their rights, the TPG favored the European tramway syndicate behind the British company.

The TPG appeared persistent in making sure that the franchise would land at the hand of westerners. Soon after obtaining the franchise, the British company failed to attract enough investment. In July 1902, the British company transferred the tramway franchise to a Belgian consortium (invested by Oriental International Corporation, Overseas Bank, Second Railway Corporation, and China Railway and Tram Corporation). At the time, Belgium had joined the western powers in exploiting economic profit from China. In 1896, the Qing state chose Belgium among the numerous Western powers to borrow the capital for constructing the Beijing-Hankou railroad and granted Belgium the franchise of building the railroad.¹⁴ Although Belgium did not send troops to join the eight powers in invading north China, it managed to sign the Boxer Protocol along with the eight powers and Spain and Netherland in 1901 and seize a plot of land in Tianjin as its concession in 1902. Belgium must have shown interest to taking over the tramway franchise and negotiated a deal with the tramway syndicate.¹⁵ The TPG, even

of the Chinese city, traversing the Japanese, French, British, and Germany concessions along the Hai River, to reach the Japanese wharf downriver. See “Tianjin Riben zujie tiaokuan,” 天津日本租界條款 in Wang Tieya 王鐵崖, *Zhongwai jiu yuezhang huibian* 中外舊約章彙編 [A collection of the old treaties between China and foreign countries] (Shanghai: Shenghuo dushu xinzhi san lian shudian, 1982), 799. Also see “Tientsin (From a Correspondent),” March 13, 1899, *The North-China Herald*.

¹⁴ The loan was guaranteed by the profit of the railroad, which put Belgium in ad hoc control of the Beijing-Hankou line. This achievement encouraged Belgium to expand its interest in China. See Seiichiro Yoshizawa 吉澤誠一郎, “Densha to koufun: Shingaikakumei zenya Tenshin no shinai koutsuu o meguru seiji,” 電車と公憤: 辛亥革命前夜天津の市内交通をめぐる政治 *Shigaku zasshi* 史学雑誌 105, no. 2 (1996): 152.

¹⁵ The Belgian Oriental International Cooperation was established in 1900 for the purpose of joining other industrial countries in exploring the East Asian market. Yoshizawa, “Densha to koufun,” 152. *Tianjin linshi zhengfu huiyi jiyao*, vol. 2, 751.

when the British company had to withdraw, still wouldn't consider Japan. But it had no difficulty in acknowledging the transfer of the franchise to the Belgian company. As a result, the Belgian syndicate took over the franchise and registered at Brussel as the Compagnie de Tramways et d'Eclairage de Tientsin, or Tientsin [Tianjin] Tramway and Lighting Company.¹⁶

The TPG was so determined to have the transport utility that could leave Tianjin a permanent mark of foreign control installed that it managed to insert a provision to the agreement of returning Tianjin to the Qing government that the Chinese must acknowledge the tramway franchise that the TPG granted to the Belgian company.¹⁷ Yuan Shikai accepted the condition on the electric tramway along with a series of other contingents of handing over Tianjin. Immediately after resuming control over Tianjin in 1902, Yuan Shikai began to negotiate a charter with the Belgian company.

The proposal of routes submitted by the tramway company further showed the westerners' desire of monumentalizing the electric tramway. The proposal layout an electric tramway system consisting of four lines, two lines together encompassing the old walled city and connecting the Chinese city with foreign concessions, a third line extending from the Chinese city to the northern suburb, and a fourth line reaching out from the old city to the western suburb. (Figure 9) The boulevards that the TPG built to replace the walls had already opened the Chinese city to through traffic as well as the European-styled landscape in the concessions. Further equipping these avenues with

¹⁶ *Tianjin linshi zhengfu huiyi jiyao*, vol. 2, 751. Yili Zhao, Lin Feng, Yanchen Sun, Kun Song, "Historical Analysis of Urban Public Transportation Development in Modern Tianjin (1902-1949)," The 18th International Planning History Society Conference (Yokohama, Japan, July 2018).

¹⁷ *The North-China Herald*, May 28, 1902.

tracks for electric tramcars would exhibit the more unfamiliar and revolutionary technology at the doorstep of the Chinese city. Once the tramway company laid tracks on the four avenues and across both the Chinese city and the foreign concessions, the geographically and psychologically segregated districts would be tied together. Imposing the most advanced western transport technology onto Tianjin, the western powers asserted a statement that they possessed the power and technique to transform the Chinese city and to redefine the relationship between China and the West.

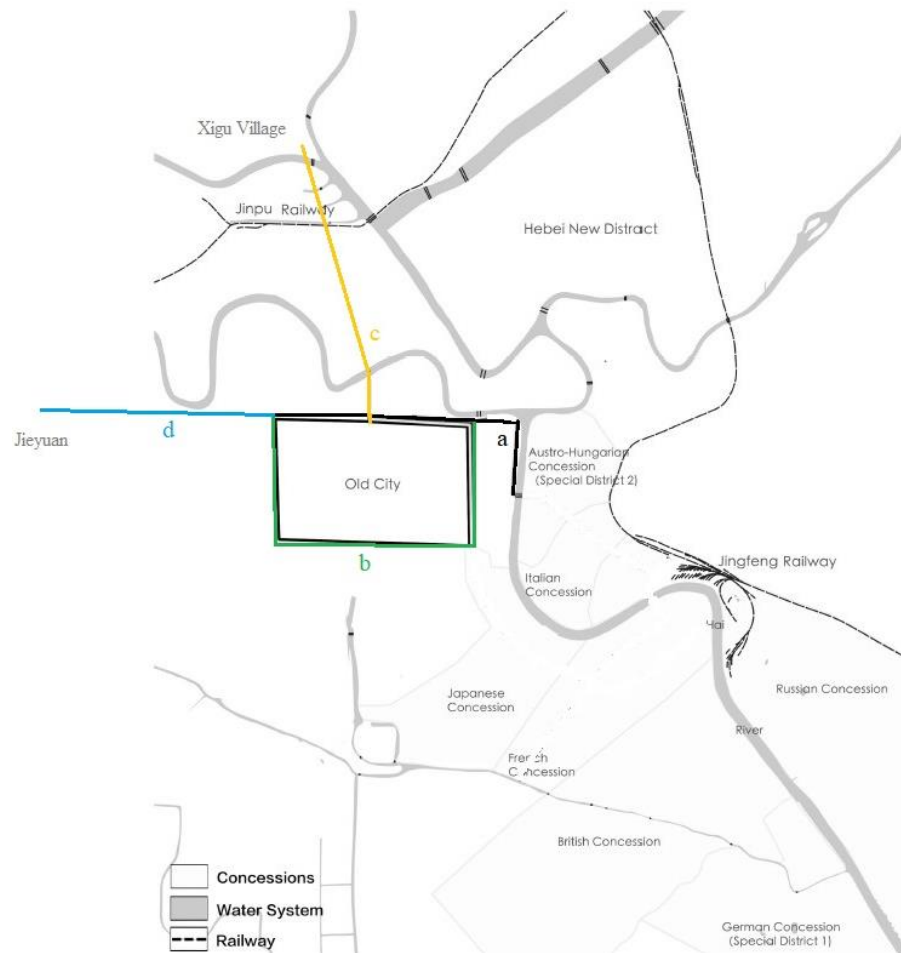


Figure 9 The original plan of tramway in the agreement signed in 1904 ¹⁸

¹⁸ a. From Zhakou along the Bund to the Northeast and thence to the Northwest corner of the City. b. Around the city from the Northwest corner to the Southwest corner, from the Southwest to the Southeast,

Comparing the original charter proposed by the Belgian company with the final version, we clearly see how Yuan Shikai tried to ease the popular resentment to this new means of transportation and to preserve the dignity of the Qing court. For instance, the final charter gave the Chinese government greater share of the profit and more control over the operation and expansion of tramways; Yuan Shikai inserted in the final charter provisions of protecting the land ownership and access to roads of local ordinary people; final charter also increased the number of Chinese board members of the company and stipulated that half of the members should be Chinese.

Another worth-noticing article in the final charter that Yuan Shikai added was one demonstrating the tramway company's veneration to the Qing rulers and Chinese traditions. This article went as follows:

On each of the following occasions, viz the first day of Chinese New Year and the birthdays of Their Majesties the Empress Dowager and the Emperor of China, two hundred (200) lights of not less than sixteen candle power each shall be installed at the "Wan Shou Lung Ting" [dragon pavilion celebrating longevity of the emperor] free of charge

The Company agree to supply electric light for public charitable institutions at half price¹⁹

Like the yellow pavilion that Yuan Shikai built at the railway station to honor the emperor and the empress dowager (which has been discussed in chapter two), he again

and from the Southeast to the Northeast corner. c. From the North Gate to Xigu. d. From the Northwest corner of the city to the junction of the Mudwall and the Grand Canal, near Jieyuan.

¹⁹ The original contract can be found in Tianjin Municipal Archives et al. ed., *Tianjin Shanghui dang'an huibian 1903-1911*, vol. 2 天津商會檔案匯編 (Tianjin: Tianjin renmin chubanshe, 1989), 2246-2251. The Chinese and English texts of the final charter can be found in Liu Lusheng and Luo Baoshan ed., 劉路生 駱寶善 *Yuan Shikai quanji* 袁世凱全集 (Zhengzhou: Henandaxue chubanshe, 2013), vol. 12, 256, and in *Agreement for the Concession of the Electric Tramways and Lighting of Tientsin with Additional Contract and Final Agreement in Ten Articles* or *Tianjin dianche diandeng gongsi xinjiu hetong ji jie jue banfa* 天津電車電燈公司新舊合同及解決辦法, unknown publisher and unknown date of publishing.

managed to endue symbols of the Qing state to the western technology and weaken the message of boasting western influence and technological achievement the new means of transportation and the changing urban landscape carried. Having the tramway company pay respect to the Qing court and contribute to the local charitable organizations would also pacify the opponents in the state and local place to the tramways.

Yuan Shikai's efforts notwithstanding, the tramway charter granted to the Belgian company had many pitfalls that later proved to be difficult to overturn. For example, comparing with the pattern of similar agreements in Europe and the United States, the tenure of the franchise was significantly longer and the conditions of purchasing the tramways by the municipality were very strict. The charter of Tianjin tramway, however, was negotiated on the ground of China's defeat in the hands of the Western and Japanese powers, which was fundamentally different from how concessions on tramway were granted in Europe and America. Looking back at the two-year long negotiation, Yuan Shikai explained himself that "whenever there was something that would benefit our merchants and people, I would fight for it."²⁰ Probably not as selfless as he claimed, he indeed intended to blend this modern technology in the Chinese city by minimizing its colonial marks and reducing conflicts between the new technology and the traditions.

That the tramway was unprecedented in Tianjin increased Chinese officials' suspicion to this new transit technology. In general, advanced technology was first used in foreign concessions before the Chinese administration approved its application in the Chinese city. The adoptions of paved road, water works, and the upcoming electricity all followed this pattern. But unlike those new urban facilities, the tramway system in the

²⁰ *Yuanshikai quanji*, vol. 13, 492.

Chinese city under planning would be the very first of its kind in Tianjin. Tramway is not a stand-alone technology; electricity would come with it to the Chinese city. Chinese officials showed distinctive attitudes to these two technologies in their negotiation with the tramway company; they would prefer getting electricity if they had the right to choose. At the time, the French and British concessions had built their own power plants in 1902 and 1903 respectively, supplying electricity to street lights and indoors lighting within the two concessions.²¹ In the Chinese city, however, street lights still burned kerosene, occasionally causing fire alarms. Having witnessed the advantage of electric street lights and the drawbacks of the kerosene lamps, the Chinese officials managed to obtain the tramway company's promises to install electric street lights in the Chinese quarter. For example, the tramway charter stipulated that the tramway company "shall place electric light installation in any quarter of the City and put in electric traction systems in any locality upon the demand of the local Authorities," and the company shall supply electricity to these street lights at discounted rate.²² In contrast, without a nearby example as reference, the Chinese officials were more concerned about the harm that this new transport technology might cause. Although, constrained by the Boxer Protocol, they had no choice but to carry out the tramway plan, they negotiated with the tramway company to curtail its ambition in expanding the tramway lines at will in the future.

The news about building tramway broke out in Tianjin when Yuan Shikai and the Belgian company²³ agreed on a charter in 1904 and immediately caused commoners'

²¹ Tianjinshi dianligongye zhi bianweihui ed., *Tianjinshi dianligongye zhi* 天津市電力工業志 (Beijing: Zhongguo tiedao chubanshe, 1993), 46.

²² *Agreement for the Concession of the Electric Tramways and Lighting of Tientsin*, 4-5.

²³ It seems that a Germany company Eduard Mayer & Company, or Shichang yanghang 世昌洋行, became the agent of the Belgian company in Tianjin.

suspicious and worries because this technology was forced upon Tianjin by the violence of the eight powers and would be ran by a western company. Tianjin had just been handed back to the Qing's rule, and the wounds of the killing and looting that the eight powers committed in Tianjin were still fresh. The obvious connection between tramway and violence made it very difficult for the Chinese inhabitants to accept this new technology.

Instead of emphasizing on the blood and fire that preceded the tramway plan, the local media discussed practical consequences associated with the adoption of tramway. *Dagong bao*, the most influential local newspaper, published numerous editorials and readers' letters addressing how the tramway might interfere with people's lives. One concern was that the tramway would take away business from rickshaws, thus diminish the livelihood of many impoverished people. The editors at *Dagong bao* learned that the tramway company estimated its annual income based on the total earnings of the rickshaw in Tianjin. In a vernacular editorial published on March 21, 1905, entitled "petitioning on behalf of the poor," the editor suspected that, in order to make the tramway business thrive, the electric tramway company would try to kick rickshaws out of business.

If the tramway company wished to reduce the viability of rickshaws, it had to have the rickshaw dues increased. If the fees are heavier, the fares of rickshaw are naturally more expensive. If the fares are more expensive, then they are not much different from the tram fares. Who wouldn't take the cheaper and faster tramway?²⁴

If the electric tramway company succeeded in forcing the Chinese officials to increase the rickshaw fees, the editors imagined that the poor rickshaw pullers would be

²⁴ "Wei qiongren qingming," 為窮人請命 *Dagong bao*, March 21, 1905.

left with no alternatives but turning to theft and robbery. The editors thus “respectfully advise” the promoters of electric tramway to “reserve a means of surviving for the poor.” Specifically, they suggested that, if the tramway must be built, the stakeholders of the tramway company and the Chinese officials should never raise the fees on rickshaws, and if they had some mercy on the poor, they should even reduce the fees and restrict the number of rickshaws. This way, “even if everyone preferred taking the tram and the business of rickshaws gradually diminished, nobody would resent the officials for not caring for the poor.”²⁵

Another proclaimed concern in local media was that people’s properties would be demolished in order to make room for tram tracks. In May 1905, it was reported that the prefectural board of works had begun to verify the ownership of land and property and send notifications of demolishing and compensation in the riparian area to the northeast of the old city, where a new road was going to be paved and tramway installed. Materials for laying the tracks had also arrived and been put on the side of the roads encircling the old city.²⁶ There was a rumor that the four avenues surrounding the old city would be further widened and a new road of a width of more than 17 meters would be paved along the Hai River.²⁷ Seeing that a lot of local houses would be demolished, a writer who assumed the penname of “Impartial hearted commentator” wrote an article for the *Dagong bao*, recalling the suffering of ordinary people whose houses were torn down under the occupation of the eight powers.²⁸ According to the author, when the Provisional

²⁵ “Wei qiongren qingming,” *Dagong bao*, March 21, 1905.

²⁶ “Dianche jinwen,” 電車近聞 May 20, 1905, *Dagong bao*,

²⁷ “Jinjun sanshiyi hang shangdong lianming bingchen shinei anshe dianche bah ai qing yu shijin wen,” 津郡三十一行商董聯名稟陳市內安設電車八害請予示禁文 *Tianjin shanghui dang’an huibian*, 2243-2245.

²⁸ *Ibid.* and “Lun Tianjin chaifang pilu ji zhengshou fangjuan shi,” 論天津拆房闢路及徵收房捐事 *Dagong bao*, May 19, 1905.

Government of Tianjin built new thoroughfares to connect the Chinese city with the foreign concessions, a large number of households were affected, and their situations were extremely miserable.

After new roads were built and houses were demolished, I myself witnessed that the people who had lost their properties become beggars, drown or hang themselves, seek shelter at their relatives', or be separated from their families. The bitterness of being defeated as a nation was demonstrated by these sorts of humiliating.

Although the writer approved that the authorities had handled the tramway construction reasonably without disturbing a lot of complaints so far, he nevertheless insisted that the Chinese authorities should discontinue the tramway project, resale the materials that had already been purchased, and raise funds in Tianjin to compensate the tramway company.²⁹

Chinese merchants in Tianjin shared the local media's concerns about the livelihood of rickshaw pullers and ordinary people's land and property, while they were also worried about the danger of being injured by the moving trams and the prosperity of the local businesses along the tramway. On May 26, 1905, the Tianjin chamber of commerce (天津商務總會), which was established only a year ago, presented a petition to Yuan Shikai on behalf of sixty-nine merchants from thirty-one guilds, asking Yuan to renounce the scheme or place the routes to less significant areas. The merchants weighed the benefit of tramway against its harm and concluded that "the benefit of [adopting] electric tramways is nothing more than rapid and easy transit and comfortable passenger experience, and is irrelevant to state economy and people's livelihood," but its harm was

²⁹ *Dagong bao*, May 21, 1905.

one hundred times more serious. The merchants enumerated eight hazards of tramway. One important argument of them was

The businesses all depend on the openness of the street-side appearance and the accessibility of their shops. If electric tramway was outside of the front gates of their stores, customers would hesitate to come for fear of crossing the rails.³⁰

Many of the supporters of this petition probably owned shops that were located on the sides of the street where tramway would be laid. They not only doubted that tramway would bring more businesses to their shops, but they also suspected that tramway would affect the accessibility and appearance of their stores. Another concern of the merchants that appeared multiple times in the eight hazards was the danger that the speedy tram posed to pedestrians including students and customers. The merchants even quoted an unspecified source claiming that the tramway in Hong Kong killed three hundred people in two months. The accuracy of their source of evidence notwithstanding, the merchants had shown that they had done their research by gathering information from the closest possible example of tramway. The chairs of the chamber of commerce, Wang Xianbin (王賢賓) and Ning Shifu (寧世福) supported the merchants' petition and added a commentary to the petition when forwarding it to Yuan Shikai, reinforcing the merchants' assessment of tramway while bringing up another criterion in making the important decision:

Some people say that building tramway would be a boon, but they do not know that the share of profit that the government would get would be less than one tenth of one percent. The wages of the Chinese people would be less than one percent of the total revenue. The big profit would be kept by the company and half of it would be used for salaries for foreign employees.

³⁰ *Tianjin shanghai dang'an huibian*, 2243-2245.

This commentary brought up an important criterion in the merchants' assessment of the tramway plan: whether the Chinese would benefit the most from it. In their analysis, even though tramway had several merits, it would be the western company who benefited the most from it, thus, the tramway did not worth the risks that the Chinese government and people would take. The merchants asked the Chinese government to ban the tramway; if the tramway must be built, they asked the authorities to change the plan and to build the tramway in the southern part of the city, where commerce was less prosperous.

Petitioning was not the only form of reaction to the news about tramway, laborers also organized sit-ins outside the chamber of commerce. Following the merchants' petitions, for days in early June, dock workers and rickshaw pullers gathered in front of the door to the chamber of commerce, dozens or hundreds of them, kneeling and crying in horror of losing their livelihood once the tramway was built. *Dagong bao* publicized a list of the names of the laborers and the garages or porters' shops that they belonged to. The locations of the garages and porters' shops were all long the proposed lines of the tramway.³¹ According to the report of the chamber of commerce, the chairmen instructed the guild leaders to explain to the gathered laborers the origin of the tramway scheme and persuade the laborers to disperse, but the laborers were too anxious to listen. In the end, only after the business owners reassured the laborers that they would not lose their job did the gathering disperse. The sit-ins were used by the merchants as another piece of

³¹ *Dagong bao*, June 13, 1905.

evidence why tramway should not be built in a second petition that they wrote to Yuan shortly after.³²

Besides the efforts of influencing the officials, the merchants also worked to consolidate the opinion among themselves. In June, the guild leaders formed a covenant to boycott the electric tramway: “Don’t use it [the electric tramway] to transport goods! Don’t ride it! Don’t use electric lights!” The covenant quickly attracted many signees.³³ In the local media, the boycotting of tramway was not seen as an individual event, but was compared with the railroad disturbance in Shandong and the boycotting of U.S. merchandise as a key issue in preserving sovereignty and rights and resisting imperialism as a nation.³⁴ Local elites wrote to newspaper, praising the strong collective will in boycotting tramway and interpreting it as a sign of the solidarity as a nation.³⁵ Another member of gentry wrote to the chamber of commerce, encouraging the members to stand by the covenant and reminding it of its responsibility in waking up the apathetic people.³⁶

Upon receiving the first petition of the chamber of commerce, Yuan Shikai firmly stated that it was impossible to renounce the agreement on electric tramway nor change it.

The treaties of returning Tianjin make it difficult [for the Qing government] to firmly decline. We could only be exceptionally cautious in drafting the charter and putting subtle restrictions. The general guideline is to retain profit and protect sovereignty.³⁷

³² “Jin shanghai wei quan Jin gehang kuli qiji shanghai qing su tingzhi xiuzhu dianchelu shi bing Zhidu wen,” 津商會為全津各行苦力齊集商會請速停止修築電車路事稟直督文 *Tianjin shanghai dang'an huibian*, 2253-2254

³³ *Dagong bao*, June 13, 1905.

³⁴ *Dagong bao*, June 6, 11, 13.

³⁵ *Dagong bao*, June 14.

³⁶ *Tianjin shanghai dang'an huibian*, 2255.

³⁷ *Tianjin shanghai dang'an huibian*, 2245.

He then tried to pacify the merchants by addressing that he had done everything to negotiate the best possible deal and control the risk to ordinary people's livelihood and merchants' business. To prove to the merchants his efforts, Yuan disclosed the charter that the Belgian company proposed and the final contract that the two parties agreed on, his memorial to the throne reporting the progress of negotiation, and a map of the planned lines that he presented to the court. In the end of his reply to the chamber of commerce, he advised the chamber leaders and the guild merchants in Tianjin to restrain from making further petitions of abdicating or changing the plan of tramway.³⁸

Yuan Shikai's first response failed to put situation under control; the shock of the tramway plan caused to the public was so huge that the call for boycotting tramway quickly gained popularity and was widely acclaimed in Chinese newspapers. Seeing the growing wave of opposition, Yuan Shikai had to find a more effective way to pacify the public. On July 11, Yuan dispatched a reply to the second petition, in which he urged the chamber of commerce to control the laborers and not to "let them cause even slight trouble." The same day, under his order, the custom *daotai* and the prefectural and county governments issued a proclamation against the popular boycott of tramway. The proclamation discussed tramway in a different manner from Yuan Shikai's response to the merchants' first petition, showing more confidence to the bright future of adopting tramway in Tianjin. It addressed the experience of adopting steamships and railroads both in China and abroad, saying:

[I]n all the countries, east and west, when steamships were first adopted, there were those who opposed them on the pretext that ordinary boatmen might lose their jobs. Again, when railroads were first introduced, there were those who opposed them on

³⁸ Yuan Shikai *quanji*, vol. 13, 492. *Tianjin shanghui dang'an huibian*, 2245-2252.

the pretext that the ordinary transportation workers might lose their jobs. Once steamships and railroads were in use, human powered boats and vehicles prospered. The public came to praise them for their convenience.³⁹

It reminded the people that the earlier adoption of western technology had proved to be beneficial to the existing transport business and implied that the adoption of tramway would do the same. Then, it analyzed how tramway could help advance the commerce and improve laborers' livelihood.

Tramways have been installed in the prosperous areas of every country. The denser the tracks are, the more the business flourishes, and the more widely human power is needed. Tianjin has been open to the world for a long time, lots of the elites and merchants have spent time abroad and they should have insights. Currently, the proposed tramways at Tianjin are limited to roads. Besides [the several roads], passengers and goods around the city that go to take the tramways or are a bit far from the roads still must be transferred by manpower. Tramways have no hinderance to the livelihood of the poor.

These words demonstrated the situation of tramway in foreign countries and clarified the limit of tramway in transporting passengers and goods, therefore convincingly explained why it would not drive rickshaws and other traditional means of transport out of business. The clear and calm analysis showed that Yuan Shikai and his fellow Chinese officials excelled in understanding the role that tramway would play in the transportation system. Following the analyses, the proclamation did not forget to finish the pampering with some threatening. It criticized that the gild merchants should have known better, and warned the laborers against believing the rumors too readily and spreading hearsays irresponsibly. The proclamation seemed to fulfill its purpose. The rest of the construction of the tramway on the four avenues proceeded smoothly and was completed in early 1906.

³⁹ “Jin Haiguandao Tianjin fuxian huixian yu jin dikang dianche gaoshi,” 津海關道天津府縣會銜諭禁抵抗電車告示 *Dagong bao*, July 11, 1905.

