Corrupted infrastructure
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Corrupted Infrastructure: Imperialism and Environmental Sovereignty in Shanghai, 1873–1911

Abstract The introduction of Western science in order to change physical and operational aspects of Shanghai’s Huangpu River had been debated by Qing and Western officials since almost the beginning of its history as a Treaty Port. At stake in those debates was the perception of the river’s proper use: as a natural barrier for military defense, or as a conduit for global trade. After the Western powers unified to militarily suppress the Boxer Uprising in 1900, they attained their long-awaited goal of the right to transform the river for global trade as part of Article 11 of the Boxer Protocol: the Junpuju (or Huangpu Conservancy Board) was created and authorized by the central government to make the Huangpu River navigable for shipping vessels. Although the Junpuju continued the ethos of earlier extra-bureaucratic organizations established during the Self-Strengthening Movement, after 1901 the organization bore the authority of the central government. During the era of the New Policies, Qing officials were intent on revising the original terms of river conservancy so that they would be more favorable to Chinese sovereignty. At the same time, imperialist rivalries among the Western powers ruptured the apparent unity of the earlier alliance during the suppression of the Boxer Uprising. Before long, Western corruption in the Huangpu River dredging was brought to the attention of Qing officials, who deftly used it to recover Qing control over certain parts of the body of the river.

Keywords Boxer Protocol, corruption, infrastructure, Gu Hongming, Huangpu River, new policies, Self-Strengthening, Sino-French War

Introduction

In the late-nineteenth century, Western imperial powers pressed the Qing state to make changes on its waterways to accommodate ever-growing capacities and numbers of shipping vessels. The Qing state dragged its feet in undertaking the proposed changes but its reluctance did not signify resistance to modernization.
Qing statecraft relied on indigenous cultural practices and technologies in hydraulic engineering; the state’s attitude towards and use of modern science and technology was both contingent upon the needs of domestic statecraft and a reaction to the multipolar politics of anti-imperial nationalism and imperialism. Scholars like Benjamin Elman have focused on positive developments in science during the Self-Strengthening Era, arguing that its institutions and achievements, such as arsenals, translation bureaus, and technology schools, have been undervalued by Chinese nationalist narratives in large part because of the Qing navy’s decisive defeat in the First Sino-Japanese War (1894–95). More recently Douglas Reynolds has shown that the bureaus (ju) of the Self-Strengthening Era were ad-hoc, extra-bureaucratic innovations of both central and local Chinese states to deal with modernization, arguing against narratives of dynastic decline and instead showing that the late-Qing state was dynamic and innovative. For both Elman and Reynolds the year 1895 is a logical end point for their historical periodization: the defeat in the First Sino-Japanese War marks a turning point after which both Korea and Taiwan were ceded to Japan as colonies and the court initiated sweeping reforms that institutionalized economic modernization.

The present essay builds on the insights of both Elman and Reynolds and, through reassessment of periodization, argues that the river conservancy organizations created by the Boxer Protocol in 1901 were a continuation of the bureaus formed by the Self-Strengthening Movement in important ways. By taking a longue-durée approach, the essay argues that the reforms of the 1900s should be seen as continuous with the Self-Strengthening Movement of the 1860s. While the river conservancy bureaus continued the earlier pattern of institution-building, they also now took on a main role within the central Chinese government and guaranteed their financial and executive solvency with Chinese central government backing.

My essay connects the new science and institutions of the late-Qing to both the high imperialism of the fin-de-siècle and the fraught social world of transnational and trans-local personal imperial networks that accompanied it. In stressing the process of science and knowledge-transfer in the Self-Strengthening Movement’s institution building, Elman and Reynolds downplay the social and cultural interactions of foreigners and Chinese. I argue that the techniques that were eventually adopted and promoted by river conservancy had little to do with the qualities of the technology itself, and much more to do with the political priorities of Qing and Western powers. Western states were most concerned with

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1 Benjamin A. Elman, “Naval Warfare and the Refraction of China’s Self-Strengthening Reforms into Scientific and Technological Failure, 1865–95,” 283–326, 284.
competing for the power and prestige of imperialism, while the primary goal of the Qing government was the preservation of sovereignty.

The unequal treaties of the nineteenth century opened Shanghai and other Treaty Ports to foreign trade, partitioning territory as concessions for foreign work and life, but China’s inland waters remained under Qing sovereignty, a point that was repeatedly emphasized by Qing officials in negotiations. Prince Gong described the sand bar at the front of Shanghai’s Huangpu River as a “heaven-sent barrier” forming a natural military defense. From the perspective of Western shipping interests, the sand bar was an obstacle to trade that should be dredged and cleared for navigation. Qing and Western officials alike had a keen sense for the importance of the river for urban development and trade; one contention of this essay is that the river’s environment was entwined with Shanghai’s urban development as a site of imperial and commercial conflict. This essay examines the river’s sovereign jurisdictional integrity against the challenges of extraterritoriality and imperialism.

The Boxer Protocol of 1901 set up two special institutions to ensure the navigability of two Treaty Port rivers: the straightening of the Hai River leading to Tianjin and the deepening of the Huangpu River leading to Shanghai. Both organizations had institutional precedents in their respective municipal councils. Unlike the Hai River, work on the Huangpu River was beset with delay by the Chinese government and then, when work was finally underway, corruption on the Western side. Another facet of this essay is to follow the negotiations over the organization’s financial structure and management, arguing that competition constrained Western imperial hegemony over infrastructure development in Shanghai. While corruption on large infrastructure projects is common, what set the Shanghai case apart was the charged politics of imperialism. Germany’s ambition to have “a place in the sun” along the other Western imperial powers as well as their alienation from long-standing colonial partnerships in Asia fueled imperial rivalries, escalating the drama of corruption among mid- and low-level Western personnel providing an opportunity for the Qing the recover rights over the river.

In the tense semi-colonial environment of the Treaty Port, the exposure of Western corruption unhinged tensions between the European powers, and amidst the proliferation of new Chinese and Western media in the 1900s had special significance for Chinese discourse about the West. For the British and Dutch, accustomed to their own privileges in their other colonies in Asia, graft was business as usual. Newly minted as a colonial power in Asia and Africa, Germany perceived the advantages afforded by the British and Dutch in their status as older, colonial empires as conspiring against German ambition. For an emerging anti-Western nationalist Chinese consciousness, the unfolding of Western corruption in the Shanghai media was a harbinger of the disillusionment
with Western civilization and values, which would be more fully developed in
the disappointment with the Versailles Treaty as evidenced in the statements of
the May Fourth Movement later on.

**Self-Strengthening**

After 1865, the Qing state started to respond more aggressively to the crisis of
Western imperialism. As Douglas Reynolds shows, many of the Self
Strengthening institutions—including the Zongli Yamen, which was created in
1861 to deal with foreign relations—were *ad hoc* organizations outside the
normal structures of the Qing state. Such institutions produced what Yue Meng
has termed “hybrid science”—a science that was a hybrid of both Western and
Chinese tradition—but this was often stifled by conflict between the Qing and
Western powers. Together, Western science and Chinese science formed a
“dominant binary for political modernity” while the mediating area, was “to be
eliminated, both at the conceptual and the institutional level.”

By the early 1870s, Shanghai was already an important transshipment port for
ducks and Western vessels, connecting the markets along the Yangzi River, north
China, Japan, and south China to the world. As the capacity and number of
steamships in the overall trade at Shanghai grew, deep draught navigation on the
Huangpu River became an increasingly urgent and contentious issue for Western
commercial groups and Chinese officials. Among Western groups, British
merchants were the most vociferous: they were dissatisfied that the nominal
purpose of the tonnage taxes levied at the Treaty Ports, to provide lighting and
safe navigation, had not been fulfilled: obstructions to navigation still existed.

