Introduction

IN THE 1920S when China was called "the Land of Famine" by an American relief worker, the phrase immediately gained currency, not only internationally but with the Chinese public as well.[1] It seemed to capture exactly the situation of China—a land where floods and droughts occurred ceaselessly, where famines of huge dimensions followed one after the other, and where poverty and hunger seemed ever present. From the mid-nineteenth century onward, the disasters had been deadlier and more frequent. The Yellow River, called "China's Sorrow," shifted its course in the 1850s, causing great hardship. Man-made disasters such as the Taiping and other rebellions of mid-century wreaked great physical destruction and exacted a human toll probably in excess of 20 million. An extensive drought in northern China in the 1870s may have cost 9 to 13 million lives. Toward the end of the nineteenth century and the first half of the twentieth, the man-made catastrophes of rebellion, revolution, and war alternated with the natural disasters of flood, drought, and locusts. The plight of China attracted international sympathy and assistance, and both Chinese and foreigners wondered if China would ever cease being the land of famine.

Of course China had not always seemed poor and backward to the West. For Marco Polo and other travelers, China had been the land of riches—displaying an abundance unknown in the Europe of the thirteenth century.[2] When Jesuits such as Matteo Ricci arrived in China in the late sixteenth and seventeenth centuries, it was Chinese learning that they admired, and in the eighteenth century French *philosophes* such as Voltaire found China's scholar-bureaucrat system a model of enlightened government. Indeed the view of China as a prosperous and cultured civilization was well grounded in the historical reality of most of the thirteenth to eighteenth centuries, with the notable exception of periods of transition from one dynastic regime to another. From the Southern Song period through the Ming dynasty, the twelfth through sixteenth centuries, the development of Chinese culture—literature, arts, and scholarship—was supported by a bureaucracy selected by civil service examinations. The development of commerce and science proceeded concurrently. In the Qing period, under the Manchu rulers, the boundaries of the empire were extended to include not just the provinces within the Great Wall but also Mongolia, Xinjiang, Tibet, Taiwan, as well as Manchuria itself.

Yet even during the periods of prosperity and expansion, the occurrence or possibility of famine in some part of the empire never disappeared, and the responsibility to avert it was part of the political ideology. China in ancient or premodern history may or may not have experienced more famine than any other empire or territory of comparable size—it would be impossible to determine this—but the consciousness of famine played an important ideological role in the formation of state policy and shaping of state goals. No other civilization has had such a continuous tradition of thinking about famine, and no other nation's modern history has been so influenced by hunger and famine. It is in this sense that China could be called the land of famine.

The legendary origins of the Chinese state emphasize the control over nature achieved by the ancient sage emperors, Yao, Shun, and Yu. The latter tamed the so-called nine rivers (dragons) of mythical prehistoric China and founded the Xia dynasty. These legends embody the Confucian notion that nature is dangerous and must be controlled by a meritorious ruler. The concept of the Mandate of Heaven, articulated by the Confucian follower Mencius in the third century B.C., stated clearly that weak and incompetent rulers would inevitably lose the mandate, which would in turn be claimed by a new dynasty. Indeed Yu showed his moral legitimacy when his predecessor had not prevented a great flood from taking place, and his achievement is immortalized in the slogan "Yu the Great controls the waters" [*Da Yu zhishui*].[3] Likewise the last Xia dynasty ruler allowed a drought to rage for several years, but Tang was able to assume moral leadership and credit for stopping the crisis, and he established the next dynasty, the Shang.[4] According to the theory of the dynastic cycle, strong early emperors would encourage the tilling of fields and nourish the people, but they would be followed by weak emperors who would allow natural calamities to take their tolls, and eventually righteous rebellions against unjust rule would develop. Earthquakes and floods were natural portents of the imminent demise of the dynasty. All the more reason why rulers should strive to prevent their occurrence whenever possible, or at least minimize their effect.

The ancient texts clearly articulated the principle that famines were not caused by nature, but by the negligence of the rulers. Xunzi, another of Confucius's important disciples, wrote:

> If the Way is cultivated [followed] without deviation, then Nature cannot cause misfortune. Therefore flood and drought cannot cause a famine, extreme cold or heat cannot cause illness, and evil spiritual beings cannot cause misfortune. . . . [But] if people violate the Way and act foolishly, then Nature cannot give them good fortune. There will be famine before flood or drought approaches. . . . This cannot be blamed on Heaven; this is how the Way works. Therefore one who understands the distinctive functions of Heaven and man may be called a perfect man.