Defining the Relationship between a New Technology and Urban Lives

Tramway immediately became a spectacle in Tianjin when it was officially put into operation on February 16, 1906. From that day on, on the left side of the four avenues surrounding the old city, two rails were embedded in beds of broken stones.⁴⁰ Along the track, electric poles were installed. On the top of each pole, electric wires were fastened and connected to the electricity plant located near the northern gate, supplying electricity to the motors of tramcars through the overhead bow and trolley. Powered by electricity, tramcars dragging a trailer ran surrounding the old city. A folk lore described this strange system as “two rails and one wire, two little cabins run all along the streets.”⁴¹ Comparing tramcars to rooms demonstrated another peculiar feature of tramway to ordinary people, the new vehicles’ large inner space. A tramcar could carry at least fifty people at one time whereas rickshaw and horse cart could only carry one person or a few people. Besides its size, the speed of tramcar was also unprecedented for urban transit. The tramway line surrounding the old city was about 10 *li* long. Normally, it took a tramcar forty-five minutes to cover a full circle,⁴² much faster than rickshaws whose speed was 68% of the average speed of tramway in operation (the time spending at stops included).⁴³

⁴⁰ Frank Rhea, “The Tramways of the Far East,” *The Far Eastern Review*, August 1920.

⁴¹ “Liangtiao guidao yigen xian, liangjian xiaowu manjie pao 兩條軌道一根綫，兩間小屋滿街跑。” Tan Ruwei 譚汝為, *Tianjin fangyan yu Jingu wenhua* 天津方言與津沽文化 (Beijing: Zhongguo guoji guangbo chubanshe, 2015), 189.

⁴² *Dagong bao*, February 27, 1906.

⁴³ Sha Gongchao 沙公超, “Zhongguo gebu dianche jiaotong gaikuang,” 中國各埠電車交通概況 *Dongfang zazhi* 東方雜誌 23, no. 14 (1926): 50.

Curiosity lured people to taking a ride with tramway and it did not cost an arm and a leg to check out the speedy and room-like cars. A ride from one corner of the old city to the next (for example, from the northeast corner to southeast corner) in first class car only cost four copper coins, and a ride for half of the distance between two walls (for example, from the north gate to the northeast corner), two copper coins. The fare for second class was half of what it cost to ride in first class. It would cost eight coins to ride a full circle in the second class car, which was lowered to six coins in the next year. In comparison, the same distance would cost ten to twenty copper coins if one hired a rickshaw.⁴⁴ *Dagong bao* in Tianjin and *Shen bao*, and *Shi bao* in Shanghai all reported the enthusiasm that the local Chinese showed to the tramway. Not only the cars were crowded with curious passengers, the roads were also blocked by onlookers who wished to peek at this modern vehicle.⁴⁵ The tramway operated from seven in the morning to ten at night. At night, electric lights would be turned on in the cars, creating a stunning scene that was compared to “one thousand white lotuses” by a contemporary. It was said that there were ten times more passengers and sight seers at night than the daytime.⁴⁶

The new urban transit had an influence on the passengers. The tramway company showed strong interest in disciplining the behavior of passengers by making very specific rules. Right before the opening of the tramway, the company published a code of conduct consisting of eighteen rules on newspapers. Some of the rules instructed the passengers about how to safely ride tramway that had fixed stops. Several rules made sure that the

⁴⁴ Shi Xiaochuan 石小川, *Tianjin zhinan* 天津指南, juan 4, 14. Published in 1911.

⁴⁵ “Dianche chuci kaixing,” 電車初次開行 *Dagong bao*, February 17, 1906. “Ji Tianjin dianche,” 記天津電車 *Shibao* 時報, February 18, 1906. “Bishang buyun shuhui dianche,” 比商不允贖回電車 *Shen bao* 申報, July 25, 1906.

⁴⁶ *Shen bao*, July 25, 1906.

passengers would not cheat and would pay the right amount of fare. More importantly, some rules defined the new relationships in the space of trams while some other rules helped the company select the right passengers. For example, rule number three regulates that “Passengers must pay the fare to the conductor in accordance to their desired destination and they should carefully check whether the ticket issued by the conductor is new and whether the destination is correctly punched.” It defined a relationship of mutual supervision between the passengers and conductors. Another rule prohibited passengers from talking to the driver. No other means of urban transit disciplined the interaction between passengers and drivers like this. For instance, when hiring a rickshaw, the transaction could not proceed if the passengers were not allowed to talk to the puller, because they were supposed to negotiate the fare and give verbal instructions.

The code of conduct also effectively defined the lifestyle and class of the targeted clientele of tramway. Rules number ten to sixteen are as follows:

10. The small basket or bags carried by passengers must not exceed 15 jin in weight or 1 cubic chi in size; must be hand held and taken care by the passengers themselves and must not be put on the seats, the form and odor of such basket or bag should not disturb fellow passengers.
11. Passengers must not smoke outside the designated smoking zone.
12. No spitting
13. People with contagious diseases are not permitted to board, once the illness is detected by the conductor, the sick passenger must get off the car.
14. Passengers must not use vulgar language and must not make a mess on this company’s tram, and they must not insult or bully fellow passengers.
15. Passengers wearing dirty clothes that will soil other passenger’s clothes or disturb other passengers are not permitted to board.
16. No dogs or other animals are permitted to board.⁴⁷

These rules determined that tramway was exclusively designed for passenger transport. They also sketched a profile of an ideal passenger. To be able to comply with

⁴⁷ “Dianche gongsi xingche zhangcheng,” 電車公司行車章程 *Dagong bao*, February 16, 1906.

these regulations, one had to be literate in the first place. He or she should not need carry heavy or big baggage and should not take pets everywhere or transport other animals. He or she should not smoke all the time and should not have the habit of spitting. He or she should be healthy, civil, and dressed clean and properly. These disciplines were accompanied with punishment to the ones who failed to comply with them. Not behaving like a “civilized” person had a price on the tramway. As a mass transportation, the electric tramway served to impose the norms of modern western public space on a large population, just as the western promoters of electric tramway had hoped.

Although the passengers and pedestrians had to adapt their behaviors to this new transportation that had fixed schedule, fares and stops and a number of other rules, for those who were the targeted clientele of tramway, riding tramway was a pretty enjoyable experience. Tramcars were equipped with curtains and electric fans; the first-class cars had soft upholstered seats.⁴⁸ Because tramway was cheaper and more comfortable than rickshaws, it was reported that some passengers rode it not for any particular business but only for fun and sightseeing.⁴⁹

There were other people benefiting from the tramway. Rickshaws business was not much impacted after the electric tramway was put into use. It was reported that after the tramway had been running for a year, the number of rickshaws in the Chinese city increased from 9,000 to 11,000.⁵⁰ Similar trend was also found in the French Concession after a tramway was built there in 1908. The number of rickshaw license issued increased

⁴⁸ Advertisement of tramway company, *Dagong bao*, March 21, 1909.

⁴⁹ *The North - China Herald and Supreme Court & Consular Gazette*, May 11, 1906; ProQuest Historical Newspapers: Chinese Newspapers Collection pg. 298. *Dagong bao*, March 11, 1906.

⁵⁰ *The North - China Herald*, September 6, 1907.

from 20,290 in 1905 to 21,662 in 1909.⁵¹ Furthermore, the construction and operation of this new means of transportation created employment opportunities and new occupations for the Chinese. It was reported that as soon as the construction of tramway began, Chinese contractors submitted tenders to compete for the projects of the tramway company.⁵² It was often reported that a lot of workers were seen on the working sites digging up dirt, erecting electricity poles, or attaching iron bars to the poles. As the loop line surrounding the old city approached completion, the tramway company began to train drivers. The trainers were westerners, but the trainees were all Chinese.⁵³ When the tramway began its trial run, it was reported that the tramway company recruited young people on the street and the monthly salary of ten yuan attracted a lot of candidates.⁵⁴

The merits of tramway notwithstanding, tramway soon gave rise to safety concerns. The tramway's code of conduct could have regulated the passengers, but not the other users that shared the same roads. Accidents of vehicles including rickshaws, horse carriages, and automobiles happened already frequently in Tianjin before the advent of tramway; the installation of tramway increased the complexity of traffic on the four already busy streets surrounding the old city. The more complicated road conditions and people's unfamiliarity with the new technology created numerous alarming scenarios ever since the trial run of the electric tramway. Romping children on the tracks and street vendors on the way of tramway frequently ran into precarious moments.⁵⁵ There was even a rumor that an eleven-year-old child was killed only several days after the opening

⁵¹ Sha Gongchao, "Zhongguo gebu dianche," 49.

⁵² *Dagong bao*, July 13, 1905.

⁵³ *Dagong bao*, February 14, 1906.

⁵⁴ "Zhaogong shiyan dianche," 招工試演電車 *Beiyang guanbao* 北洋官報, February 15, 1906.

⁵⁵ *Dagong bao*, February 10, 1906; February 14, 1906.

of tramway, which soon proved to be untrue.⁵⁶ The police posted a proclamation along the four streets immediately after the opening of the tramway. Written in vernacular Chinese, the proclamation alerted the people:

Electric tramway has begun to operate, the trams are heavy and fast. If you are not careful, and are hit or ran over, you might get killed. So, the regulations of the tramway company say that even for the passengers on the tram, it is dangerous to get on and off willy-nilly, how much more dangerous it is for the onlookers and the children who don't understand anything. How can you so casually stand around and watch, or ran after the tram? Isn't that making trouble for yourself? [...] As for the children, although they don't understand anything, in their families, fathers and big brothers should have supervised and taught them. Are they truly not afraid that their children would be injured? What I'm saying is very important. Don't turn a deaf ear!⁵⁷

Despite these precautions, the first tramway accident that led to the loss of a life happened in March 3, 1906, a month after the opening of the loop line in the Chinese city. The driver Zhang Ruiting drove the tramcar to the southeast corner of the old city, ran down a six-year-old girl whose last name was Lü. Investigation showed that the patroller on duty nearby shouted at the driver to warn him about the girl, but Zhang neglected the warning and did not pull the brake.⁵⁸ The girl died after being transferred to a hospital.⁵⁹

In this case, one character of the tramway took a toll. Zhang's testimony attributed his carelessness to the tramway company's requirement of sticking to schedule: "The westerners demanded speedy driving and if the tram were even slightly delayed, there would be a severe punishment."⁶⁰ Unlike the traditional transportation, electric

⁵⁶ "Yabi renming," 軋斃人命 *Dagong bao*, February 13, 1906.

⁵⁷ "Xunjingju baihua baoshi," 巡警局白話告示 *Dagong bao*, February 21, 1906.

⁵⁸ "Fuxun yabi ming'an," 覆訊軋斃命案 *Dagong bao*, April 9, 1906.

⁵⁹ "Yashang youhai," 軋傷幼孩 *Dagong bao*, March 5, 1906.

⁶⁰ "Tianjin minqi zhi fada," 天津民氣之發達 *Zhonghua bao* 中華報, vol. 440, March 12, 1906.

tramway operated according to a schedule and the cars needed to reach a certain speed in order to follow the schedule. This excuse of Zhang was criticized as a piece of evidence of the tramway company's contempt to the Chinese people. The decision that Zhang made at the scene betrayed morality, which also exposed the cruelty of technology if it was not properly utilized and the effect of alienation that imperialism had on individual Chinese.

Because this accident caused death, it drew much more attention than the earlier accidents that were less severe. The accident was first reported by *Dagong bao* on March 5. In a week, newspapers in Beijing and Shanghai covered this tragedy as well. The local gentry saw this accident as a critical moment to establish a model for future cases. They worried that the tramway company would interfere, and the Chinese authorities would let the custom Daotai handle this case as a Sino-foreign conflict. If that happened, the tramway company could protect the driver from being punished on the excuse of consular jurisdiction. The gentry's worries were fully justified because none of the drivers involved in the previous tramway accidents were arrested or convicted.⁶¹ Moreover, the provisions regarding accidents in the tramway charter were rather self-contradictory:

23. If any accident should happen on the track, causing death or injury to person, or damage property, the Company shall make compensation therefor liberally, provided the accident happened by fault of one of the Company's employees. Should any compensation thus made be considered insufficient by the person injured, he may appeal to the Local Authorities, who if they agree with the said person, will make representations to the Company and if these representations are not approved by the Company, the matter will be settled by arbitration according to paragraph 25.

...

⁶¹ *Zhonghua bao* 中華報, March 12, 1906.

25. All cases of dispute between the Company, or a foreigner belonging to this Company, and Chinese subjects, criminal cases being excluded, shall be referred to the Local Authorities and settled by them conjointly with the representative of the Company amicably and according to the spirit of equity. *Should they not come to an arrangement, the matter will be referred to arbitrators, one appointed by the Company and one by the Local Authorities, and in case the two disagree, they will appoint a third one conjointly, who shall decide finally....*

Although the charter said that it was within the jurisdiction of the Chinese authorities if no foreigners were involved, it also allowed the tramway company to interfere if they disagreed with the Chinese authorities. Such clauses left a backdoor for the tramway company. These two provisions merely followed the standard explanation in similar Sino-foreign treaties. The practical procedure of dealing with tramway accidents had yet been established.

The local gentry in Tianjin made great effort in influencing the Chinese officials and the public opinion. A local gentry Hua Shiyong and a few others petitioned to the Chinese authorities including the custom Daotai, the patrol police headquarters, the county magistrate, and the Zhili provincial government that this was a criminal case and the driver must be punished according to Chinese laws.⁶² Upon receiving the petition, the custom Daotai wrote an official letter to the patrol police headquarters that the headquarters should take over the case. When the case was still in investigation at the police headquarters, the tramway company entrusted Zhao Wansong and some other arbitrators to offer the relatives of the dead girl a compensation of one hundred yuan in exchange of closing the case. It was said that the girl's family had agreed to the settlement and the company had applied to close the case. Once hearing of that, the local

⁶² "Tianjin shenshi Hua jun Shiyong deng gong cheng Xianzun binggao," 天津紳士華君世鏞等公呈縣尊稟稿 *Dagong bao*, March 20, 1906.

gentry wrote another petition to the patrol police headquarters. In this petition, the local gentry argued that the case was a matter concerning China's sovereignty. They stated that:

This case does not concern only the Lü family, nor does it concern only Zhang Ruiting himself. It is actually a matter concerns Whether or not China is able to maintain sovereignty. If we agree with the tramway company, our country would lose sovereignty, and if we agree with the Lu family, our contry also lose sovereignty. Moreover, this tramway accident has long-term repercussions. This time, the relatives of the diseased are willing to settle, and the company asked to withdraw the case accordingly and this is the company took the intention of the relatives as the basis for action. If in the future there are fatal tram accidents, only when the driver be executed would the relative of the deceased be satisfied, would the company also take that for their basis for action? ⁶³

The local gentry illustrated the danger of letting the company settle the case. It would set a precedent that, by offering a settlement, the tramway company could avoid trial and punishment on its staff even if the staff committed a crime. Therefore, they asked the authorities to “allow Zhang Ruiting’s punishment to fit the crime, in order to bolster the public opinion and protect the sovereignty.” The gentry also offered to donate to the victim’s family if the tramway company refused to give the compensation once the driver was indicted. The police headquarters declined the tramway company’s request of closing the case and transferred the case to the county government on March 15 for the reason that this was a severe criminal case. Once again, the local gentry handed in another petition to the county magistrate, asking the magistrate to continue upholding the principle of not allowing settlement. In this petition, the gentry enumerated the recent conflicts caused by the arrogance and ruthlessness of the tramway company staff. Such incidents included hit-and-run accident and drivers beating or scolding ordinary Chinese

⁶³ “Tianjin shenshi shang Xunjingzongju bing,” 天津紳士上巡警總局稟 *Shibao*, March 25, 1906. The petition was probably composed between March 11 and 15.

or policemen. They indicated that these incidents showed that “the driver cloak themselves in foreign power in order to harm their fellow citizens.” If the case was compromised, it would “surrender the local sovereignty to the tramway company.”⁶⁴

The gentry’s petitions to the local officials were all published in the local newspapers and some were reprinted locally as well as in newspapers in Shanghai. Furthermore, the gentry in Tianjin also called for public support. At the same time of submitting their first petition, the local gentry wrote to *Dagong bao*, explaining the importance of acquiring a fair trial of this case. The letter mentioned the contempt of foreigners for Chinese laws and officials as the background of this accident and stated that only a fair trial of the suspect would resurrect Chinese sovereignty and save the lives of Tianjin people from the violent treatment by the foreigners and their machines. They also suggested that a fair trial would save the electric tramway from being boycotted by the local Chinese.⁶⁵

Their efforts caused the public to protest the tramway company by boycotting the tramway. Chinese newspapers reported that the boycott greatly reduced the number of passengers:

Recently, although the routes of trams have been running to and fro like threads in cloth, there hasn’t been a single person of upstanding character taking them. The lower class passengers are also scarce.⁶⁶

⁶⁴ *Dagong bao*, March 20, 1906.

⁶⁵ “Jinjun shenshang wei yabi hai an gongcheng Duyuan binggao shuhou,” 津郡紳商為軋斃幼孩案公呈督院稟稿書後 *Dagong bao*, March 11, 1906 and March 20, 1906.

⁶⁶ *Zhonghua bao* 中華報, March 12, 1906.

It was said that the boycott caused the tramway company to lose 100,000 taels.⁶⁷ An English newspaper reported the opposite: “However much the “boycott” may have meant at the first, its influence is evidently being overcome or forgotten...”⁶⁸ The boycott might have faded away eventually, but it had worked at least in warning the tramway company of the consequences of interfering legal cases within Chinese jurisdiction.⁶⁹ The tramway company thus downplayed the privilege that a western company could claim for fear of losing passengers and revenue. The rest of the trial of the case went on without interruption. In June, Zhang was sentenced to three year’s imprisonment with hard labor and was fined 10 silver taels.⁷⁰

The petitions from gentry and villagers, though utilizing political discourses, effected in depoliticizing the legal cases involving tramway. Following the model set by this very first lethal accident, the tramway accidents involving only Chinese nationals were dealt with as ordinary criminal or civil cases that had nothing to do with extraterritoriality.

The activities of the local elite in response to the death of the six-year-old girl raised the public awareness of the safety problems caused by the tramway; then the subsequent boycott forced the tramway company to improve its service and take

⁶⁷ *Shen bao*, July 25, 1906. “Guanshang ni gouhui dianche gongsi,” 官商擬收回電車公司 *Guangyi congbao* 廣益叢報, no. 114 (1906).

⁶⁸ “The Electric Tramway,” *The North - China Herald*, May 11, 1906.

⁶⁹ In the middle of the boycott, the Tianjin police commissioner, Duan Zhigui, and the chair of the chamber of commerce, Wang Xianbin, proposed to Yuan Shikai and Xu Shichang to purchase the assets of the tramway company and let Chinese merchants run the tramway. Some Chinese merchants must have seen that electric tramway could be a profitable business and it was a great opportunity to purchase the company when there was an ongoing boycott. The attempt of purchase further demonstrated that the Chinese considered technology as a universal tool but it mattered to the Chinese that the technology was controlled by and would benefit the Chinese. In July, they failed to make a deal because the tramway company asked for a sum of 1,100,000 taels while the Chinese merchants only offered to pay 400,000 taels. See *Dagong bao*, March 20, 1906; March 24, 1906; *Shen bao*, July 25, 1906; *Guangyi congbao*, no. 114 (1906).

⁷⁰ *The North - China Herald*, Jun 15, 1906.

precautions to safety issues. After the accident, the tramway company deployed signalers carrying red flags along the rails to warn other users of the road of moving tramcars and placed nets outside some cars to keep pedestrians at distance.⁷¹ The Tianjin police administration and the custom Daotai proposed thirteen regulations to the tramway company.⁷² The regulations detailed the procedures of dealing with different types of tramway accidents and ascertained that the tramway company should refrain from being partial to its Chinese employees. The Chinese authorities also suggested to establish a tramway patrol force and the expenses should come from the tramway company. There were other regulations about segregating male and female passengers, deploying a whistle blower on each tramcar to assist driver and warn passengers.⁷³

While the Chinese authorities were waiting to hear from the tramway company about the thirteen regulations, another well-known tramway accident occurred in August, damaging the left wrist of a female teacher of a modern women's school Lü Qingyang. Due to the identity of the victim as a representative of educated women, this accident found a lot of sympathizers. Local intellectuals and educators called upon their colleagues in other places for support. They wrote to urge Yuan Shikai and the Tianjin police to take action to punish the responsible party and protect the safety of women educators and other lives.⁷⁴ Ten days after the accident, Yuan Shikai ordered the Tianjin police to make inquiry to the tramway company about the safety issue.⁷⁵ The police urged

⁷¹ *Dagong bao*, March 16, 1906.

⁷² "Huishang dianche fangxian zhangcheng," 會商電車防險章程 *Beiyang guanbao*, October 1, 1906. *Dagong bao*, September 10, 1906.

⁷³ "Zhidu chi chongding dianche shixing zhuanzhang," 直督飭重訂電車駛行專章 *Xinwen bao* 新聞報, September 8, 1906, 2.

⁷⁴ *Dagong bao*, August 28, 1906; September 7, 1906.

⁷⁵ *Yuan Shikai quanji*, vol. 15, 277.

the company to acknowledge the thirteen regulations and requested the company to equip the cars with safety nets. Beside urging the tramway company to take measures, the Tianjin police also deployed posts along the tramway and made a special rule that all the accidents involving tramway had to be immediately reported to the headquarters.⁷⁶

After two years of adjustment period, in 1908, dealing with tramway accidents had become a routine and the police force had developed a standard procedure for handling tramway accidents.⁷⁷ The police academy's graduation exam in 1908 included a question "What must be done in the event of a tram hitting a pedestrian," among three other questions (What are suspicious behaviors? What must be done about boisterous behavior? What must be done when encountering suicidal persons?).⁷⁸ This question being used to select qualified policemen showed the frequency of tramway accident. It entered the exam also because a reform in law enforcement that would change the procedure of dealing with tramway accidents occurred in 1908. During the constitutional movement in late Qing, a system of independent judiciary was established. In Tianjin, as a result of the constitutional movement of the Qing court, an independent local court (審判廳) was established in early 1908. Yoshizawa Seiichiro discusses the transfer of jurisdiction over tramway accidents from police and county government to the independent court.⁷⁹ When an individual was injured or killed by electric tramcar, the

⁷⁶ *Dagong bao*, September 10, 1906; September 13, 1906.

⁷⁷ Tianjin's experience of accommodating electric tramway set up a model for Shanghai. From 1906 to 1908, media in Shanghai followed the news about tramway in Tianjin closely. At the time, tramways were planned out in the concessions in Shanghai. Seeing the accidents and the local response to them in Tianjin, the Shanghai elite pushed the Chinese authorities to make considerate regulations with the tramway company in advance. See "Shanghai shanghai chengqing shangding xing dianche shanfa," 上海商會呈請商定行電車善法 *Xinwen bao*, November 29, 1906.

⁷⁸ "Xunjing bing kaoshi ji ti," 巡警兵考試紀題 *Dagong bao*, April 19, 1908.

⁷⁹ See Yoshizawa Seiichiro, "Densha to koufun."

common process was that the policeman stationed nearby immediately sent the injured to hospital and took the driver or conductor to police office. After investigation, the case would be transferred to the court for judgment. If the fault was on the driver or conductor and the victim died from the accident, the driver would be sentenced to one to three years of imprisonment. If the victim was only injured, the driver and the company would compensate two to five yuan to the injured. If the accident was due to the passengers' carelessness, such as jumping off the cars or paying no attention to signals or bell rings, the driver would be released, and the case would be closed.⁸⁰

Difficulties of Expanding the Tramway System

When the tramway surrounding the old city was opened in 1906, the venture of tramway into foreign concessions had not been very successful. Although the TPG, representing the western powers, intended to use tramway to show off western superiority, the authorities of the foreign concessions were more concerned with the practicality of tramway. In 1901, when the British company still owned the tramway franchise, it submitted its tramway proposal first to the British municipal council. If the foreign concessions allowed the tramway syndicate to build a line, the tramway syndicate proposed to divide one percent of its gross income and two percent of the net profit (after paying a seven-percent dividend) among the municipalities of the concessions in proportion to the length of tramway within each concession.⁸¹ The British municipal

⁸⁰ See *Dagong bao*, "Dianche yaren song an," 電車軋人送案 March 11, 1908; "Wushang xunming jian," 誤傷訊明結案 May 2, 1908; "Youhai keshang," 幼孩磕傷 May 30, 1908.

