Shanxi, Greater China, and the Famine

It was in Shanxi Province that the Incredible Famine threw its longest shadow. The province lost between one-third and one-half of its prefamine population of between fifteen and seventeen million people to starvation, disease, and flight. Even today elderly villagers recall terrifying stories of how starving family members killed and ate one another during the disaster. Before the famine struck, however, Shanxi had been thriving. As one of the few parts of China not severely affected by one of the three gigantic mid-nineteenth-century rebellions, in the early 1870s the province was home to the lucrative Hedong saltworks, an impressive banking network, and merchants powerful enough to dominate China's trade with Mongolia and Russia. How, then, did the drought that struck between 1876 and 1878 result in a devastating famine that brought such a wealthy and strategically important part of the empire to its knees? To address that question, I look closely at prefamine conditions in Shanxi and, more broadly, consider how the formidable challenges facing the Qing Empire in the late nineteenth century hampered the state's ability to prevent a drought from escalating into a major famine.

THE LAY OF THE LAND: SHANXI BEFORE THE FAMINE

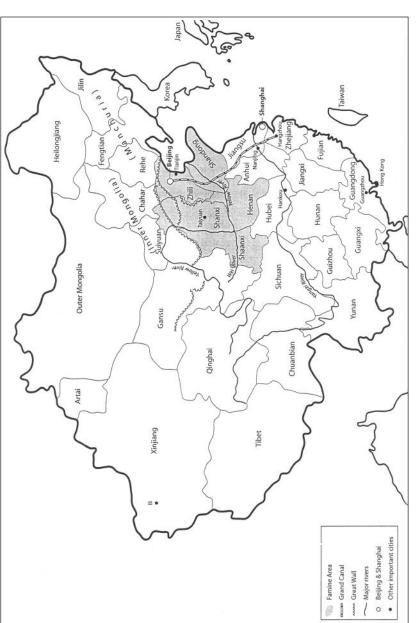
Only a decade before the famine, the Reverend Alexander Williamson of the National Bible Society of Scotland and his colleague Jonathan Lees of the London Missionary Society took a nine-hundred-mile journey through the North China provinces of Zhili, Shanxi, Shaanxi, and Henan. Some seventy years earlier, between 1793 and 1795 a Zhili native named Li Sui spent two years traveling through forty-eight prefectures, counties, and cities of Shanxi overseeing examinations as the secretary to the provincial education commissioner (*xuezheng*). Both Williamson and Li Sui published detailed descriptions of their travels in prefamine Shanxi. Their accounts reveal the prosperity that characterized the province in the late-Qing period.¹

Located on a loess plateau about two hundred miles west of Beijing, Shanxi Province is approximately the size of England and Wales combined. The Shanxi plateau rises nearly four thousand feet above the plain of Zhili, and the province is cut off from the North China plain and the seacoast by mountains. The Yellow River marks Shanxi's border with Shaanxi Province to the west and Henan Province to the south, and mountains and the outermost Great Wall mark Shanxi's northern border with the Mongol areas of Suiyuan and Chahar (today's Inner Mongolia). In the center of the province lies the densely populated Taiyuan basin, home to both the provincial capital and Qing Shanxi's wealthy banking institutions. The Fen River flows from the mountains north of Taiyuan toward the southwest, finally joining the Yellow River south of Qing-era Pingyang Prefecture. That river did not dry up during the drought, so the fortunate farmers who owned land along the river were able to irrigate a few crops. The southernmost agricultural region in the province is the Yuncheng basin, a populous area known for its enormous salt lake and the important saltworks.²

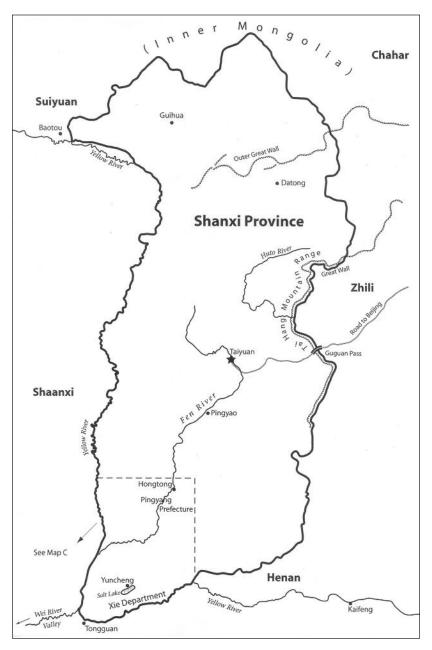
Li Sui and the Williamson party both entered Shanxi via the great Guguan Pass, a mountainous stretch of about 130 miles that served as the principal eastern entrance into Shanxi. Li Sui arrived at the pass in June of 1793, after leaving his former post in Jiangsu Province and traveling by cart through Shandong and Zhili. He was impressed by what he saw in Pingding, the area just across the pass from Zhili. The people of Pingding were educated and cultured, he wrote. Moreover, the area was very rich in iron ore, so the poor there made a living by mining iron.³

Williamson, Lees, a Chinese preacher, a servant, and several carters set out from Beijing in September 1866. After traversing the level plain of Zhili for about a week, they left the imperial highway at Jingding and turned west, entering the Taihang mountains that separate Zhili from Shanxi. Although they transported heavy cartloads of Christian books over the rugged Guguan Pass, Williamson's party suffered no mishaps and took only about five days to traverse the mountain ranges and enter

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Map 1. The Qing Empire and the North China Famine (Graphic Services, Indiana University)



Map 2. Late-Qing Shanxi (Graphic Services, Indiana University)

the plain of Taiyuan.⁴ Eleven years later the narrow road through the Guguan Pass became the major artery through which the government attempted to move thousands of piculs of tribute grain from the port of Tianjin into Shanxi to prevent mass starvation there. The pass proved tragically inadequate for this purpose. A report written by R. J. Forrest, the chairman of the China Famine Relief Committee at Tianjin, described the road in terms that would have been unimaginable to Williamson back in 1866:

The most frightful disorder reigned supreme along this route. Huai-lu Hien [xian], the starting-point, was filled with officials and traders, all intent on getting their convoys over the pass. Fugitives, beggars, and thieves absolutely swarmed. The officials were powerless to create any sort of order among the mountains. The track was frequently worn out, and until a new one was made, a dead block ensued. Camels, oxen, mules, and donkeys were hurried along in the wildest confusion; and so many perished or were killed by the desperate people in the hills for the sake of their flesh, that the transit could only be carried on by the banded vigilance of the interested owners of grain, assisted by the trained bands or militia. . . . Broken carts, scattered grain-bags, dying men and animals, so frequently stopped the way, that it was often necessary to prevent for days together the entry of convoys on the one side, in order to let the trains from the other come over. ⁵

The scenes of chaos and death that Forrest witnessed in the Guguan Pass in the late 1870s were repeated throughout southern and central Shanxi. Before the famine, Li Sui and later Williamson described those same areas as thriving and prosperous. Li Sui, while celebrating the Lantern Festival holiday in Taiyuan, witnessed the liberal use of coal. Every year the people of Taiyuan marked the festival night by piling up towers of coal several feet (*chih*) high in their doorways and burning them, he wrote. The towers were called "Fire Pagodas," he reported, and they made the night streets look as bright as day. Williamson devoted pages of admiring prose to the "great and varied" nature of Shanxi's mineral resources, particularly its abundant iron and coal supplies. "At almost every road falling into the imperial highway from the north, we met donkeys laden with coal," he wrote. "We saw pit after pit, collier villages, and all the accessories of coal-mining on the hill-sides. . . . The blocks piled up at the mouths of the pits."