In response to these complaints, local Shanghai officials conducted their own
investigation of the area. More than other Qing officials, the Shanghai Daotai
was regularly confronted with challenges brought on by political, economic and
social forces and shifting institutional responsibilities in local politics as well as
central-local and interprovincial relationships. Shanghai’s position of global
trade made it an important destination for Chinese merchants from other regions,
exposing the Shanghai Daotai to international, empire-wide and regional
demands and tensions. After interviews with local residents, Shen Bingchen,

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3 Ibid.
4 Yue Meng, “Hybrid Science versus Modernity: The Practice of the Jiangnan Arsenal,
1864–97,” 13–52, 44.
5 “No. 1 Mr Harper to Mr Hammond, 18 April, 1872,” in *Shanghai: Political and Economic
Reports* (henceforth SPER), vol. 7, 65.
who was the Shanghai Daotai, and He Jing, who was both the Baoshan magistrate and Superintendent of Trade concluded that deepening the Huangpu River was not possible, even with the use of foreign dredging machines. Western consuls were dissatisfied with the report’s findings, and thought the report was “too perfunctory and incomplete.” They accused the Shanghai officials of not possessing “sufficient technical knowledge” to conduct a “nautical survey with intelligence, let alone success” and called the investigative process “farcical.”

Finally in 1873, the Western Treaty Port community invited two Western hydraulic engineers working for the Japanese government to Shanghai to survey the Huangpu River.

Unlike China’s Self-Strengthening Movement, which was a modernization of the military and only a partial reform of foreign affairs, Meiji Japan undertook a more thorough reform that included domestic politics, society and infrastructure. The Japanese government invited Western experts to advise various infrastructure projects, including hydraulic engineering. Two of those experts were Johannis De Rijke and G.A. Escher (father of the artist M.C. Escher), who had been active in Japan’s government service since 1871. Escher and De Rijke were among a group of Dutch engineers in the employ of the modernizing Meiji state. Upon completion of the survey by the two Dutch engineers, Western diplomats in Shanghai petitioned the Jiangsu Governor Zhang Shusheng (1824–84) about the environmental obstructions to navigation: they proposed a 300 feet wide channel through the shallow part of the river of 1700 yards, thereby providing for it to be maintained free of subsequent obstruction through regular dredging. Although the Western diplomatic community was of the opinion that a more thorough survey should be completed for the Chinese central government, ultimately the plan was made in consultation with Western naval officers, nautical experts, and a dredging engineer who was sponsored by the Chamber of Commerce.

During the early months of 1874, Western and Chinese officials clashed over the sand bar. In February 1874, the British Minister at Beijing, Thomas Wade, called for diplomatic intervention to promote steam vessel navigation. Wade referred to the growth of the Wusong sand bar as the “evil affecting all foreign interests alike.” The river had narrowed so much “as to expose large vessels to constant danger of collision” and to cause navigational delays. Revenue for both the Qing government and treaty powers was lost as a result of delays and accidents. Thus, Wade argued, Western machinery should be brought in quickly to “secure the river.” When Prince Gong, head of the Zongli Yamen, received

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9 PAAA: Peking II-1203, Wade to Gong, February 1874.
Wade’s request, he directed the Southern Superintendent of Trade to investigate. In May 1874, Prince Gong finally addressed the diplomatic community at Beijing. Prince Gong argued that the shallow sand bar at the mouth of the Huangpu River was an integral part of the Qing’s military defense: it was “an obstruction provided by nature,” and it was China’s sovereign right to utilize this natural obstruction to “protect the Port, if necessary, form entrance of an aggressive nature, in case of war.”10 Quoting from the Southern Superintendent’s report, Prince Gong cited the historical use of the environment for military defense as grounds for rejection of the dredging work. Prince Gong responded that there was nothing within the treaties that stipulated the Qing should undertake dredging for navigation. According to Prince Gong, the sensible solution was to build ships to draw water according to the depth of the port.11

The stability of the smaller sized Chinese junks was cited as another reason for not altering the river. Far outnumbering the larger Western vessels, junks were threatened by the “rushing flood” and “running ashore” when a larger vessel passed by and caused a wake. In approaching a shallow portion of the river, the junks would anchor and the boatmen “sleep on the ship’s bow, quietly waiting till the tide rises, when they sound the rattle, and go their course as they like.” Likewise, dredging the channel would disrupt the navigation of smaller boats and could only cause further anxiety to these boatmen. It was imperative to consider the interests of indigenous junks, not just the material benefit of “a few great steamers.”12

Shanghai’s future as a world port seemed to be in danger. Robert Hart ominously predicted that Zhenjiang would overtake Shanghai as the most important semi-terminus and transshipment port in twenty years’ time, if work were not done on the Huangpu River to ensure navigation.13 The Shanghai Municipal Council decided to act without the authorization of the Qing government. In April 1875 the Dutch Consul invited Escher and De Rijke to complete a survey and report on the Wusong sand bar.14 The two did not receive official leave from the Japanese government, but covertly arrived in Shanghai in August to survey the river and visit the various foreign consuls. Their joint report on the river confirmed the fears of the commercial community and Robert Hart: that the river could be durably improved with dredging and construction of

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11 PAAA Peking II-1203.
12 Ibid.
13 PAAA Peking II-1203; Rhoads Murphey, Shanghai: Key to Modern China, 75–78.
14 Yoshiyuki Kamibayashi, Johannes De Rijke: De ingenieur die de Japanserivierenweer tot level bracht, 71.
several dikes but if no action were taken, Shanghai would be useless as a global port.\(^\text{15}\) Meanwhile, Shanghai’s business community sought alternative transport between the mouth of the Huangpu River at Wusong Village and Shanghai City. Plans for a railway line between Wusong and Shanghai, which had been under discussion since 1863, was now underway.\(^\text{16}\) A British firm leased the land from Chinese locals in the winter 1872–73. The land was in proximity to Chinese governmental sites such as the Wusong battery, customs barrier, and the seat of the Baoshan magistrate.\(^\text{17}\) In addition, Chinese officials perceived the railway to be unfair competition for the low-draught vessels of the China Merchant Steam Navigation Company and the Shanghai Steam Navigation Company, which had not been affected by the silt of the Huangpu River.\(^\text{18}\)

The railway opened on June 30, 1876 and its first month was a success among the inland tea and silk Chinese merchants of Hangzhou, Huzhou, and Suzhou.\(^\text{19}\) Yet, Chinese government officials were less than keen on the railway, purchasing and dismantling it a year later. Their antipathy was justified on the grounds that the railway threatened agricultural livelihoods. The Chinese interior was not yet ready for industrial development.\(^\text{20}\) Zeng Guofan exemplified this view: “If small steamers be allowed on inland waters, native craft of every size, sailors, and pilots will suffer; if foreigners are allowed to construct telegraphs and railways, owners of carts, mules, chairs, and inns will suffer, and the means of living be taken away from the coolies….” Although concessions could be made on small points, there could be no compromise on issues such as railroads and steamers: toward anything that was “destructive to our people’s interest,” a “strenuous fight should be made.”\(^\text{21}\)

Over the next few decades, the discussion between the city and central government over the river continued. In 1880, the Shanghai Chamber of Commerce voted to impose taxes that would fund the improvement of the river.\(^\text{22}\) Meeting minutes revealed that Shanghai was inspired by port and river

\(^{15}\) Koen Sizoo, *Johannis and Hendrik De Rijke: Two Dutch Engineers in the Yangtze Delta, 1875–1919*, 16.