⁸¹ "Meeting of the Owners Feuers and Residents of the British Municipal Extension," *Peking and Tientsin Times*, November 2, 1901, Supplement.

council, upon receiving the proposal, entrusted the investigation of the proposal to an “impartial special committee.” It was “impartial” in the sense that all the councilors that had interest in the syndicate were excluded from this committee. The special committee concluded their investigation by recommending rejecting the proposal because “the present time is inopportune for the introduction of tramways to the Bund.” The “bund” refers to the docking area in the British concession. The British concession possessed the second broadest waterfront among all the concessions in Tianjin, and the docks in the British concession had grown into the center of the port of Tianjin. Britain also took the largest portion of Tianjin’s overall volume of foreign trade since Tianjin’s opening as a treaty port until Japan surpassed it in the 1890s. In 1897, the British authorities found it necessary to obtain more space for its settlement and forced an expansion into four times larger. The main argument of the special committee against the proposition of building tramways at the bund was that the plan would “lead to a very serious loss of revenue resulting in a large increase in direct taxation.” The bund was already inadequate to the normal traffic of the port and if the tramway occupied a strip of road in a width between ten and sixteen feet, the withdrawal of the space would bring about a more serious congestion and affect the normal operation of the port. In the meantime, the loss of revenue from the reduction of storage space, congestion, and interruption of trade would in no way be compensated by the share of profit that the tramway syndicate offered.⁸²

Another reason that the British authorities were not attracted to the new transportation

⁸² “Tramways in Tientsin,” *Peking & Tientsin Times*, November 2, 1901. The meeting of the British Municipal Extension, an area to the west of the British concession that Britain obtained in 1897, was softer in their attitude toward the introduction of tramway into the extension. The representatives on the meeting were positive that a through tramway linking all the concessions would bring capital to building development in the extension. However, they were hesitant to go against the finding of the special committee, and in the end, although the exact process is unknown, the extension did not bring in tramways either.

was that the major revenue of the municipality came from shipping and trade, not petty businesses and services that were sensitive to accessibility. In other words, increased flows of people mattered little to the prosperity of the British concession.

Although many of the promoters of the tramway company were influential councilors of the British municipal council, they, not without struggle, eventually voted to support the decision of the special committee. That the British Municipal Council refused to bring tramway into its concession further shows that there was no obvious need for a new form of transportation even in the very vibrant part of Tianjin. Lacking the economic motivation of the tramway syndicate and political motivation of the TPG, the British Municipal Council was not willing to sacrifice its space and municipal revenue to a new transit utility that was probably too ambitious for the moment. The tramway company attempted to expand the track into the British concession in 1911 and again failed to persuade the British municipal council.⁸³

Unlike the British Concession, the concessions of Austria-Hungary, Italy, and Russia that had not seen much development embraced tramway. The tramway company reached agreements with the Austro-Hungarian, Italian, and Russian concessions in 1905, and a branch line was extended from the southeast corner of the loop line into these concessions in 1906 following the completion of the tramway in the Chinese city. A Chinese newspaper commented that this progress might not bring the tramway company much profit because these concessions were far inferior to British, Japanese, and French

⁸³ “Tianjin dianche diandeng gongsi laijian,” 天津電車電燈公司來件 *Dagong bao*, December 28, 1911.

concessions in terms of numbers of foreign companies and the developmental level of trade and businesses.⁸⁴

The Austro-Hungarian and Italian concessions were located across the Hai River from the prosperous commercial area outside of the east gate of the old Chinese city and the Chinese population density in these two concessions were larger than most other concessions.⁸⁵ Despite the dense population, the concession authorities had very limited vested interest and were planning on redesigning the streets and relocating the Chinese residents.⁸⁶ The advent of tramway would not interrupt with the Austro-Hungarian or Italian interest but could boost the value of land and bring flows of people from the Chinese city to the businesses in the two concessions. Downriver from the Italian concession, there was the Russian concession. Further away from the center of the Chinese city, although it possessed the longest waterfront and was the second largest foreign concession in Tianjin, the Russian concession only had a population of 2870 in 1906. The only busy spot within the Russian concession was the railway station of the Beijing-Mukden line (the station itself was excluded from the Russian concession). If tramway could be built to reach the railroad station, the accessibility of the station would be improved and would increase traffic and opportunities of business in the Russian concession. Therefore, the authorities of the Russian concession also welcomed the

⁸⁴ “Rijie shangren gong ju dianche,” 日界商人公拒電車 *Shandong guanbao*, 山東官報 December 23, 1906.

⁸⁵ In 1906, the Austro-Hungarian concession had the highest density of population among all the foreign concessions (with a population of 25744 and a density of 37489 persons per square kilometer). The Italian concession also had a relatively dense population because its proximity to the prosperous Chinese areas (population 12419 and density 24161.5 in 1906).

⁸⁶ Zhou Junqi ed., 周俊旗 *Minguo Tianjin shehui shenghuo shi* 民國天津社會生活史 (Tianjin: Tianjin shehuikexueyuan chubanshe, 2004), 17.

tramway. Negotiations between the tramway company and these three concessions concluded sooner than the French and Japanese concessions.

Negotiation with the French concession took a bit longer because the vested interest of the westerners there was much larger than in the Austro-Hungarian, Italian, and Russian concessions, and the French authorities had more bargain power because it could bring the tramway company more profit than the other three concessions. The French concession was one of the earliest foreign settlements in Tianjin. About 5 miles away from the center of the Chinese city, it used to be a low land area of cabbage field, ice pits, and cemeteries before 1860. After four decades of development, it had a population of 4421 in 1906. Low land and ponds were filled up; western style houses were built to accommodate households, businesses, and public services; up-scale hotels and theaters were also in presence. These buildings were facilitated with paved roads, water works, and electric lights. The value of land had grown twenty times dearer comparing to the value before 1860 by the end of the nineteenth century.⁸⁷ However, the conditions of the docks in the French concession were inferior to the ones in the British concession. The waterfront of the French concession was almost as long as that of the British concession but it was at a river bend. France also had little trade with Tianjin, counted for one-thirteenth of the value of the trade between Japan and Tianjin and one-eighth of that value between Britain and Tianjin in the beginning of the twentieth century.⁸⁸ The continuous growth of the French concession had to depend on the prosperity of businesses that was highly contingent on accessibility. In addition, the

⁸⁷ F. A. Aglen, "Report on the Trade of Tientsin," in *Reports on the Trade at the Ports in China Open by Treaty to Foreign Trade, for the Year 1896*, 23-24.

⁸⁸ *Ershi shijichu de Tianjin gaikuang*, 240.

French authorities expanded their concession to four times larger in 1900 and needed stimuli to develop the newly sustained region. An agreement between the tramway company and the French concession was reached in 1906. By the end of 1906, the branch line connecting the northeast corner of the old Chinese city with the Hai River was extended across the river by building an iron bridge (Jintang Bridge), running through the Austrian, Italian, and Russian concessions on the left bank, then crossing the river on the International Bridge built in 1902 and entering the French concession. Ideally, it would be more profitable for the tramway company if the tramway could traverse the Japanese and British concessions that were just next to the French concession, but the line had to be designed to cross the river twice in order to reach the French concession because in 1906 “negotiations with the Japanese Authorities have not concluded yet.”⁸⁹

The Japanese concession was another area that the tramway company spent longer time to reach a deal with. The Japanese concession, located between the Chinese city and the French concession, was established in 1898. The region to the south of the old Chinese city that the Japanese concession covered used to be a very low-lying area with swamps, but because its closeness to the Chinese city, it was a poor area but not scarcely populated. The swamps were filled up in 1903 and the population in the region was more than 11,000 in 1906. A lot of restaurants, inns, theaters, wine shops, and brothels concentrated there, contributing more than 20% of the revenue of the Japanese municipality.⁹⁰ A tramway traversing the Chinese city, the Japanese concession and other concessions would certainly bring more patrons to these businesses. However, the

⁸⁹ “The Iron Bridge,” *The North - China Herald*, Jan 4, 1907.

⁹⁰ For example, see the report of the Japanese kyoryū mindan in Tianjin for the year of 1906. Tianjin Library ed., *Tianjin Riben zujie juliumintuan ziliao* 天津日本居留民團資料 (Guilin: Guangxi shifandaxue chubanshe, 2006), vol. 1, 5-6.

proposal of building tramway within the Japanese concession met with a number of obstacles. The Japanese concession had a complicated history with the tramway in Tianjin. After losing the franchise of tramway to the Belgian company in 1901, the Japanese consul made another attempt in 1902 to transplant the Tokyo horse car tramway, which would soon be replaced by electric traction in Tokyo, to Tianjin. The next year, a Japanese merchant sought cooperation with French and Chinese merchants with a plan to build a horsecar tramway line through the French and Japanese concessions and reach the Chinese city.⁹¹ At the time, it was uncertain whether the Chinese authority would recognize the franchise that the Belgian company obtained from the Provisional Government, and the Japanese merchant was confident in getting the Chinese approval on building a horsecar tramway. However, these efforts were again shattered when Yuan Shikai signed the agreement with the Belgian tramway company in 1904. Given Japan's wasted ambition in competing for the franchise of tramway, it was possible that Japan was interested in building and operating tramway within its concession. Another factor that might have prolonged the negotiation was that the Japanese concession had its own electricity plant and it could be a point of dispute about who could supply the electricity to the tramway. More importantly, inside the Japanese concession, merchants opposed the tramway plan. It was reported that more than two hundred businesses collectively submitted a petition to the Japanese consul in December 1906, demonstrating their concern about the safety issue of tramway. They cited the many tramway accidents that already happened in the Chinese city and asserted that with the narrower roads in the

⁹¹ "Tientsin Tram Car," *The Japan Times*, November 6, 1902. "Tenshin no basha teddou keikaku," 天津の馬車鉄道計画 *Asahi Shimbun* 朝日新聞, October 14, 1903. "Tramway for Tientsin," *The Japan Times*, October 20, 1903.

Japanese concession than the four roads surrounding the old city, there would be even more accidents if tramway was built in the Japanese concession.⁹² The Japanese authorities could have waited to observe the Chinese response to the operation of the electric tramway and the tramway's safety issues or used petitions like this to negotiate better terms with the tramway company. Reports that the Japanese concession was about to reach agreement with the tramway company began to appear in newspapers since December 1906, but not until July 1907 had the two parties signed the final agreement.⁹³ The prolonged negotiation could also partly due to the improvement of Japan's status after its victory in the Russo-Japanese war in 1905. Japan now had more leverage in negotiating conditions such as royalty and share of profit. The Japanese authorities managed to obtain 3.5% of the company's gross earnings proportioned to the mileages of tramway within the Japanese concession. In addition, the tramway company would also compensate the difference in the rickshaw fees that the Japanese concession collected if that revenue declined after the tramway was built.⁹⁴ By this agreement, another branch line in the tramway company's charter could be built, the line extending from the old southern gate of the Chinese city, crossing the Japanese concession, and reaching the French concession. This section of tramway was completed in 1908.

In 1908, the major tramway lines were finished. On the tracks surrounding the old city and reaching into the foreign concessions, the tramway company operated four lines, each being assigned a color in order to make it more manageable for the ordinary people

⁹² *Shandong guanbao*, December 23, 1906.

⁹³ *Dagong bao*, December 5, 1906; January 9, 1907; May 11, 1907; June 4, 1907. "Tientsin Tramway System," *The Far Eastern Review*, January 1907. "Tientsin Tramway Extension," "The Tientsin Tramways," *The Far Eastern Review*, July 1907.

⁹⁴ Report for the year of 1908, *Tianjin Riben zujiejuliumintuan ziliao*, vol. 1, 35.

to ride the different lines. The line surrounding the old city was the White Line. The other three lines all began at Beidaguan (北大關), a station to the north of the northern gate and at the south bank of the South Canal. The Red Line continued going east after passing the northeast corner, turning south at the west bank of the Hai River, then crossing the river, traversing the Austrian, Italian, and Russian concessions, and ending at the Laolongtou railway station. The Blue line followed the same route of the White Line to the southeast corner, then roughly traced the curve of the Hai River, going through the Japanese and French Concession, before it crossed the Hai River to reach its final stop at the Laolongtou railway station. The Yellow line traced the same route as the Blue Line into the French concession, but instead of crossing the river, it went further east toward the British concession and turned toward the northeast to reach the maritime customs house on the right bank of the Hai River. (Figure 10)

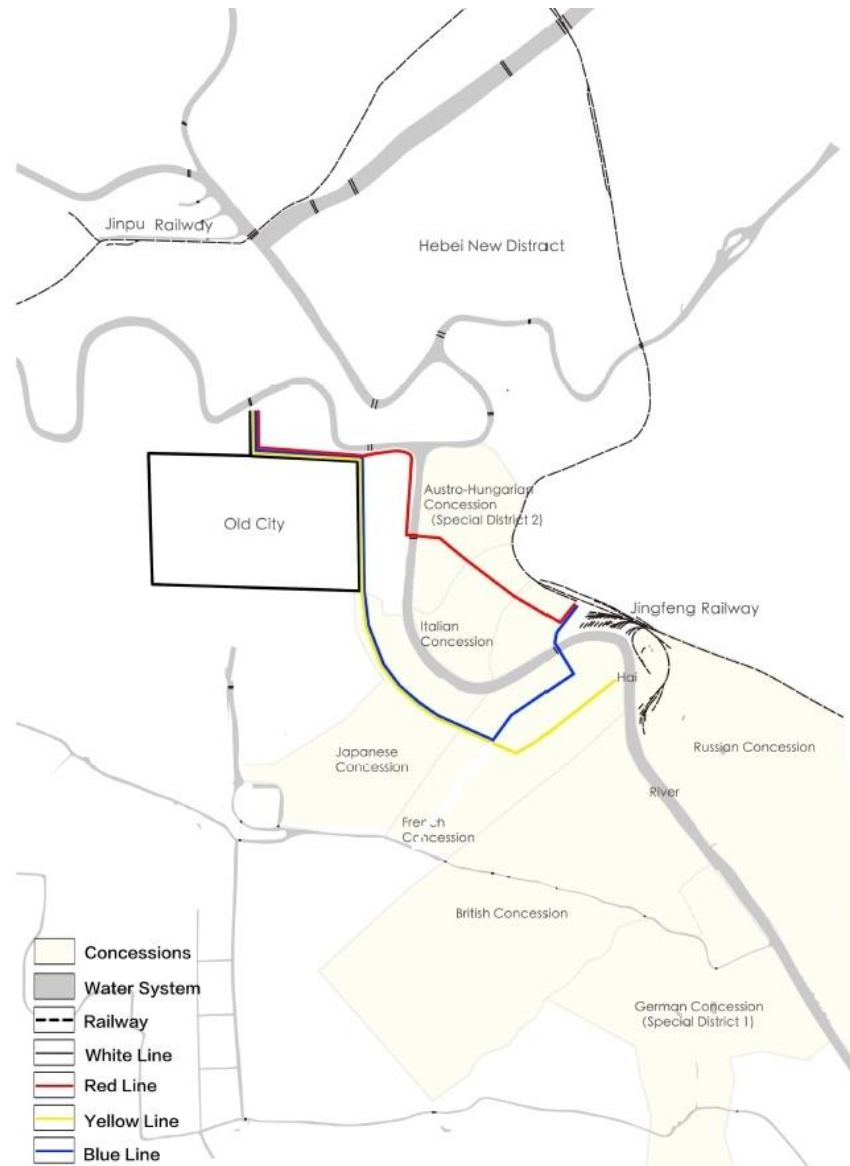


Figure 10 Tramway system in 1908 ⁹⁵

By 1908, two lines in the 1904 tramway charter had not been built, one connecting the north gate to the Xigu Village, which was to the northwest of the old city, the other stretching from the northwestern corner of the old city toward west to Jieyuan. In the following decade, the tramway company made several attempts to build these two

⁹⁵ Adapted from Yili Zhao, Lin Feng, et al, “Historical Analysis of Urban Public Transportation Development in Tianjin (1902-1949),” Conference Proceeding of the 18th International Planning History Society Conference, Yokohama, Japan.

lines or expand the tramway into new areas. None of these attempts succeeded in the Chinese city.

From 1908 to 1915, the local autonomous institutions played critical role in resisting the expansion of tramway in the Chinese city. In 1907, under Yuan Shikai and Xu Shichang's advocacy, the Qing court began experimenting local autonomy and Tianjin pioneered the movement. A county assembly (天津縣議事會) was established in Tianjin, the very first one nationwide. One of its rights was participating in administration of important public works.⁹⁶ However, for a while, the assembly was merely a figurehead and unable to practice its rights. For example, in late 1907, the tramway company sought to double the tram track of the southern section of the loop line. The governor-general of Zhili province approved the tramway company's request without consulting the county assembly. In order to assert its authority, the county assembly submitted a petition to the governor-general Yang Shixiang (楊世驥) in early 1908. In the petition, the county assembly first praised the authorities of entrusting it with the privilege of participating in decision making about public works. It pointed out the close relationship between public works and the nation's sovereignty:

Whether the public works policies are appropriate or not matters most fundamentally for the local interest. It is not just that people's livelihood depends on them. Therefore, all the nations in the east and west work tirelessly to manage all the road building and mining rights. Why? Where there are road rights, there are sovereign rights, and the same principle applies on the national and local level.

⁹⁶ "Huiyi shixiang," 會議事項 *Dagong bao*, August 28, 1907.

Then, the petition turned to discuss the doubling of tramway rails in Tianjin, arguing that the tramway company had misled the governor-general into believing that the doubling of the track was agreed in the 1904 contract. The petition analyzed the specific provisions in the contract and showed that the contract in fact forbade the tramway company from doubling or expanding tramway at will. In the end, the county assembly asked the governor-general to notify the tramway company that

[N]o matter where the tramway extends or whether it is widened, [the tramway company] has to reach an agreement with the Assembly according to the first clause of the contract. [...] If [the tramway company] takes liberties without consulting the Assembly, the Assembly is allowed to report [the company's violation of the contract] to the authorities. The company should immediately obey the order no matter whether the construction has begun or not.⁹⁷

Yang Shixiang forwarded this petition to the custom Daotai and the Zhili bureau of foreign affairs for recommendation. The custom Daotai at Tianjin replied with favorable comments to the petition, indicating that the county assembly could assist the governor-general in handling disputes over economic rights involving westerners:

According to our investigation, the local gentry are often effective in making up for what the officials are unable to accomplish. Recently, foreigners frequently demanded railroad and mining rights in all provinces. The disputes are too many and complicated for the officials to handle. As soon as the gentry and ordinary people protest, this creates some wiggle room which allows the situation to be more easily resolved.

He argued that, by directing the tramway company's requests of expanding to the county assembly, the governor-general would not lose his control over the local affairs because

No matter whether the Assembly approves or rejects the tramway proposals, it still must submit the matter to higher officials. Only with the officials' approval, can the deliberations of the Assembly be implemented. This can both foil foreigners'

⁹⁷ "Guanyu difangzizhi shiyi wenjian," 關於地方自治事宜文件 *Dagong bao*, January 22, 1908.

deceitful plots and avoid the disadvantages of having power in the hands of the people.⁹⁸

Yang Shixiang was convinced and approved the assembly's petition. Consequently, the Tianjin County Assembly became the first political agency that proposals of expanding tramway had to go through.

On April 25, 1911, the tramway company proposed to build a tramway that was not exactly the same as either of the remaining lines in the contract that had not been built. The proposed new line started from the former north gate area, the Beidaguan, went northward, crossed the south canal, traced the Hebei Avenue, then turned west to reach the West Railway Station, which was just established in 1911. (Figure 11) The tramway company justified this proposal, saying that

The [Tianjin] station of the Tianjin-Pukou Railway is still separated from the inner part of the city of Tianjin. If a tramway could connect with the railway station, one might expect that passenger travel would become more convenient and business would prosper.

In order to make sufficient room for the tracks, the tramway company also asked to have the bridge across the South Canal rebuilt and the Hebei Avenue that the tramway would go through widened.⁹⁹ According to the procedure that was established in 1908, the proposal was submitted to the Tianjin County Assembly for discussion. It was reported that the tramway company offered to donate 10,000 yuan to the county assembly each year if the assembly approved the proposal.¹⁰⁰

⁹⁸ "Guanyu difangzizhi shiyi wenjian," 關於地方自治事宜文件 *Dagong bao*, January 23, 1908.

⁹⁹ "Guanyu Tianjin difangzizhi zhi wenjian Zhili Tianjinxian yishihui gongbu," 關於天津地方自治之文件直隸天津縣議事會公布 *Dagong bao*, July 5, 1911.

¹⁰⁰ "Qing zhan luxian," 請展路綫 *Dagong bao*, June 17, 1911.



Figure 11 Proposed line from Beidaguan to the West Station in 1911

Having learned about the proposal, Zhou Wenjun (周文俊),¹⁰¹ a probationary representative (議員附生) of the county assembly, petitioned to the county magistrate, saying:

According to our investigation, the tramway encircles the city. All the poor people who pull rickshaws have been affected and there have been frequent accidents. It has long been our insight that people in Tianjin would deeply fear the trams. If such a long track were to be added now, we fear that as the company's profits grow, the lives of the people of Tianjin would be more endangered. The consequences are truly unthinkable.¹⁰²

Living in the Austro-Hungarian Concession himself, Zhou should be familiar with tramway and the danger of it. Zhou had also experienced or at least witnessed his folks

¹⁰¹ He was also a graduate of Primary Teachers' School (初級師範學堂) and the Institute of Study of Autonomy (自治研究所), an enthusiastic organizer and lecture of the Autonomy Academy (自治學社).

¹⁰² *Dagong bao*, July 5, 1911.

being treated unfairly by the western authorities. In fact, the Austro-Hungarian authorities did not compensate the villagers adequately in Zhou's village for demolishing their properties, and in 1910, Zhou had just successfully led his village to win a case against the translator of the Austrian municipality.¹⁰³ Therefore, his concern about further expanding tramway in Tianjin should not be dismissed as illusion. Also, as an active promoter of local autonomy, he was aware of the limitation of the assembly's authority: the assembly was under the supervision of the provincial and county administrations and it was important to obtain the support of the magistrate in order to stop the expansion of tramway.

The county government forwarded the tramway company's proposal and Zhou's petition to the county assembly, the city board (城董事會), and the Tianjin chamber of commerce on June 25, asking these institutions to investigate the effects of this proposal on the local area and reply to the county with their recommendations. A week later, the assembly wrote back, recommending the county magistrate to reject the proposal of the tramway company. In mid-July, the representatives at the city board also voted to reject the proposal.¹⁰⁴

At the level of the city board, the analysis of the tramway proposal gave careful consideration to the details. Besides safety concerns, the city board pointed out another consequence of the proposed expansion of tramway:

The route that the company proposed this time is one from the North Gate to Xigu. As we investigated, our investigation revealed that the streets on this route are extremely narrow but there are quite a lot of businessmen and residents. If we allow for the expansion, all the stores and residences will all be demolished. While the city

¹⁰³ "Wubi de zhi," 舞弊得直 *Dagong bao*, August 17, 1910.

¹⁰⁴ "Buyun zhanxian," 不允展綫 *Dagong bao*, July 14, 1911.

is economically depressed/ at this time of economic downturn in the city, the people are already terrified, and they really worry that in the morning they can't plan for the evening. If they suffer again this round of harassment, we suspect it will disrupt the public order.

One of the narrow streets on this proposed line was the Hebei Avenue. Spanning between the South Canal and North Canal, the Hebei Avenue was once the administrative center of tribute grain transport where the Chinese customs house and the office of grain inspection were located. After the tribute grain transport stopped, it remained an important commercial street. Many stores selling herbal medicine, dry fruit, bamboo product, porcelain, and agricultural tools lined up on the sides of it. Because the Grand Canal was still an important shipping channel for domestic trade, stores on the Hebei Avenue took advantage of the excellent location and attracted customers from the rural areas along the Grand Canal. The street was only three to four meters wide, which would be easily eaten away if a tramway was built.¹⁰⁵ Historical photos show that walking was the primary means of moving about on the street. The already narrow space was encroached by the roadside vendors and mat sheds extending from the entrances of the stores. Therefore, for the businesses on this avenue, they already had plenty of water transport and foot traffic; the traffic that tramway could bring to them seemed trivial yet the loss of space and the interruption of business that the tramway would cause seemed much more severe.

Before the county and provincial administrations made a decision, more conflicts between the local residents and the tramway company broke out. The tramway company

¹⁰⁵ *Yishibao* 益世報, February 5, 1937, 512. Wang Huaiyin and Liu Xuheng, 王槐蔭 劉續亨 “Tianjin gongshangye zhong de Jizhou bang,” 天津工商業中的冀州幫 *Tianjin wenshi ziliao xuanji* 天津文史資料選輯 32 (1985), 132.

had already marked with flag the construction zones and the properties that would be demolished, which agitated the business owners on the Hebei Avenue and the villagers in the area.¹⁰⁶ The merchants and villagers collectively petitioned to the county assembly and the chamber of commerce not to allow the expansion of tramway. The collective anxiety and insecurity culminated into a group unrest in August, when a tramcar hit and injured a patroller Zhou Junshan. Enraged people threw rocks onto the tramcars and smashed the windows. The tramway company requested 800 yuan of compensation from Chinese government.¹⁰⁷ Not long after, a laborer Gong Yihe was killed under the wheels of a tramcar. Villagers near the Hebei Avenue once again wrote to the chamber of commerce, quoting these two accidents to support their argument about the perilous situation that the tramway put the local people in. They begged the chamber of commerce to work toward having the tramway company's flags removed and banning further expansion of tramway.¹⁰⁸ Afraid of instigating more resentment of the Chinese people, the tramway company shelved the proposal of a new tramway for the moment.