Thus, Xunzi firmly believed in man's ability to control nature. "Therefore to neglect human effort and admire Heaven is to miss the nature of things."[5]

Many of the important principles and instruments of famine prevention originated in the ancient times. The concept of the ever-normal granary, for example, is attributed to Mencius and may have had even earlier origins.[6] The officials were to establish such granaries, buying grain when the price was low and selling it when the price was high, thus keeping grain prices low and stable. Such grain stocks could also be distributed as famine relief. The sage ruler was to help tame the rivers by sponsoring river control projects. He also had the responsibility for maintaining agricultural productivity. If floods occurred, it was because the rivers had not been properly controlled. If droughts occurred, their effects could be alleviated by irrigation and their human suffering stemmed by famine relief. A natural calamity (*tianzai*) might cause a harvest failure (*huang* or *zaihuang*), but the harvest failure did not necessarily result in a famine or "great hunger" (*ji*, *daji*, or *jihuang*). The purpose of imperial or official intervention was first to prevent the occurrence of famine, but secondly, if famine occurred, to take measures to restore agricultural production.

Over the course of imperial China's long history, such principles were honored more in the breach than the practice, but it seems important to recognize that the principles did endure, and they shaped expectations of imperial and bureaucratic responsibility. Under Legalist influence, the basic administrative measures to deal with famine were codified in the first imperial dynasty, the Qin (221–206 B.C.).[7] By the Song period (960–1279 A.D.), famine relief was one of the several areas designated by the great scholar officials as needing reform and renewed attention. Not only rulers and officials should mind these institutions, but local elites—scholars, landlords, and other notables—should also sponsor famine relief, granaries, and charitable works. By the late Ming period (1368–1644), traditions of philanthropic works were well established in many localities, particularly in the more prosperous areas of southern and central China, such as the Lower Yangzi valley.

The importance attached to *huangzheng*—the administration of official disaster relief—can be seen in the late imperial historical records, where the chronology of disasters, the methods of agriculture, the building of granaries, and the maintenance of river control were all detailed.[8] Local gazetteers also devoted large sections to these topics. In addition, especially from the fourteenth century onward, there were numerous agricultural manuals, famine relief treatises, essays on river control, and other compilations—all bearing eloquent testimony of the importance of famine prevention and relief in the administrative agenda.

Famines of catastrophic proportions characterized the later part of the Ming dynasty during the mid-sixteenth and early seventeenth centuries, compounding, or perhaps causing, widespread rebellions.[9] When the new Manchu rulers assumed the throne in 1644, they needed to transform their tribal and military style of governance to take into account a large agrarian economy. For the great emperor Kangxi, who reigned for more than sixty years (1662–1722), the south was a source of agricultural abundance and human talent that he needed to understand and command. He and his successors, Yongzheng (1723–35) and Qianlong (1736–95), and their top advisors, drew on the traditional ideas and experience about political economy to develop the institutions and techniques of agricultural support, grain storage, river conservancy, and famine relief to a degree of efficiency never before known in Chinese history. Because these efforts were recorded in great detail, it is possible to study the ways in which imperial policy actually affected economic life. (This has been especially so since the Qing archives were opened for scholarly use in the late 1970s.) In the eighteenth century, China experienced a level of peace and prosperity that was unprecedented, even as territorial conquest and diplomacy extended the boundaries of the empire.

Although these triumphs could be understood as the high point of the Qing dynastic cycle, there were other historical developments, barely perceived at the time, that can now be seen as unprecedented and not cyclical in nature. The first of these was a great surge in population, which is usually estimated to have doubled from 150 million people in 1700 to 300 million in 1800.[10] By mid-nineteenth century, population size was probably about 430 million. In the late nineteenth century through the first half of the twentieth, the rates of increase slowed, most likely due to the high mortality from military and other disasters. Nevertheless, by 1950, the population was close to 600 million. During the second half of the twentieth century, under the People's Republic of China, population more than doubled. By the turn of the twenty-first century, it was about 1.2 billion. The reasons for these rates of growth, as well as their exact magnitude, are not completely understood, but their impact on the history of the twentieth century is indisputable.