The Shanxi Li Sui described was a place of good food, wine, and well-dressed women. He enjoyed delicious dark-purple grapes in Wen Shui and drank the famous wine made in Fenzhou with enthusiasm, but was

perhaps most impressed by the variety of food available in Zezhou Prefecture in southeastern Shanxi. It was said that Shanxi people went their whole lives without tasting crab, he wrote (presumably because the province was far from the sea), but in Zezhou, which traded with nearby Henan, people could enjoy crab, not to mention papaya and many other fruits.8 Li Sui also noted the wealth of Jiang Department (Jiangzhou) in southwestern Shanxi, the section of the province that would be most severely affected by the North China Famine. Jiangzhou City was a market hub where crowds of merchants converged, he reported. Since it overlooked the Fen River, people could travel by boat from the city to the Yellow River. People in Jiangzhou, continued Li, valued extravagance to the point that young men and women wore trailing garments of fine silk. Shanxi residents called the area "Little Suzhou," presumably because it reminded them of the wealthy South China city famous for its canals, silk production, and beautiful women. Later in his diary Li claimed that all throughout Shanxi it was the custom for men to labor while women enjoyed leisure. Not only the women of wealthy families, he stated disapprovingly, but also poor women who lived in narrow alleys all powdered their faces and oiled their hair. During the 1870s similar critiques of female extravagance were prominent in famine accounts written by local literati in Shanxi.

Williamson's account of prefamine Shanxi emphasized the unusual size and wealth of Shanxi's population. "In Shanxi the cities are more numerous and more populous than anywhere else," he wrote. "The villages of Shanxi are very numerous; they are generally surrounded with high mud-walls, and full of goods of every description, and of people giving not a few indications of wealth and prosperity." Williamson described Taiyuan, the provincial capital, as "a large and noble city" with a population of about 250,000 people. Well-kept walls, a moat, and eight city gates (each with a "splendid" tower) enclosed streets from fifty to seventy feet wide and many good shops. He visited an imperial gun and cannon foundry whose workers were paid a wage of one hundred cash per day as well as food. Eleven years later women and children would be sold on the streets for less than that sum.¹⁰

Williamson was even more impressed by the province's thriving trade networks, evidenced by the abundance of foreign goods in Shanxi's market towns. "I saw foreign goods in all their busy cities and markets, such as Manchester cottons, Russian woolen goods, matches, needles, etc.," he stated. "I was surprised to find everywhere such quantities of Russian cloth; they evidently carry on a most extensive trade through Mongolia.

We met Russian-speaking Chinamen in several cities. . . . I found also that camel-hire through Central Asia was remarkably inexpensive." He also commented on the wealth of the Yuncheng basin, in the far southwestern corner of the Shanxi plateau. Yuncheng City had a population of 80,000 to 100,000, Williamson estimated. He described the saltworks at the nearby salt lake as a thriving place that employed three hundred different salt merchant firms and produced a sizable revenue for both the Qing government and Shanxi merchants. 11

Li Sui also emphasized the important role that trade played in Shanxi's economy, though he was less enthusiastic than Williamson would be later about its benefits. In Fenzhou and Pingyang prefectures, areas in south-central and southwestern Shanxi that would suffer terribly during the famine, most people depended on trade to make a living, he claimed. Li Sui identified three types of people who got rich through trade rather than farming. Wealthy financiers who established accounting offices (*zhangju*) in Beijing and other large cities made huge profits by charging high interest rates on loans to officials waiting for appointment to office. Expectant officials who had passed the examinations still needed substantial amounts of cash to pay for gifts and favors that might help them procure a good post. ¹²

While the wealthiest merchant families in Fenzhou and Pingyang got rich by playing on the hopes of expectant officials, other entrepreneurs established pawnshops that preved on the commoners in their own locales. According to Li Sui, the pawnshop owners in Pingyang and Fenzhou were anything but scrupulous. If one brought them gold, "they said it was impure, if pearls, they said they were like rice, if a fur coat, they said it was moth-eaten, if clothing, they said it was tattered. [They] speak evil of all objects so that they can lessen their value," he explained. People who wanted to redeem their possessions had to pay 30 percent more than they had initially received for the objects, and those who could not redeem belongings within two or three years lost them forever. "In name," he railed, pawnshops "are convenient for people, but actually [they are] worms robbing the commoners." ¹³ Contrary to Li Sui's view, famine accounts written during the 1870s demonstrate that starving families saw the chance to pawn jewelry, furniture, and clothing as a lifeline that provided cash to buy food at famine prices. Yet as the disaster worsened, so many people tried to pawn their possessions that pawnshops were overwhelmed and eventually had to close their doors. 14

Li Sui also described the muleteers who transported goods and people around the province, traveling over one hundred li per day, or 30,000 li

per year. ¹⁵ During the Incredible Famine, this segment of Shanxi's population fared no better than the pawnshop owners or peasantry. Muleteers and carters lost their jobs in the 1870s because the animals they depended on to make a living were either commandeered by famine relief officials in charge of transporting grain into Shanxi or stolen and eaten by famished people.

Williamson's and Li Sui's descriptions of Shanxi before the famine, as well as recent scholarship by historian Henrietta Harrison, highlight the crucial role that trade and other nonagricultural pursuits played in late-Qing Shanxi. Because of the mountainous terrain in Shanxi, only about 20 percent of the land in the Qing period was cultivable. As noted by Li Sui, even as early as the 1790s a large proportion of Shanxi's population did not depend primarily on agriculture for employment. While poor in cultivable land, the province was rich in natural mineral resources including coal, iron ore, salt, tin, copper, marble, and agates. Many families thus made their living working in coal mines, iron foundries, saltworks, lime and pottery kilns, and paper-making centers. 17