In October 1911, China's Republic was established in Nanjing. In February 1912, the last emperor of the Qing abdicated, and Yuan Shikai, who controlled the military of north China, became the first president of the new republic.¹⁰⁹ Although a republic replaced the Qing dynasty, the power structure in Tianjin remained stable: powerful

¹⁰⁶ "Hebei dajie cunmin bingqing quxiao tuiguang dianchelu wen" 河北大街村民稟請取消推廣電車路文 *Shanghai dang'an xuanbian*, 2258.

¹⁰⁷ "Duidai dianche," 對待電車 *Dagong bao*, August 25, 1922.

¹⁰⁸ *Shanghai dang'an xuanbian*, 2258.

¹⁰⁹ Before Yuan could set out for Nanjing to take the office, a coupe took place on March 2, 1912 in Beijing and Tianjin and kept Yuan in the north. During the coupe, soldiers looted and set fire on the most prosperous markets in the Chinese city including the Hebei Avenue. Sixty to seventy percent of the stores on the Hebei Avenue suffered from the coupe. This incident was also said to have propelled many Chinese business owners to relocate their businesses into the foreign concessions. "San zhi luanhao zhi xiangqing," 三誌亂耗之詳情 *Dagong bao*, March 5, 1912.

figures in the Beiyang clique continued to hold the power. Feng Guozhang was the new governor-general of Zhili. On December 29, 1912, he notified the Zhili Bureau of Foreign Affairs and the Tianjin County Assembly that he acknowledged the former governor-general Yang Shixiang's decision regarding the procedure of approving the expansion of tramway in Tianjin, continuing to honor the assembly's rights to make recommendations on the tramway plans.¹¹⁰

In early 1913, the tramway company submitted a different proposal of a new line and the proposal was again forwarded to the county assembly. At the time, the Tianjin bureau of public works was planning on cutting through the bend of the North Canal between the Jin'gang Bridge and the Sanchahekou and dig a shorter and straighter channel. After this cutting, the two canals would be joining each other at the Jingang Bridge instead of the Sanchahekou. The tramway company proposed to lay tracks along the bank of the new channel and extend tramway into the Hebei area until it reaches the Central Railway Station of Tianjin. The tramway company argued that this plan would

If a new route is opened, horse carts will not jam at Dahutong and the trams could improve traffic flow around the new railway station at Hebei. The real estate value along the tramway is bound to increase.¹¹¹

The Hebei area between the Beijing-Fengtian railway and the North Canal was developed under Yuan Shikai's order after 1902. Governmental offices, schools, and exhibits of industrial products concentrated in the region. The government employees and the railroad passengers would be able to afford both rickshaws and tramway, but it would be a pleasant cheaper alternative once tramway becomes available. In addition, the area

¹¹⁰ "Yiwen zhaodeng," 移文照登 *Dagong bao*, January 5, 1913.

¹¹¹ *Dagong bao*, January 17, 1913.

had a grid system of roads that were paved 10 to 20 meters wide. It would not involve purchasing land or demolishing properties if a tramway were to be built. Therefore, a tramway traversing this area and reaching the railway station would certainly be profitable for the tramway company. The tramway company also promised that it would share the cost of rebuilding the Jingang Bridge if the proposal was approved.

The proposal was submitted to the county assembly. Zhou Wenjun, an opponent to the expansion of tramway in 1911, had now been elected to be a formal representative at the county assembly. In July, he proposed a motion to reject the tramway company's plan of building a new line in the Hebei area.¹¹² It is unclear whether the assembly pursued that motion but because the plan of cutting the bend of the North Canal was still premature, the proposal of expanding the tramway that used the cutting as its pretext stagnated.

In 1915, seeing that the cutting of the North Canal was nowhere close to be carried out, and the tramway company revised its plan and submitted to the provincial government. It intended to build a new line starting from the northeast corner of the white line, then crossing the two canals and tracing the Dajing Road in the Hebei area to reach the Central Station. On June 25, the provincial government sent the proposal to the department of finance, the Tianjin customs Daoyin, the department of police, the Tianjin county, and the Tianjin chamber of commerce, asking the five authorities to investigate the proposal. On June 30, the five authorities co-authored a response to the provincial government, demonstrating their reasons of opposition.

¹¹² “Tiyi jin tian guidao,” 提議禁添軌道 *Dagong bao*, July 5, 1913.

The first reason had to do with the spatial situation of the area between the two canals.

If the tramway goes from the northeastern corner of the old city to Dajing Road, it will have to go through Dahutong between the North Canal and South Canal. Because the street is already narrow and pedestrians and carts are endlessly coming and going, the area is already extremely crowded every day. We absolutely cannot allow trams to go through and cause trouble. Even if we move the route eastward, there are row upon row of houses at Jinjiayao, and some people will be reluctant to go along with compulsory purchase and compensation. This is the first reason we don't approve; the geographic situation.

Dahutong was one of the busiest commercial streets near the Sanchahekou, the center of traditional commerce. It spanned between the two canals, just like the Hebei Avenue. The office of Zhili governor-general used to stand on the southern end of the street. The street was lined up with book stores, food stores, and shops selling paper and stationery, medicine, or shoes. There were also restaurants, bathhouses, and Chinese banks. The types of businesses in Dahutong were directed toward a more affluent class of customers, who would afford hiring rickshaws and would not be stopped due to the lack of tramway. Similar to the Hebei Avenue, Dahutong was a narrow street with protruding vendors and sheds to the sides. To its east, there was a crowded Chinese residential area known as Jinjiayao. It would be very difficult to widen the road, but if the road was not widened, the tramway would take too large a portion of the road and it would affect the interest of the business owners. Even if the tramway company was willing to bypass the Dahutong area and trace the bank of the North Canal to reach the Dajing Road, it would have to traverse Jinjiayao and due to the density of population there, the difficulty of construction would also be enormous.

The second reason was the public resistance to a new tramway line. The officials in Tianjin indicates that

This route is already outside the scope of the original company charter, and moreover, it has been rejected by the county assembly. This is the second reason why we don't approve; the public opinion.

Although the self-governing assembly of Tianjin county had been dismissed by this time, the local authorities still deemed the assembly's decision to oppose a similar line in 1911 as representative of the public opinion. Without the assembly, it is difficult to hear the actual voices of the local residents, but judging from the past handling of tramway proposals and as we will see what happened later, it would be safe to believe that the public opinion remained negative to a new tramway line.

The third reason was the concern of the livelihood of the poor, especially the rickshaw pullers. They argued that

Ever since the tramways in the old city and beyond line that encircles the city and other lines became prosperous, the livelihood/plight of the poor has become more and more strained. If the tramway is further extended through Dajing Road in Hebei toward the central railway station, the means to survive of the poor coolies/laborers who keep a rickshaw will be more difficult. This is the third reason why we don't approve; protecting the livelihood of the poor.¹¹³

After receiving the negative response, the tramway company had not given up on this potentially profitable line. In December, it submitted a statement to the provincial government in response to the three reasons of opposition that the five local authorities gave. Targeted at the first reason, the tramway company explained that the route they proposed would not trespass either the Dahutong or the Jinjiayao area, therefore, it would not involve demolishing a lot of properties. As for the second reason, the tramway

¹¹³ Archive of the Chamber of Commerce of Tianjin, Tianjin Municipal Archives, J0128-2-002193-014.

company argued that the 1904 contract allowed it to propose new lines for the Chinese authorities' approval. Furthermore, although the line connecting the northeast corner of the old city and the Central Station was not agreed in the contract, the company claimed that

When the contract was drawn up, the essence/ principle of the contract when it was agreed upon/executed was that the area to the north of the city was the most important and needed to be connected with the center of the city in the future. The current plan is made based on this principle and closely resembles the route between the northern gate and Xigu as stipulated in the contract. The reason why the agreed route was altered is that when we proposed to build that line in the past, we did not carry it out because there were too many houses on Hebei Avenue that needed to be demolished, but the route toward the central railway station requires no demolition at all.

Emphasizing the 1904 contract probably was not a good idea if the company wished to win more sympathy from the Chinese authorities, because the contract of tramway was forced upon China through unequal treaties.

Against the third reason, the company listed the benefit that the tramway had brought or would bring to the local residents.

The rickshaws around the city/throughout the old city of Tianjin have been increasing day by day. There are now many times more of them than there were before tramways were built. In contrast, in the British Concession where no tramway has been built, the number of rickshaws has decreased. Apparently, the tramway has not much impeded the rickshaw pullers. ... It is cheaper and faster for the local residents to take trams than rickshaws. Even if, as some people have argued, trams are beneficial to passengers, they inevitably affect the rickshaw pullers. The common good of the local residents is more important than the interests of one group of people.

Our company has hired about 3000 Chinese employees in total. These people live comfortably. If we were to expand the tramway, the number of employees would increase, and other people would be able to enjoy comfortable lives too. Also, in extending the tracks and paving roads, we would hire quite a few poor people/ Hire poor people in no small number.

In addition to these two points, the company indicated that once a comprehensive public transportation system was established, new residential areas could be built in the suburb and poor people could afford a place to live in a better environment with fresh air and less dense houses. Factories could also be built in the suburb where working class people were concentrated, therefore, the managers would find it easier to hire workers.¹¹⁴ The Chinese authorities refused to buy any of these explanations and the tramway's attempt to expand its network again failed.

Chinese Efforts to Recover the Right of Managing the Tramways

The closest to success that the tramway company's proposal of expansion ever got was what the proposal of 1917 achieved. The summer of 1917 witnessed the most severe flood in the past thirty years sweeping the entire Zhili Province.¹¹⁵ When water finally retreated, in October, the tramway company began to advocate for building a tramway connecting Dahutong with the Central Station. (Figure 12)

¹¹⁴ “Wei Tianjin dianche diandeng gongsi dui dianche kuochong guilu banfa zhutiao shuoming de han,” 為天津電車電燈公司對電車擴充軌路辦法逐條說明的函 J0128-3-004108, 4-5.

¹¹⁵ After the flooding, the Chinese river authorities decided to carry out a project to reengineer the river system in Zhili, which including cutting the bend of the North Canal near the Sanchahekou, a plan having been considered in 1913.



Figure 12 Proposed line connecting Dahutong with the Central Station in 1917

This time, the plan seemed to have won the favor of some Chinese merchants and officials. A local newspaper *Yishi bao* published an open letter written by Liu Mengyang and Li Wenquan, demonstrating their opinion about developing a new market in the Hebei area. They asserted in the letter that “in order to revitalize the market conditions, we must take measures to facilitate easy transportation; in order to facilitate easy transportation, we must allow tramway to go through Hebei.”

The newspaper followed up with another report saying that Liu Mengyang, the former vice president of the Tianjin County Assembly, has discussed building tramway in the Hebei area with the tramway company and the company had begun to draw up a plan.¹¹⁶ Liu Mengyang was the vice president of the Tianjin County Assembly in 1909. During his tenure, he advocated for reforming the regulations of the operation of tramway. After he resigned from the assembly and founded a newspaper *Tianjin baihua*

¹¹⁶ “Hanqing guihua Hebei luxian,” 函請規劃河北路線 *Yishi bao*, October 14, 1917.

bao (天津白話報), he wrote articles concerning the safety issues of the tramway and the assembly's rights of supervising the operation of tramway.¹¹⁷

Liu's alleged change of attitude toward tramway caught the merchants of Dahutong by surprise. They wrote to the chamber of commerce, asking it to reject the plan of the tramway company. The request of the Dahutong merchants led the chair of the chamber of commerce to write a letter to Liu, intending to find out whether Liu had indeed discussed a tramway plan with the company. To clarify his position, Liu clarified in *Yishi bao* that he indeed had spoken with Liu Ruiting, the Chinese manager of the tramway company, about expanding the tramway in to the Hebei area, but he did not endorse a tramway line traversing Dahutong. In the announcement, he also indicated that Cao Kun, the Zhili governor-general, seemed to be interested in expanding the tramway.¹¹⁸

Though Liu denied that he had endorsed any tramway proposal, the fact that the rumor had stricken serious panic signaled a changing image of tramway around 1917. As the economy of Tianjin developed and types of businesses shifted, tramway had become an indispensable means of urban transit. Since the First World War erupted in 1914, European powers slowed down their economic extraction in China. Chinese enterprises in manufacturing, industry, exporting, and banking had a chance to thrive. In Tianjin, the total investment in national industry was growing from 49,875,000 yuan in 1913 to 155,221,000 yuan in 1920. Tianjin was become the leading city in flour manufacturing, textile, chemical industry, and machine making. Many of the factories, though owned and

¹¹⁷ See Yoshizawa, "Densha to koufun," 167-169.

¹¹⁸ "Liu Mengyang da Dahutong Fuxing deng hao," 劉孟揚答大胡同富興等號 *Yishi bao*, October 21, 1917.

ran by Chinese, chose to locate in foreign concessions, because of the better access to water and sea shipping route, more advanced infrastructure, and the extra security under the umbrella of extraterritoriality. These factories provided plenty of working opportunities that attracted a large number of people, mostly young males, from the greater Zhili Province and the close-by provinces to move into Tianjin. Commerce was also experiencing significant transformation. In addition to the traditional specialized shops, large department stores began to appear. Highly relied on flow of people, these department stores tended to be established at the busiest and most accessible spots of the city. With very few exceptions, most of them were found along the tramway lines, especially in the Japanese and French concessions where multiple lines went through. Over the course of the 1910s, the population of Tianjin increased from 600,000 to 775,000. The population in the foreign concessions grew to twice as large from 1911 to 1917, from 54,543 to 119,150. The commuting needs in both the Chinese city and the foreign concessions, and in between different parts of the city became greater. In 1909, tramway transported 18,500 passengers each day on average; ten years later, this number increased to 110,900. The frequency of taking tramway also increased from 11 times per person annually in 1909 to 54 in 1919. The riding habit of Tianjin residents was ranked the first among the Chinese cities that had tramway, surpassing Shanghai and Beijing.

Indeed, in 1917, the proposal of adding additional lines to the tramway system seemed more practical. In November 1917, Cao Kun forwarded the tramway company's proposal of expanding tramway into the Hebei area to the Shunzhi provincial assembly (順直省議會). (The Tianjin County Assembly had been dissolved in 1915.) Upon hearing the news, the merchants of Dahutong were determined to have their voice heard

because “If the provincial assembly were to decide this issue at its discretion, the commerce in the Hebei district would suffer a great loss.”

In order to keep the tramway from encroaching on the precious space of Dahutong, the merchants utilized the discourses of nationalism to gain sympathy and support. More than seventy business owners collectively submitted petitions to the chamber of commerce, the provincial assembly, and every individual member of the assembly, opposing the expansion of tramway into Dahutong and the Hebei area. In the petition, the merchants first listed the common reasons why tramway should not be built such as the threats of tramway to the safety of pedestrians and the livelihood of the poor. Then, they turned to focus on the Dahutong region:

The street is narrow, pedestrians are coming and going. There are many inconveniences, and commerce is affected. Even if a route were opened to the east or west of Dahutong, it would drain the vitality of Dahutong. Besides, are there remedies if rickshaw businesses were to decline?

These concerns did not differ from the opponents’ petition in 1915, but the merchants did not stop there but boosted their argument by linking the expansion of tramway with the nation’s economic rights. Furthermore, they advocated for turning this incident into an opportunity of reclaiming control over the tramway.

Since the original contract does not have a clause for extending the tramway to Hebei, we should not arbitrarily alter the route simply because the opposition at Xigu Village. Besides, those who opposed this plan at Xigu have their own reasons. The tramway company has violated the contract on many counts, this is more than enough to justify our position regarding the Xigu Village line. What’s more, the tramway is not even run by our own country. For those who think that nothing but a tramway can facilitate transportation, according to the contract, we could buy back the enterprise in twenty years and that date is approaching. Therefore, it is an opportune moment to ask them to propose a joint venture involving officials and merchants. Considering that everyone knows that the business of the company is well developed and profiting greatly, [officials and merchants] would certainly invest enthusiastically in this

attractive enterprise. It would not be hard to make an ocean by collecting many drops of water and through establishing a Chinese company, we could reassert our rights.¹¹⁹

The merchants made it clear that they did not oppose tramway altogether but acknowledged that tramway was a beneficial means of transit and a profitable enterprise. However, they would not allow the tramway to expand if it remained a western enterprise. Behind the political discourse, in reality, although tramway had proved to be an efficient transportation, the commercial pattern of Dahudong had not changed and tramway remained inadequate for the area. Considering the current commercial pattern, Dahutong was probably at the most comfortable location in relation to the tramway: only a bridge apart from the northeast corner station shared by three tramway lines. It is possible that the area had already benefited from the traffic brought by the tramway while not being troubled by the tracks and tramcars.

The chamber of commerce supported these merchants' petition. On November 27, it wrote to the provincial assembly and the governor, asserting:

The establishment of tramways encroached upon our economic rights. We signed the treaty under duress. It is impossible to save what we have lost, but we should proactively protect what we have not lost in order to protect our rights and interests and enrich people's lives.

By putting the emphasis on the nation's economic rights, not the more specific reasons of opposition, the chamber of commerce made sure that the merchants' petition would resonate with the provincial assembly members who were unfamiliar with the local situation of Tianjin.¹²⁰ Until the provincial assembly met to vote for the tramway

¹¹⁹ J0128-2-002193-031.

¹²⁰ Letter from the Chamber of Commerce to the Provincial Assembly and provincial governor, dated November 27, 1917, J0128-2-002193-027.

proposal, petitions from an individual local resident and an owner of a rickshaw garage continued to be forwarded to the assembly.

The adoption of nationalist discourses worked to influence the higher assembly. On January 5, 1918, although the tramway proposal gained some support in the beginning, the Shunzhi provincial assembly voted to reject the tramway proposal.¹²¹ The explanation that the provincial assembly gave reinforced with the Tianjin merchants' claim of protecting China's economic rights and sovereignty. It also implied another more practical reason why the representatives voted to oppose the plan:

Ever since the great disaster, people's vitality has been deeply undermined, their livelihood has dwindled, and dangerous situations have arisen continuously. How could the people of Tianjin endure another calamity? We earnestly request that the governor solemnly refuse [the proposal] and put an end to the issue so as to maintain municipal order and provide people with peace of mind.

After the 1917 flooding, the provincial river authorities decided to carry out a project to reengineer the river system in Zhili, which included cutting the bend of the North Canal near the Sanchahekou. The project involved a lot of land purchasing and property demolishing near the Dahutong area. If the residents in the Dahutong area refused to cooperate, the cutting would be very difficult to complete. The river work was a much higher priority than the tramway, and it would be the first time that the Chinese river authorities implement river cutting in Tianjin. The social and political implication of the Sanchakou cutting was way more positive than allowing a western company to build another tramway line. Since then, the tramway company had never again proposed to build new lines in the Chinese city.

¹²¹ J0128-2-002193-031.

In 1922, the movement of retrieving control over the tramway started, fundamentally undermining the tramway company's ambition of further expansion. For five years, the Chinese authorities' negotiation with the tramway company went on and off. The movement certainly can be viewed as part of the efforts in recovering economic rights and terminating consular jurisdiction, but it also had its local motivations. In this period, Tianjin's economy continued thriving and the population had exceeded 1,000,000. Chinese owned industry kept growing while foreign investment in industry increased rapidly. It is estimated that there were 100,000 industrial workers in Tianjin in 1922 and more than 130,000 in 1927. Ever since 1912, Chinese owned businesses began to open branches or relocate to foreign concessions, especially the shops that had larger assets such as jewelry stores, antique stores, clock stores, glasses stores, and pharmacies. In the 1920s, the French and Japanese concessions gradually took place of the northern and eastern regions in the Chinese city, becoming the center of commerce. In every part of the city, population was growing, but the rate was faster in the newer districts. For example, the Hebei area had a population of 70,000 in 1910; the number had increased to 209,000 in 1928. This model district was finally populated to the similar level as the old Chinese city after 26 years of development. Population also grew fast in the foreign concessions. In 1930, the average density of population throughout the city was 19,077 persons per square kilometer, and the density in the foreign concessions was catching up, being 15,311. By that time, the tramway company had found it necessary to add a new extension (the Green Line) within the French concession to link the center of the concession to its southern border (opened in 1921, shown in green on the map) and a rush hour line (the Flower Line) on the existing track between the Chinese city and the

Japanese and French Concessions (opened in 1927, shown in purple on the map). (Figure 13) Having been an excessively advanced means of transportation that was installed as a political proclamation, the tramway in Tianjin finally matched the development of the city by the end of the 1920s.

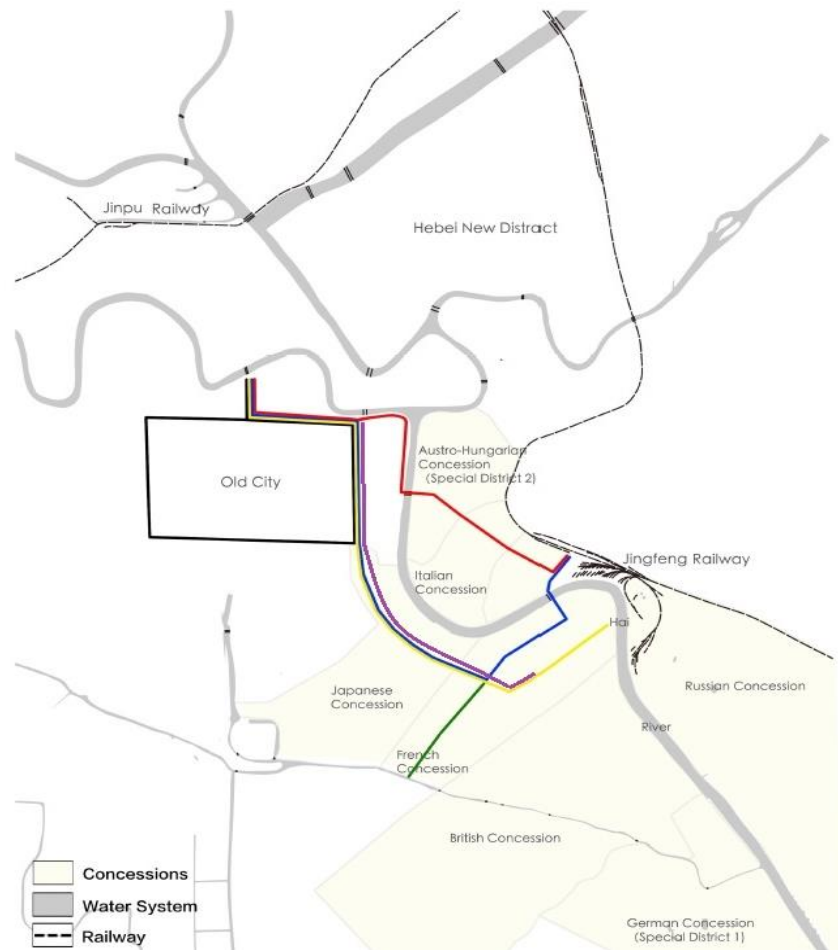


Figure 13 The Green Line and Flower Line added in the 1920s

Rounds of negotiation did not result in the handing over of the tramway to the Chinese authorities. The government could not afford purchasing back the assets and paying the fifteen times of the annual profit as the 1904 contract regulated. In 1927, as a compromise, the Zhili government signed an Additional Contract and a Final Arrangement in Ten Articles with the tramway company. By the stipulations of the two

documents, a new Chinese tramway company was established and would build tramway lines six li further away from the Drum Tower. The Additional Contract also increased the percentage of the Chinese government's share of profit. The new company never actually constructed any lines. The tramway in Tianjin remained in the hands of the Belgian company until the Japanese took over in 1940.¹²²

Electric tramway was introduced into Tianjin when the city had no internal demand for mass transportation. The city was unprepared for a modern urban transit and it lacked the drive to embrace this advanced technology. These two facts led to the serious safety problems in tramway's operation and the complete failures of tramway's expansion in the Chinese city. Another fact that had shaped how tramway was discussed in Tianjin was that this new transport technology was forced upon Tianjin by western powers to show off their military victory and technological superiority. Tramway in Tianjin, therefore, always carried with it the mark of imperialism. This mark of imperialism did not give the tramway company much chance to take advantage of it. On the contrary, it was more often used by the Chinese to resist the expansion of this western enterprise. Chinese utilized the discourses of nationalism, anti-imperialism, or national sovereignty when discussing tramway. Under the cover of these political discourses, however, what really mattered were the practical reasons of opposition such as economic interest or avoiding risks.

Before the tramway was built, memory of the western invasion and the fact that tramway was imposed by western powers increased people's concern and defensiveness

¹²² *Tianjin tebieshi gongshu gongyongchu xingzheng gongzuo ji shiye jihua huikan* 天津特别市公署公用处行政工作暨事业计划汇刊, 50. Publisher unknown, published in 1941.

to an unfamiliar technology. When the first major tramway accident happened in 1906, fully aware of the political context in which tramway was adopted, the local Chinese elites recognized the exigency of controlling the legal jurisdiction over this case in order to set up a model for future accidents. They mobilized their resources to publicize the political implications of the way in which this accident was handled and called for the persistence of the Chinese government and the victim's family in declining foreign interference. These efforts curtailed the influence of consular jurisdiction on tramway accidents. By drawing on the political connotations of tramway, the local elites depoliticized future tramway accidents and kept those events within the realm of ordinary civil or criminal cases that could be judged all by Chinese authorities.