Environmental decline was another important trend. The human impact on the forests, soils, and rivers of China was a centuries-old historical process, but by the eighteenth century, the effects of human encroachment on land, forest, and water resources was becoming evident to officials and local elites of many parts of China. Increasing population size demanded greater agricultural productivity from these diminished natural resources, thus vastly compounding the task of "feeding the people." The containment of waterways through levees and dikes, necessitated by denser land settlement, increased the possibility of damage in times of heavy downpours. In the second half of the twentieth century, industrial and urban needs have further depleted land and water resources, and chemical pollutants have threatened air quality as well as soil and water.

Increased population pressure on the land in the late Qing period created an even greater need for bureaucratic interventions—such as more investment in river control or greater emergency grain reserves—just at a point when the dynasty's capability was much diminished by internal decay—in the form of weak emperors, corrupt bureaucracy, and rebellions. At the same time, a more visible threat emerged in the form of Western imperialism in the nineteenth century—in all its military, economic, and cultural aspects—further reducing the possibility of imperial leadership just when it was most needed.

In the early twentieth century, promising new opportunities for commercial development and industrialization were undercut by the lack of a strong central government as well as foreign aggression. The political instability brought about by warlords, Japanese invasion, and Communist insurgency made hunger and rural poverty even more visible problems. Although forced to retreat to the northwest, Communist forces dramatically expanded their control over most of northern China and large parts of central China by appealing to the rural villagers' genuine grievances over their material hardships and channeling them into social and political action. Although the reasons for the ultimate victory of the Chinese Communist Party continue to be hotly debated, there can be no question that hunger and poverty were the fundamental issues addressed by Mao's rural strategy; without those issues, the revolution would have taken a very different path. Widespread devastation from internal warfare and Japanese invasion made more profound the already familiar problem of rural immiseration. A large portion of the urban middle class and intellectuals, although relatively sheltered from poverty, also became convinced that China's rural problems urgently needed to be addressed.

In the second half of the twentieth century, under the People's Republic of China, the need to feed a rapidly expanding population played a key role in the shifts in party policy concerning land distribution and the organization of production. From land reform through collectivization and finally decollectivization, the need to provide food self-sufficiency became increasingly acute as the population size doubled. Faced with severe limitations of land and other resources, the party first emphasized the rationing of land and grain, as well as other redistributive methods, and later the collectivization of agriculture, which gave the state further control over scarce resources. The Great Leap Forward essentially shifted the emphasis from redistributive mechanisms to grandiose and fantastic schemes for rapidly increasing production. The resulting famine caused the death of at least 30 million people, the greatest famine in world history, and one that was almost entirely man-made. It is one of history's most deeply ironic tragedies that a government that came to power on the basis of its promise to address the issue of hunger only succeeded in making it a more central and urgent issue.

In the 1960s and 1970s, the renewed emphasis on subsistence and regional self-sufficiency was expressed in the slogan "Taking grain as the key link." After Mao's death in 1976, the party's emphasis shifted to economic reform that included decollectivization of agriculture, incentives for investment in industries, opening up to foreign trade and investment. Yet this radical reshaping of "socialism with Chinese characteristics" did not displace a type of food fundamentalism that had been so deeply engrained in the Chinese experience. In the same decades that the market economy was liberalized, population control policies, enacted in order to support economic growth, were the opposite of liberal. The strict enforcement of the one-child policy—with its often tragic personal outcomes such as late-term abortions and infanticide—represented the latest form of state intervention in the population-food equation.

In the 1990s, the success of economic reforms seemed to have brought security to most urban and rural Chinese, to the extent that obesity, not malnutrition, became a problem among spoiled city children who were called "little emperors." Yet food self-sufficiency remained a sensitive issue for the leadership and for technocrats. In 1989, on the eve of the fortieth anniversary of the establishment of the People's Republic of China, and just months after the Tiananmen demonstrations and shootings, the *People's Daily* proclaimed, "Our country's accomplishment in disaster relief work receives the attention of the world: Socialism has sent running 'China the land of famine.' "[11] At other times, however, it was convenient to invoke China's still-precarious population-land situation. In interviews during his 1997 visit to the United States Jiang Zemin pointed out that China had the task of feeding 22 percent of the world's population on only 7 percent of its arable land; therefore, political dissent and democratization had to take second place.[12]