Trade was even more crucial to Shanxi's economy, and young men were often expected to leave their home villages to work as merchants. Shanxi forms a natural corridor linking central China to Mongolia and the northwestern frontier. The imperial troops that the Williamson party witnessed passing through Shanxi in large numbers in 1866 were the most recent in a long line of troops whose presence contributed to the growth of Shanxi's trade networks. During the Ming period (1368–1644), Mongolia was China's main strategic frontier. Shanxi merchants made a fortune after winning government permission to operate the salt and tea trades in return for provisioning the frontier armies. After the Manchus made both Mongolia and China part of the Qing empire in the mid-seventeenth century, Shanxi merchants entered Mongolia and played an important role in the Sino-Mongolia trade. Once the Qing signed the Sino-Russian Treaty of Kiakhta in 1728, the extensive trade with Russia conducted at the Mongolian border town of Kiakhta also came to be controlled by Shanxi merchants. 18 In return for Chinese tea, silk, and cotton, they imported horses, sheep, and woolen cloth from Mongolia and Russia. They also marketed Shanxi's abundant supply of salt, iron, and coal to other areas in China proper.¹⁹

The merchant-run financial institutions that Li Sui observed in the 1790s became even more wealthy and powerful in the second half of the nineteenth century. Great trading houses used their profits to develop the Shanxi *piaohao*, one of China's main banking networks from 1850

to 1911. The Shanxi banks held and transferred government funds and acted as multipurpose intermediaries between the government and the money market.²⁰ Having begun in the 1820s, this banking system increased in scale during the Taiping Rebellion, when many provinces started remitting their tax receipts through the Shanxi banks because tax silver could not be safely shipped through rebel-occupied areas. Shanxi's trading houses and banks, based in the Yuncheng and Taiyuan basins, also established branch offices in Hankou, Shanghai, and other major cities in southern and central China.²¹

Famine folktales about the Incredible Famine highlight the importance of merchants in late-Qing Shanxi. A story that Chai Fengju from southern Shanxi's Dingcun Village heard as a child from her grandmother reconfirms that male family members frequently worked as merchants in other provinces. According to Mrs. Chai, during the Guangxu 3 famine, there was no rain for three years, and after a time purchasing a young child as a servant or future concubine cost only two eggs. A man named Zhang Yongsheng had a wife and two small children. Desperate to save her family, Zhang's wife willingly sold herself to a human trader from South China for 1,000 coins. Luckily a merchant who had just returned with a lot of money earned by selling goods in South China ran into the human trader on the road. To his horror, he recognized the woman purchased by the trader as his younger sister, who clung to him and cried when she saw him. When the merchant tried to redeem her, the trafficker initially refused because she was very pretty. Only after the merchant offered the trader every bit of his silver did the trafficker relinquish the sister and allow her to return home.²²

Few traces of late-Qing Shanxi's wealth, influence, and strategic importance are evident in the hundreds of letters and reports that foreign and Chinese relief workers wrote about Shanxi during the famine years. Missionaries who entered the plain of Taiyuan in late 1877, for example, wrote of encountering "the silence of stupefied misery." R. J. Forrest described how women struggled to bury their dead children, while dogs and crows feasted on those who had perished alone. "Gangs of desperadoes" terrorized those who dared to leave their homes, he wrote, and in each ruined house were found "the dead, the dying, and the living huddled together on the same stone bed." The Shanghai newspaper Shenbao published equally disturbing reports for a Chinese audience. Early in 1878 it reported that a filial son from a decent family had beaten his famished step-brothers to death for stealing the pittance of food he had procured for his starving mother, and then had confessed his crime

to the authorities in the hope that he and his mother might obtain food by being thrown into prison. ²⁴

Famine-related depictions of Shanxi shaped perceptions of the province not only among nineteenth-century observers but also among modern scholars who study the famine. Even now it is difficult to find Englishor Chinese-language scholarship on the disaster that portrays late-Qing Shanxi as anything but a drought-ridden, miserably poor, and inaccessible part of China. Chinese publications on Shanxi during the Incredible Famine routinely begin with descriptions of the province's mountainous terrain and transportation difficulties.²⁵ The most detailed English-language discussion of the famine, Paul Richard Bohr's book on missionary relief efforts, is heavily influenced by missionary depictions of Shanxi. Like the foreign relief workers who saw the province at its worst, Bohr highlights the "narrow, winding and often impassable roads over tortuous countryside" that separated Shanxi from the coast. Due to severe deforestation and soil erosion in Shanxi, he concludes, "even in normal times, farmers could barely eke out a living from this barren land." Mike Davis's more recent work on late-nineteenth-century famines also introduces Shanxi as "an impoverished, landlocked province." 26

Sadly, such descriptions of Shanxi came to fruition in the early twentieth century. In the decades after the 1911 Republican revolution, Shanxi was ranked as one of China's poorest provinces, and its mid-nineteenth-century surpluses gave way to yearly deficits of over seventy-five million Chinese yuan.²⁷ It continues to lag far behind China's thriving coastal regions.

No single cause accounts for Shanxi's decline. As Harrison has demonstrated, both the central government's decision to focus more attention on the southeast coast than on inland North China and the adverse effects of Mongolian independence and the Russian Revolution on the trade networks so crucial to Shanxi merchants played important roles in turning Shanxi "from a major trading corridor into an isolated and inaccessible province." Some aspects of Shanxi's decline, however, can be traced back to the Incredible Famine of 1876–79.

THE WAGES OF FAMINE

The North China Famine had a considerable impact on Shanxi and on the late-Qing empire as a whole. The disaster wrought additional damage on already weakened national and provincial finances. The customs official and historian of China H. B. Morse calculated that between 1876 and 1878 the Qing government granted more than eighteen million taels of tax remissions, equal to "more than one-fifth of one year's receipts of the imperial treasury," to drought-stricken Shanxi, Henan, Shaanxi, and Zhili. Revenues from the northern provinces remained low for several years afterwards as they struggled to rebuild their tax bases. The central government also allocated more than five million taels in direct aid for famine relief, and ordered provinces outside the famine area to loan additional relief money to the drought-stricken provinces. More than 2.2 million *mu* of Shanxi Province's roughly 56.4 million *mu* of cultivatable land was abandoned during the famine, so no taxes could be collected from those areas. This had a serious effect on the provincial treasury. Even before the famine, Shanxi's annual expenditures had exceeded its revenue by some two million taels per year, but after the famine this jumped to an annual deficit of roughly five million taels. 30

In addition to adversely affecting national and provincial finances, famine conditions hindered long-distance trade between Shanxi and its neighbors and within the province itself. The long drought made some waterways in Shanxi and Henan unnavigable, forcing salt merchants and others who ordinarily relied on water transport for at least part of their journeys to switch to far costlier land routes. Overland trade routes were also disrupted. The government commandeered as many boats, camels, carts, mules, and horses as possible in order to transport grain into the province. Moreover, both officials and merchants found it increasingly difficult to procure fodder for pack animals during the drought, and those that survived were in danger of being slaughtered and eaten by the starving populace. It thus became increasingly difficult for Shanxi merchants to transport their goods for sale elsewhere. The sharp decline in commerce during the famine is reflected in the 54.9 percent decrease between 1876 and 1878 in provincial transit tax (*lijin*) revenues.³¹