\(^{16}\) “Commercial Reports from Her Majesty’s Consuls in China for the year 1876,” in SPER, vol. 7, 343, 361.

\(^{17}\) David Pong, “Confucian Patriotism and the Destruction of the Woosung Railway, 1877,” 648.

\(^{18}\) Ibid., 669.

\(^{19}\) Ibid., 652; “Commercial Reports from Her Majesty’s Consuls in China for the year 1876,” in SPER, vol. 7, 361.

\(^{20}\) “Shanghai Trade Report and Returns for 1874,” in SPER, vol. 7, 106.

\(^{21}\) “Commercial Reports from Her Majesty’s Consuls in China for the Year 1876,” 20–21, in *IUP-BPP*, vol. 12.

\(^{22}\) PAAA Peking II-1203.
developments that were already underway in Europe and America: explicit comparisons were made with the Danube River in Europe and the Mississippi River in the United States.23

There was one commercial group for whom navigation on the Huangpu River had no effect: the opium merchants. They did not want to be unduly taxed. After all, their merchandise was in high demand all over China: if they could not navigate their ships to Shanghai then they could bring it to another port where there would be equal demand. Despite the dissent raised by the opium merchants, the motion to raise funds for dredging on the Huangpu River passed.24 Finally, the Zongli Yamen agreed to put a Western dredger named Anding in place to meet the demands of the Shanghai Chamber of Commerce. In autumn 1883, the dredger commenced with removing the sand bar. Dredging operations were conducted under Chinese supervision.25 Prince Gong’s change of heart probably points to the increasing voice of the China Merchants Steam Navigation Company: even though the Self Strengthening offices were extra-bureaucratic organizations that were not part of the regular Qing state, they could have a significant impact on state policy, even causing the government to abandon positions it had considered important for the protection of sovereignty.

The Sino-French War (1884–85) put an end to the relatively cooperative arrangement on the Huangpu River; one of France’s first acts of war was to blow up the Fuzhou Arsenal, which had been constructed under French supervision. Initially, the Chinese and French agreed to make Shanghai and Wusong neutral, but Chinese authorities, wishing to apply pressure on foreign trading interests who would in turn apply pressure on their home governments, wanted to blockade the mouth of the Huangpu River. The Shanghai Chamber of Commerce was alarmed, fearing that this would jeopardize Shanghai’s commercial viability during and after the war.26 By September, stone-laden junks were moored on the sand bar, ready potentially to be sunk, and piles to be driven in the mud. Over the next months, the Western diplomatic community struggled, but failed, to prevent the sinking of the boats,27 and in November piles were sunk to narrow the channel.28

After the war, negotiations over work on the river resumed. By early 1887 there was still no dredging. There was some discussion over what to do with the

21 Ibid., “Minutes of a Public Meeting of the Mercantile Community of Shanghai,” April 2, 1880.
24 Ibid.
25 PAAA Peking II-1204. April 25, 1886 and January 11, 1887.
26 “Shanghai Chamber of Commerce, Shanghai 9 September, 1884,” in SPER, vol. 9, 92.
28 Ibid.
dredger Anding, and whose supervision it ought to be placed under. With the cooperation of the Daotai and the Superintendent of Customs, dredging finally resumed in May 1889, however navigation remained poor. Hence it was not just at the Fuzhou Dockyard that the Sino-French War served to marginalize the hybrid science of the early Self-Strengthening Movement. Blockading obstacles were placed into the Huangpu River, and the Chinese dredging operations were suspended for five years.

**Negotiating the Boxer Protocol**

Environmental disasters and lack of redress by the Qing government during the 1890s contributed to the growing social discontent in north China. The area surrounding Beijing and Tianjin, experienced floods that displaced locals and had an impact on Hai River navigation. Though not as dramatic as in north China, there continued to be difficulties for Western shipping on the Huangpu River. De Rijke, who surveyed the Huangpu River in 1876, now had a distinguished career behind him in Japan and was invited by the Shanghai Chamber of Commerce in November 1896 to update his earlier report on the sand bar. Following his visit, the local Chinese officials and the foreign communities of Tianjin and Shanghai established the first river conservancy boards in late 1897. De Rijke came to Shanghai in 1897 and again in 1899 and submitted a report.

The same natural disasters that disrupted shipping also brought to the surface social discontent that contributed to the Boxer Uprising. The Boxers destroyed infrastructural works in north China, including railways and the work on the Hai River. On December 3, 1900, the Qing court conceded responsibility for the Boxers and negotiations for the peace settlement under military occupation at Tianjin and Beijing quickly followed. Article 11 of the Protocol mandated central government support for the river conservancy organizations established in 1897. The Junpuju had full jurisdiction over the river, powers to appoint the harbor master and river police and carry out and maintain improvements on the river, even in areas that extended beyond formal jurisdiction. Two main points of contention were the organizational finances and board membership: revenue would come from taxes on foreign property in Shanghai and an annual contribution from the Chinese government. The Shanghai Board consisted of (1)

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29 PAAA Peking II-1204, Shanghai, January 11, 1887.
30 Ibid., May 11, 1889.
32 BArch BL: R 901-17981.
the Daotai; (2) the Commissioner of Customs; (3) two members elected by the foreign consuls who made up the Consular Body in Shanghai; (4) two members of the General Chamber of Commerce of Shanghai elected by the Committee; (5) two members representing shipping interests, who were to be elected by shipping companies, commercial firms and the merchants, and whose total of entrances and clearances at Shanghai, Woosung and other ports on the Huangpu river exceeded 50,000 tons per year; (6) a member of the Municipal Council of the International Settlement; (7) a member of the Municipal Council of the French Concession; and (8) a representative of each nation. National representatives were to be appointed by the respective national government—but allowing only those states whose total of entrances and clearances at the ports of the Huangpu River exceeded 200,000 tons per year.34

As with the railway rights recovery movement, the Chinese government was keen to recover sovereignty over its water transport infrastructure. After the 1901 Protocol was signed, the Chinese government delayed on appointing a Chinese member to the Junpuju, which was required for a quorum. The governor-generals at Nanjing and Wuchang pushed for full financial responsibility for the river works, rather than just half, with the other half paid by the foreign powers as outlined in Article 11 of the Boxer protocol.35 On June 9, 1904, the Chinese Ministry of Foreign Affairs wrote to the Diplomatic Body, which was made up of the foreign ambassadors to the Chinese government in Beijing, to renegotiate the terms of the Whangpoo Conservancy Agreement. There were five new stipulations: first, that the Chinese government would bear all costs; second, that the management would be shared by the Shanghai Daotai and the Commissioner of Customs; third, that in three months the Chinese government would appoint one or two experienced engineers, with the approval of the foreign powers; fourth, every three months the board would have to submit a report on the progress; and fifth, the Chinese government was responsible for the entirety of the costs, and Annex 17 of the 1901 Protocol could not again be invoked to collect additional tax from shipping tonnage or commercial sources.36

A second treaty was signed in Beijing on September 27, 1905, revising the original 1901 agreement to give more financial control to the Qing government. The Chinese government would pay for the riverine work, and not levy any taxes or ask for contributions on the river properties and traffic of the shipping merchandise. The total expenditure was guaranteed by the opium taxes of Sichuan and Xuzhou prefecture, Jiangsu. Hence Chinese opium dealers would pay the costs of river infrastructure demanded by foreign powers, with some