The importance of famine in shaping Chinese history of the last few centuries can be contrasted with the European experience. Mortality crises were not unknown in Europe of the Middle Ages and later, but they were not considered regular and inevitable occurrences. Europeans were unprepared for the great famine in northern Europe from 1315–22 because there had been no bad weather since the twelfth century, and there would not again be weather-related crises until the sixteenth century. Famine was experienced not as a periodic phenomenon, but as a catastrophic event that must be a form of divine punishment for human sins.[13] The sense of retribution was even greater during the Black Death, the plague that tormented Europe just a few decades later and that exacted a great mortality.[14] The religious interpretation of such events is not surprising given the central role of the church in medieval society and the weakness of the state. Charitable relief of suffering was also the undertaking of the churches, not the secular authorities.

Although Europe experienced many mortality crises in the sixteenth century, historians now emphasize that the link between nutritional status and mortality was probably indirect, and infectious disease probably played a more pivotal role. High mortality was not a necessary outcome of food scarcity as measured by high food prices.[15] The eventual disappearance of the plague is given greater credit for ending mortality crises in Europe than improvements in agriculture or economic developments.[16] The links between poor harvests (as measured by high food prices) and mortality were weakening in the seventeenth century, and they were severed by the eighteenth century.[17] After the 1740s, "subsistence crises no longer produced major mortality peaks." Europe's "last subsistence crisis" took place in 1816–17. Due partly to weather and partly to the disruptions of warfare, this crisis affected most of Europe, and its effects were felt elsewhere in the "western world."[18] In the end, state intervention helped to relieve the crisis, not religious charity. Various governments, such as those of France, the Netherlands, and Prussia, took advantage of large quantities of grain that could be supplied from the United States and Russia. They did not distribute the grain as relief, but sold it at below-market prices.[19] Such forms of intervention resembled the methods of below-market price sales known in China. After this, large-scale food shortages in Europe due to harvest or other crises did not necessarily result in major increases in mortality, it is argued.[20] The Irish potato famine of 1840s did result in high rates of mortality, but it was restricted to Ireland. Although crop failure was the direct cause, the famine has always been controversial, blamed on factors ranging from backward Irish farming techniques to failures in British policy.[21]

The difference between the role of famines in Europe and China was not simply that one developed beyond self-subsistence and mortality crises two or three centuries earlier than the other, but that from earliest times, there were different cultural and social meanings associated with the phenomenon. In China, the control of famine was a responsibility of the ruler; hence, it played a role in the ideological foundations of the Chinese state. Indeed the very fact of the continuity, albeit not unbroken, of a centralized state in "China" since the Qin-Han empires in the third century B.C. forms a fundamental difference with "Europe," when the kingdoms and principalities that fragmented after the Roman Empire were never brought back together into a single state. Not coincidentally, state formation in nineteenth-century Europe coincided with the disappearance of subsistence crises. In the premodern period, there were only a few major mortality crises that affected all of "Europe" at the same time, and almost none that affected all of China at the same time. Yet in the Chinese empire in the Ming and the Qing periods, a famine in one region was considered the central government's responsibility and required intervention, at least theoretically. In Europe, no single state was charged with the responsibility for conditions beyond its borders even when many states were affected at the same time.

In Europe from the late seventeenth century, public demonstrations over food were a frequent phenomenon. The mob protests over bread prices in revolutionary Paris are the best known, and Marie Antoinette's "Let them eat cake" symbolized the disregard of the French monarchs for the welfare of the people. The grain blockages, price riots, and other forms of protest in France, England, and elsewhere were caused by fear of hunger and dearth, but they developed in the period in which subsistence conditions were improving, and crises were actually decreasing. They were expressions of a popular sense of food entitlement as European states tried to assert greater control over grain markets. "State-making, the maintenance of public order and control of food supply therefore depended on each other intimately."[22] In China the very same concerns prevailed, but these centuries did not witness any fundamental institutional innovation, similar to European state-building; indeed, the traditional state was stronger than ever in this period. Because the relationship between the "state" and the "people" was differently construed, food did not become the subject of political struggle until the twentieth century. There were some food riots in China, but they tended to be small in scale and to have food supply as their focus, not political change.[23] The best-documented grain blockages occurred in the more commercialized regions of China, where local residents protested the export of local grain supplies that would raise prices. Food riots almost never occurred in Zhili, a grain-deficient region. In Beijing—in striking contrast to Paris, and also to Edo (Tokyo) in the same period—the poor never rioted over food.