After the lines circling the old Chinese city were built immediately following the signing of the contract, the speed of expansion of tramway varied across the patchwork of territories controlled by Chinese and multiple foreign authorities. The commercial pattern, population structure, spatial layout, and municipal planning of each district all played into the decision making of the authorities. In the Chinese city, before the full-scale invasion of the Japanese, tramway had never been expanded since 1906. The tramway company submitted a number of proposals over the years. Each proposal underwent the scrutiny of Chinese elites, merchants and residents in the neighborhood that under the impact of the specific proposal. They would weigh the pros and cons of tramway according to the local conditions. From 1906 to 1915, each district in Tianjin was self-sufficient and the need for mass urban transit was insignificant. The merchants that ran businesses on the Hebei Avenue and in Dahutong were organized and won the support of the autonomous institutions, successfully aborted tramway's expansion. After

1914, the growth of population in Tianjin accelerated because of the significant development of industries, and the population densities among Chinese city and the foreign concessions began to even out. As a result, the commuting needs increased, and the advantages of tramway became more transparent. The proposal of expansion in 1917, therefore, gained some support among Chinese officials and elite. But it fell through in the end just as other similar proposals. Oppositions were not from all the neighborhoods along the proposed line but was from the merchants that had businesses along a short but critical section of the proposed lines. The actual reasons of opposing a particular tramway proposal could be very specific and localized, but they were often presented as only secondary to more upright, selfless goals such as preserving national sovereignty, economic rights or caring for the poor.

In the 1920s, as industry and commerce in Tianjin progressed and attracted huge influxes of migrants, various districts were more integrated and population density became more evened out across the city. Finally, transportation need in Tianjin well matched the tramway that had been built two decades ago. This could have been a good time for tramway to expand, but as the date that Chinese government could purchase the tramway was approaching and the negotiations about taking over the tramway were underway, the tramway company had stopped seeking expansion with only one exception being the Green Line within the French Concession.

CHAPTER IV Mobility and Tianjin's Modernity

The first three chapters have analyzed how the processes of building the modern transport network modernized Tianjin. Steamships, railroads, and tramways had reinvented Tianjin in many ways in the late nineteenth and early twentieth centuries. On the verge of decline after the Grand Canal was abandoned, Tianjin gained the opportunity to become a seaport and a railroad hub. In fact, Tianjin was opened to steamships only later than the first five treaty ports and was the first city connected to a railroad in China. At a time when the disabling of the Grand Canal and the political and social upheavals were roasting the traditional commercial, Tianjin took an advantageous position in the emerging modern transportation system. The early adoption of the steamship and railroad at Tianjin enabled Tianjin to avoid the fate of perpetual decline that many of its peer canal ports were about to face. Tianjin became a nodal city in a developing urban network that was linked within it by sea shipping routes and railroad lines. This was how the modern transportation technology redefined Tianjin's status in the urban network and forged the material connections and mobility between Tianjin and other cities and regions.

Meanwhile, Tianjin's inner connections and mobility were also improved by the electric tramway. Different parts of the city, especially the Chinese administered quarter and the foreign concessions, became more integrated. The affordable fare of tramway provided ordinary people a faster alternative to move around in the city. How could one tell whether they were in a modern city? An obvious sign is electric tramway for the Chinese cities in the early twentieth century. The frequently cited page in the *Liangyou*

magazine describes electric tramway as “one of the most important transportations in the metropolis.” On that page, a photo of a running tramcar was collaged with photos of other manifestations of “Sound, Light, and Electricity.”¹ Besides improving connectivity and mobility, the tramways had introduced damages to the livelihood of the rickshaw pullers, to the safety of the passengers and pedestrians, and to the traditional commercial pattern and layout of the streets. The darker side of this new technology motivated the local residents to participate in shaping the decisions of the municipal and provincial governments. Modernity was thus embedded not only in the connectivity and mobility that tramway improved, but also in the residents’ political activism to oppose the expansion of the modern transportation.

This last chapter examines how the new means of transportation facilitated the development of trade, news agency, and individuals’ careers in the modern sectors. By the 1930s, as a seaport and railroad hub with an advanced mass transportation system, Tianjin had turned into one of a few modern cities in China that housed prosperous trade, industry, banks, and media alike, whose development depended upon the fast and large-scale movement of people, commodities, capital, and information. This chapter will show what a city equipped with a modern transportation network meant for three different kinds of business: cotton trade, newspaper, and bank.

¹ *Liangyou* 良友 87 (1934), 25.

Mobility of Goods: Raw Cotton and Cotton Products

As a modern transportation system was being built up, Tianjin became a trading center for cotton and cotton products such as yarns and textiles. Before 1911, cotton was by no means a significant goods that being traded in Tianjin. From 1911, cotton was increasingly concentrated at Tianjin from Zhili, Shandong, Shanxi, Shaanxi, and Henan and became an important goods of export. From 1919 to 1935, each year, more than 540,000 *dan* of cotton was gathered at Tianjin on average.² Except 1917, from 1911 to 1918, each year, 100,000 to 240,000 *dan* of cotton was exported from Tianjin. After 1922, the annual export of cotton was rarely under 400,000 *dan*. The export of cotton reached a peak time from 1926 to 1932, when the average export each year was around 650,000 *dan*. Then, the amount dropped to 270,000 to 500,000 from 1933 to 1936.³ From 1921 to 1935, more than half of the overall export of cotton in China was exported from Tianjin. The percentage reached 89.45% in 1932 and 93.4% in 1933.⁴

The sudden surge of the trade of cotton in Tianjin after 1911 was first caused by the international demand. The continuous development of textile industry in Europe, America, and Japan led to a shortage of cotton on the world market and the price of cotton therefore increased rapidly. Japan had been looking for a stable source of cotton in China since 1900 and there had been small exports of cotton from Tianjin to Japan since

² Fang Xianting, 方顯廷 “Tianjin mianhua yunxiao gaikuang,” 天津棉花運銷概況 in *Fang Xianxing wenji*, 方顯廷文集 vol. 2 (Beijing: Shangwu yinshuguan, 2012), 465.

³ Zhang Limin, 張利民 “Jindai Tianjin mianhua zhongji shichang de xingcheng he zuoyong,” 近代天津棉花終極市場的形成和作用 in *Tianjinshi yanjiu lunwen xuanji*, 天津史研究論文選輯 ed., Liu Zhiqiang 劉志強 and Zhang Limin, vol. 2 (Tianjin: Tianjin guji chubanshe, 2009), 597-599.

⁴ Fang Xianting, “Tianjin mianhua,” 479.

then. The incentive of high price in 1911 had driven the export merchants to stock larger amount of cotton.

The second reason was the increased output of cotton in north China. In order to develop textile industry and to cut the import of cotton yarn, the Qing government had begun encouraging peasants to grow cotton in 1908. Research institutes were established in Tianjin, Henan, and Shandong. Edicts were issued to prohibit the growing of opium poppy, which used to be the major cash crop on the soil that was suitable for growing cotton. With the demand and supply both secured in 1911, the establishment of the railroads between Beijing and Hankou and between Tianjin and Pukou connected the places of cotton production with Tianjin, the market and port. Although many of the counties that grew cotton in Zhili, Shandong, Henan, and Shanxi had waterways leading to Tianjin, railroads provided a faster and more reliable option for shipping. The transportation system centered on Tianjin made Tianjin a center for trade of cotton.

Cotton became an important cash crop in north China once the places of production were connected with Tianjin by rivers and railroads. Because of the increasing demand of cotton, cotton could bring the peasants 2 or 3 times more profit than grains.⁵ Seeing the profit, peasants turned more land into cotton fields and some regions even became specialized in growing cotton. In Zhili Province, it was estimated that there was 1,500,000 *mu* of cotton fields in 1900, taking about 3% of the arable land of the province. In 1919, the acreage of cotton fields increased to 6,380,000 *mu*, taking up 8.5% of the total arable land in Zhili. In 1936, the acreage of cotton fields reached 10,000,000 *mu*,

⁵ Zhang Limin, "Shilun jindai Huabei mianhua liutong xitong," 試論近代華北棉花流通系統 *Zhongguo shehuijingjishi yanjiu*, 中國社會經濟史研究 no. 1 (1990): 82. Qu Zhisheng, 曲直生 *Hebei mianhua zhi shengchan ji fanyun* 河北棉花之生產及販運 (Shanghai: Shangwu yinshuguan, 1931), 44.

which was 10% of the arable land of Zhili, which had been renamed to Hebei Province after 1928.⁶ In some regions, the percentage of cotton fields was way above the average. For example, according to a survey in 1923, in a village of a county in Hebei near the Hutuo River and the Beiping-Hankou railroad, 70% of the land was used for growing cotton.⁷ In 1936, about half of the land in several counties in Hebei Province was cultivated into cotton fields.⁸ The output of cotton also increased significantly from early twentieth century to the 1930s. In 1911, Zhili Province only produced 550,000 *dan* of cotton; this number increased to 2,680,000 *dan* in 1919 and Zhili became the second largest cotton growing province. In 1936, the output of cotton in Hebei was the highest among all the provinces and reached 3,000,000 *dan*. The rate of commercialization of cotton produced in the five provinces of north China was estimated to be 80% in 1930.⁹ Such large amount of cotton was mostly shipped to Tianjin and sold domestically or exported abroad.

Shipping of Cotton

Tianjin had been a reliable market for cotton produced in North China because it provided low risk transport solutions. From the place of production to Tianjin, multiple means of transport, carts, boats, and railroads, could be used to ship cotton. Most of the cotton traded on the Tianjin market was produced in Hebei Province. For example, from November of 1935 to August of 1936, 98.5% of the cotton imported came from Hebei

⁶ Zhang Limin, "Jindai Tianjin mianhua," 596.

⁷ Qu, *Hebei mianhua*, 43. Tanxia Village in Haocheng County.

⁸ Zhang Limin, "Jindai Tianjin mianhua," 596. 51.49% of the land in Wei county, 46.63% of the Zhao County, 45.25% of Cheng'an county, and 41.09% of Handan county.

⁹ Zhang Limin, "Shilun jindai Huabei mianhua liutong xitong," 83.

Province; cotton imported from Shanxi, Shandong, and Xinjiang counted for 1.2%, 0.12%, and 0.12% respectively.¹⁰ The cotton growing areas in Hebei (Figure 14) were mostly located along the tributaries of the Hai River and the Beiping-Hankou or Tianjin-Pukou railroads. Technically, cotton from Hebei could be transported to Tianjin either by water or railroad. For example, cotton produced on the banks of the Daqing River, Hutuo River, and Fuyang River (West River cotton) could be carried by animal-drawn carts to nearby ports on these rivers or the railway stations along the Beijing-Hankou line, and then be loaded onto boats or trains. The boats would trace these rivers into the North Canal and reach Tianjin; on the trains, cotton would first be shipped to Beijing on the Beijing-Hankou line and then from Beijing to Tianjin through the Beiping-Liaoning (formerly Beijing-Mukden) line. Cotton from the area along the South Canal could be shipped to Tianjin through the South Canal or on the Tianjin-Pukou line. The cotton grown along the Luan River, Beitang River, North Canal (East River cotton) can be shipped to Tianjin on waterway or be carried by animal-drawn carts to the railway stations on the Beiping-Liaoning line such as Xugezhuang and Yangcun and then transported to Tianjin through the railway.¹¹

¹⁰ Fang Xianting, "Tianjin mianhua," 438-9.

¹¹ Fang Xianting, "Tianjin mianhua," 448.

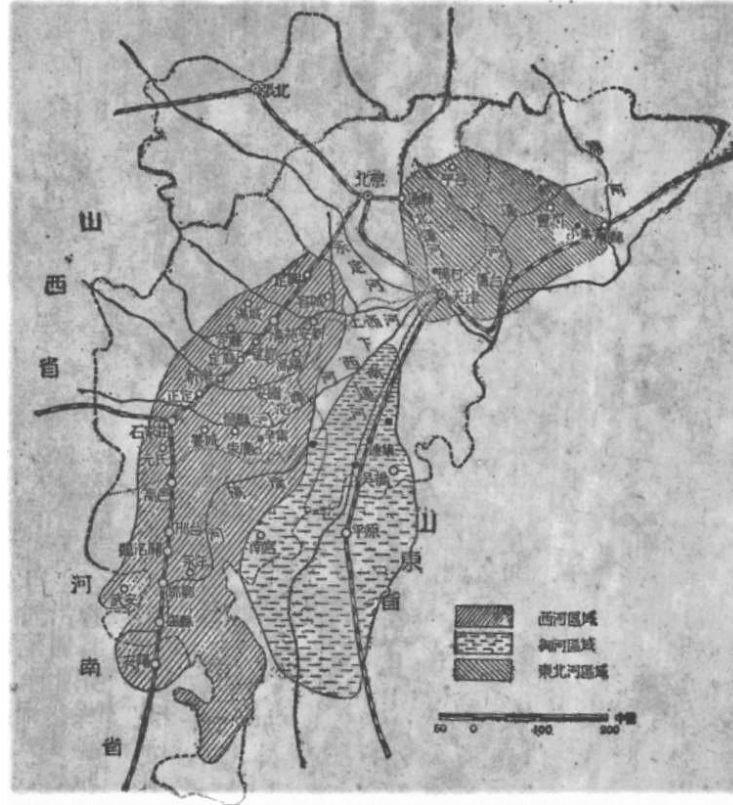


Figure 14 Production areas of cotton in Zhili

The advantage of being a hub for both waterways and railroads was that Tianjin always offered an alternative plan for shipping. Statistics show that, from 1921 to 1939, 56.5% of the cotton transported to Tianjin was shipped on the waterways and 40.5% of the cotton arrived at Tianjin by railroads, but the specific breakdowns differed greatly from year to year.¹² When the railroads functioned normally from 1921 to 1924, about 70% of the cotton entering the Tianjin market arrived by railroads. However, railroads were often interrupted by regional wars between the Beiyang warlords or between the warlords and the Nationalist army, which forced the cotton merchants to ship most of their cotton by boats. For example, in 1926, only 7.7% of the cotton arrived at Tianjin by railroads because of the Second Zhili-Fengtian War; in 1928, due to the Northern

¹² Fang Xianting, "Tianjin mianhua," 449.

Expedition of the Nationalist army, only 12.5% of the cotton was transported to Tianjin on railroads.¹³ Despite the fluctuating proportions of shipments by waterway and railroads, the annual amount of cotton arriving at Tianjin did not decrease when military affairs interrupted with railroads.

The transportation system of Tianjin also allowed the cotton dealers to plan the best itinerary for their cotton in different situations; they could take the location of production, the market, the availability of the transportation, and the shipping costs into consideration and find the most suitable shipping channel at the lowest cost. For example, if a cotton dealer were to ship cotton from Qingyuan to Tianjin, there were two ways. By railroad, the dealer could have the cotton transported on the Beiping-Hankou line from Qingyuan to Fengtai, then on the Beiping-Liaoning line from Fengtai to Tianjin. The route was 256 kilometers and would take four days. By river, the dealer could ship his (more likely, the dealer would be a man) cotton on the Daqing River. It was a 230-kilometer trip to get to Tianjin and would take four to six days, but the river would freeze for 2 to 3 months a year. The shipping cost by train was 1.5 times dearer than boats and made the railroad less competitive than the waterway during warmer times. The Beiping-Hankou line thus offered special rates in summer to attract customers. Qingyuan was not very far from Tianjin and the advantage of railroad in speed was not very significant in this case. Therefore, most people would ship cotton to Tianjin by boats; about 70% of the cotton from Qingyuan was transported to Tianjin by boats.¹⁴

¹³ Fang Xianting, "Tianjin mianhua," 449.

¹⁴ Qu, *Hebei mianhua*, 141.

When the distance was longer, for instance, if the dealer were to ship cotton from the counties near Shijiazhuang where the distance to Tianjin was doubled from the distance between Tianjin and Qingyuan, he might be more inclined to choose railroad. The cotton produced from these counties would first be gathered at the Shijiazhuang railway station. By railroad, the cotton could be shipped to Tianjin on the Beiping-Hankou and the Beiping-Liaoning railroads to Tianjin. The route was 387 kilometers and would take nearly a week. When shipping on the railroad was interrupted by war or other upheavals, the Hutuo River would be used. The port on the Hutuo River was slightly north to Shijiazhuang and the waterway to Tianjin was about 400 kilometers. Unlike the Daqing River, the Hutuo River was shallow, thus, only smaller boats could be used. It would take more than 15 days to reach Tianjin by boat. In this case, although the cost of shipping with railroad was higher, the railroad was a more favorable means to ship cotton to Tianjin from the region of Shijiazhuang.¹⁵

Tianjin being a hub of railroads and waterways allowed the cotton dealers to take actions to protect their interest in accordance to the rapidly changing market. The ups and downs of the cotton market would also affect the cotton dealers' choice of transportation. It was said that the dealers in the West River Cotton Zone where both railroad and waterway were available, would use trains if the cotton price rocketed and would hire boats if the cotton price plunged.¹⁶

¹⁵ Qu, *Hebei mianhua*, 141.

¹⁶ Liu Qixiang, 劉企庠 “Zhengding mianye diaocha,” 正定棉業調查 *Tianjin mianjian* 2, 天津棉鑿 no. 1 (September 1931): 4.

Trading Cotton in Tianjin

After 1911, Tianjin quickly grew into the third largest cotton market of China after Shanghai and Hankou. In the 1920s, Tianjin surpassed Hankou and became the second largest market of cotton. Buyers and sellers of cotton flocked into Tianjin, and to support the operation of such a large market, numerous institutions and businesses servicing the buyers and sellers were established in Tianjin. (See Figure 15) I will use an example to illustrate how the trade of cotton worked in Tianjin.

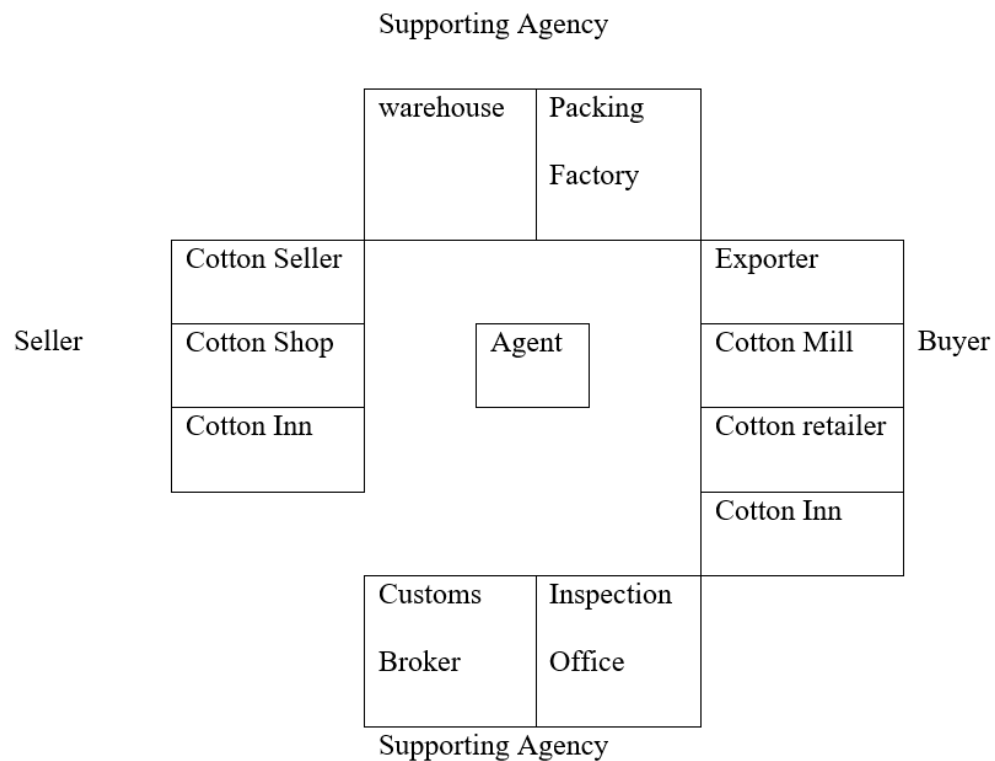


Figure 15 The structure of the cotton market in Tianjin¹⁷

One day, a dealer from Shulu County in Hebei Province escorting 100 bags of cotton on a boat arrived at a port on the Ziya River about 30 li to the southwest of

¹⁷ Adapted from Qu Zhisheng, *Hebei mianhua*, 113.

Tianjin. At the port, a station of the bureau of general tax that specialized in taxing cotton and dry goods stopped the boat. The dealer sent someone to Tianjin to hire a customs broker to help with the paperwork and taxation. After paying the 2.5% general tax on cotton and two other kinds of tax, the boat continued its journey until it got to the Red Bridge at the intersection of the Ziya River and the North Canal, where a branch of the native customs house was located. At the native customs house, the customs broker again helped take care of the native customs tax which was 2.5% of the value of the goods. If the cotton was shipped to Tianjin for export by a foreign firm and could present a Transit Pass (三聯單), the native customs house at the Red Bridge would charge a 2.5% export on behalf of the maritime customs house. If the cotton was shipped to Tianjin on railroad, the taxes that the dealer needed to pay were the same.

After completing the procedures at the customs house, the boat could go on to arrive at the International Bridge in the French Concession and get ready for unloading. In order to unload the cotton at the port in the French Concession, the cotton dealer had to submit a request to the port authority and hire porters. The customs broker could help with that. Alternatively, the cotton dealer could ask the inn that he would stay with to deal with the port authority and the porters' shop. There were inns that were specialized in accommodating cotton dealers. The so-called Cotton Inns kept staff who would help match buyers and sellers, rent warehouses, gather information, and raise fund for cotton dealers. After being unloaded, the cotton had to be first transferred to the Cotton Testing House near the East Railway Station. If the moisture content of the cotton was under 12%, the cotton would receive a stamp and only with the stamp could it be sold. After the

testing, the cotton inn would stock the cotton into the warehouses that the inn rented on behalf of the cotton dealer, waiting to find a buyer.

As long as the cotton dealer continued commissioning his cotton to the cotton inn, the inn would either send its own staff or hire a broker from outside to look for buyers for the dealer. The broker or inn staff would pay frequent visit to the Chinese compradors that were affiliated with foreign trade companies and the managers of the cotton mills. If any of the stocks of the cotton inn met the need of the trade companies or the cotton mills, the brokers would fetch a sample of the cotton from the warehouse for the buyers' examination. If a comprador, after reporting to his foreign manager, decided to buy, the cotton would be weighed at the warehouse. If it was a cotton mill who bought the cotton, the cotton would be transferred to and weighed at the factory.

After the weight of the cotton was verified, the cotton would be prepared for shipping. In practice, the different choice of means of transport required different preparation and procedures. For example, when cotton would be transported on trains, the locally packed cotton would need to be repacked into compacter units, because shipping fee was charged according to the volume of the goods. The smaller space that a certain amount of cotton takes, the cheaper the shipping fee would be. For example, a 20-ton capacity car of the Beijing-Hankou line could only be loaded with 110 bags of cotton if every 60 kilograms of cotton was packed into a bag, which only weighed 6600 kilograms, wasting most of the car's capacity.¹⁸ If the destination was Japan, the cotton would be sent directly to the docks that the trade company selected and uploaded to a steamship. When large ships could not trace the Hai River to reach Tianjin, cotton would need to be

¹⁸ Feng Cihang, 馮次行 *Zhongguo mianye lun* 中國棉業論 (Beijing: Beixin shuju, 1929), 116-119.

first shipped to Tanggu or Dagu in smaller boats. If the river froze, the section of the Beijing-Mukden railroad between Tianjin and Tanggu would be used.¹⁹ After setting off from Tianjin, in about 15 days, cotton could arrive at Osaka.²⁰ If it was a western company, the cotton would be first sent to a packing factory for repacking, because long-distance shipping required high density packing.

Each middleman throughout the transaction would charge the cotton inn a certain amount of commission fee. While individual brokers might only charge 1.5% of the price of the goods, the compradors might charge 2% of the price. The fees of hiring porters for transferring cotton from warehouse to docks, packing factory, or cotton mills would also be paid by the cotton inn, who would later charge the cotton dealer. After the transaction was completed, the cotton inn would charge the seller all the fees that it covered for the seller plus a service fee that equaled to 1% of the selling price.²¹

It can be seen that the cotton inns played a critical role in the trade of cotton in Tianjin. No matter who the seller was, individual dealers or representatives of cotton shops, or who the buyer was, foreign companies or local cotton mills, they almost always went through the cotton inns. According to a survey in 1936, there were 46 cotton inns in Tianjin. Most of them were located in the foreign concessions. The largest ones were concentrated in the Japanese, French, and the former Russian concessions, near the seaport and the railway station. Some of these cotton inns moved from the Santiaoshi

¹⁹ Fang Xianting, "Tianjin mianhua," 470.