34 SMA: Q1-5-100.
35 PAAA: Hsin Wen Pao, August 6, 1904 in Peking II-1197.
36 AS-IMH: 02-06-008-01-003.
support from Chinese officials and organizations like the China Merchants Steamship Navigation Company. The Protocol guaranteed an annual sum of 460,000 taels for twenty years: in case the purchase of machinery necessitated an exceptional expenditure beyond the allowance, the Chinese government would contract a loan that was guaranteed on the revenues of the opium tax. To pay off the loan, the Sichuan and Jiangsu provincial authorities would remit the sum via equal monthly installments to the Daotai and Commissioner of Customs at Shanghai. If the allotted amount was insufficient, then the Chinese government would remit the necessary sum from other sources.37

After the 1905 reorganization of the Junpuju to terms satisfactory to the Qing government, Gu Hongming was appointed its Director, a role in which he served for two years before his appointment as Vice Minister in the Ministry of Foreign Affairs. Like most of the staffs of the bureaus in the Self-Strengthening Movement, Gu had an international background. He was an overseas Chinese born in Penang, and as such was also a British subject. At age 13 he accompanied his father’s employer, a British subject, to Britain for education. In 1871, he earned a master’s degree in literature at the University of Edinburgh and then studied civil engineering at University of Leipzig. Between 1871 and 1873 he studied and traveled in Europe, acquiring German, French, and Italian.38 It was only after Gu returned to Southeast Asia that he began formal study of Chinese. His entry into the Chinese government was by chance: in 1885 a conversation in German was overheard by one of Zhang Zhidong’s prefects, Yang Yushu. Yang was impressed with Gu’s linguistic ability and recommended him to Zhang Zhidong. Zhang, at the time engaged with the Sino-French War, invited Gu to be a private secretary to help him interpret for Zhang’s new German military advisors.39 Later on, Gu was Zhang Zhidong’s secretary in Hankou.40 His background would later prove useful: Gu’s sympathy for German culture probably made him more receptive to German criticisms of the British-led Junpuju work.

Imperial Rivalries

The appointment process of Treaty Port organizational staff was highly politicized. Just days after the 1905 agreement was confirmed, the German

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37 SMA: U1-5-100; AS-IMH 02-06-008-03-006.
39 Ibid., 42.
40 TNA: FO 371-21, 600.
Minister at Beijing, Mumm von Schwarzenstein,\(^{41}\) recommended Hans Schellhoss as the Assistant Engineer for the Junpuju to the Inspector General of Customs Robert Hart. Prospects for Schellhoss’s appointment looked bleak.\(^{42}\) Hart rejected the nomination on the basis that it was necessary to consider Japan’s growing commercial and political interests in China. Yet a French representative would also be expedient since there were two settlements in Shanghai: an International one and a French one.\(^{43}\)

In 1902, the German Ministry of Foreign Affairs appointed Hans Schellhoss as the Hydraulic Engineer to the German Consulate in Shanghai.\(^{44}\) Schellhoss’s newly created post in the German Consulate at Shanghai signified the German government’s intention of playing a role in the transformation of Shanghai that was disproportionate to German economic interests in the city, which were small in comparison to those of Britain, Japan, and France. Schellhoss’s appointment also represented Germany’s ambitions in the rest of China, and during these years, while not working on the Huangpu River, he was dispatched by to survey other water systems in North China.

There were three candidates for the Chief-Engineer position: Johannis de Rijke, Lindon Bates (who had earlier worked with Ludwig Franzius on the Franzius-Bates plan), and a French national Guïotton. The American ambassador did not intend to support Bates’s candidacy to the Chinese government. Rijke’s appointment seemed most likely. One, he had long experience with the Huangpu; his first report on the river completed in 1874 while he was still in the employ of the Japanese government. Two, he did not represent a ‘Big Power’ state. There seemed little chance of having a German national appointed to the post, so the German consul suggested supporting De Rijke’s candidacy, with the hope that Schellhoss might still be appointed to a position on the Junpuju.\(^{45}\)

On June 7, 1906, De Rijke was appointed Chief Engineer and the re-organized Junpuju officially began its operations.\(^{46}\) De Rijke had a degree of autonomy in his work.\(^{47}\) He decided to adhere to one of his original plans: Plan A would close off the lower part of the Huangpu River and excavate a new eastern course to the Yangzi River. De Rijke opted, however, for Plan B, which aimed to keep the

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\(^{41}\) Alfons Mumm von Schwarzenstein (1857–1924) had a long-standing career in the German Foreign Ministry. Between 1900–1906, he was Ambassador to China. Between 1906–8, he was Ambassador to Japan. *BHIDAD*, Bd. 3, 326–27.

\(^{42}\) BArch BL: Peking 25 September 1905 in R 901-17981.

\(^{43}\) Ibid.: 4 October 1905 in R 901–17981.

\(^{44}\) Ibid.: 29 August 1902 in R 901–17992.

\(^{45}\) Ibid.: Peking, 4 October 1905 in R 901–17981.

\(^{46}\) Ibid.: R 901–17981, “The Imperial Chinese Government and Mr. Johannis de Rijke Agreement.”

powerful tidal movement in the existing riverbed and to redirect the flow of water, keeping it concentrated in a way that would leave the least possible amount of sedimentation and keep the shipping channel at an even depth. A sand bar lay at the mouth of the river, which was the junction where ships turned in from the Yangzi to the Huangpu to reach Shanghai. That was called the Outer Woosung Bar. De Rijke’s plan included the construction of a 1,425-meter-long levee that would direct the flow of the outgoing tide over the sandbank so as to deepen the channel. At the Inner Bar, two channels passed on either side of Gough Island: the deeper Ship Channel, which was used by deeper draught vessels and the shallower Junk Channel used by Chinese flat-bottomed vessels. De Rijke’s plan was to make Gough Island part of the riverbank and lead the entire flow of the tidal water to pass through the Junk Channel.48

There was controversy about what to do with the areas outside of the extraterritorial concessions. The Junpuju included the area in front of the Chinese City in its improvement scheme of the Huangpu, which meant the displacement of the boat people who lived on the river. The engineers wanted the flood tide to run up the river, which at that point was prevented by both the river’s narrowness and the mud bank, which stretched along the Chinese embankment. The mud bank was dry at low tide and was the site for storage of thousands of baskets that functioned as silt catchers. In view of the Junpuju, these contributed to the river’s deterioration. Furthermore, there was a small floating city of “beggar boats”: people too poor to hire lodgings on land. De Rijke wanted the lumber and the beggar boats to be removed so that the river could be brought to a regular depth for the whole width of the river.49

The navigation, harbor space and waterfront development along the Wusong River was entwined with that of the Huangpu River, and both rivers were recognized as part of the larger Lake Tai water system. Although the maximum fairway depths had not changed much since the 1860s, several factors contributed to changes on the river. First, Shanghai’s urban expansion came at the expense of agricultural areas along the tidal part of the river. Former irrigation canals and reservoirs that had been a part of the tidal capacity were now filled with land. Chinese farmers regenerated their fields with mud removed from the foreshore, which had the benefit of assisting in the natural regulation “by maintaining tidal capacity, assisting scour and removing deposits.” Though there was some police regulation concerning garbage thrown into the water near the houses and industrial mills, the trade and building garbage was nonetheless thrown in to the river, as well as the garbage from boats, lost anchors, collapsed buildings, sunken vessels, and lost cargo.50

48 Ibid., 24.
49 BArch BL: R 901–17982, dated July 23, 1907.
50 SMA: U38-1-1840.
Against the backdrop of an already highly competitive real-estate market in Shanghai, the work of the Junpuju relating to land reclamation was particularly contentious. After 1899, as MengYue has pointed out, the “proportization of land” in Shanghai was inaugurated by the expansion of the International Settlement, which enhanced a particular type of economy of finance, insurance, real estate, and the opium trade. According to the September 1905 agreement, riparian owners could buy or lease reclaimed land adjacent to their property that resulted from the river modification. However, the agreement did not specify who would get the proceeds from the sales or leases. The Junpuju anticipated that issues relating to land would generate friction. For some land reclamation would be of great advantage, but for others who had to give up their current landing stages or wharves in order to conform to the new, normal regulations and lines, there would be considerable cost. The agreement outlined that the price to be paid for reclaimed land was to be set by a committee that would be composed according to the nationality of the riparian owners. The concern was that such a committee would not act propitiously toward fair assessment.