Local markets and industries suffered as well. In south and central Shanxi the local markets for salt, paper, silk, coal, and iron collapsed as people spent an increasing percentage of their income to buy food at famine prices. Local industries were also hurt by a loss of affordable labor because roughly a third of the province's prefamine population died or fled. Li Wenhai and three colleagues, in their book on ten great disasters in China's modern history, argue that Shanxi's traditional iron and silk industries never recovered from the ravages of the Incredible Famine. Jincheng County, for example, had nearly a thousand iron foundries in the 1850s, but only half that number after the famine. Moreover, the number of silk worker families in the Zezhou area is said to have de-

clined from "over a thousand" to only one.³² The famed Hedong saltworks, which had so impressed Williamson, also declined during and after the famine due to high transport and labor costs and low demand.³³

The demographic impact of the Incredible Famine is the most disturbing aspect of the disaster. While reliable data are lacking, all estimates posit population loss in the millions. In his March 1879 report, R. J. Forrest used data collected by foreign relief workers to estimate that 9.5 million people had died due to the famine—roughly 5.5 million in Shanxi, 2.5 million in Zhili, 1 million in Henan, and 500,000 in Shandong. Estimates increased in the years following the catastrophe. In 1922 the Peking United International Famine Relief Committee reckoned that between 9 and 13 million deaths had occurred. That is the range most commonly cited in later studies of the famine.³⁴

Shanxi bore the brunt of famine-related demographic loss. He Hanwei demonstrates that while the population of Shanxi, Henan, and Shaanxi grew rapidly from the 1760s to the 1850s, between 1850 and 1898 Shanxi's population actually declined by about 31 percent, Shaanxi's by 29 percent, and Henan's by 7.5 percent. While Shaanxi and to a lesser degree Henan had already experienced serious population losses before the famine because of the Northwest Muslim rebellion (discussed later in the chapter), in Shanxi's case the dramatic population decrease was primarily attributable to the famine.³⁵

Estimates of population loss in Shanxi during the famine vary widely. Toward the end of the disaster Shanxi's governor, Zeng Guoquan, wrote that nearly half of the people of Shanxi had died since the famine had begun and that deaths were continuing due to epidemic disease.³⁶ The edition of the Shanxi provincial gazetteer compiled shortly after the famine under Zeng Guoquan's order and published in 1892 stated that based on the province's population registers, no fewer than ten million people had died during the famine.³⁷ Foreign relief workers gave a lower but still sickening approximation: roughly 5.5 million of Shanxi's prefamine population of 15 million had "perished of famine and the subsequent pestilence."38 Liu Rentuan's recent gazetteer-based study of the famine's impact on Shanxi's population from 1877 through 1953 finds that both the province's prefamine population and famine-related loss were higher than the foreign estimates but lower than Zeng Guoquan's. Liu states that Shanxi's population dropped from 17.2 to 9.6 million between 1876 and 1880—an astounding 44.2 percent loss.³⁹ It is impossible to ascertain from gazetteer records how many of Shanxi's missing millions died during the famine and how many migrated to other areas.

Liu Rentuan also charts demographic shifts within Shanxi itself. Southwestern Shanxi, which was so prosperous before the disaster, suffered the greatest losses. Liu puts the prefamine population of southwestern Shanxi at 5.9 million, or 34.3 percent of Shanxi's total 1876 population of 17 million. By 1880 this area had lost 3.9 million people to death or flight, or roughly 66 percent of its 1876 population, and its proportion of the province's total population had fallen to 20.4 percent. There was heavy immigration into this depopulated area after the famine, but the region never regained its former preeminence in either population density or wealth. Even in 1953, when China's first modern census was conducted, the southwestern area constituted only 22.4 percent of Shanxi's total population. Liu argues that the famine hampered the province's development in the late nineteenth and early twentieth centuries. He attributes the dramatic decline in capital accumulation among Shanxi's rural and urban population to population loss, and asserts that the damage to the material wealth of Shanxi society also delayed cultural change in the province.40

PRC scholars argue that the Incredible Famine, in combination with other natural disasters that struck late-Qing China, impaired national as well as provincial economic development during the late-Qing period. Xia Mingfang, for example, asserts that the Self Strengthening Movement (1861-95), which aimed to enrich and strengthen China by fostering industrialization, was seriously hampered by a series of costly and destructive floods and droughts that drained the Qing treasury and diverted the attention of progressive officials away from modernization efforts. By demonstrating that natural disasters significantly impeded primitive capital accumulation and the development of commodity and labor markets in late-nineteenth-century China, Xia's research expands to the national level Liu's assertion that the famine hampered capital accumulation in Shanxi. 41 Mike Davis takes the discussion of the impact of "natural" disasters to a global level. The devastating famines that struck China, India, and Brazil in the late nineteenth century, he argues, both resulted from and hastened the transformation of "former 'core' regions of eighteenth-century subcontinental power systems" into "famished peripheries of a London-centered world economy."42

Whether one focuses on the local, provincial, national, or global level, the effects of the North China Famine were serious and long lasting. As the epicenter of this famine, Shanxi was particularly devastated. Contrary to the assumption often made in scholarship on the disaster, however, prefamine Shanxi was not a poor, isolated, or backward part of

China. Its banking and trading networks were of national importance, and its traditional industries provided its people with many nonagricultural employment opportunities. Shortly before the drought, Shanxi appeared to be in better economic shape than neighboring provinces. How, then, did the drought that struck the province in the mid-1870s result in such a destructive and unprecedented famine?

CONTEXT AND CAUSATION: AN EMPIRE IN CRISIS

The severe drought that struck North China in the late 1870s was the catalyst but not the underlying cause of the Incredible Famine. Droughts were nothing unusual in Shanxi, or in North China generally. Qing rulers and officials might well have agreed with economist and philosopher Amartya Sen's assertion that "droughts may not be avoidable, but their effects can be." They were well aware of the "high degree of uncertainty" concerning climate and water resources in the north, and throughout the eighteenth century and well into the nineteenth they took impressive measures to prevent droughts from escalating into famines. 43 The drought that began in 1875 was more prolonged and affected a much wider area than was usual even for North China. Nevertheless, in a "vast, integrated, and highly commercialized economy such as that of the Qing," a serious regional dearth did not have to result in a major famine.⁴⁴ Had such a serious drought occurred in the eighteenth century, when the Qing state's power and commitment to storing and distributing grain were at their apex, the state could have significantly reduced, though perhaps not wholly prevented, the ensuing devastation.

In contrast, by the late nineteenth century the Qing state had been considerably weakened by the mid-century rebellions, the pressure of foreign imperialism, and a lack of strong leadership. It was no longer capable of intervening in food crises to the extent that it had a century earlier. The government's failure to act in a timely manner was particularly problematic for grain-poor provinces like Shanxi that depended on early government intervention and on regional grain trade networks to obtain sufficient grain during a subsistence crisis.