Throughout its late imperial period, from the tenth century onward, Chinese civilization was unique in world history for its stable form of government, based to a large extent on a bureaucracy chosen by scholarly merit. Its high culture and material riches were admired in the West. In the Qing period, the empire was greatly expanded through territorial conquest. These historic achievements would make it absurd to identify China as "the land of famine." Yet without understanding this darker aspect of China's history, we cannot understand the transition from the glorious eighteenth century to the deeply tragic twentieth century.

This book is about the struggle against hunger and famine in North China throughout three centuries, from the late seventeenth century until the end of the twentieth century. It is North China that has been most regularly visited by droughts and floods, particularly in recent centuries.

Although North China was predominantly a dry region, it was nevertheless vulnerable to flooding because of the seasonal concentration of rain and the increasing siltation of the Yellow River and other rivers. In the late nineteenth century, after the Yellow River changed course, Westerners dubbed it "China's Sorrow." Unlike South China where rice is abundant, agriculture in North China traditionally consisted of dry-land crops like wheat, millet, and sorghum. In more recent times, cotton and corn have been extensively cultivated.

This book focuses on one important region within North China, the Hai River Basin, which comprises the present-day province of Hebei and adjacent parts of Inner Mongolia, Shanxi, Shandong, and Henan, as well as the independent municipalities of Beijing and Tianjin. During the Qing period, it was equivalent to the metropolitan province of Zhili, including the capital area of Beijing and some peripheral parts of Shandong and Shanxi. Because most of this physiographically defined region is contained within one province, it is, as a practical matter, more suitable for research purposes than a region less clearly bounded in administrative terms.

As a drainage basin, the Hai River system shared many of the characteristics of the larger and better-known Yellow River system. Although extending only a few miles from Tianjin to the ocean, the Hai River in the Qing period and in the first half of the twentieth century formed the single outlet for the entire system of rivers and streams in the region. Because of increasing siltation and excessive engineering combined with periodic neglect, the propensity of these rivers to overflow posed a grave and persistent challenge for officials charged with river conservancy. The environmental decline and agricultural limitations of the Hai River Basin were balanced in part by the region's political centrality. Because Beijing was located in its center, Zhili Province received direct economic benefits from tribute grain from central and southern China transported via the Grand Canal, as well the benefit of close bureaucratic attention to its rivers and crops. In modern times, the city of Tianjin has served as a major port and as a commercial and industrial center.

North China, or Huabei as it is known today, has many cultural and historical identities. It has long been considered the "cradle of Chinese civilization" because the early states of Xia, Shang, and Zhou originated there. Centuries later, as the south became fully settled and rivaled the north culturally and economically, different social patterns developed in the Lower Yangzi valley and elsewhere in the south, ones in which powerful lineages and elites, supported by wealth from fertile land, played a larger role in informal local governance. In the north, by contrast, a less productive agricultural economy resulted in a more austere way of life that did not support strong local elite activism, and the state played a larger role in maintaining local functions such as river control.

This north-south binary had other dimensions. The north was more connected to the Central Asian steppe, the homeland of the Mongol and Manchu rulers. The south often meant the coastal south, more exposed to overseas commerce and influence, first with Southeast Asia and later with the West. By the late Qing, the northern orientation certainly implied traditionalism and conservatism; the general Zuo Zongtang prevailed in his determination to secure Qing territorial control in the northwest, which permitted Xinjiang to be fully incorporated as a province. By contrast, Li Hongzhang's suggestion to build a modern navy to defend against the new threats from the West and Japan received far less support at the court. In the 1988, a daring television documentary, "The River Elegy," made by the dissident Su Xiaokang, found a large and sympathetic audience in China. It invoked the dualistic images of yellow river (and the yellow earth) and blue ocean to represent traditionalism and enlightenment, respectively. The message was not subtle; China's Communist leaders, like the yellow emperors before them, were not open to the new ideas and thinking from the blue ocean.[24]