²⁰ Qu, *Hebei mianhua*, 237.

²¹ Qu, *Hebei mianhua*, 104-117.

area near the two canals to the foreign concessions after 1915. Only a handful of large cotton inns remained in that area.²²

Cotton inns did not have facilities to store the cotton and had to rent warehouses from outside. Warehouses in Tianjin were concentrated in the Italian concession, the former German concession and the former Russian concession, near both the port on the Hai River and the East Railway Station. Most of these warehouses housed all kinds of goods but several of them were specialized in cotton. They were built with bricks and cement, installed with iron doors and windows. The floor was covered with wooden beams to prevent moisture.²³

Buyers of cotton in Tianjin were primarily the export traders. In 1936, 71 trade companies in Tianjin engaged in exporting cotton, 31 owned by Chinese and 16 owned by Japanese.²⁴ 40 such companies were located in the Japanese, French and British concessions. Nearly half of the total export of cotton was conducted by the Chinese merchants, and one third was done by the Japanese merchants.²⁵ The largest market for the cotton exported from Tianjin was Japan. From 1932 to 1936, 60-78% of the total export of cotton went to Japan. In 1932, the export of cotton to Japan reached 279,126 dan. The second largest international market of the cotton exported from Tianjin was the United states, consuming around 11-17% of the total amount of Tianjin-exported cotton; in 1933, the percentage reached 27.44%.²⁶

²² Fang Xianting, "Tianjin mianhua," 454-457. Qu, *Hebei mianhua*, 119-120.

²³ Qu, *Hebei mianhua*, 108.

²⁴ Fang Xianting, "Tianjin mianhua," 466-467

²⁵ Feng Cihang, *Zhongguo mianye lun*, 103-109.

²⁶ Fang Xianting, "Tianjin mianhua," 584-587.

Cotton Mills

Besides the trade companies, cotton mills in Tianjin were another big buyer of cotton. There were six large cotton mills in Tianjin in the 1920s and 1930s. In 1930, these cotton mills had 221,512 spindles and 1,310 looms.²⁷ In 1940, there were 550,000 spindles and 10,000 looms.²⁸ These cotton mills consumed more than 200,000 dan of cotton annually. It was estimated that 90% of the cotton consumed in Tianjin was purchased by the cotton mills.²⁹

All the large cotton mills in Tianjin were established between 1915 and 1921 when the World War I forbid the import of cotton yarn from Europe. During this period, the price of cotton dropped, and the price of yarn and textile increased, the price of cotton was between 20 and 30 taels per *dan* while the cotton yarn (16 threads) could be sold at 150 to 160 taels per *dan*. Attracted by the great profit, warlords, officials, and merchants invested in cotton mills.

With two exceptions, all the major cotton mills were owned or invested by powerful figures in the Beiyang clique.³⁰ The first cotton mill in Tianjin was the Zhili Mofan Cotton Mill (直隸模範棉紡廠) established by the Beiyang government in 1915. In 1917, Zhang Ruiting (張瑞庭), owner of the Hengyuan Canvas Factory, convinced Cao Rui (曹銳), the governor of Zhili, to support the merging of the Zhili Mofan Cotton Mill and Hengyuan. The result of the merging was a government-merchants collaborative

²⁷ Gong Jun, 龔駿 *Zhongguo dushi gongyehua zhi tongji fenxi* 中國都市工業化程度之統計分析 (Shanghai: Shangwu yinshuguan, 1934), 88.

²⁸ Fang Xianting, "Tianjin mianhua," 466.

²⁹ Fang Xianting, "Tianjin mianhua," 466.

³⁰ Zhu Chunfu, 祝淳夫 "Beiyang junfa dui Tianjin jiandai gongye de touzi," 北洋軍閥對天津近代工業的投資 *Tianjin wenshi ziliao xuanji* 天津文史資料選輯 4 (1979), 152.

Hengyuan Cotton Mill. The investment was 4,000,000 yuan and one third of which came from the Beiyang warlords including Cao Kun, Cao Rui, Bao Guiqing, Tian Zhongyu, and Zhang Zuolin.³¹ The Hengyun Cotton Mill was put into operation in 1920 and it had 31,000 spindles and 200 looms. In 1917, Huaxin Cotton Mill (華新棉紡廠) was founded by Zhou Xuexi (周學熙), Minister of Finance of the Beiyang government. The overall capital was 2,400,000 yuan and had 30,000 spindles. In 1918, Yuyuan Cotton Mill (裕元棉紡廠) was established with an initial investment of 5,600,000 yuan. In 1922, Yuyuan established its department of textile production and was equipped with 1000 looms. In 1920, Baocheng Cotton Mill (寶成棉紡廠) was founded. The next year, two more cotton mills, Beiyang (北洋) and Yuda (裕大) were both established. The total number of spindles in Tianjin was 220,000 to 230,000 between 1927 and 1930, ranked only after Shanghai and Qingdao.

By 1935, the scale of the industry of cotton mill in Tianjin surpassed Qingdao and became the second largest center of cotton yard production. The overall capital of cotton mills in Tianjin was 18,180,000 yuan, taking up 83% of all the industrial investment in Tianjin.³² After 1923, the Japanese established more and more cotton mills and the European countries recovered from the war; moreover, the Chinese cotton mills overcrowded the market for low thread count yarn.³³ As a result, cotton mills in Tianjin

³¹ Yue Qianhou et al., 岳謙厚 *Caokun jiazhu* 曹錕家族 (Beijing: Jincheng chubanshe, 2000), 330-331.

³² “Tianjin liu da shachang,” 天津六大紗廠 in *Tianjin jingji shihua*, 天津經濟史話 ed., Sun Dagan 孫大千 (Tianjin: Tianjin shehuikexue chubanshe, 1989), 267-273. Gong Jun, *Zhongguo dushi gongyehua*, 86-88.

³³ Tokihiko Mori, 森時彦 “Zhongguo mianfangzhiye jindaihua de dongtai jiegou,” 中國棉紡織業近代化的動態結構 *Riben Dongfangxue* 日本東方學 1 (2007): 346.

began to find it difficult to maintain normal operation. After 1936, four of the six cotton mills, Huaxin, Yuyuan, Baocheng, Yuda were sold to the Japanese.

In the day-to-day operation, the cotton mills in Tianjin mixed cotton from various places in different proportion to produce all kinds of yarn. The most common sort of cotton on the Tianjin market was the West River cotton produced in Hebei. The fiber of West River cotton was short and thick and was most suitable for making absorbent cotton, cotton plaster, gun powder, being mixed with wool to make felt or carpet, or used to fill coats and covers. In order to make quality cotton yarn, the cotton mills had to mix the West River cotton with cotton from Shaanxi, Shanxi, Turpan, and southern cotton, and even cotton imported from America and India. The finer the yarn was, the less proportion could the West River cotton be used. For example, to make yarn of 10 threads, 60% of the ingredient could be West River cotton; 16 threads, 50%; 20 threads, 40%.³⁴

Another popular sort of cotton in the cotton mills at Tianjin was the Shanxi cotton. Cotton from Shanxi destined for Tianjin was usually gathered at Yuci, then loaded onto the Zhengding-Taiyuan railroad to be transported to Shijiazhuang. From Shijiazhuang, Shanxi cotton would be shipped to Tianjin through the Beiping-Hankou line and the Beiping-Liaoning line. Almost all the Shanxi cotton appearing on the Tianjin market was sold to the local cotton mills. The quality of Shanxi and Shaanxi cotton was closer to American middling cotton.

The finest cotton used in the Tianjin cotton mills was from Turpan, Xinjiang. The annual output of Turpan cotton was only 100,000 *dan*; 60,000-70,000 *dan* was exported

³⁴ Qu, *Hebei mianhua*, 4.

to Russia and the rest was transported to Tianjin. Turpan cotton was usually shipped in postal packages and it took a year to arrive at Tianjin. Despite the rarity of Turpan cotton and the difficulty of shipping, the high quality of Turpan cotton made it an important ingredient for making cotton yarn of 32 threads and above.³⁵

Located at a transportation hub, the cotton mills in Tianjin had access to all kinds of cotton and could choose the most economical combination of cottons to save the cost and increase the profit. According to the length, strength, and color, cotton mills ranked cotton into three levels. The middling and good middling cotton from America and the cotton from Shanxi belong to the first rank. The second rank included Shaanxi cotton, Tongzhou cotton, East River cotton, and Broche cotton from India. The West River cotton, Huaijiang cotton, and waste cotton belonged to the lowest category. On the market, the prices of different kinds of cotton constantly shifted. Cotton mills in Tianjin therefore often change their recipes in order to control the costs. For example, according to a survey of an anonymous cotton mill from September 1925 to September 1926, the cotton mill changed its recipes for making 10 threads, 16 threads, and 20 threads yarn every two weeks. On September 4, 1925, the recipe for yarn of 16 threads was as follows: 5% middling, 5% Turpan, 40% Shanxi, 10% Huaijiang. On September 18, 1935, the recipe for making the same kind of yarn was adjusted to 15% East River cotton, 15% Shanxi, 30% Zhengzhou, and 40% West River.³⁶

The consumption of cotton yarn within Tianjin was limited but the transportation system in Tianjin allowed the yarn produced in Tianjin to reach a broad market. Part of

³⁵ Qu, *Hebei mianhua*, 271-273.

³⁶ Qu, *Hebei mianhua*, 58-59.

the cotton yarn produced in the cotton mills was consumed by the local textile factories; part of the yarn was shipped to Shanghai and commissioned to the Shanghai Cotton Yarn Exchange; the rest was shipped to the northeastern provinces, Shanxi, Gansu, Beijing, and areas in north China where hand-weaving textile workshops were thriving, such as Gaoyang, Raoyang, and Zhengding. Unfortunately, after 1931, the Japanese occupied the northeastern provinces and set the tariff on cotton product at 50%, thus effectively stopped the cotton yarn and other product from entering Manchukuo.³⁷

Textile Mills

Textile production in Tianjin was not highly modernized. In Tianjin, there were only two modern textile mills before 1937.³⁸ According to a survey of 1929, there were 328 textile mills using hand looms, and, on average, each mill only had 12.7 looms and 75% of these mills hired under 30 workers.³⁹ Most of these mills had an investment lower than 1,000 yuan. They had not been mechanized because the rate of return was much larger in cotton mills than textile mills and capital would not enter textile manufacturing. For example, if someone invested 1,000,000 yuan in purchasing modern spinning machines, the increased productivity could replace the labor of 29,600 workers, but the same amount of capital invested in power looms could only replace the labor of 1,488 workers. This was not a phenomenon special to Tianjin. In fact, in 1936, the machine-

³⁷ Linda Grove, *A Chinese Economic Revolution: Rural Entrepreneurship in the Twentieth Century* (Lanham, MD: Rowman & Littlefield, 2006), 36.

³⁸ Producing 870,000 bolts of canvas in 1928.

³⁹ Fang Xianting, "Tianjin zhibu gongye," 天津織布工業 in *Fang Xianting wenji*, vol. 2, 220-222.

made cotton yarn in the whole country was enough to feed 188,000 power looms. However, there were only 80,000 power looms in China at the time.⁴⁰

Textile mills began to appear in Tianjin after 1909 when the Shixi gongchang (Practical Factory 實習工廠) that Yuan Shikai established was dismissed leaving hundreds of apprentices trained in making jacquard fabric unemployed. Many of these apprentices returned home; some stayed in Tianjin and founded their own small textile mills. Starting in 1914, jacquard machines were used in making rayon textile.⁴¹ In 1925, Yao Shuchun, owner of a textile mill in Tianjin, invented a method of combining rayon with cotton yarn in making a very fine and glamorous textile, which was named “Minghuage.”⁴² Since then, the number of textile mills increased rapidly; 207 of the 328 mills were opened between 1925 and 1929. The capital of 16 of these mills counted for more than half of the total investment in textile manufacturing of Tianjin. The largest 5 mills were all specialized in making canvas or flour sack cloth.⁴³ The rest made jacquard fabric with cotton yarn and rayon. The textile mills in Tianjin using hand looms consumed 1,328,480 pound of rayon and produced 539,705 bolts of textile.⁴⁴ Among the products of the 328 textile mills, rayon textile and blended textile contributed 69.1% of the total value. As for the cotton textile, half of the products were canvas and the cloth

⁴⁰ Yan Zhongping, 嚴中平 *Zhongguo mianfangzhi shigao* 中國棉紡織史稿 (Beijing: Kexue chubanshe, 1963), 254.

⁴¹ Lu Dangping, 魯盪平 “Fangzhi gongye,” in *Tianjin gongshangye* 天津工商業 (Tianjin: Tianjin tebieshi shehuiju, 1930), 83.

⁴² Fang Xianting, “Tianjin zhibu gongye,” 211.

⁴³ Fang Xianting, “Tianjin zhibu gongye,” 210-216.

⁴⁴ Lu Dangping, *Tianjin gongshangye*, 80.

used to make flour sacks; the other half were all kinds of cotton textiles including shirting, sheeting, jeans, standard-width cloth, and native cloth.⁴⁵

That the manufacturing of rayon textile took large portion in the textile industry in Tianjin was largely due to the transportation conditions of the city. Rayon was all imported from foreign countries such as Italy, France, Germany, and British. The large scale of import of rayon began in 1925, when Yao Shuchun invented “Minghuage” and this sort of fabric blending cotton and rayon quickly gained popularity in Tianjin and surrounding areas. Since then, the import of rayon increased rapidly in Tianjin, from 4,445 *dan* in 1925 to 34,253 *dan* in 1928.⁴⁶ The amount of rayon imported in Tianjin was only second to Shanghai among all the Chinese ports.

The distribution of the textiles produced in Tianjin relied heavily on the postal system developed on the basis of the railroads. Before 1929, the most prominent markets of Tianjin’s textiles were Manchuria, Shanxi, Shaanxi, and Gansu. The factories had two means of selling. One, the buyers came to Tianjin and stayed at an inn; the textile factories would then send middlemen over bringing samples of textiles for the buyers to choose from. The second way was that the textile factories established selling agencies at large cities such as Taiyuan and Harbin. The second means was not often used after 1929 as Tianjin’s textile industry lost the important market of Manchuria and the industry severely declined.⁴⁷ Evidence shows that some Tianjin-made textiles also entered Shanghai and Hankou. When shipping the synthetic or blended textiles, other than the

⁴⁵ Fang Xianting, “Tianjin zhibu gongye,” 248-9.

⁴⁶ Fang Xianting, “Tianjin zhibu gongye,” 208-211.

⁴⁷ The Sino-Soviet conflict over the Chinese Eastern Railway turned the northeast into war status in 1929. Then in 1931, the Japanese occupied the northeast and trade between Tianjin and the northeast was interrupted.

waterway and land route, postal service was sometimes used. On waterway or land route, these kinds of textiles would be charged local customs dues and likin taxes. If using the postal service, one could avoid the local customs dues and likin taxes but would pay a postal tax, which was about the same rate with the local customs dues. The drawback of using the postal service was the weight of each package was limited to 22 pounds.⁴⁸

Tianjin meant more than a manufacturing center for China's textile industry; because of the transportation system, Tianjin also projected its influence on other centers of textile manufacturing. For example, Tianjin played a critical role in Gaoyang's rise as a brilliant model of rural economy. Gaoyang was a county in Henan Province. In the 1910s and 1920s, Gaoyang gained an upper hand in competing with other rural textile manufacturing centers because it adapted high thread count yarn in producing finer textiles. The high thread count cotton yarn that helped Gaoyang distinguish its product from the low end cotton textiles was imported to Tianjin from Shanghai or Japan.⁴⁹ The rayon that Gaoyang relied to resurrect in the latter half of the 1930s was smuggled to Tianjin by the Japanese and then transported to Gaoyang. The technique of making rayon-cotton blended textiles was also copied from Tianjin; in 1926, a Gaoyang entrepreneur sent several apprentices to the Tianjin textile mill where the technique was invented, commanded the technique and brought it back to Gaoyang.⁵⁰ Tianjin also provided most of the looms and jacquard machines that Gaoyang used. In mid-1930s, a large portion of the 2700 looms in Gaoyang was made in Tianjin.⁵¹ The distribution of

⁴⁸ Fang Xianting, "Tianjin zhibu gongye," 251-3.

⁴⁹ Tokihiko Mori, 森時彦 "Liangci Shijiedazhan zhijian Zhongguo de Rizhi shachang yu Gaoyang zhibuye," 兩次世界大戰之間中國的日資紗廠與高陽織布業 *Jindaishi yanjiu*, 近代史研究 no. 4 (2011): 70.

⁵⁰ Linda Grove, *A Chinese Economic Revolution*, 33-6.

⁵¹ Gail Hershatter, *The Workers of Tianjin, 1900-1949* (Stanford: Stanford University Press, 1987), 87.

Gaoyang textiles was also conducted through Tianjin. Although the textile mills in Gaoyang were a major rival to the textile industry in Tianjin and the textile manufactures in Tianjin even complained with jealousy that their operational costs and taxes were much higher than in Gaoyang.⁵²

Mobility of Information: The Making of a National Newspaper

Dagong bao began publishing in Tianjin in 1902, and for a long time, it remained a local newspaper with a small editorial staff and a modest volume of circulation. After 1926, it rapidly grew into the most influential newspaper in north China with national fame. The success of *Dagong bao* was inseparable from the resources and connections that Tianjin as a modern city provided.

Based in Tianjin, *Dagong bao* gained some advantages in acquiring information but its coverage of news was very limited in the beginning. From 1902 to 1912, the founder of *Dagong bao*, Ying Lianzhi (英斂之), was also the editor-in-chief, journalist, and manager. There were two or three other staff members, each assuming multiple roles. The size of the editorial staff changed little after Ying left *Dagong bao* in 1912. *Dagong bao*'s own journalists only covered local news before 1916. Its international news was gathered through news agencies, such as Reuters and the Oriental News Agency of Japan, and the domestic non-Tianjin news came from its correspondents in Beijing and other places. This was a common practice for newspapers at the time, but *Dagong bao* did a better than average job in acquiring news. Telegram lines were established in Tianjin in

⁵² Lu Dangping, *Tianjin gongshangye*, 63.

1880 and railroads had been constructed to connect Tianjin with Beijing and the northeast by 1900. *Dagong bao* thus could receive telegrams conveniently from the international news agencies. A number of foreign news agencies even had offices in Tianjin including the Reuters. As for domestic news, due to Tianjin's proximity to Beijing and Ying Lianzhi's personal connections to the imperial clan, *Dagong bao*'s reports on the imperial life and the political climate of the court were quick and comprehensive. Outside of Beijing and Tianjin, *Dagong bao* also recruited correspondents all over the country, though these sources provided intelligence only occasionally. After it was founded, *Dagong bao* immediately became a major source of news of north China to *Shenbao*, already a reputed newspaper in Shanghai.

However, relying on external correspondents and international news agencies for non-local news could harm the timeliness and credibility of the newspaper. For instance, *Dagong bao* subscribed to the service of Reuters and it could very conveniently receive daily news from the agency because there was an office of Reuters in the British Concession in Tianjin, but Reuters only allowed the subscribers to print the news it provided no sooner than the next day the subscribers received the news.⁵³ News provided by the correspondents were even more problematic. The correspondents at the time were notorious for fabricating stories based on a copy of the record of the titles of the official documents that they somehow acquired; they even sometimes made up ambiguous and hard-to-verify reports on persons who might never looked at Chinese newspapers such as foreign diplomats.⁵⁴ Because various newspapers shared the same sources of national and

⁵³ Fang Hanqi, 方漢奇 *Dagong bao bainian shi* 大公報百年史 (Beijing: Zhongguo renmin daxue chubanshe, 2004), 148.

⁵⁴ "Cong yihao dao yiwanhao," *Dagong bao*, May 22, 1931.

international news, exclusive news obtained first hand by the newspaper's own journalists was not a selling point; instead, editorials and commentaries mattered greatly in the competition for readers.⁵⁵ Before 1912, most of the editorials of *Dagong bao* were written by Ying Lianzhi, who was very sharp and outspoken in criticizing the Qing government and Yuan Shikai's policies in Tianjin but supported a constitutional monarchy rather than the more revolutionary points of view. His editorials also helped maintain a sizable readership for *Dagong bao*.

The volume of circulation of *Dagong bao* was another sign that it remained a local newspaper in the beginning of the twentieth century. The very first issue of *Dagong bao*, which was published in June 1902, had a circulation of 3,800. The volume of circulation increased to 5,000 in three months, but it fluctuated between 3,500 to 5,000 for more than ten years.⁵⁶ In the beginning of the twentieth century, newspapers in Shanghai such as *Shenbao* and *Xinwen bao* had both reached a volume of circulation of 20,000. In Tianjin, more than twenty newspapers were established during the last decade of the Qing but most of them only published 300 to 400 copies a day. With a circulation volume of 5,000, *Dagong bao* was already one of the most well-received newspaper in Tianjin. Another private, commercial newspaper that could compete with *Dagong bao* was *Riri xinwen* (日日新聞) owned by Japanese, which had a similar size of circulation with *Dagong bao*.⁵⁷ The only newspaper that had a larger circulation in Tianjin was the *Beiyang Gazette* (*Beiyang guanbao* 北洋官報), but it was the official newspaper of the Zhili provincial government and the channels of circulation differed from commercial

⁵⁵ Fang Hanqi, *Dagong bao bainian shi*, 146.

⁵⁶ *Ershishiji chu de Tianjin gaikuang*, 333.

⁵⁷ *Ershishiji chu de Tianjin gaikuang*, 334.

newspapers. It is estimated that the *Beiyang Gazette* published 3,000 copies within Zhili and 3,000 copies in three other provinces.⁵⁸ Most of the newspaper was sold or subscribed locally. Although on the first issue, *Dagong bao* listed more than 60 distributors all over the country, it is doubtful how many copies were actually distributed outside of Tianjin. According to an incomplete survey of two kinds of newspapers published in Tianjin, 80% of the newspaper was sold in Tianjin; the other 20% mostly were sent to Beijing and Baoding; only very few copies would circulate in other places.⁵⁹

After 1916, a new editor-in-chief took advantage of the location of Tianjin and the convenient connections Tianjin had with Beijing and other places to increase the amount and quality of first-hand news. After the Republic was established, Ying was only nominally the owner and had in fact stopped participating in the works of *Dagong bao*. While *Dagong bao* was struggling to find its new voice, it was faced with the challenge of newly established newspapers such as *Yishi bao* that had gained popularity by publishing more revolutionary commentaries.⁶⁰ Then, the ownership of *Dagong bao* changed hands in 1916 and Hu Zhengzhi was appointed the editor-in-chief. After obtaining a law degree in Tokyo Imperial University in 1911, Hu Zhengzhi returned to China and had practiced law, taught at universities, worked as newspaper editor, and had been a judge at a regional court and chief secretary to a high official.⁶¹

After Hu joined *Dagong bao*, he proclaimed in the prospectus of the new year entitled “The New Hope of the Newspaper” that “the reform of the media has to start by

⁵⁸ Du Haihong, 都海虹 “Beiyang guanbao yanjiu,” 北洋官報研究 (PhD diss., Hebei University, 2018), 48-49.

⁵⁹ *Ershishiji chu de Tianjin gaikuang*, 335

⁶⁰ *Yishi bao* was founded in 1915.

⁶¹ Fang Hanqi, *Dagong bao bainian shi*, 141.

improving journalism and gaining social credibility.”⁶² The measures that Hu Zhengzhi took to improve the credibility of news included terminating contracts with untrustworthy correspondents and inviting reliable friends to provide news leads. When Hu took over, *Dagong bao* was often filled with fake telegram news and unverified rumors from correspondents. Hu fired four of the five correspondents in Beijing, keeping only one who had access to the documents of the governmental offices in Beijing. In addition, he paid generously to hire new correspondents who posted reports to Tianjin on a daily basis. As the chief editor, Hu not only scrutinized all the sources and selected only the credible ones for publishing, but also interviewed critical figures in person and directly quoted these figures in news reports. The series of reports on Zhang Xun’s attempt to restore the Manchu monarchy in July 1917 had brought up the sale of *Dagong bao* from 3,000 to over 10,000 copies.⁶³ In September and October, 1918, Hu traveled from Tianjin to Vladivostok with the Chinese troops, interviewing authorities of Siberia, Czech, Russia, and Japan and posting sixteen reports and articles to Tianjin throughout the journey. At the time, *Dagong bao*’s major competitor in Tianjin, *Yishi bao*, still depended on foreign news agencies or translating from foreign newspapers for international news; *Dagong bao* already begun to investigate and interview on its own. After the First World War, Hu Zhengzhi went to Paris to report on the Peace Conference in 1919. He was the only Chinese reporter at the conference. Although his telegrams often arrived Tianjin later than the ones of Reuters or the intelligence from the foreign diplomats in Beijing, they focused on the matters that concerned the Chinese most and contained more

⁶² “Benbao zhi xin xiwang,” 本報之新希望 *Dagong bao*, January 3, 1917.