Before the decline of the Qing granary system, which began in the 1790s and reached crisis levels after 1850, Qing officials relied on state and community granaries to keep grain prices down and to provide emergency relief during subsistence crises. As historians Pierre-Etienne Will and R. Bin Wong explain, "ever-normal granaries" (*changping cang*) were run by officials who bought and sold grain with the state's money. Gran-

ary officials sought to cushion the impact of seasonal price fluctuations by buying up cheap grain immediately after the harvest and reselling it at low prices during the lean period before the new harvest arrived. Evernormal granaries also served as emergency food banks that softened the impact of natural disasters by distributing granary reserves to the poor. In addition to the grain stored in ever-normal granaries, during the eighteenth century, grain-poor provinces like Shanxi stored between 20 and 40 percent of their total reported provincial grain reserves in semi-official or nonofficial community and charity granaries (*shecang* and *yicang*). These granaries were supposed to be run by local gentry and to rely on contributions from wealthy families rather than from the government.⁴⁵

The Qing granary system was vital to the welfare of drought-prone northern provinces. Pierre-Etienne Will's overview of the relief campaign carried out by the Qing state during the serious drought that struck Zhili and northern Shandong from 1743 to 1744 provides a vivid example of the high-Qing government's ability to prevent a natural calamity from degenerating into a full-blown catastrophe. During the 1743 drought, Zhili, unlike late-Qing Shanxi, had sufficient reserves in its ever-normal granaries to keep people alive until government grain issues could arrive. Moreover, once local reserves were exhausted, the high-Qing state kept some two million people alive for eight months by granting ten successive "allocations" of grain to Zhili. Due to the "very narrow margin of surplus in North China," nearly 75 percent of the relief grain the government rushed into Zhili had to be imported from tribute depots or granaries from other regions of the empire—53.3 percent from Yangzi valley provinces and 21 percent from areas in Mongolia and Manchuria. And the service of the relief grain the government rushed into Zhili had to be imported from tribute depots or granaries from other regions of the empire—53.3 percent from Yangzi valley provinces and 21 percent from areas in Mongolia and Manchuria.

As this eighteenth-century example demonstrates, it was crucial for grain-poor northern provinces like Shanxi to establish transport networks that could quickly import surplus grain from South China or from northern areas outside the Great Wall. More than a century before the North China Famine, mountainous Shanxi lost the ability to cultivate enough grain to feed its burgeoning population. Over the course of the eighteenth and nineteenth centuries the province imported more and more grain. Highly conscious of the instability of the food supply in Shanxi and neighboring provinces, activist Qing officials in the eighteenth century strove to increase the grain reserves at three strategic transportation nodes where the Yellow River meets the Wei River or the Fen River along Shanxi's far southern border with Shaanxi and Henan.⁴⁸

The Qing government experimented with transporting tribute grain from Henan up the Yellow River into Yuncheng or from Zhili through

the Taihang mountains into Taiyuan, but the difficulty of moving grain upstream or through the narrow Guguan Pass made those two routes impractical. They were used only in times of severe emergency. Normally, officials and merchants imported grain into Shanxi from the west and north. From the eighteenth century on, the province depended heavily on grain surpluses from neighboring Shaanxi's Wei River valley and from newly cultivated land north of the Great Wall.⁴⁹

Shanxi's wealthy grain merchants played a vital role in ensuring that the province imported enough grain. During the eighteenth and nineteenth centuries they regularly transported grain from central Shaanxi into the heavily populated Yuncheng area of southern Shanxi. After shipping Shaanxi rice and wheat in large boats down the Wei River, upon reaching the Yellow River border with Shanxi, merchants transferred the grain into smaller boats and transported it upstream via Shanxi's Fen River or carted it overland to Yuncheng. 50 Through their well-established trade networks, Shanxi merchants also procured grain from areas north of the province's main population centers and the Great Wall. Grain dealers transported grain surpluses from southern Inner Mongolia and northern Shanxi overland a thousand *li* (more than three hundred miles) to the Taiyuan basin. Merchants and Qing officials also attempted to move grain from the fertile Hetao region of Inner Mongolia to southern Shanxi via the Yellow River. The distances involved and the difficulties of navigating the river's often violent current, however, meant that importing sufficient grain from the north remained a problematic and costly endeavor. Until the mid-nineteenth century, Shanxi imported more grain from Shaanxi's Wei River valley than from areas "outside the wall."51

Beginning in the 1860s the Qing government's brutal suppression of the Northwest Muslim rebellion in Shaanxi and Gansu (1862–73) destabilized the Wei River valley and seriously hampered its ability to produce grain surpluses. The purchasing power of people in southern and central Shanxi enabled the province to import sufficient grain for more than a decade after the depletion of the vital Wei valley surplus, but grainhungry Shanxi was gradually forced to import more and more grain from the less accessible surplus areas of Inner Mongolia.⁵²

In sum, in spite of Shanxi's serious transportation difficulties and the province's inability to grow enough grain to support its own population, a combination of well-stocked government granaries and the wealth and flexibility of Shanxi's trading networks enabled officials and merchants to deal with annual grain shortages and years of dearth fairly successfully in the eighteenth and much of the nineteenth centuries. During the

Incredible Famine, however, Shanxi's ability to procure sufficient grain collapsed completely and spectacularly. The Qing government tried desperately to ship tribute grain into Shanxi from the east via the Guguan Pass, but as detailed accounts by contemporary observers reveal, those efforts were doomed.

Fiscal problems also contributed to the late-Qing state's inability to get grain into Shanxi in a timely manner. During the eighteenth century, high-Qing officials maintained an effective granary system and mustered enormous amounts of cash and grain relief during famines, in large part because the state's generous fiscal reserves normally remained at around twenty million taels. By the time drought struck North China in the 1870s, the Qing treasury had suffered major reversals. The decline in fiscal reserves began in the late eighteenth century, when the state spent some one hundred million taels to suppress the White Lotus Rebellion of 1796-1804. By the early nineteenth century, tax collection became more and more difficult, and the imperial clan had grown from 2,000 members in the early-Qing period to 30,000 members, their maintenance costing several million taels a year. As the century progressed, the cost of maintaining the Yellow River dikes grew tremendously because of increasingly serious flooding brought about by ecological destruction. 53 Paying indemnities to victorious Western powers after military confrontations, and financing coastal defense projects aimed at improving China's ability to repel maritime invaders, brought additional fiscal pressures.