After 1949, the recent experience of the Chinese Communist leaders in North China greatly influenced their goals and methods for the rest of China. The "Yan'an model" was based on the experience of the party not only in the poor northwest, but on the extreme poverty and hardship that prevailed in all the base areas they controlled in the north. The Yan'an experience was imposed on all China, even when it was more appropriate for the conditions of the north. Many now see this as a fundamental error that led to much unnecessary hardship. Yet this issue leads back to fundamental geopolitical and cultural unity that has endured despite regional disparities and the essentializing north-south binary. There may be a North China or South China economy, or even cultural predilection, but there has been one Chinese political entity that has prevailed. It is far more appropriate to call North China, rather than South China, "the land of famine." The fact of political unity, however, has meant that the hardships of the north affected the entire country and had to be addressed by it. Although this book focuses on one well-defined region, the issues it raises and their consequences have significance for all of China.

The term "famine" is used in this book to refer to hunger and food scarcity in the broadest sense, as well as subsistence crises that were catastrophic in scale and resulted in elevated levels of mortality.[25] Usually their cause was a harvest failure resulting from natural causes such as flood or drought. In studies of famines in other societies, the term famine is sometimes defined more precisely. John Post states, "The term 'subsistence crisis' refers primarily to the demographic and economic consequences of doubled or tripled cereal prices and, while the effects are due more to the high cost than to the absolute shortage of food, the conditions may range from dearth and scarcity to actual famine, with deaths from starvation."[26] It is the latter result, "deaths from starvation," that constitutes the essential part of the conventional understanding of famine. One definition employs the term "true famine" to distinguish between those situations where there is an absolute shortage of food and those created by economic scarcities. "True famine is shortage of total food so extreme and protracted as to result in widespread persisting hunger, notable emaciation in many of the affected population, and a considerable elevation of community death rate attributable in part to deaths from starvation."[27] The 1885 *Famine Relief Code* of the Bombay Presidency distinguished between scarcity and the economic effects of scarcity. The latter was "when in consequence of the failure of the harvest of over a large area the price of food is raised and the usual employment of labour for wages is diminished in such a degree that the poorer classes will perish from starvation unless Government intervenes with measures of relief."[28]

Increasingly the major famines of the twentieth century were caused more by "man-made" factors than by natural catastrophe. The Ukraine famine of 1930s, the Bengal famine of 1943, the Ethiopian famines of the 1970s, and the North Korean famine of the 1990s—in addition to Great Leap Forward famine in China—all originated as arguably weather-related crises that were turned into major tragedies by wartime situations or government neglect or grievously bad policy. Other recent mortality crises, such as in Cambodia and in Rwanda, have resulted almost entirely from violence and warfare, not from bad harvests. In *Poverty and Famines: An Essay on Entitlement and Deprivation*, Amartya Sen views famines as failures of entitlement and not the result of food shortages. His case studies include Bengal, Ethiopia, the Sahel, and Bangladesh.

In speaking of China, the English term "famine" must be applied very generally because the most commonly used Chinese terms that correspond to famine—such as *tianzai*, *zaihuang*—actually focus on harvest failures, assumed to be weather-related, rather than mortality as the outcome. In the local records, as explained below in Chapter 1, disasters are usually described in terms of natural phenomena, either drought or excess rain—*han*, *shui*, *lao*—and very rarely described in terms of social outcomes—hunger, starvation, or mortality—*ji*, *daji*, or *jihuang*. In the Qing period, official records of harvests, grain prices, rainfall, granary stocks, and the like were carefully kept, but no one counted or recorded the numbers of deaths from disasters. To some extent, this may mean that high excess mortality was not always the outcome of floods and droughts because it is certainly true that excess deaths are *sometimes* found in the records. Yet, more fundamentally, it signifies that in the agrarian economy of China what really mattered was the harvest and anything that affected it.

Although it is human welfare and human suffering that underlie all the historical processes discussed in this book, it is the state that has the central role. The imperial, bureaucratic, and local leaders are the agents of change. This is in part due to the official origins of the sources upon which this study relies. But it is a premise of this book that the state was actually the most important player in this historical drama, and that the Chinese assumptions about the rulers' responsibility for preventing disasters should be taken seriously, if not literally. The state in the high Qing made possible dense population settlement in North China by investing in river conservancy and grain transport; such measures allowed the population to expand and live more securely. The Qing state was not necessarily suppressing market activities to intervene in the economy. In fact, the state often used merchants and markets to achieve adequate supplies and price stability. Nor was the state waging "a war against nature."[29] These polarities—state versus people, state versus market, and state versus nature—reflect a modernist perspective; they do not recognize the benefits of state intervention in the early modern context. Yet it must be acknowledged that rapid population growth, underdeveloped markets, and environmental decline were the unintended consequences of a relatively large state role both in the high Qing and under the People's Republic of China (PRC).