The Junpuju’s plan for the new river bank boundaries affected current and potential landowners along the shore. As the negotiations over the shoreline were underway, anxiety among property owners reached a peak. Carlowitz & Co., a German firm active in China since the 1840s that occupied a site along the river was concerned about the low water line, and that there would be a way for steamers to moor. In a report to the German consulate, Schellhoss projected that property prices along the new shoreline would rise, and that it would perhaps be wise to buy up new plots for use by German businesses. In summer 1903, Carlowitz purchased a piece of property on the Huangpu River from a Japanese company, intending to build a shipyard for river steamers. On July 20, 1903, Carlowitz applied to the Shanghai Harbour Master Carlson for permission to build pontoons help facilitate the loading and unloading of goods.

On behalf of Carlowitz, Schellhoss conducted a survey of the Huangpu River port between the upper and lower reaches, where the Carlowitz lot was located. Schellhoss concluded in his report that it was fine to build structures on the water, and indeed that De Rijke’s plan would create serious problems for navigation on the river. Yet both the Commissioner of Customs and Harbour Master of Shanghai Port rejected the application because such structures would interfere with the flow of the river. In February 1904, Carlowitz conveyed the findings

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51 Yue Meng, *Shanghai and the Edges of Empires*, 172.
52 BArch BL: R 901-17982, dated July 23, 1907.
53 Ibid., Mr. A. von de Sande Bakhuyzen, July 23, 1907.
54 Ibid.: R 901-17981, Schellhoss, Shanghai, March 5, 1907.
55 PAAA: Peking II-1197, dated February 2, 1904.
56 Ibid., dated September 26, 1903 and January 13, 1904.
of Schellhoss’s report to the Deputy General Consul at Shanghai Dr. Boyé, to protest the Harbour Master Hobson’s denial of Carlowitz’s application.\footnote{Carlowitz to Boyé in Peking II-1197 in PAAA. Adolf Boyé, (1869–1934): Between 1900–1901, he was General Konsul in Yokohama, Japan; General Konsul in Shanghai, January 31, 1901 to June 17, 1904. Beginning in 1907, Boyé was a member of the Final Examination Committee in the Chinese and Japanese at the seminar for Oriental languages in Berlin. \textit{BHDAG}, Bd. 1, 243.}

German political and commercial interests followed these developments concerning Shanghai’s waterways (See Fig.1). On August 14, 1907, the Prussian ambassador to Mecklenburg and the Hanse cities in Hamburg wrote to Chancellor Bülow concerning the views of the local shipping interests toward the Huangpu River corrections. The opinion of the Hamburg water works director Bubendey was also received. The shipping company Hamburg-Amerika Linie suggested that the detailed plans for the river’s modification should be presented to the Ministry of Public Works in Berlin for review. Meanwhile, Hamburg-Amerika Linie would collaborate with its branch in Shanghai to review the plan as well.\footnote{BArch BL: R 901-17982, Hamburg, August 14, 1907.} Bubendey conceded that his sketchy knowledge of the local conditions did not let him form a substantial opinion about the outer bar. Bubendey agreed with Schellhoss’s assessment that De Rijke’s plan would create a serious impediment to navigation. Only if De Rijke’s plan was undertaken with the help of a large dredging machine, could temporary damage on the waterway be avoided. Not only was the success of De Rijke’s plan uncertain, it was also expensive; for example, to build a training wall cost 2,187,798 Shanghai taels by the Dutch firm versus 1,615,000 Shanghai taels if it were to be carried out by the German firm C. Verin.\footnote{Ibid., “Korrektionsentwurf für den Wusung- oder Huang Pu-Fluss,” Hamburg, July 23, 1907; “Die Flußregulierung in Shanghai,” in \textit{Hamburger Nachrichten}.}

In summer 1907, concerns about the diligence and efficiency of the works being carried out were raised. The Diplomatic Body at Beijing was concerned that too much money would be spent on a particular aspect of the work at the expense of the river correction as a whole. Von Buri expressed concern that the Shipping Channel would become too narrow.\footnote{BArch BL: R 901-17982, Von Buri, Shanghai, July 15, 1907.} On June 11, 1907, the Consular Body at Shanghai decided to inquire more closely into the finances of the Conservancy Board. Though the 1906 agreement explicitly stated that the Chinese government would pay all of the costs of the works, other aspects of the financial obligations of the Chinese government were still being debated. If the latter fulfilled its annual obligation of 460,000 taels, then what about the inevitable excess expenses needed to maintain the works?
Access to real estate was of primary concern for commercial interests, including German ones. First on September 28 and again on October 26, 1907, the German shipping interests of Melchers & Co., K. Oldörp for Hamburg-AmerikaLinie, Siemssen & Co., Carlowitz& Co., Johan Jessen for Diederichsen, Jbse & Co., Meyer & Co., Sader, Wieler & Co., and Friedrichs, submitted to the German Consulate General at Shanghai a petition concerning the Huangpu River conditions. In short, German shipping interests disagreed with De Rijke’s plan to close the existing waterway named the “Ship Channel” and to open in its place the “Junk Channel” which at that point was entirely silted up. The German shipping interests compared extracts from the 1898 report De Rijke submitted to the Shanghai General Chamber of Commerce with extracts from the Quarterly Reports of the Junpuju about the present state of the river. The memo concluded that the extracts from the Quarterly Reports showed that the projections of the 1898 scheme had not been fulfilled; in fact, exactly the opposite happened. De Rijke’s scheme had intended to make use of the “Junk Channel” because it had been the opinion that the natural tendency of the river was to flow through there. From the Arsenal to the Yangzi River, with the “Kajow Bar” given to deep water, the “Ship Channel” improved considerably, with the “Inner Bar” gradually decreasing to “a short narrowing of the deep fairway.” Having addressed the German Voluntary Association, the German shipping interests then had their petition translated into English and forwarded to
the Chamber of Commerce and all Shanghai Associations that were concerned with the river. 61

In the reply by the American Association of China, the long history of effort by the Shanghai community—extending over forty years—was emphasized, as was the fact that large-scale work on the river was very recent. Consulting the records of the years 1902 to 1906, the Americans concluded that the rise in the river bottom and reduction in water depth at the end of summer each year was normal; thus, measures should be based on observations of a series of years, not just one year. 62 The British China Association reply was more unyielding, stating that from the point of view of the British Shipping Firms, the river’s current condition was satisfactory. Moreover, it would be “extremely unfair and injudicious” to question De Rijke’s scheme without better evidence. 63

German shipping interests reacted angrily and called upon their local home governments. On December 12, 1907 Norddeutscher Lloyd addressed the Imperial Prussian envoy Prince Schönburg-Waldenburg in Hamburg concerning their local Director of Superstructure Bücking’s evaluation of the Huangpu plan. On July 20, Bücking told the Bremen Senate that the maps, newspaper clippings and reports given to him were not sufficient for him to draw any competent conclusions. 64 Despite Bücking’s reticence on this occasion, it was clear that the technology of the Junpuju’s operations had become increasingly politicized. Disputes over plans to reengineer Shanghai’s waterways pitted the nationals of one state against another, recreating Europe’s national rivalries on China’s coast. Science did not take the form of a disinterested technocratic discourse; it was thoroughly imbricated within commercial and international politics. The impact of this on the history of the Junpuju, and on Chinese perceptions of Europe more broadly, is seen in the following section.