Above all, it was the mid-century rebellions that began in the 1850s that depleted both national and provincial resources, leaving them woefully ill-prepared to deal with a major drought. The combined fiscal impact of the Taiping Rebellion (1851–64), Nian Rebellion (1853–68), and two major rebellions waged by Muslims in Southwest and Northwest China (1855–73) was enormous. According to some calculations, military expenses constituted nearly three-fourths of total governmental expenditures. The Taiping war devastated some of China's richest Yangzi valley provinces and cut off the capital from the land tax and salt monopoly revenues of thirteen provinces. Simultaneously, the Nian rebels disrupted administration in large sections of four northern provinces, and the Muslim revolts in the southwest and northwest depopulated entire areas ⁵⁴

The monumental effort to suppress the mid-century rebellions wreaked havoc on the Qing granary system so important to ensuring North China's food supply. The empire-wide granaries that had stored as much as forty-eight million piculs of reserve grain during the high-Qing period

held less than twenty million piculs left by the 1850s.⁵⁵ Will and Wong assert that the Qing granary system never fully recovered from the devastating civil unrest that began in that decade. "Ultimately," they write, "benevolent methods of promoting social welfare to ensure social stability lost some of their appeal in the face of the dramatic political challenges posed by the mid-century rebellions. The food supply priorities of the state shifted to provisioning large numbers of troops." By the 1870s, then, the high-Qing state's formidable eighteenth-century ability to deal with food crises had for the most part been replaced by a makeshift system run by local elites who lacked the state's power to maintain large granary reserves and carry out vital interregional grain transfers. ⁵⁷

The decades of warfare also had a significant, if indirect, impact on Shanxi's ability to deal with the 1870s drought and ensuing famine. Four of the five famine-stricken provinces-Shandong, Zhili, Henan, and Shaanxi—were ravaged by rebel forces and their Qing opponents during the decades immediately preceding the famine. Shanxi escaped most of the active warfare, though Pingyang Prefecture and other southern areas were briefly invaded by the Taiping army in 1853 and by Nian troops in 1868.58 The heavy financial burden of supporting the Qing state's war effort, however, threw the province's finances into disarray. Because Shanxi was a wealthy province relatively unscathed by the wars, it was expected to contribute a great deal to the struggle to suppress the various rebels. Li Wenhai and his colleagues estimate that Shanxi's annual revenue in the decades preceding the disaster was about three million taels, but the annual amount the province had to raise for tribute, military expenses, local armies, and official salaries came close to five million taels.⁵⁹

After the famine the new governor of Shanxi, Zhang Zhidong, argued that Shanxi had fallen into fiscal insolvency because of the massive expenses it had paid beginning with the Taiping Rebellion. During the decades of warfare, wrote Zhang, Shanxi's treasury and its wealthy merchants had repeatedly been called on to lend money and goods to finance China's military efforts. In addition, a constant stream of soldiers and officials had passed through Shanxi on their way to the conflicts in the northwest, forcing Shanxi to feed and house all of them. Zhang estimated the total aid Shanxi sent to other areas of the country during this time at fifty to sixty million taels. Due to the extensive aid that wealthy Shanxi had provided from 1850 on, by the time the drought arrived in 1875, the provincial treasury and granaries had few reserves to fall back on.

The mid-century rebellions also had adverse effects on some of Shanxi's rich merchants. The destruction the Taiping war caused in the Jiangnan region hurt the Shanxi merchants who conducted much of their business there, and they were also pressured to contribute money for military expenses. 61 Moreover, during the 1860s Shanxi's merchants began to lose their monopoly of Sino-Russian overland trade via Mongolia. Preoccupied with quelling the rebellions within its borders, the Qing government buckled under pressure to sign an unequal treaty with Russia that opened the empire's northern frontier to Russia's political and commercial influence and reframed the rules for frontier trade. The Sino-Russian Treaty of Peking (1860) and the ensuing Sino-Russian Overland Trade Regulations (1862) established a favorable system for Russian merchants who traded in Mongolia, thereby cutting in on Han (primarily Shanxi-based) merchants. Worse still, the Russian government legalized the maritime tea trade. At the expense of overland trade routes, Russian ships carried tea and other Chinese goods from Canton and Shanghai to Odessa, bypassing Shanxi merchants altogether. 62

In short, the nearly three decades of warfare that preceded the North China Famine drained national and provincial treasuries, disrupted trade and commerce across large regions of the country, and took the government's attention away from vital matters such as maintaining granary reserves, roads, and dikes. When the drought spread across North China in the late 1870s, it caught both the Qing state and the exhausted provincial governments in the north unprepared.

A lack of strong leadership was yet another factor that hindered the late-Qing state's response to the drought. Will's study of the government's effective relief effort during the drought of 1743–44 highlights the importance of imperial oversight and activism. "The fact that the emperor had proclaimed his interest in the efficient conduct of relief operations had swept away all the obstacles that might have prevented the use of the channels of communication (and deliberation) reserved for important government business," writes Will. In contrast, during the late 1870s there was no strong imperial voice, and no one person or group had the authority and confidence to set a clear policy.

Questions about the legitimacy of the Guangxu emperor's succession arose in 1875, only a year before the great drought began. When the young Tongzhi emperor died of smallpox in 1875 without leaving an heir, Empress Dowager Cixi selected her three-year-old nephew, Zaitian, as successor to the throne.⁶⁴ Her choice shocked Qing officialdom because the child was the late Tongzhi emperor's cousin from the same genera-

tion. According to the dynastic law of succession the new emperor should have been selected from the generation below the deceased emperor so that he could perform sacrifices on the latter's behalf. As historian William Ayers has explained, the hasty enthronement of Cixi's nephew as the Guangxu emperor "created an undercurrent of criticism that lasted for more than four years while the empress dowager was trying to consolidate her power anew and forestall the growth of opposition." The weak throne was "able to play a kind of balancing politics by playing off opposing political groups to magnify the significance of its decision making power," states historian Richard Horowitz, but was "unable to drive policy forward."

The lack of a strong ruler on the throne enhanced the importance of the Grand Council and the Zongli Yamen during the famine years. The Grand Council, a supervising and coordinating high privy inner-court body that originated in the mid-Qing era, was in charge of drafting imperial edicts and presenting them to the emperor (or dowager empresses) for approval.⁶⁷ The Zongli Yamen (office for the management of affairs with the various countries) was the powerful coordinating bureau established in 1861 to take charge of all matters concerning the Western powers. During the 1860s and the early 1870s Prince Gong and Wenxiang, two powerful members of both the Grand Council and the Zongli Yamen, used the latter as a political base from which to push forward self-strengthening policies such as purchasing Western weapons and establishing shipyards and arsenals. Wenxiang, a Manchu grand councilor, was the pre-eminent figure in the yamen from its inception in 1861 until the eve of the famine. Prince Gong, the Xianfeng emperor's younger brother and the Tongzhi emperor's uncle, was named "deliberative prince" and put in charge of advising the dowager empresses on affairs of state after his brother's death in 1861.68

Between 1865 and 1875, however, Cixi increasingly checked Prince Gong's influence and ability to steer Qing policy. In 1875 Prince Gong failed to have his son installed as the successor to the Tongzhi emperor and watched as his brother's son and Cixi's nephew took the throne instead. Then in 1876 Wenxiang died, depriving the *yamen* of one of its most influential leaders. Between 1875 and 1880, Lolan Wang Grady writes, the decision-making group in the Grand Council and the Tsungli Yamen was much less cohesive than it had been prior to 1875. The day after Wenxiang's death, Prince Gong wrote a poem that interweaves his grief over the great statesman's death with his anxiety about the drought spreading across North China:

In the midst of the great drought, we wait in vain for the timely rain,
Dark clouds have hidden the lustre of the bright star;
You, who have toiled tirelessly for the country both at home and beyond,
Have brought honor to your banner, such that it is known to the Emperor;
Righteousness and caution have guided your steps throughout your life,
In assisting us for twenty years you have sworn the oath of loyalty and
sincerity,

But from this day on, my eyes shall not want for tears.⁷¹

Bereft of strong guidance from either the throne or the Zongli Yamen, the Qing government in the late 1870s had more difficulty than usual in implementing a famine policy requiring large-scale expenditures. Bureaucratic responsibility for financial matters was divided among many different government organs, including the Board of Revenue, the Grand Council, the Imperial Household Department, and the Zongli Yamen in the capital, and the imperially appointed treasurers in each province. "Any crisis or reform proposal threatened to degenerate into an acrimonious debate," states Horowitz, "making the swift resolution of problems, and the consistent pursuit of policy difficult and perhaps impossible." 72

During the worst years of the famine, then, the succession crisis had weakened the throne, Wenxiang's leadership had ended, Prince Gong and the Zongli Yamen no longer led the formation of new policies, and the most influential officials in the realm were bitterly divided over which crisis presented the greatest threat to Qing rule. In spite of these problems, the grim fiscal and political realities facing late-nineteenth-century China forced Qing rulers and their ministers to make excruciating choices about how best to use the country's depleted resources.

The years preceding the famine were anxious ones for the Qing empire. The 1856–60 Anglo-French War on China (the Arrow War), the harsh terms the victors imposed on China in the Treaty of Tianjin (1858), and the burning and looting of the treasured imperial Summer Palace outside Beijing by British troops in 1860 accentuated the threat posed by the West. The decade of relatively calm Sino-Western relations that followed the Arrow War came to an explosive end in 1870, both because of Britain's rejection of revisions that would have softened the punitive character of the Treaty of Tianjin and, more infamously, because of the Tianjin Massacre and its aftermath. The Tianjin catastrophe occurred when tensions between French and Chinese Catholics on one hand and Chinese officials and commoners on the other boiled over in June of that year. A Chinese crowd angered by French arrogance and by rumors that French Catholic nuns were mistreating Chinese orphans killed between

thirty and forty Chinese converts and twenty-one foreigners, including two French officials and several nuns and priests. In addition to the damage done to Sino-French relations, the incident led to increased conflict between opposing groups within the Chinese bureaucracy. Self-strengtheners hoped to avoid another war by pursuing a conciliatory policy with the foreign powers involved, while the most anti-foreign wing of the Chinese bureaucracy viewed such a policy as tantamount to selling China's soul. After rancorous debate, the Qing government agreed to execute eighteen Chinese found guilty of conducting attacks and to pay a total of 492,500 taels to compensate for foreign loss of life and property damage.⁷⁵

In addition to defending China's eastern seaboard from foreign aggression, Qing rulers in the 1870s also had to deal with serious threats to the empire's northwestern frontier. Xinjiang, the inner-Asian frontier that Qing emperors had struggled to conquer in the mid-eighteenth century, was thrown into turmoil by the Muslim revolts that convulsed Shaanxi and Gansu from 1862 to 1872. After much of Xinjiang fell to the Muslim rebel commander Ya'qub Beg in 1870, Russia, eager to ensure that Ya'qub did not support the independence of the Central Asian Islamic states Russia was then in the process of conquering, invaded and occupied Xinjiang's rich Ili valley in 1871. Qing rulers viewed Xinjiang as their first line of defense in the northwest and feared both Russian territorial designs and the regional instability that might result from continued Muslim control. Once the Qing forces under Zuo Zongtang finally overcame the Chinese Muslims in Shaanxi and Gansu in 1873, the government set its sights on recovering Xinjiang.⁷⁶

But as Zuo Zongtang awaited the imperial court's permission to launch the campaign to retake Xinjiang, yet another challenge, on the southeastern coast, arose to demand the government's attention and money. In April of 1874 a Japanese "punitive expedition" landed on the eastern coast of Taiwan under the pretext of punishing members of the Botan tribe for killing shipwrecked sailors from the Ryukyu Islands and Japan. Japan apparently aimed to assert its control over the Ryukyu Islands, which were a tributary of China, and to challenge Qing sovereignty over those areas of Taiwan dominated by aboriginal groups. The Qing government responded by appointing Shen Baozhen, the director of the Fuzhou Dockyard, to be imperial commissioner in charge of maritime defense of Taiwan. Shen was given permission to purchase foreign arms and negotiate a foreign loan of up to six million taels, but he soon realized that his forces could not defeat the Japanese navy and its ironclad ships. The impasse

was broken only when China agreed to pay a 500,000-tael indemnity to Japan and to refrain from condemning Japan's actions.⁷⁷

The realization that China was unprepared to respond forcefully to a naval challenge posed by a much smaller Asian neighbor shocked Qing officialdom and raised the question of which was more urgent, the threat to China's seacoast or the danger along the northwestern frontier. In November 1874, less than a week after the Taiwan crisis was resolved, officials from the Zongli Yamen submitted a memorial to the throne proposing "dramatic reforms" in the empire's coastal defense capabilities. The imperial court circulated the *yamen*'s memorial to leading provincial and metropolitan officials and solicited their responses, thus initiating a major policy debate over whether coastal or frontier defense was more critical. The debate highlights the fact that by the mid-1870s, both the Qing court and many high officials had come to see foreign military aggression rather than domestic unrest as the more serious threat to Qing survival.

The Zongli Yamen's memorial expressed the fear that foreigners who had observed China's inability to defend Taiwan might take advantage of the dynasty's military weakness to launch an attack. It recommended that the country's highest officials submit their views on the needs of coastal defense and suggest ways to find additional funding for military training, modern weapons, and shipbuilding.⁷⁹ In response Li Hongzhang, the powerful official responsible for defending China's northern ports, boldly suggested that the government should abandon the costly campaign to recover Xinjiang and use the money saved to fund a more effective coastal defense program, which he estimated would cost ten million taels per year. "Nonrecovery of Xinjiang will not hurt us physically or spiritually," he wrote, "whereas lack of preparedness in coastal defense renders our basic trouble even more difficult."