The issues of population, land, and famine are Malthusian in nature, but this book does not assume a Malthusian outcome. Thomas R. Malthus thought that when population growth outstripped available land, the outcome would be famine. "Famine seems to be the last, the most dreadful resource of nature."[30] Although Malthus's predictions were proven by historical evidence to be wrong, the notion of the inevitability of famine as a result of population pressure on land remains difficult to dispel. Most of the Chinese historical experience belies historical inevitability and instead shows the importance of human decisions and actions. Yet, without a doubt, famines in particular, and hunger and poverty in general, have been fundamentally important in the history of China—particularly during the last two centuries. This view is contrary to recent trends in Western scholarship that have dismissed the importance of famines, either by denying their existence, or by treating them as an "exogenous" events, outside the normal processes of economic development. Two demographic historians have written, "Famines were relatively few and had a very limited impact. . . . Overall there is no evidence of increases in mortality or in the frequency and intensity of mortality crises during the last 300 years. . . . Despite a sustained population increase from 225 million in 1750 to almost 600 million in 1950 and to over 1.2 billion today, the threat of overpopulation appears to have been a myth."[31] Writing about the 1930s, an economic historian dismissed famines as "random disturbances."[32]

The topic of this book sets it somewhat apart from recent American and European scholarship on Ming and Qing socioeconomic history, which emphasizes the mature growth of Chinese agriculture and commerce, the development of a more affluent and influential merchant class, and the proactive policies of the Qing state in agriculture, river control, and famine relief.[33] These scholars tend to emphasize the role of rationality and efficiency in guiding the decisions of individuals as well as statesmen. Others in this group have pointed to the ways in which the Chinese economy was as advanced as that of Europe prior to 1800 or even 1850, for example in the standard of living, or in the demographic trends.[34] This new scholarship has fundamentally changed the view of the past. The late imperial Chinese state has been cast in a more favorable light. Merchants and commerce have been given a more progressive look, helping to work against the older essentialist view that traditionally China was hostile to science and entrepreneurship. The late imperial period has been given its due as a period of accomplishment. Eurocentrism has been dealt a blow.[35]

Much of this book shares and draws from these perspectives and, indeed, largely concurs with them. By concentrating on the more prosperous, and arguably more glorious, eighteenth century, however, most of these writers have largely ignored its darker outcomes in the nineteenth and twentieth. By considering a longer period of three centuries, this book hopes to trace some of the twisted threads of historical change and examine how the land of prosperity become the land of famine. The "high Qing" period did not inevitably lead to the "low" nineteenth and twentieth centuries, but at the same time there were tendencies set in motion, consequences suffered and poorly understood, choices made then and later—all of which are better understood in *la longue durée*.

Although Western historians have turned away from the study of hunger and poverty in Chinese history, scholars in China have recently returned to this subject in great numbers.[36] Most of the recent publications were supported by government research grants; in the 1980s and 1990s party leaders were concerned about the recurrence of famines and were interested in the historical background.[37] This academic trend was preceded by officially sponsored compilations of archival and other documents concerning the history of weather, disasters, and rivers. In the 1970s and 1980s researchers from the Ministry of Water Conservancy and Electrical Power were among the most active in using the Qing-dynasty documents of the First Historical Archives in Beijing. Their purpose was to understand long-term historical trends in climate in order to predict future trends. At the same time their compilations, together with new gazetteers published by various other national and provincial agencies, have also benefited historians.[38]

The sources for this book are derived from the enormous corpus of published and archival documents of the Qing court and bureaucracy. Essays and collections of documents on river conservancy, agriculture, famine relief, and related topics supplement the official record. The early twentieth-century local gazetteers, social surveys, and reports are rich resources. For the second half of the twentieth century, which is in the memory of those alive today, recently published data on agriculture and food helps to confirm and illuminate widely shared experiences that are not yet in the conventional historical record.