Meanwhile, there were problems with the revenue. As part of the Qing government’s efforts in rights-recovery, the state was eager to bear the full financial burden of the river work; the Qing government decided to tap into the tax revenues from opium. But on September 20, 1906, a new campaign to remove poppy cultivation from China began. As Mary Wright has pointed out, the anti-opium campaign was a risky one: opium was the most profitable crop in many of the poorest areas and an important source of revenue and relief for government and local society alike. 65 In 1906 Sichuan produced 40 per cent of the empire’s opium, yet by 1910, poppy cultivation was nearly eradicated in the

61 Ibid., Shanghai, October 26, 1907.
62 Ibid., November 15, 1907.
63 Ibid., November 19, 1907.
64 Ibid., Norddeutscher Lloyd Bremen to Hamburg, December 12, 1906.
65 Mary Clabaugh Wright, “Introduction” to China in Revolution, 14.
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Sichuan basin. Because of the crackdown on opium in Sichuan, the governor-general Zhao Erxun reported there was now less revenue from the opium tax that could be contributed to funding the work on the Huangpu River. The Sichuan government’s fighting in Kham (Eastern Tibet) was also drawing on the funds: in short, Sichuan government was spending more than its tax income. During the first year, it was supposed to contribute 130,000 taels and then subsequently 60,000 each year for ongoing work. Despite the growing financial crisis in Sichuan, Zhao Erxun still sent 50,000 for the Huangpu work. Sichuan’s continued payments showed the empire-wide significance of the scheme, but the shortfall in the remittance left a gap in the Junpuju’s budget.

**Corruption**

Scholars of imperialism have shown that corruption was a regular feature of the operation of the great, European monopolistic trading companies such as the East India Company, and Robert Bickers has discussed the perceptions of the corrupting influence of the British on Americans in Shanghai during the 1920s. Historical narratives on the decline of the Qing focus on corruption among Chinese government officials, and rightly so. Yet the corruption in Western companies operating in China in the late-nineteenth and early-twentieth century also shaped the course of Sino-foreign relations, and no study as yet has discussed how Western corruption has shaped the perception and contours of the Western presence in China.

With the support of Gu Hongming, on March 8, 1908 A.P. Drakeford, an overseer in the employ of the Junpuju, made the confidential statement that M. Kamsteeg, the superintendent employed by the East Asiatic Dredging Company (EADC), offered him bribes and tried to persuade him to make false returns on the amount of matter that had been dredged. Despite Gu’s support, the complaint went unnoticed in the short-term and Drakeford was dismissed shortly afterwards following a fight with a crewmember of one of the dredgers. A few months later an employee wrote to the Junpuju management alleging that there were irregularities in connection with the dredging work. Enclosed was a letter from Arie Renaud, who was the former dredging master for the EADC, and since dismissed for drunkenness. In the letter, Renaud accused his former employers of

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66 Judith Wyman, “Opium and the State in Late-Qing Sichuan,” 212.
67 AS-IMH: 02-06-008-03-006.
systematically swindling the Junpuju, and several of the Junpuju overseers of receiving bribes, called “hopper money.” On August 9, Mills, one of the Junpuju overseers, admitted to Gu Hongming, Sergeants Bookless, and McDowell that he received “hopper money” for over-measuring barges and falsifying returns, and signed a document stating this. On August 11, Mills admitted the same to De Rijke and Captain Forbes. On the same day, the EADC wrote to the Board stating that they had paid “hopper money” to their employees. Shortly afterward, Renaud died in a hospital, which prevented libel action from being taken against him by Junpuju employees. With the exception of Mills, all of the employees accused, denied on oath receiving “hopper money” from the contractors.70

The Liangjiang governor-general appointed a commission to investigate. On August 27 the Consular Body objected to the commission and proposed that the Board conduct its own investigation. Statements and other supporting data were prepared by Captain Forbes and submitted by De Rijke, which completely contradicted the reports sent in by Gu Hongming, Renaud, and others. On September 21, the EADC denied the accusation of swindling and maintained that “hopper money” was only paid for legitimate work done. On September 17, the Commission of Inquiry, which was made up of H.E. Hobson, and the Daotai’s interpreters J.O. Anderson and Y.T. Ouan, opened and sat for fifteen days. Mr. Schregardaas, an assistant in the Customs, acted as an interpreter of Dutch when required.71

On September 17, 1908 the first witness was called up: De Rijke. He expressed regret at being uninformed of Drakeford’s letter of March 8, 1908, otherwise he would have taken steps to prevent “hopper money” from being paid out to conservancy overseers. Hobson then drew attention to the fact that the letter was addressed to Gu Hongming and marked “confidential.” On September 18, Stratton, an engineer employed by the Junpuju, denied Renaud’s accusations against him and stated that he was bringing a libel charge against Renaud in the Dutch Court. Overseer Mills admitted that he and all other Conservancy overseers connected with dredging received “hopper money” from the Dredging Company. He was complicit with over-measuring barges and entering extra barges in the records. Other company employees continued to deny receiving any money.

Renaud then testified that the Contractors Overseer Kamsteeg told him to either fill or half-fill barges. Kamsteeg also ordered additional barges to be entered into the register books. Drakeford had refused to approve the alterations and additions being entered, which led to his dismissal. On September 25, Mr.

70 TNA: FO 228-2631, “Report on dredging malpractices.”
71 Ibid.
De Graeff, the manager of the EADC, stated that he could not say whether Junpuju overseers accepted the “hopper money”; but that his company “realized and deplored their mistake in paying it,” maintaining that the money was used to expedite work, with “no suspicion that any-thing underhand had been practiced.”

On September 29, Captain de Jong, who was master of the Dredger “Cycloop” and employed by the Contractors, testified about his record-keeping method, which basically consisted of a chalk tally that was eventually copied into the registers. The Conservancy overseers in turn kept their own registers, and De Jong testified that he thought the overseers were not particularly strict in keeping their own registers, regularly measuring in favor of the contractors. Moreover, De Jong noticed that either Altes or Kamsteed had added additional barges in his books. Because De Jong feared the consequences, he did not dare to make any protest. De Jong testified that the faulty record-keeping practices were “naturally made to defraud China.” Testimonies by deck hands, overseers, and engineers testified to faulty record-keeping, and that three or four additional barges were added per night.

On October 15, in face of overwhelming testimony and evidence, the EADC acknowledged the allegations. The next day, De Rijke confirmed that all told, the extra entries amounted to “some 400 barges loads or say 100,000 cubic yards and perhaps even a little more.” De Rijke then proposed that the EADC should be fined for the “trouble and shame brought by the case” and should be made to dredge half a million cubic yards without charge, which the Company accepted the next day. Mills then confessed to receiving “hopper money,” and De Rijke subsequently stopped dredging for two days. Dredging resumed afterwards, but all night work stopped. Hobson recommended that De Rijke’s offer of 500,000 cubic yards of dredging be accepted, but the Shanghai Daotai wanted a cash payment, which the EADC refused.