⁶³ “Cong yihao dao yiwang hao,” 從一號到一萬號 *Dagong bao*, May 22, 1931. Fang Hanqi, *Dagong bao bainian shi*, 131.

details.⁶⁴ With the timely updates from the foreign news agencies and correspondents in Beijing as well as the detail-rich reports from Hu Zhengzhi, *Dagong bao* covered the Paris Peace Conference more extensively than any other newspapers in China. The excellent coverage was of course primarily due to Hu Zhengzhi's journalistic skills and network (the trip was funded by Wang Yitang, one of the representatives of the Chinese government, who was Hu's former supervisor), but it would not be possible if Tianjin was not a transportation hub that had been connected to networks of postal services, telegraph and telephone.

The transportation infrastructure and communication facilities in Tianjin could help *Dagong bao* gain influence; losing the access to those facilities could also be devastating to the newspaper. In 1920, warlords that had been providing funds for *Dagong bao* lost the control of the government. The owner of *Dagong bao* fled and Hu Zhengzhi resigned.⁶⁵ Since then, *Dagong bao* gradually lost its status as the largest newspaper in Tianjin. Then in 1924, because of the newspaper's connection with the clique of Duan Qirui, on the excuse of spreading rumors, the Beiyang government punished *Dagong bao* by prohibiting delivery of *Dagong bao* outside of foreign concessions.⁶⁶ The order of prohibition was very detailed and effectively stopped the delivery of *Dagong bao* by carriers, postal services and railroads. The headquarters of *Dagong bao* was located in the Japanese concession, thus the Chinese government had no authority to shut down the newspaper entirely, but they knew the prohibition of delivery

⁶⁴ Fang Hanqi, *Dagong bao bainian shi*, 148-152.

⁶⁵ Duan Qirui lost the control of the Beijing government to Cao Kun. The Anhui clique led by Duan had been providing stipend for *Dagong bao* since 1916. The owner of *Dagong bao*, Wang Zhilong, was closely related to Duan

⁶⁶ Fang Hanqi, *Dagong bao bainian shi*, 120-122. *Beiyang junfa Tianjin dang'an shiliao xuanbian* 北洋軍閥天津檔案史料選編 (Tianjin: Tianjin guji chubanshe, 1990), 50-51.

was a severe punishment. In less than a year following the issuing of the order, *Dagong bao* was closed.

In 1926, Hu Zhengzhi had an opportunity to revive *Dagong bao* with two partners. During the six years that he was away from *Dagong bao*, he established the Guowen News Agency (國聞社) in Shanghai and opened branches in Beijing and Hankou. In 1924, he founded the *Guowen Weekly* as an associated publication of the news agency. In 1925, Hu Zhengzhi moved to Beijing to run the branch office. That summer, he traveled to Tianjin for business and reunited with an old friend, Zhang Jiluan (張季鸞). Zhang was one year older than Hu and also studied in Japan. After returning China in 1911, except being a secretary of Sun Yat-sen in Nanjing for a short period in 1912, he worked as a journalist in Beijing until 1918. He was arrested twice because of criticizing the authorities. After being released from jail in 1919, he joined a newspaper in Shanghai. In 1924, the newspaper closed, and he came back to Beijing where he took a job at the Long-Hai railroad bureau. He soon quit the job and came to Tianjin to look for other opportunities. The two of them had attempted to establish a newspaper in Shanghai in the past but were not able to gather enough fund. Seeing the old building of the closed *Dagong bao*, they realized that they might have a chance in Tianjin.

Their reunion might seem coincidental, but there was good reason for them to both go to Tianjin and seek new opportunities. And Tianjin did not disappoint them. They quickly found an interested investor, Wu Dingchang (吳鼎昌), who studied business in Japan and was now a successful banker. Wu had served in significant positions in national banks, mint, and department of finance. He accumulated a lot of wealth and was

a major shareholder of one of the four largest Chinese banks in the north and had been the chief manager of another.⁶⁷

By that time in 1926, Tianjin had developed into the commercial and financial center of north China. The large volume of trade and the establishment and operation of large factories required financial services. All the major banks opened offices in Tianjin and some placed headquarters here. The financial services they provided in turn improved commerce and industry of the city. In a city like this, Wu Dingchang certainly was not the only person who had the capability to fund a newspaper, but he might be the most willingly investor to a newspaper. He shared the experience of studying in Japan with Hu and Zhang, and the three of them had seen what modern journalism and newspapers were like. Moreover, Wu Dingchang had political ambitions and liked to define himself an intellectual more than a banker.

When Hu and Zhang approached him with the plan of reviving *Dagong bao*, he gladly provided 50,000 yuan as the start-up fund and joined the two talented journalists in bringing the *Dagong bao* back to life. The three of them purchased the assets of *Dagong bao* from the son of Wang Zhilong with 10,000 yuan. They hired back the manager and workers of the old *Dagong bao*, and invited over experienced editors who used to work with Hu in Shanghai and Beijing. The Guowen News Agency became associated with the new *Dagong bao*, its headquarters was moved from Shanghai to Tianjin and the two branches in Beijing and Shanghai also became the offices of *Dagong bao*. As a result, the

⁶⁷ China & South Sea Bank, Salt Industrial Bank, Kinchen Bank, and Mainland Bank.

new *Dagong bao* had a robust team of journalists and editors and a network for exchanging information.

Hu and Zhang were the major contributors to the content and the operation of the newspaper; Wu wrote analytical articles on the economy from time to time, but his major job was to make large purchases of papers. This might sound a trivial task, but according to a survey from 1931, the cost of paper and ink could take more than 40% of the total expenditure of running a newspaper.⁶⁸ The paper and ink were exported from abroad and the prices and exchange rates shifted constantly. As a banker and with the necessary intelligence at hand, Wu Dingchang was good at choosing the right time to buy and could save large amount of money.

In many ways, Tianjin proved to be an ideal place for the three founders of the new *Dagong bao* to realize their journalistic principles. On September 1, 1926, the first issue of the new *Dagong bao* was published and it carried on the issue number from the old newspaper, making it the 8316th issue. On the first page, Zhang Jiluan stated that the principles of the new *Dagong bao* being “Non-partisanship, non-compromising, no self-interest, no unverified reporting.”⁶⁹ Having been arrested twice for what he wrote, Zhang must understand the risks of standing by these principles. Fortunately, the location of the office of their newspaper provided some protection. When the new *Dagong bao* began publishing, the Nationalist troops were approaching Wuhan on their way of the Northern Expedition and Beijing and Tianjin were under control of the Fengtian warlords. Several

⁶⁸ Wu Ou ed., 吳甌 “Tianjinshi xinwenshiye tongji,” 天津市新聞事業統計 in *Tianjinshi shehuiju tongji huikan* 天津市社會局統計匯刊 (Tianjin: Tianjinshi shehuiju, 1931), no page number. Paper and ink take 40.29% of the total expenditure; salary takes 15.9% and other costs take 39.34%.

⁶⁹ “*Bu dang, bu mai, bu si, bu mang.*” 不黨，不賣，不私，不盲. “*Benshe tongren zhi zhiqu.*” 本社同人之志趣 *Dagong bao*, September 1, 1926.

months later, the Northern Expedition occupied Wuhan and the Guangzhou Nationalist Government moved to Wuhan. At the time, the Beijing government prohibited newspapers from publishing Guomindang's public telegrams, and the police was arresting Guomindang party members in Beijing and Tianjin. Some newspapers in Beijing such as *Chenbao* picked side and frequently used eye-catching titles to emphasize the internal conflicts within Guomindang or claim that Guomindang was losing popularity and breaking down. Hu Zhengzhi found it necessary to closely examine Guomindang and its northern expedition. He traveled to Hankou in February to interview people and observe. In March of 1927, *Dagong bao* published a series of articles written by Hu, speaking highly of the Northern Expedition army and the Nationalist Government of their disciplined conduct and achievements in managing Wuhan.⁷⁰ Meanwhile, *Dagong bao* continued publishing criticism toward the Beiyang warlords and their troops.⁷¹ Considering that Tianjin was still under control of the Beiyang warlords until June 1928, these commentaries could have led to severe consequences if the office of *Dagong bao* were not in a foreign concession.

Starting in 1927, *Dagong bao* entered a period of rapid growth and eventually became influential on the national level. The unbiased first-hand reports on the Northern Expedition and the extensive coverage of the expedition and the process of Nationalist government's taking over had helped *Dagong bao* gain popularity among readers. From September 1, 1926 to the end of 1928, the volume of circulation surged from 2000 to

⁷⁰ "Nanxing shicha ji," 南行視察記 *Dagong bao*, March 6-9, 1927.

⁷¹ This was also partly because Zhang Jiluan joined Tongmenghui and once was the secretary of Sun Yat-sen. His political stance was more sympathized with the Nationalist Party. Wu Dingchang was also once a member of Tongmenghui. Hu Zhengzhi, 胡政之 "Huishou yishiqinian," 回首一十七年, *Dagong bao*, April 15, 1949.

13,000. The speed of growth lasted into the next year. In 1929, *Dagong bao* installed a roll-fed printing press, which was much faster than the old sheet-fed machine. That year, the circulation continued to grow to 20,000. In addition to the existing three branches in Beijing, Shanghai, and Hankou, *Dagong bao* opened two branches in Shenyang and Harbin in 1927 and a Nanjing office in 1929.⁷² The volume of circulation reached 30,000 in 1930. The same year, agents selling *Dagong bao* statewide increased to 293. In 1931, 10,500 copies were sold in Tianjin and 40,700 were distributed outside of Tianjin.⁷³ Although the numbers were much lower than the volume of circulation of the largest newspapers in Shanghai, *Dagong bao* had no doubt become an influential newspaper on the national level. In 1936, *Dagong bao* began to publish a Shanghai edition simultaneously with the Tianjin edition and in half a year, the volume of circulation of the two editions reached 100,000.⁷⁴

What had propelled the continuous increase in *Dagong bao*'s influence and volume of circulation was its coverage of the economic information that could only be obtained in Tianjin. The importance of Tianjin as a commercial and financial center allowed *Dagong bao* to position itself as a newspaper concerning people's livelihood and the state's economy. In its very first issue, the new *Dagong bao*, placed a notice on the first page next to the head, informing the readers of what was new about this newspaper. The second point of the notice said:

This newspaper's mission emphasizes the question of people's livelihood, in particular issues of commerce and economy. Thus, we set up a column called "Economy and Business." Regarding domestic, international, local and other

⁷² Fang Hanqi, *Dagong bao bainian shi*, 180.

⁷³ Wu Ou, "Tianjinshi xinwenshiye tongji," no page number.

⁷⁴ Kong Zhaokai, 孔昭愷 *Jiu Dagong bao zuokeji* 舊大公報坐科記 (Beijing: Zhongguo wenshi chubanshe, 1991), 65.

domestic ports, market price of gold and silver (precious metal), currency exchange rates, and rise and fall of commodity process including the cotton and yarn, construction, and beans and grain. we have correspondents ready to report by telegram or write special feature. The layout is eye-catching, the information is up-to-date and accurate. We strive to provide the greatest benefit to the business world.⁷⁵

Dagong bao had indeed kept its promise. The fourth page was usually the economic page and it was kept ad-free for around a year. A study shows that advertisements took 49.9% of the total space of *Dagong bao* in 1928 and 51.7% of the newspaper in 1936.⁷⁶ Making the economic page ad-free in the beginning was clearly an intentional choice and showed that the editors of *Dagong bao* would like this page to be dense, professional, and focused. Starting in mid-1927, advertisements began to appear on this page and gradually increased to take up half of the page in 1928. The page usually covered local, national and international economic news signaling trends in certain field of trade or finance, such as public bonds, stock market, exchange rate of foreign and domestically used currencies, markets of cotton, flour, yarn, textile, coal, grain, almond, sugar, etc. It also listed the up-to-date prices of the major commodities of various brands, indexes of stocks and bonds, and exchange rates.

How did *Dagong bao* gather the information? The information on prices of commodities was reported by large stores and trade companies in Tianjin.⁷⁷ The exchange rates, prices of major stocks and bonds were reported by western-style banks, Chinese traditional banks, and foreign trade company in Tianjin.⁷⁸ News on Shanghai's

⁷⁵ "Benbao qishi," 本報啓事 *Dagong bao*, September 1, 1926.

⁷⁶ Lu Xilin, 陸錫麟 *Fukan shinianlai zhi Dagong bao neirong yanjiu* 復刊十年來之大公報內容研究 (unknown publisher, 1937), 13-14.

⁷⁷ See *Dagong bao*, December 5, 1926, 4. Prices of grain were provided by Wanchun grain store; prices of different brands of cotton yarn were provided by Longshun Renji yarn store, the prices of candles were provided by Zhongguo shiye company.

⁷⁸ See *Dagong bao*, January 4, 1928. The exchange rates of the currencies that circulated in Tianjin, exchange rates of foreign currencies, and the prices of the stocks and bonds were reported by Yuanyi

economy and financial situation was reported by telegrams sent by *Dagong bao*'s correspondents. The intelligence from the world financial centers came in the form of telegrams from New York, London, and Kobe. On the economic page, news on and prices of cotton and yarn appeared most frequently. One could find in the economic page of *Dagong bao* the sorts of cotton news ranging from the situation of growing and harvest of any major cotton-growing region to the market of cotton and yarn in the US, Japan, and India. The comprehensive coverage of news related to cotton and yarn was of course because of Tianjin becoming a large trade center of cotton and an important center for textile production in the 1920s and 1930s. Meanwhile, *Dagong bao* provided the merchants doing business in Tianjin a reliable source of information in a complex market where multiple currencies were used and was deeply influenced by the international market.

Other than being the center of commerce and finance, Tianjin was also a center of education and was close to Beijing where the resources of higher education were concentrated. These conditions provided opportunities for *Dagong bao* to integrate the available resources to publish high-quality analyses of the economy. In 1928, *Dagong bao* began to publish a weekly statistical report every Monday in collaboration with the Institute of Economy and Society, Nankai University, summarizing the trend of the wholesale prices and exchange rates.⁷⁹ In 1933, *Dagong bao* began to publish a weekly supplement on economy along with other more than ten kinds of different weekly supplement. The newspaper also occasionally published surveys of certain industry,

Yinhao. The prices from the stock markets in London, Tianjin and Shanghai were reported by Doney & Company (永盛洋行).

⁷⁹ *Dagong bao*, May 21, 1928.

factory, and labor force written by journalists or scholars. The timely economic news and in-depth economic analyses helped *Dagong bao* attract a readership of merchants and banker. The intellectual resources in Beijing and Tianjin also allowed *Dagong bao* to diversify its content and attract a wide readership. The daily supplement and the weekly supplement on literature published scholarly essays, novels, poems, and scripts written by Beijing-based writers such as Hu Shi, Shen Congwen, Xiao Qian, Lao She, and Lin Huiyin. Shen Congwen and Xiao Qian had directly edited the supplements for *Dagong bao* in the 1930s. Other content including schedules of trains and ships, notifications of the port and customs office, and programs of theaters and cinemas also helped *Dagong bao* become a necessity for travelers and residents.

Another advantage of making Tianjin the headquarters of newspaper was that Tianjin was at an excellent spot for gathering and distribution of information. Because of the transportation networks and communication facilities that Tianjin had, the city as a newspaper headquarters offered multiple solutions to the needs of transmitting information. For a journalist, except interviews and writing, he or she must always keep time in mind and consider the best means of submitting the news. *Dagong bao* had six offices in six cities and the reporters at each office had their own options of cheaper or faster means of communicating with the Tianjin headquarters. *Dagong bao* also often sent journalists to cover important events, who had to find out about how they could submit their reports on time. For example, telegrams and telephone calls were faster but cost a lot more than using postal service on the railroad. Thus, journalists stationed at Shanghai and Nanjing sent telegrams almost every day, whereas journalists in the Beijing office posted most their news and reports. Because the last train left Beijing for Tianjin at

6 pm, any important news after 6 pm would have to be delivered by telephone calls.⁸⁰ In addition, the railway stations and the seaports were where a journalist could sniff the smell of news. A journalist of *Dagong bao* recalled that many reporters would wait at a railway station for celebrities or critical political figures. When these individuals took off the train or were about to board, the reporters would approach them and ask questions or have a brief conversation.⁸¹ A skillful and sensitive journalist could write a pretty good piece after the mini interviews at the railway station. Some railroads were equipped with independent telegraph lines, so information could be transmitted along the railroads when other means of communication were cut off. For example, during the battles among Chiang Kai-shek, Yan Xishan, and Feng Yuxiang in 1930. No news reports directly came from the battlefield in Henan. Hu Zhengzhi used his connection at the railroad bureau to introduce a journalist to a railway official. Through the official, the *Dagong bao* reporter obtained information about the deployment of cars on the Beiping-Hankou railroad and analyzed the situation.⁸² Therefore, with three railway station connected to the entire railroad network and a seaport, Tianjin was where information easily gathered and distributed.

The history of *Dagong bao* demonstrated the close relationship between the newspaper's success after 1926 and Tianjin's position in the economy and transport networks. Despite Hu Zhengzhi's efforts from 1916 to 1920 in increasing first-hand news and improving the newspaper's credibility, the circulation of *Dagong bao* was not significantly improved and the influence of *Dagong bao* remained limited to the Zhili

⁸⁰ Kong Zhaokai, *Jiu Dagong bao zuokeji*, 11. Xu Zhucheng, 徐鑄成 *Baohai jiuwen* 報海舊聞 (Shanghai: Shanghai renmin chubanshe, 1981), 141.

⁸¹ Kong Zhaokai, *Jiu Dagong bao zuokeji*, 12.

⁸² Kong Zhaokai, *Jiu Dagong bao zuokeji*, 13-4.

Province. At the time, Tianjin had already become the largest railroad and sea transport hub in north China, but specialized market and trade had yet been established. In the 1920s and 1930s, the trade of cotton and flour flourished in Tianjin and the associated industries and businesses rapidly grew. As cotton and flour were both international commodity and the prices of them were deeply intertwined with the world market. A small degree of fluctuation of the prices could result in enormous gains or losses, because cotton and flour were traded in bulk. The nature of the trade of cotton and flour meant that financial services and up-to-date information were critical to all parties involved in such trade. The desire for accurate and timely economic intelligence in turn grew. In Tianjin, there were sufficient stores, factories, brokers, and bankers who possessed a piece of information. And newspapers were the institutions who could bring these pieces together and feed them to the ones in need.

The success of *Dagong bao* after 1926 had many reasons, and the owners/editors recognition of the society's pressing needs of accurate news and professional economic intelligence and their ability of utilizing the unique resources in Tianjin to satisfy the readers' needs. After 1928, the nation was reunified but it fell prey to the Japanese invasions. The pressing threats of war and the increasing nationalist thinking gave rise to a public concern over the current situation. Newspapers proliferated all over the country. In Tianjin, from 1927 to 1937, 58 Chinese newspapers were founded. In 1931, every 2.5 persons had one copy of newspaper on average; seven newspapers had a volume of circulation that was larger than 10,000.⁸³ Among them, *Dagong bao* was the largest newspaper and in 1936, it published two versions simultaneously in Shanghai and

⁸³ Luo Shuwei, *Jindai Tianjin chengshishi*, 610-611.

Tianjin. To meet the readers' need of first-hand national and international news, *Dagong bao* took advantage of Tianjin's excellent position in the networks of transportation and communication to expand its group of correspondents and send reporters to the sites where news occurred. To meet the needs for the newest information of the market and economy of the merchant readers within and outside of Tianjin, *Dagong bao* integrated the resources of commerce, trade, and finance in Tianjin to provide a vantage point through which to understand the market. In a sense, Tianjin gave birth to the *Dagong bao* and *Dagong bao* repaid Tianjin by providing its services to the urban public and to make the market of Tianjin more transparent and orderly. As *Dagong bao* became an influential newspaper nation-wide, it also helped expand Tianjin's economic influence and improve Tianjin's image as a modern city.

Mobility of Talents and Capital: A Banker's Experience

The last two sections have examined what a modernized city like Tianjin could provide for trade, industry, and media. The people who ran those businesses chose Tianjin because of there were resources and utilities that could make their ventures successful. This section will specifically focus on one individual to further demonstrate what a modern city meant for an ambitious and talented young man.

Bian Baimei (卞白眉) was born to an elite family in Ningbo in 1884. Soon after his birth, his family moved to Shanghai, where he spent most of his adolescent years. Supported by an official scholarship, he went to study in the United States in 1906 or 1907 and completed a double major in social science and political economy from Brown

University in 1912.⁸⁴ He then returned to China and chose to stay closer to his wife's well-connected relatives in Beijing, instead of his own family in Shanghai.⁸⁵ In the beginning, he worked as teacher and journalist. Then he made his way to the Bank of China in Beijing using his knowledge and family connections. How and why did he end up spending most of his working life in Tianjin?

Bian Baimei first moved to Tianjin in 1916, seeking security for his family and new opportunities for his career, and he was not alone in making that decision but represented a trend at the time. After Yuan Shikai renounced his short-lived monarchy, the political instability and brewing financial crisis caused a lot of politicians and bankers to consider leaving Beijing. The foreign concessions in Tianjin became the first choice for many of them. At the time, Bian Baimei was the general auditor (總稽核) of the Bank of China in Beijing as and also planned on sending his family elsewhere. Perhaps Bian had anticipated that his career in Beijing was going to take a turn, and whether his anticipation would materialize, Tianjin would be an ideal place for him to move to. If he would continue working in Beijing, Tianjin was only two-hour a train ride away; if he would have to cut off his current occupation, Tianjin was taking off as a financial center in north China and would offer more opportunities for him than Shanghai, where the financial market had been well established. Indeed, modern banking had just taken off in Tianjin at the time. The number of Chinese modern banks in Tianjin was increasing rapidly. In 1911, there were five Chinese modern banks in Tianjin.⁸⁶ From 1912 to 1920,

⁸⁴ Brett Sheehan, *Trust in Troubled Times: Money, Banks, and State-Society Relations in Republican Tianjin* (Cambridge, MA: Harvard University Press, 2003), 23-24.

⁸⁵ Sheehan's theory is that Bian probably did so to distance himself from his family obligations as his father died and he was the eldest son of the eldest son. Sheehan, *Trust in Troubled Times*, 26.

⁸⁶ *Tianjin zhi yinhao* 天津之銀號 (Unknown publisher, 1936), 4-5.

13 Chinese modern banks (including joint stock ones with Chinese and foreign investment) were founded and established their headquarters or branch offices in Tianjin.⁸⁷ On April 1, 1916, his wife and children arrived at Tianjin, temporarily residing in a hotel. The next day, he went to Tianjin and found a nice house in the British Concession for the family. In a month and half, he joined his family in Tianjin after handing in his resignation letter because of a major disagreement he had on the bank's policy on dealing with the run.⁸⁸

New opportunities soon emerged for Bian in Tianjin. The brother of his wife's uncle, Sun Duosen (孫多森), who was Bian's supervisor at the Bank of China and resigned around the same time as his resignation, was preparing for establishing a private bank in Tianjin and asked for Bian's assistance.⁸⁹ It seemed that Bian had received other job opportunities but after several months' consideration, he began to work for Sun Duosen's Zhongfu Bank (中孚銀行) in September as the chief secretary and general auditor. He traveled between Beijing and Tianjin frequently, discussing issues with Sun Duosen who still lived in Beijing. They together drew up the regulations of the bank and contracts of collecting funds. Bian also worked on purchasing typewriters and hiring staff. The headquarters of Zhongfu Bank opened in November 1916 in Tianjin, and a Beijing office and a Shanghai office were established in 1917.⁹⁰ As Sun Duosen was invited back to lead the Bank of China in July of 1917, Bian was appointed as a consultant in his old bank. Several months later, Bian moved his mother from Shanghai

⁸⁷ Pang Yujie, 龐玉潔 “Tianjin kaibu chuqi de yanghang yu maiban,” 天津開埠初期的洋行與買辦 *Tianjin shida xuebao (Shehuikexue ban)* no. 20 (1908): 108.

⁸⁸ Bian Baimei, *Bian Baimei riji*, vol. 1 卞白眉日記 (Tianjin: Tianjin guji chubanshe, 2008), 57-60.

⁸⁹ *Bian Baimei riji*, vol. 63.

⁹⁰ *Bian Baimei riji*, vol. 67-69.

to Tianjin to live with his own family. It was unclear when Bian left the Zhongfu Bank, but he chose to stay in Tianjin after quitting the job at Zhongfu and had become a manager at the Tianjin branch of the Bank of China by the start of 1920.