While some officials wrote in support of Li's arguments, other prominent statesmen including leaders in the Zongli Yamen sided with Zuo Zongtang, the influential official in charge of the Xinjiang campaign. Zuo asserted that it was strategically vital to recover Xinjiang. If Xinjiang were lost, the empire would not be able to defend Mongolia, he claimed, and the loss of Mongolia would endanger the security of the capital. Zuo agreed that the Western powers were a threat, but he opposed shifting funds from frontier to coastal defense. Because Russia had both territorial and commercial designs while the Western maritime nations were primarily interested in trade, he reasoned, the Russians represented the more serious threat to China.⁸¹

The policy debate of 1874–75 impacted the government's ability and willingness to deal effectively with the massive famine that struck only two years later. The court backed Zuo Zongtang's position that it was imperative to recover Xinjiang from Muslim and Russian rule, thereby rejecting Li Hongzhang's proposal to shift funds from the Xinjiang campaign to coastal defense. And it responded only vaguely and ineffectually to the Zongli Yamen's request that the government find additional funds for coastal defense projects. ⁸² Li and the *yamen* became all the more determined, therefore, to guard the already scarce resources earmarked for coastal defense and other self-strengthening projects. During the famine they attempted to prevent transfer of the considerable funds under their jurisdiction from coastal defense to famine relief. ⁸³

Moreover, the costly campaign to recover Xinjiang coincided with the worst years of the Incredible Famine, thus making it all the more difficult for the state to fund relief efforts for the starving people of North China. For the three-year period from 1875 to the end of 1877, Zuo Zongtang received a total of 26.7 million taels, or 8.9 million taels per year, for the Xinjiang campaign. These funds came from foreign loans, Board of Revenue grants previously earmarked for coastal defense, and money contributed by twelve different provinces. Then between 1878 and 1881, additional interprovincial revenue assistance totaling 25.6 million taels went toward prosecution of the war, making a total of 52.3 million taels for the entire campaign. In comparison, according to the Shanxi provincial gazetteer compiled shortly after the famine, between 1877 and 1879 a little over 10.7 million taels of relief silver and roughly one million piculs of relief grain were distributed in Shanxi. Shanxi.

During the Incredible Famine, Shanxi, and to a lesser extent four other northern provinces, faced a crisis so severe that starving families were forced to choose which family members to save and which to abandon. The late-Qing state faced equally tough choices in the late 1870s. By that point many high officials viewed defending China against foreign assaults—whether along the eastern seacoast or the northwestern frontier—as more urgent than relieving the starving northern provinces. Famine relief was of central importance only to a group of moralistic censors and low-ranking officials known as the Pure Current (Qingliu). Qingliu spokesmen, however, generally lacked the power to get their suggestions approved over the objections of higher-ranking officials.

The comparatively low priority placed on famine relief for North China corroborates Kenneth Pomeranz's argument that beginning in the

1860s, the Qing state gradually abandoned inland North China in order to focus its resources on coastal (or frontier) areas where the threat of imperialism was more dangerous, thereby turning what had been a core region of the empire into an impoverished periphery. "The foreign onslaught destroyed basic principles of Ming-Qing statecraft, particularly a commitment to social reproduction that had often required rich areas to subsidize the infrastructure of poorer ones," states Pomeranz. Instead, "resources had to be used where they did the most to protect China's threatened autonomy from direct intervention or the consequences of foreign debt or both."

In the late 1870s the Qing government did appropriate and borrow sufficient funds to recover and keep Xinjiang. This impressive accomplishment laid the foundation for twentieth-century successors of the Qing empire to reconstitute a sovereign state that continues to control the vast majority of the former empire's territory even today. ⁸⁷ The Xinjiang campaign demonstrates that the late-Qing state did possess the capability, however attenuated by financial and military pressures, to carry out expensive and complex policy initiatives on an empire-wide stage.

The Incredible Famine did not attract the resources allocated to defense projects in the late 1870s. This exercise of real agency on the part of the Qing state suggests the extent to which statecraft had changed for the Qing since the eighteenth century and demonstrates how much the mid-century rebellions and the threat of imperialism had transformed Qing governance over the course of the nineteenth century. Despite the Confucian priority of mitigating disasters in order to retain the Mandate of Heaven (particularly important for a conquest dynasty facing the starvation of millions of Han Chinese in North China), and despite the fear that the famine might provoke additional internal rebellions, relieving the famine could not compete with the self-strengthening projects and military campaigns aimed at securing the territory of the Qing empire from foreign aggression.⁸⁸

THE DROUGHT

The combination of internal rebellions, foreign aggression, fiscal problems, deterioration of the granary system, and weakness and division in the top echelons of power left both the Qing state as a whole and Shanxi Province in particular unprepared for a drought of the magnitude of the one that struck North China between 1876 and 1879. Mike Davis

demonstrates convincingly that the cause of the severe droughts that struck northern China, India, southern Africa, and northeastern Brazil in the late 1870s was a particularly powerful "El Niño event," or a rapid warming of the eastern tropical Pacific that led to the prolonged and virtually complete failure of the monsoons that normally provide rainfall for the affected areas.⁸⁹

In North China a failure of the spring rains generally meant that the wheat and barley planted the winter before would fail to ripen. It also jeopardized the sowing of the autumn millet crop, since the loess soil dried and hardened quickly. A drought that lasted through the summer would doom whatever crops farmers had planted in the spring, resulting in the total failure of both the winter and autumn crops for that year. If rain still failed to arrive during the autumn months, the winter wheat could not be sown and the populace faced the prospect of a hungry spring following on the heels of a brutal winter. This was the general pattern all across North China in the late 1870s. As the drought spread over, not one or two, but *five* major provinces, the normal interaction of grain markets across the entire region was thrown into increasing chaos.

To prevent disaster it was imperative that the state take measures to stabilize prices and transport grain from South China, Manchuria, and Mongolia into the stricken northern provinces. The late-Qing state, however, was poorer, weaker, and more beleaguered than its high-Qing predecessor, and also less committed to using government intervention to shore up the food supply of North China. Thus reports of serious droughts in Shandong, Zhili, Shanxi, Henan, and Shaanxi were not met with early intervention as they would have been a century earlier.

The imperial court did begin prescribing relief measures for famine areas in June 1876, but due to the dismal condition of state and local granaries by the 1870s, relief was often given in cash rather than in grain, and the amounts distributed were not enough to stave off disaster. With the court's attention focused on drought areas closer to the capital and on the Xinjiang campaign, even when the situation in Shanxi took a turn for the worse after the entire autumn millet crop was doomed by the severe summer drought in 1876, no preventive action was taken.

Rain and snow were scarce during the autumn and winter of 1876–77, and the Wei River valley grain surplus so vital to Shanxi's well-being was also stricken by drought. By the spring of 1877 grain prices in Shanxi had skyrocketed, and the poor were surviving on grass roots and tree bark. Early in 1877 the Board of Revenue finally allocated relief money for Shanxi, but not until November was an official relief program for-

mulated, including grain transfers from Manchuria and the sale of grain at reduced prices. ⁹¹ By that point, it was simply too late to stem the course of the disaster. Shanxi's mountainous geography made the belated official relief efforts even more ineffective there than in the other stricken provinces. When both the spring and summer rains failed to materialize in 1877, the crops failed for a second year in a row, and the people of Shanxi starved en masse. ⁹²