The Chinese Ministry of Foreign Affairs was then given a copy of the proceedings of the investigation by the Dutch legation. There was concern among the foreign diplomatic community that the proposed settlement “did not commend itself to public press” which was insistent that “no settlement should be ratified unless provision is made for the publication of all the details.” On December 15, 1908, the German Consul-General at Shanghai, Von Buri, suggested to the Senior Consul that the Conservancy Board be asked to show a

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72 Ibid.
73 Ibid.
74 Ibid.
75 Ibid.
76 Ibid.
statement of accounts—the “total amount of money spent up to end of the current year”—so that the money still available for the conservancy scheme could be known. Von Buri then inquired into whether the original stipulated amount of 9,200,000 taels of the 1905 agreement was sufficient to carry through the whole work between Jiangnan Arsenal and the mouth of the Huangpu. On February 4, 1909, the Board gave its reply: 1,440,069 Shanghai taels were still available, which at the current rate of expenditure, would be enough for two more years of conservancy work. Since De Rijke was only concerned with the lower part of the river, and not with the entirety of the river up to the Jiangnan Arsenal, he was unable to give a fair estimate of what the costs would be; as a matter of fact, his estimate for just the lower part of the river was a gross under-estimate. British Consul-General Pelham Warren conceded that the “question of raising further revenue to enable the scheme as stipulated in the Conservancy Agreement to be carried to a satisfactory conclusion must before long engage the attention of the Chinese government.”

Meanwhile, the German Consul-General tried to convince the Consular Body to hold a public investigation. From the British point of view, the stance of the German Consul-General confirmed “the general impression, alluded to in the statement drawn up by the Dutch Legation, that the Germans are making the most of this undoubtedly discreditable incident.” The Consular Body neither agreed to the German proposal, nor accepted the East Asiatic Dredging Company’s offer to dredge 500,000 cubic yards free; instead a committee was appointed to examine the Conservancy board’s report.

On behalf of local companies, the Hamburg and Bremen senates continued to monitor the situation in Shanghai. C. Vering, which had earlier submitted tenders to complete the dredging work, again addressed the Hamburg government to be considered for the reorganized work on the Huangpu River. On April 20, 1909, the office of the Regierungs-Präsident of Cologne wrote a secret report on the Cölnische Tiefbau-Gesellschaft. Established in 1899 by Adolf Schumacher of Cologne and Salomon ten Bokkel Huinink in Ubbergen (Holland) and Bruder Anton ten Bokkel Huinink in Amsterdam with 300,000 marks, the Cölnische Tiefbau-Gesellschaft was in the business of civil engineering and deep dredging. According to the report, the EADC had quite a few financial problems in Shanghai; moreover, Adolf Schumacher had told a local engineer that the Cölnische company and EADC were one and the same.

78 Ibid., Shanghai, February 9, 1909.
79 Ibid., Peking, January 18, 1909.
80 BArch BL: R 901-17983, Hamburg February 25, 1909.
81 Ibid.
Media, Public Opinion and Rights Recovery

Both the Chinese- and Western-language press reported on the Huangpu River’s developments. Although the British attempted to hide the corruption case, imperial rivalries exposed the shenanigans of the Dutch company. Divisions among the foreign community enabled public debate about the Junpuju’s work, and the readership of the Treaty Port Western language newspapers could, in the media of the 1900s, actually carry on a real dialogue with editors. Regular updates on the river’s condition and the progress of reconstruction were printed in the Western language media. Entire reports and meeting minutes were reproduced. For example on May 10, 1907, the North China Herald provided its readers with the legal framework for the legitimacy of the project, an update on new appointments, details on work so far accomplished including the cost, comparison of the current work with previous surveys and projections, and a detailed summary of expenses.

Initially the Anglophone press was critical of the German role in exposing the situation of the Junpuju: the British suspected the Germans of simply causing trouble to try to exert their own influence. Yet, as more facts about the corruption were unveiled, there occurred a shift in opinion among the commercial and diplomatic community at Shanghai that suggested that there needed to be reorganization and reconceptualization of the river work.

On December 19, 1908, Shenzhou ribao published a cartoon which reflected the declining Western prestige in Chinese perception (See Fig. 2). In the first frame, two Chinese men stand outside the building of the Junpuju. The first man exclaims: “This is truly a model of civilization.” The second man agrees: “To gaze at the brilliant exterior is blinding!” In the second frame, the first man suggests to the other that they go in to see what is inside. The second man asks about the black vapor emitting from the window. We see that the text on the black vapor says: “Reports of Western newspapers.” In the final frame, the two men are inside the building, which is dark. The first man cries out: “Oh, it is so dark and black inside!” The second man simply states: “This is civilization!”

The Western language press was similarly disdainful of the large amount of funds that was siphoned away (See Fig. 3). In this cartoon, we see two men: one a Chinese Daotai official and the other a Westerner who bears resemblance to Johannis De Rijke. De Rijke has his hands out, palms facing upwards as if to show he has nothing. The Chinese official looks askance at him and says: “What! More money for the Whangpoo? Does this man think I’m made of money?”
Gu Hongming’s letter to the editor of *The China Gazette* was reprinted on June 15, 1909 and provided a simplified account of British efforts to dredge the Huangpu and Germany’s ambition to have its own national company carry out the work. Gu Hongming attributed the scandal—that is, the exposure of Dutch
corruption—to Germany being “irritated” so that “her representatives began to keep a watchful eye on the working of the conservancy scheme with the result that a great scandal was soon unearthed and most ingenuously canvassed.”

Although the corruption itself was deplorable, Germany could “hardly be too strongly condemned for her attitude in the matter although people will say, no doubt, that any other power would surely have done the same. Altruism finds no place in present day diplomacy.”

On November 1, 1909 both Norddeutscher Lloyd and Hamburg-Amerika Linie wrote to the new German Chancellor Bethmann Hollweg about their concerns for the Huangpu River correction. Norddeutscher opined that the Chinese government should heed the views of those shipping lines who made significant payments in contribution to the work, and then detailed their own contribution to the river correction as being no less than 160,000 marks (or 63,000 taels). On September 6, the application process for a new dredging company to resume work on the river was opened. Two applications were received. One was from a Chinese syndicate named Yih King Co. whose consulting engineer E. Scherer was a German national and also occasionally in the service of the German navy at Qingdao. Scherer made a bid of 24 taels for every 100 cubic yards. The second bid came from the former dredging company EADC (since October 1 renamed Netherlands-French Harbour Works Co.), which bid 27 taels for every 100 cubic yards.

Meanwhile, the dredging stopped and 100 to 200 Chinese laborers were idle at the Huangpu River site. The Chinese government contracted the Chinese syndicate Yih King Co. With the help of a subsidy by the Chinese Daotai, Yih King Co. purchased one small dredger and four lighters that had been used in the German colony at Qingdao. Chinese official and commercial circles considered that a Chinese company’s having won the contract to be an achievement.