Tianjin proved to be a place where Bian was able to maintain relationship with a circle of bankers and expand his social network beyond his own profession. Banks often needed to collaborate in resisting or supporting the government and had frequent interactions with one another. Moreover, many managers working at the modern banks shared similar education background and lifestyle. The bankers in Tianjin thus organized a bank association and Bian Baimei served as the chairman for a long time. There were other groups that he had participated in order to expand his social network. For instance, as a Ningbo native, Bian joined the Ningbo native-place association in Tianjin. A study of the background of 30 bankers in early twentieth century Tianjin has revealed that 14 of them came from Zhejiang and Jiangsu and 11 identified as natives to Tianjin.⁹¹ Although the native-place identity perhaps wasn't very significant for him, since he had not actually lived in Ningbo for very long, he would as well use this identity when it could help him establish relationship with others. Outside of the banking system, compradors in western firms were another kind of occupations that Bian's townsmen concentrated in. Many compradors who were Zhejiang natives had worked in Shanghai for foreign firms. Foreign firms in Tianjin preferred hiring them because they could bring their social network and other resources that they have obtained in Shanghai. The opportunity of socializing with these groups of people were probably the strongest motivation that drew Bian into activities of the native-place association. However, there was no evidence

⁹¹ Pang Yujie, "Tianjin kaibu chuqi de yanghang," 111.

showing him taking leading roles in the Ningbo association. In comparison, he showed a much stronger preference in expanding his social network taking advantage of the cosmopolitanism that Tianjin offered. For example, he was a member of the Rotary Club, where both Chinese and foreign elite had banquet regularly with some speaker presenting a pressing issue going on at Tianjin that had impact on both Chinese and foreign communities. He also deeply engaged himself with the public life of Tianjin by serving on numerous committees of schools, organizations of commerce and charity, board of the British Concession, and consultation groups for public projects.

Bian and a group of managers of modern banks that actively engaged with the economic and public life in Tianjin mobilized their skills and resources to maintain and grow Tianjin's financial market and economy.⁹² The main businesses of modern banks in Tianjin was providing financial solutions for the various enterprises that developed on the basis of Tianjin's excellent transportation conditions. For example, after the First World War was concluded, the exchange rate between silver and Pound dropped greatly and many Chinese companies trading imported cotton yarn and textiles found themselves deep in debt with foreign banks. Bian Baimei, with the assistance of other members of the Chinese Chamber of Commerce, negotiated a plan of paying the debts with installments.⁹³ These banks saved the numerous cotton and yarn merchants from going bankruptcy and thus protected this important trade. The fact that the banks were willing

⁹² Brett Sheehan's book provides another example of the function of the modern banks in Tianjin: maintaining impersonal trust of state currencies.

⁹³ Liu Xuheng, 劉續亨 "Zhuming yinhangjia Bian Baimei zai Jin de ershinian," 著名銀行家卞白眉在津的二十年 *Tianjin wenshi ziliao xuanji* 36 (1986), 96.

to lend a hand also showed the banks' confidence in the continued prosperity of Tianjin's cotton market.

The modern banks controlled the rare resources of currencies and the power of issuing loans, which were important to the transportation infrastructure projects of Tianjin. Bian had played a critical role in mitigating among the state and private banks, the western powers, and the Chinese government on the issuing of the public loan for the conservancy of the Hai River. In 1928, because of the silt-laden influxes from the Yongding River, the riverbed of the Hai River had risen significantly, and larger steamships could no longer sail to the port in Tianjin but had to stop at Tanggu. This situation worried Chinese and foreign merchants in Tianjin greatly. As I have discussed in the first chapter, there had been a foreigners dominated Haihe Conservancy Commission since 1900 that worked on straightening and dredging the Hai River, but because, in order to relieve the threats to the safety and navigability of the Hai River, works had to be done on the upper reaches, a Chinese institution, Haihe Improvement Commission, was established in 1928. The new commission made plans to divert water from the Yongding River into a sedimentation basin before channeling the cleared water into the Hai River, but it could not carry out the project unless a fund of 5,000,000 yuan could be raised. Bian Baimei was invited to serve on the board of the Haihe Improvement Commission, as the only representative of the bankers in Tianjin. Apparently, whoever invited Bian must have trusted that Bian was capable to raise the necessary fund for the project. Indeed, as he served on the board of the Chinese Chamber of Commerce and was the chairman of the Chinese Bankers Association of Tianjin, as well as a member of the Rotary Club, he was probably the best bet to coordinate Chinese and foreign financial

resources. At the time, he must have been familiar with the dilemma of the Hai River because the newspapers that he regularly read, *Dagong bao* and *Yishi bao*, followed the issue extensively. Moreover, it had become a heated topic in his daily interaction with his social circle. For example, two days before the Haihe Improvement Commission met for the financial arrangement for the river project, the Rotary Club met for dinner during which the chairman of the Hebei Provincial Government, the Tianjin mayor, and the chairman of the Haihe Conservancy Board each gave a speech on the current situation of the Hai River and the threats it posed to the prosperity and even the existence of the port of Tianjin.⁹⁴ Bian Baimei proposed to the Chamber of Commerce a plan of raising fund for the river conservancy project:

I beg to propose that arrangements be made with our Government at Nanjing whereby the Tianjin Maritime Customs would be instructed to collect a surcharge on the import and export cargoes in the same manner as previously in respect of the collection for Famine Relief purposes. Such surcharge as collected will be set aside as the sinking fund to secure the issue by the Government of Haihe bonds, which should be distributed for underwriting among all the shipping and transportation companies, godown owners and insurance companies and the Chinese and foreign import and export merchants, banks and investment companies.

In order to strengthen the confidence of subscribers, he further suggested that some other form of guarantee should be secured: a portion of the British Boxer Indemnity funds could be advanced for the immediate start of the river works.⁹⁵ Bian's proposal won approval of the members of the Chamber of Commerce and was forwarded to the relevant Chinese authorities in Nanjing, and the provincial and municipal governments. In 1929, the Ministry of Finance agreed to issue a loan of 4,000,000 yuan and the

⁹⁴ *Bian Baimei riji*, vol. 2, 37. W0003-1-000004, 40-42.

⁹⁵ "Bian Shousun shujun Haihe jihua shanghai tongguo," 卞壽蓀疏浚海河計劃商會通過 *Yinhang yuekan* 8, no. 9 (1928): 18. "Schemes for Relief of the Haiho," *The North-China Daily News*, September 12, 1928.

collection of a surtax on all import and export commodities at the Tianjin Maritime Customs had begun. Bian Baimei, Tan Danya and Jing Youyan were elected to serve on the commission of custody of the loan.⁹⁶ However, on how the loan would be secured and underwritten, the government and the banks failed to reach an agreement.

Bian's skillful mediation among the circle of Chinese and foreign bankers played an important role in eventually sealing the deal. The regulations of the administration of the loan needed the approval of the Nanjing government and the Consular Body because it involved the guarantee of the customs surtax. However, the Nanjing government was trying to abolish the consular jurisdiction and other treaty privileges and would not allow foreign banks to participate in the issue of the loan. Therefore, in April 1929, the Legislative Yuan approved a version of the regulations that excluded foreign banks' participation. This had upset the interested foreign parties in Tianjin.⁹⁷ The American Consulate General warned the governor of Zhili Province that under the current terms of the regulations, "it would not be possible for the foreign banks to obtain permission from their head offices to participate in the loan."⁹⁸ What he did not say explicitly in this letter was that without the participation of foreign banks, it was highly possible that the Consular Body would not prove such a loan being guaranteed by a customs surtax. The Manager of the Banque Franco-Chinoise, who had been in close contact with Bian discussing issues on this loan, represented foreign banks to negotiate with the Chinese government. In May, the Chinese government agreed that foreign banks could participate

⁹⁶ *Dagong bao*, November 27, 1931.

⁹⁷ *Dagong bao*, May 13, 15, 1929. W0003-1-000004, 146.

⁹⁸ W0003-1-000004, 146.

in purchasing the loan, and then the Consular Body approved the plan of increasing the rate of customs duties for the security of the loan.⁹⁹

In Bian's diary from 1929 to 1931, meetings with Chinese and foreign bankers about the river conservancy loan took up a lot of his time. Although Bian and some other bankers had to report to the headquarters, they contributed most of the ideas and drafted most of the provisions for the loan. Because Bian was a member of the Haihe Improvement Commission and was the leader in the Bankers Association, he was the linchpin in the negotiations about the provisions of the loan's regulations and contracts among the bankers, the river authorities, and the government. He was in frequent communication with the managers of the Tianjin office of the Bank of Communications, the Yien Yieh Bank (鹽業銀行), the Banque Franco-Chinoise, the Kincheng Bank (金城銀行), and the Continental Bank in Beijing (大陸銀行). A lot of details are missing from the sources we have, but we could tell that some appeals in Bian's conversations with the local bankers showed up in the final agreements. For example, Wu Dingchang proposed to increase the commission to banks that underwrote the loan and suggested banks to pay no interest to the customs surtax that deposited at the banks.¹⁰⁰ By incorporating the banks' requirement into the final agreement, Bian Baimei protected the banks' interest and consolidate his reputation among the bankers. Bian also played a role in keeping a foreign bank in the issuing institutions. After the episode of dissatisfaction of the foreign banks, although the Chinese government revoked its former decision and allowed the foreign banks' participation, several foreign banks including the most influential

⁹⁹ *Bian Baimei riji*, vol. 2, 64; W0003-1-000004, 164.

¹⁰⁰ *Bian Baimei riji*, vol. 2, 53.

Hongkong & Shanghai Banking Corporation and the Chartered Bank of India, Australia and China withdrew their offer. The only participating foreign bank was the Banque Franco-Chinoise, of which the managers have been an active member in Bian's social circle. Bian Baimei and other Chinese banks' relationship with these foreign bankers incidentally had won the foreigners' trust and cooperation in the whole project.

Whether the river works were effective or not was not the bankers' responsibility; what mattered was, when the city's continuous prosperity was thought to depend on the river works and the navigability of the Hai River, the local banks had made their contribution to financing the projects. After rounds of negotiations, all the contracts of underwriting of the loan were signed in May 1931. Deducting the funds collected through the customs surtax, the remaining 2,900,000 yuan was apportioned among seven Chinese banks and one foreign bank as follows: Bank of China and Bank of Communications, 1,000,000; the Yien Yieh, the China and South Seas, the Kincheng, and the Continental Banks, 1,000,000; the Banque Franco-Chinoise pour le Commerce et l'Industrie, 700,000; and the Hobei Provincial Bank, 200,000.¹⁰¹

Not only was his professional life deeply entwined with the fate of Tianjin, his private life also fully exploited what the city had to offer. The connectedness of Tianjin based on its modern transportation system allowed Bian to frequently travel for work mainly to Beijing and Shanghai as well as travel for fun to Beidaihe. Not only to attend to his responsibilities, these travels exposed him to the valuable space on the go, where he

¹⁰¹ *Dagong bao*, May 13, 1931.

met people of his own class outside of professional life.¹⁰² Tianjin also allowed a very cosmopolitan lifestyle for him, which was an attraction offered in a very few cities in China at the time. Although he studied in the US for five years, when he first returned to China, his lifestyle in Beijing showed little marks of a western one, mainly because he had not much leisure time at the beginning of his career, but also because Beijing did not offer a lot of activities that were modern or western. Tianjin being a city under strong western influence had given him chance to adopt a lifestyle that distinguished him from those who had no background of studying in the US. He had no interest in smoking opium or watching Peking opera. He admitted that he did not know how to appreciate traditional Chinese operas and even when someone knowledgeable about the Peking opera told him that it was a good performance, he could barely sit through a lengthy show.¹⁰³ In his leisure time, he preferred watching movies or going to western performances. The first movie theater in Tianjin was established in 1906 in the French concession. In the 1920s, there were already 7 to 10 movie theaters.¹⁰⁴ This number increased to more than thirty in the 1930s.¹⁰⁵ The prosperity of consumption of movies in Tianjin was only second to Shanghai at the time. Bian went to watch movies at least once a week and most of the movies he chose were American produced. He also frequented

¹⁰² Anne Reinhardt talks about the public space in the compartments of the steamships and how it helped shape the identity of classes. Anne Reinhardt, *Navigating Semi-colonialism: Shipping, Sovereignty, and Nation-building in China, 1860-1937* (Cambridge, Massachusetts: Harvard University Asia Center, 2018).

¹⁰³ *Bian Baimei riji*, vol. 1, 76.

¹⁰⁴ Gan Mianyang, 甘眠羊 *Xin Tianjin zhinan* 新天津指南 (Tianjin: Jiangxuezhai shuju, 絳雪齋書局 1927), page number. Tianjin Huabei baobai gongsi, 天津華北告白公司 *Tianjin zhinan* 天津指南 (Tianjin: Xinhua shuju, 1921), 24-25.

¹⁰⁵ Yanguilaiyi zhuren, 燕歸來簾主人 *Tianjin youlanzhi* 天津游覽志 (Beijing: Zhonghua yinshuju, 1936), 38.

western plays and concert that were primarily performed for the foreigners in the concessions.

Meanwhile, as a filial son, when he needed to entertain his mother, Tianjin was also a city full of resources for someone preferred a traditional life. For example, to celebrate his mother's seventieth birthday, he reserved the Star Theater for the entire day. Two well-known Beijing opera groups during the daytime and the evening, and the last show at night would be Mei Lanfang's two popular performances.¹⁰⁶

On food choice, Tianjin provided a full spectrum of options ranging from Cantonese food to Shandong banquet, from Japanese to German restaurants. his favorite restaurant in Tianjin was probably Kiessling. His diary suggests that he went there several times a week for bread, dessert or afternoon tea if not a meal. Business lunches or dinners, unless with people who also had studied in the west, he would choose the fine Chinese restaurants such as West Lake Spring and Quanjude.

Tianjin also supported his other hobbies that indicated the western influence. He was a frequent customer at foreign bookstores located in the concessions and was often surprised by what he could find in those stores. He subscribed for several kinds of English journals and newspapers and the delivery of these reading materials relied on Tianjin's logistic connection with the outside world. As a sports fan, he played bowling, tennis, and basketball and his enthusiasm in sports had an impact on his sons; one of his sons became a well-known basketball player in Shanghai.

¹⁰⁶ *Dagong bao*, November 22, 1932.

As time went by, Bian Baimei's active role in public life had made him an influential figure in Tianjin, and his comfortable living experience in Tianjin and the social network he cultivated made him to adopt a new identity as a Tianjin person. All his children grew up in Tianjin, he saw his mother passing away in Tianjin, and his family never moved away from Tianjin until 1938. He engaged in the public life of Tianjin and became an influential leader in many fields. In 1933, he participated in a fund-raising committee for donating a plane named "Tianjin" to the government.¹⁰⁷ This fund-raising movement was a response to the Japanese invasion to the Manchuria and the similar action that had taken place in Shanghai, Hangzhou, and Hankou. The flyer for the committee articulated the motivation and purpose of the movement.

We regret to see, since the Northeast annexed, the area of Jehol had also been ensnared, our rivers and mountain had all fallen into enemy hands, our people were under the domination of a foreign race. For a short while, there were such clamorous cries to save China by air that the government promoted it, people responded to them, and like mad. Feverishly donated money to buy airplanes. In Shanghai alone, there were a squadron of eighteen. Other provinces such as Hunan, Henan, Zhejiang, and Hubei, had each donated ten or more planes. Only Tianjin is lacking. When we think back of that, how could we not be ashamed? Tianjin is close to the war zone and the first to be attacked by enemy and had taken the heavies casualties and thoroughly understand the dangers, we indeed should stand up/raise our fists to take stand the lead on behalf of the whole country. Now we are just as silence as ever, as if the situation didn't affect us, isn't it strange? Isn't it humiliating? Furthermore, although there has been a cessation of hostilities, their aggressive rapaciousness, wolf-like hearts had not been brought under control. The defense has been abandoned, the territory has been breached. We are afraid that the great calamity is upon us, we are dressing our old wounds in sorrow. Although there is no warfare right now, the enemy's planes still come and go in the Hebei area, wantonly dropping bombs. Once battles began, there is very little chance that Beiping and Tianjin won't be destroyed in fierce bombardment. Our anxiety about the situation is high, but we lack the ability to save our country. Based on this pursuant, we launched and organized the ... commission of "Tianjin" airplanes. Our conscience remains and it's easier to achieve our goal if we all pitch in. We propose to raise fund for buying planes, which would

¹⁰⁷ *Dagong bao*, October 28, November 6, 1933.

save the country and protect our lives. Men of resolve must respond or come forward. Any men of resolve would come forward.¹⁰⁸

Clearly, the project was imposed with strong local identity and was motivated by the shared experience of being in a city close to Manchuria and under the threat of the bombardment of the Japanese fleet. The fact that the imagined plane was named after the city also addressed the urban identity being the glue in this movement. In one and half year, the committee raised 43,899 yuan, which was not sufficient to purchase a plane. Bian Baimei negotiated with six Chinese banks a high interest rate for depositing the fund. While the committee continued to taking donations, the interest generated by the deposit would be used to sponsor aircraft researches and manufacturing.¹⁰⁹

In the end of our story, Bian Baimei, who had wisely selected Tianjin to relocate his family and career and enjoyed what the city had to offer to the fullest, had developed a strong connection with the city both materially and mentally. His talent and hard work and the city's resources and culture accomplished each other. Similarly, Tianjin had accommodated in various ways the cotton dealers, the inn keepers, the middle-men and numerous people engaged in the cotton related businesses, and the journalists, editors, printing workers, and deliveryman working to inform the readers of the public media. The steamships, railroads, and tramways constituted the infrastructural foundation for these individuals' livelihood and the city's prosperity.

¹⁰⁸ *Dagong bao*, October 28, 1933.

¹⁰⁹ *Dagong bao*, March 27, 1935.

Conclusion

This dissertation is finished amidst the outbreak of the pandemic of COVID-19 in the spring of 2020. Many people, including me, have cancelled trips and tried to avoid using public transit. Never have I been so acutely aware of how contingent the functioning of transportation system is upon the non-technological conditions. While ceasing to rely on public transportation, we become more dependent on other technologies that enable virtual meetings and we are desperately looking forward to a breakthrough in developing effective treatment and vaccines. Similar to Tianjin in the late nineteenth and early twentieth centuries, this is a moment when every individual's relationship with technology needs to be adjusted and when people have certain expectations for the effects of technology that technology doesn't promise to bring about.

For the city of Tianjin, the adoption of steamship, railroad, and tramway was not simply adding new ways to travel; it meant to incorporate in the city a multi-dimensional technological system of transport. On the material dimension, the new modern transport network not only physically transformed the environment of Tianjin, but also enabled Tianjin to rise as the most important commercial center and seaport of north China and nurtured a new economic ecosystem consisting of modern banking, media, and various kinds of trades and industries. On the socio-political dimension, these new transportation technologies created new social space where new order had an opportunity to form. The active local elites strived to insert their voices into the decision-making processes for the future of the city. Very often, these efforts took the form of opposing modernization but had to borrow modern lexicon and ideology and to make them heard through modern

media. In the meantime, the urban society also transformed the technology, inscribing its own value, aesthetics, and social structure onto the vehicles of modernity. One example is the simplification of the interior appeal of the tram and the abolishing of the difference between first-class cars and second-class cars as the tramway company failed to attract upper class passengers and tramway became dominantly used by ordinary people. On the epistemological dimension, as technological and transport infrastructures, new means of transportation constituted the most significant way that ordinary people experienced modernity, semicolonialism, and the hybridity of western and Chinese culture in a treaty port setting. To some extent, these new technologies helped construct a new vision of the world in which Tianjin as a semi-colony had a special position: Steamships linked Tianjin into a network of treaty ports that formed the frontier of the “informal empire” of the western powers; traveling on the railroad gave the passengers a striking impression of the contrast between the landscapes of city and the countryside; riding the tram similarly exposed passengers to the disparity within the city by integrating the formerly segregated districts that were under western and Chinese administrations.

Tianjin was transformed by the adoption of these new transport technologies and the establishment of a modern transport infrastructure, but the transformation did not occur as a result of a carefully implemented plan; neither did the transformation take the form that any individual or interest group had anticipated. In fact, there were plenty of contingencies in the processes of adopting modern transportation technology and building the required facilities. By reconstructing the historical processes of building a modern transportation system in Tianjin, I have shown that the modernization of Tianjin was not a logical and natural results of opening Tianjin as a treaty port in 1860. Rather, it was a

much more complicated, decentralized process during which the Chinese state, western powers, and local society worked towards realizing their respective visions of Tianjin. Due to the competing agendas, the new transportation system was built through constant negotiation and conflict. The ownership and rights of running the transportation facilities, the planning of the routes, and the regulations and laws had all been questioned and adjusted at various times. This made the consequence and effects of these new types of transportation hard to predict. Nevertheless, these negotiations and struggles had an impact on not only the transportation infrastructure, but on all aspects of urban life, because the founding period of the modern transport infrastructure occurred when the historical actors from local to international, from commoners to elites were adapting to their new political and economic situation.

With the voluminous carrying power facilitated by the modern transportation system, Tianjin was indeed modernized into a metropolis that hosted thriving commerce, industry, banking, and media in the early twentieth century, but the close examination of that process in this dissertation reveals that it was not a journey with a presupposed destination as defined by the experiences of Europe and North America. Instead, the development of Tianjin was the collective consequence of numerous contingencies that did not follow a linear, progressive trajectory, contingencies such as colonialism and Chinese responses, global technologies, its position in relation to Beijing and hinterland, and the natural environment.

The modernization of Tianjin presented in this dissertation goes beyond the existing patterns that are either premised on China's future unique trajectory towards socialist revolution or on a continuous track of development towards modernization.

Taking contingencies into serious consideration can help us understand the many cities that have been left out in the studies of Chinese urban history because they “failed” to modernize as the most successful treaty ports. Among the more than one hundred treaty ports in modern China, only about a dozen of them truly thrived and were viewed as modern cities. One important reason that cities failed to modernize have been neglected by urban historians is that they do not fit the dominant pattern that scholars of Shanghai developed. This dissertation has shown that it was almost coincidental that Tianjin and Shanghai were modernized since too many contingencies were involved. These contingencies, no matter they helped a city accomplish modernization or prevented modernization, are the key to understanding modern China.

This dissertation has drawn to its conclusion but the interaction of Tianjin with the steamship and port, the railroad, and the electric tramway in Tianjin did not stop at 1937. Although the plan of building a Great Northern Port to the south of Tianjin as Sun Yat-sen had proposed was not realized, the fact that the port in the area of foreign concessions could no longer handle the trade volume was widely recognized. In 1937, the Japanese Kanto Army took control of Tianjin and decided to build a new seaport closer to the river mouth. Among various proposals, the Great Northern Port was again put forward. The Japanese, however, adopted another plan: building a new port in Tanggu. The Japanese had partially finished the Tanggu New Port when they were defeated in 1945, leaving a deeper navigation channel between Tanggu and the sea. After the Nationalist Government regained control, some Chinese engineers attempted to restart the project of the Great Northern Port because they believed the better natural conditions

at the Daqing River estuary were superior to those at Tanggu.¹ That attempt, however, was soon interrupted again by the civil war between the Nationalist Party and the Communist Party. In the beginning of the era of the People's Republic of China, the Communist government picked up the half-done project of the Tanggu New Port and eventually accomplished the goal of making Tanggu the main terminal for steamships in 1951. The port in Tianjin gradually lost its functionality to Tanggu and no longer served steamships after 1958. Nowadays, the city of Tianjin has been expanded to absorb Tanggu and the Hai River is a reservoir of fresh water that is closed to the sea.

While Sun Yat-sen's dream of a Northern Great Port died prematurely, another plan in *The International Development of China* was gradually realized. The railroad system in China continued to expand after 1949 roughly in accordance with the railroad plan drawn up by Sun Yat-sen. The Tianjin-Pukou line and the Beijing-Shanhaiguan line that were built in the early twentieth century remain the major trunk lines directly passing Tianjin to this day, but as they intersected with more lines, places that have railway connections with Tianjin have significantly increased. For instance, the Datong-Qinhuangdao line intersecting with the Beijing-Shanhaiguan line at Qinhuangdao connected Tianjin with the coal mine in Shanxi Province. Within Tianjin, during the Japanese occupation, a new branch line was built between the site of the new port and the Tanggu railway station to prepare for the open of the Tanggu New Port.² In the 1950s, new regional branch lines and stockyards were built to enlarge the capacity of the railway stations in Tianjin. From 1949 to the present, the Chinese railroad system has gone

¹ *Shenbao*, October 7, 1947, and February 2, 1948.

² *Tianjin tongzhi tielu zhi* 天津通志鐵路志 (Tianjin: Tianjin shehuikexueyuan chubanshe, 2006), 664.

through six times of system-wide upgrade. Right now, the speed of the inter-city high speed train between Tianjin and Beijing can reach 350 kilometers per hour.

Unlike the steamship and railroad persisting into today's Tianjin, the tramway ceased to be a functional means of transportation and only several model tramcars can be found exhibited in museums. The Guomindang government finally nationalized the tramway system in 1945 and the Chinese state-owned tramway company added a purple line to Tianjin in 1947. The tramway routes stayed unchanged until the whole electric tramway system stopped service in 1972, as China had become self-sufficient in gasoline and buses became the main ground public transportation. Four years later, the first subway line was completed and put into trial in Tianjin. The brief descriptions of the changes of the railroad, the steamship harbor, and the electric tramway in Tianjin after 1937 do not mean to indicate a clear causal-effect relation between the past and the present. Rather, they mean to show that transportation continues to be an organic part of the history of Tianjin and, although this dissertation does not go on to cover the post-1937 times, the many twists and turns in the more recent history of these transportation sectors, if broken down and analyzed with a careful consideration of the contingencies, would also yield rich stories that can demonstrate the complex interactions between technology and modernization of the Chinese city.

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