This book also makes use of a unique set of grain-price data from the Qing archives. (The origin and nature of these data are described in Appendix 2.) Collected by local and provincial officials, the grain prices formed a way to forecast and measure impending harvest crises, and they provided the basis for determining the degree of damage suffered by different localities within a disaster area. Although price data were collected from all over the empire, they were the most complete and probably the most accurate for Zhili Province because of its proximity to the capital. As a source for economic history, the price data are invaluable for establishing long-term economic trends in China for the eighteenth and nineteenth centuries, measuring the degree of market integration, as well as providing a quantitative basis for case studies of particular subsistence crises. Although grain prices have been used in European economic history since the Middle Ages, no European price series can match these Chinese grain price data for their length, continuity, and quality.

The twelve chapters of this book proceed both chronologically and topically. After describing the geographic and climatic characteristics of the Hai River Basin, Chapter 1 examines the historical record of climate, natural disasters, and famines, emphasizing the constant interaction between natural forces and human experience. Chapter 2 traces the efforts by Qing emperors and their high officials to control the rivers in Zhili through ambitious engineering projects. With each new emperor a new "reign cycle" commenced, characterized by bold ambitions at the outset and decaying environmental conditions by the end. When emperors acted as engineers, they had to work through a complex bureaucracy, which became even more difficult to manage than the rivers. Chapter 3 analyzes the agricultural system in Zhili during the Qing period and later. Focusing on the functions of different grain crops in the seasonal cycle, the chapter also considers whether the standard of living declined from the eighteenth to the twentieth century as the population increased.

Chapter 4 employs the grain price data from 1738 to 1911 to learn about the long-term, secular movement of prices, which are the foundation for understanding economic trends. The quantitative analysis measures the impact of natural disasters on grain prices and concludes that the price effects of rainfall and drought were *in the aggregate* less severe than the literary or documentary record leads one to believe.

The next three chapters provide some explanations for why the price of grain was not determined solely by the local weather and harvest. Chapter 5 shows that the presence of Beijing at its center benefited the region rather than draining resources from it. Tribute grain from central and southern China was intended for the provisioning of the capital, but it also found its way into the wider market. The measures that the state took to guard the food security of the capital also served to stabilize the grain supply of the entire region. Chapter 6 shows that the state granaries also supplemented the local harvest, but the cost in both financial resources and bureaucratic corruption proved too high to sustain the system adequately in the nineteenth century. Using both grain price analysis and documentary sources, Chapter 7 discovers that the market integration achieved in the high Qing declined in the nineteenth century as transport routes decayed. As in Chapter 5, the relationship between state and market is the focus.

The next two chapters look at particular famines in the eighteenth and nineteenth centuries respectively through the lens of famine relief. Chapter 8 reviews the various famine relief techniques during the period that Pierre-Étienne Will has called "the golden age of famine relief," and then uses price data to measure the effectiveness of these techniques. Chapter 9 sees that the partial breakdown of the high Qing model did not affect the fundamental assumptions and approaches toward relief even as crises became more severe and frequent, and the larger historical context was changing.

Chapter 10 examines famine relief during the early twentieth century, when China became the "the land of famine." International relief workers subjected Chinese social and economic life to close scrutiny while providing some new approaches to famine relief. While famine seemed to reach its most desperate proportions in this period, the development of railroads, treaty ports, migration to Manchuria, agricultural commercialization, and industrialization have seemed to some historians evidence of important structural changes in the economy. Chapter 11 evaluates these new trends against the background of chronic famine described in Chapter 10.

Chapter 12 looks at the second half of the twentieth century, dominated by the Chinese Communist Party's leadership. Inheriting a problem of intense population pressure on diminished natural resources, the party intensified the techniques of economic intervention already practiced in prototypical form in late imperial times, controlling the distribution of scarce resources down to the household level. Having failed to raise per capita grain production in the 1950s, the party and people fell victim to the delusion of a great leap forward in agriculture. After China suffered the worst man-made famine in history, the party leaders resorted to a form of food fundamentalism that placed grain production above all else. Even after repudiating that policy, and turning to a market economy, at the end of the twentieth century the party continued to exercise strong control of the grain market.

The book concludes with some reflections on how three centuries of fighting famine resulted in short-term successes as well as long-term failures and other unintended consequences. Both famine and fighting famine have determined the destiny of North China—and hence of China as a whole—all the way to the end of the twentieth century.