How did Chinese officials perceive the exposure of Western corruption? A memorial approved by the Liangjiang governor-general Zhang Renjun laid out how Qing China envisioned regaining sovereignty over the river. The stated objective was “to finish and wind up Conservancy affairs as soon as possible and to get back China’s sovereign right.” This was to be done in the following steps. First, the memorial reasoned, the Boxer Protocol had stipulated that the expenditures would not exceed 9,200,000 Haiguan taels, with the appropriation to be spread over twenty years. However, when an agreement with De Rijke was

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83 BArch BL: R 901-17985, Bremen November 1, 1909.
84 Ibid., dated November 4, 1909.
85 PAAA: Peking II-141229, Shanghai Mercury, September 1909.
86 BArch BL: R 901-17986, Shanghai, December 2, 1909.
87 TNA: FO 228-2631, June 8, 1909.
reached, there was a stipulation for completion of the work in four years. An account of the work on the clearing of the channel was presented. The inadequate work by the EADC was also revealed. On October 29, 1909, the Qing Ministry of Foreign Affairs addressed the foreign Diplomatic Body: speedy resumption of the work was requested and the Qing state claimed that it could “raise funds and arrange herself,” and confidently projected that work would be finished by next spring or summer.88

By November 1909 the De Rijke scheme was fully discredited. The Germans played a central role in exposing the squandering of Chinese government funds under De Rijke’s supervision. Now was a critical juncture for German shipping interests: a replacement was needed for De Rijke’s post, otherwise the German Foreign Ministry’s earlier efforts might be in vain.89

On May 17, 1910, the Junpuju terminated De Rijke’s tenure as Chief Engineer. The Board cited that the simpler work of maintenance could be carried out by another engineer “less conspicuous attainments.”90 Again, the decision was disputed, and again the lines of the dispute fell along national and political boundaries. The Chamber of Commerce protested the action in a letter, while the German Consul-General objected to the objection. A vote was taken, in which seven Consuls voted for supporting De Rijke’s continuation, five against, and four abstentions.91

A new engineer of Swedish nationality was appointed as De Rijke’s successor. Heidenstam had the rank of captain and was a member of the Royal Swedish Corps of Engineers. Just over thirty years old, He was less than half De Rijke’s age, and with his appointment to the Chief Engineer post, several circumstances of the Junpuju changed to the favor of the Germans. The new Swedish engineer inquired privately with the German Consulate for a German hydraulic engineer to be named his Assistant Engineer.92 The German government responded quickly, but the Shanghai Chamber of Commerce had approved the appointment of two English engineers, which, in the eyes of the German government, would ensure the continuity of English influence to the detriment of German interests. Because of the positive role that the Germans played in exposing the shenanigans of the other Western powers, the Chinese government perceived the Germans favorably; thus the German government succeeded in having Emil Blunk of

88 PAAA: Peking II-1411, October 29, 1909.
89 BArch BL: R 901-17992, November 16, 1909.
90 TNA: FO 228-2631, Office of the Whangpoo Conservancy Board, Shanghai, May 17, 1910.
91 TNA: FO 228-2631, June 8, 1909.
92 StAHH: January 12, 1911 Bestandnummer 111-1 Signatur Cl. VI. No. 14a, Vol. 1, Fasc. 26 in Senatskommission für die Reichs- und auswärtigen Angelegenheiten.
Hamburg, appointed as Assistant Engineer of the Junpuju. Heidenstam prepared a report in which he evaluated what had been and what was to be done. De Rijke’s plan for the Huangpu, to which the Germans had long objected, was finally abandoned and the Franzius-Bates plan, which opened the Ship Channel and closed the Junk Channel, was adopted.

**Conclusion**

After the outbreak of the First World War, the new Chinese government was under British pressure to declare war against Germany. Gu Hongming, who presided over the corruption hearing of the Junpuju, became Vice-Director of the Ministry of Foreign Affairs in 1908. Gu was a patriotic nationalist—he endeavored to roll back the tide of imperialism during his service as a Qing official—but during the 1911 Revolution he made clear his position as a Qing loyalist. In 1911, he returned to Shanghai to work at the Nanyang Gongxue, the predecessor to Shanghai Jiaotong University, and being vocal about his anti-revolutionary views made him unwelcome by the students. Subsequently, he went to Qingdao where he joined other Qing loyalists, including former colleagues from his time working under Zhang Zhidong. In 1915, Gu returned to Beijing to teach in the English literature department. That year, his book *The Spirit of the Chinese People* appeared: in it was an attempt to understand the origins of the First World War. Gu characterized Britain as “worship of the mob” and Germany as “worship of might.” Gu’s view was that the revolutionary Chinese, those returned students from Europe and America, had “learnt the European mob in Shanghai how to misbehave themselves; to behave themselves not as good citizens, but as a mob—a mob encouraged, coddled and worshipped by the British diplomats and the British Inspectorate General of Customs in Peking.” Gu’s experience in Shanghai as the Chinese government appointee in the Junpuju was still fresh in his mind when the European war broke out. For Gu, the imperial rivalries in the Junpuju were a microcosm of European diplomacy and politics. Gu called German diplomacy “tactless” in its pursuit of righteousness, blaming the “tactlessness of the German diplomacy” as well as pursuit of might for being “directly responsible for the war.”

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93 Ibid.: Bestandnummer 111-1 Signatur Cl. VI. No. 14a, Vol. 1, Fasc. 26 in Senatskommission für die Reichs- und auswärtigen Angelegenheiten.
94 Ibid.: Shanghai November 14, 1911 Bestandnummer 111-1, Signatur Cl. VI. No. 14a, Vo. 1, Fasc. 26 in Senatskommission für Reichs- und auswärtigen Angelegenheiten.
96 Ibid., 14–15.
and political leadership in Shanghai was deeply divided over which of two plans to transform the Huangpu River to adopt. Germans favored one plan, created by a German engineer; while the British favored the plan of a Dutch engineer. Their support for one plan rather than another was guided not by disinterested, rationalistic considerations of the science behind the plans, but by national and commercial rivalries. This essay is agnostic on whether German science presented a better plan than De Rijke’s: plans were implemented not because they accorded with a rationally better scientific understanding of the river. The operations of the Dutch company engaged to deploy new dredging technology on the river were ended, not for reasons relating to the technology itself, but the ire of a small state that saw an opportunity in exposing its corruption. As a British diplomat put it, the Germans have made “the most of this undoubtedly discreditable incident,” and Germans gained more influence over the science and politics of the river’s transformation. Chinese seemed to benefit too: awarding Yih King Co. the contract to dredge the Huangpu River marked the beginning of Chinese use of industrial technology and corporate organizational forms in the transformation of its own rivers.

Of all phenomena supposed to be characteristic of modernity, science is perhaps that most imbued with a mystique of rationality, and older histories of science tended to assume a natural progression, the absence of which signaled a block imposed by some non-rational cultural obstacle. In the past, the apparent failure of China to more rapidly and extensively adopt Western science during the Self-Strengthening Movement was often attributed to non-rational “traditional culture.” Recent historians, such as Benjamin Elman have revised this narrative by showing that in fact Qing Self-Strengthening institutions were more thorough in their adoption of Western technology than was often assumed. The revision is compelling, yet it does not force us to question the core assumption of older narratives of the history of science. If it turns out that there was no failure to adopt Western technology in late-nineteenth century China, then it might still be possible to see the history of science as a natural, rational progression. Yet a close examination of the Junpuju in Shanghai has provided a study of one untenable aspect of this view of science, as well as arguing for the importance of interrogating the links between the political contexts in which science is adapted to the process of science adaptation itself. Moreover, large-scale infrastructure projects—whether modern and industrial or not—required considerable outlays of capital and labor investment and necessitated consensus by institutions across government, commercial and societal sectors. In the dusk of high imperialism and late imperial power, the negotiations over the Huangpu River in semi-colonial were thus exceptionally fraught.

Modern urban and river planning challenged riparian population livelihoods
that came to be displaced in favor of modern wharves and docks. This was not a bi-polar world of foreigners versus Chinese, or imperialism versus nationalism: it was competition among competing Western interests that escalated in the 1900s and entwined with corruption in large infrastructure projects. In the way they held foreigners accountable for their corruption, we see a dynamic late-Qing state during the Reform Era, opportunistically rewriting and renegotiating the terms of water conservancy for national sovereignty.

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SMA. Shanghai Municipal Archive.

StAHH. Staatsarchiv Hamburg, Germany.

TNA. The National Archive in Kew, Britain.

