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DROUGHT AND FAMINE IN NORTHWEST CHINA: A LATE VICTORIAN TRAGEDY?

Abstract
The North China Famine of 1876–1879 has received some attention recently, but little of this work has focused on the north-western province of Shaanxi. This imbalance is reflected in the local histories that devote far more space to the documentation and commemoration of the Hui rebellion than to the famine. This paper argues that the drought of those years and the ensuing famine is historically much more significant than this biased documentation would suggest, and that the rebellion can only be fully understood by paying attention to the environmental and social conditions in which it unfolded. Further, the paper engages with Mike Davis's argument that portrays the famine in China as part of a 'late-Victorian holocaust.' While persuasive, his focus on outside forces is problematic as it ignores the history of the Qing Empire as an expanding force in itself and inadvertently reinforces the victimization narrative that dominates modern Chinese historiography.

Key words
Drought, North China Famine, Shaanxi, Historical memory

In a short essay on historical droughts in China, the Harvard-educated meteorologist Zhu Kezhen (1890–1974) explained how his research was motivated by a lecture on "climate and human life" given by Ellsworth Huntington (1876–1947) at the University of Nanjing in the fall of 1924.[1] Huntington claimed that all the invasions from the north that China had suffered throughout its history could be explained by the cooling of the climate in Central Asia. Based on his own careful research, Zhu Kezhen confirmed the close correlation between climatic shifts and major historical events, though he was cautious to state that he "definitely did not believe that his theory was entirely right."[2] Throughout the twentieth century historians remained careful not to abandon the strict separation of nature and culture that had been a hallmark of Western scientific thinking since the age of Enlightenment. This was not only due to a sense of human superiority and a strong confidence in the human ability to master the material world, but also

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[1]A note on the use of Chinese characters: I will generally use *fantizi* 繁體字, with the exception of references to materials published in the PRC after the introduction of *jiantizi* 簡體字. In those cases, I do not change the original form of writing, as I would not change American English to British English spelling in English titles.

[2]Zhu Kezhen 竺可楨, "Zhongguo lishi shang de hanzai" 中國歷史上的旱災, *Shidi xuebao* 史地學報 3, no. 6 (1925): 47–52.

because ever since the rise of climatic deterministic thinking (which ultimately arose from that exact same sense of superiority) and the infamous moral judgements of peoples and their cultures linked to it, with devastating consequences, putting too much emphasis on the impact of the physical environment on human societies had become even more problematic. Even historians of climate were reluctant to establish too close a link between climatic and human history. With the advent of the Anthropocene this situation may now have come to an end. The human species will have to relearn how to understand itself as an integral part of the physical world—which is not the world "around us" any more—and historians are only just beginning to learn how to rewrite their histories in a way that reflects this newly regained understanding.[3]

Typically, so far political histories have remained remarkably devoid of any serious consideration of drought as a climatic phenomenon and famine as its social consequence. This is even true for Chinese history, despite the conventional reference to famines and an entire plethora of further disasters as markers of the end of a dynastic cycle. In his analysis of violence in China's northwest, for example, Lipman mentions "geographical factors" such as poor transportation and a violent climate, but he does not further explore the impact of these geographical factors.[4] Climatic conditions, in particular droughts leading to harvest failures, are routinely recognized as a logistical problem for military strategists and economic reformers, but rarely does the analysis go deeper than that.[5] In the case of the Hui rebellion in the Northeast of the Qing Empire ethnic relations and questions of religion dominate the discussion, not drought and famine. There is obviously a huge literature on the history of famine and in particular famine relief, but this is generally separated from everything else—despite early calls by scholars such as Zou Yilin and Xia Mingfang, based on Li Wenhai's pioneering work, to change this.[6]

This is also true for the history of what is known in English as the Great North China Famine of 1876–1879 and in Chinese as the Dingwu qihuang 丁戊奇荒, or the Extraordinary Famine, of the Years 1877 and 1878, of which the drought and famine in China's northwest discussed here forms a part. In those years large parts of North China were struck by a protracted drought. The extent and progression of that event are clearly shown in a series of maps in a recent climatological study: it started in eastern China with the core in Shandong province and moved on to cover most of central north

[3]Dipesh Chakrabarty, "The Climate of History: Four Theses," *Critical Enquiry* 35 (Winter 2009): 197–222.

[4]Jonathan N. Lipman, "Ethnic Violence in Modern China: Hans and Huis in Gansu, 1781–1929," in *Violence in China: Essays in Culture and Counterculture*, ed. Jonathan N. Lipman and Stevan Harrell, 65–86 (Albany: State University of New York Press, 1990), 74.

[5]E.g. Wen-djang Chu, *The Muslim Rebellion in Northwest China, 1862–1876: A Study in Government Minority Policy* (Paris: Mouton, 1966); Peter Lavelle, "Cultivating Empire: Zuo Zongtang's Agriculture, Environment, and Reconstruction in the Late Qing," in *China on the Margins*, ed. Sherman Cochran and Paul G. Pickowicz, 43–64 (Ithaca, NY: East Asia Program, Cornell University, 2010).

[6]Among the many contributions of Li Wenhai 李文海, see e.g. "Qingmo zaihuang yu Xinhai geming" 清末灾荒与辛亥革命, *Lishi yanjiu* 1991.5: 3–18. See also Zou Yilin's 邹逸麟 introduction to *Ziran zaihai yu Zhongguo shehui lishi jiegou* 自然灾害与中国社会历史结构, ed. Fudan daxue Zhongguo lishi dili yanjiu zhongxin (Shanghai: Fudan daxue chubanshe, 2001) and Xia Mingfang 夏明方, "Zhongguo zaihaishi yanjiu de fei renwenhua qingxiang" 中国灾害史研究的非人文化倾向, *Shixue yuekan* 2004.3: 16–18.

China, in particular southern Shanxi, northern Henan, and then further west to the Guanzhong region in Shaanxi, finally reaching Gansu in the Northwest.[7] At the time, the affected area was estimated at 650,000 km^2 by a British consular official, threatening the livelihoods of about sixty to eighty million people.[8] The ensuing famine affected ten of China's eighteen central provinces. It first attracted national and international attention in 1876–77 in the eastern provinces of Shandong and Zhili, due to the presence of Western missionaries, some of whom saw the famine as a heavenly-sent gift that helped to promote their proselytizing work. It was most deadly in the central provinces of Shanxi and Henan, where it reached its peak in the spring and summer of 1878 (even the official account said that Shanxi lost half of its population), and finally brought havoc to the northwestern province of Shaanxi, which had barely recovered from the devastations of the Muslim and other rebellions that had reached their climax about a decade earlier. Estimates of the overall death toll range from nine million to thirteen million.[9]

A number of monographs in English, Chinese, and Japanese have appeared since the 1970s focusing on particular aspects of this famine. Richard Bohr's book on Timothy Richard (1845–1919) and missionary relief in Shandong and Shanxi pioneered the field. This was soon countered by He Hanwei's study that examined the famine from a Chinese perspective, focusing on government relief in all of the five mainly affected provinces.[10] Then, since the 1990s, an ever-growing number of studies on this subject have been published. Just to mention the monographs: Zhu Hu examined the changes in the organization of private relief in the Jiangnan region; Takahashi Kōsuke wrote a social history of famine relief in the nineteenth century that also focuses on the work of Jiangnan philanthropists in the famine regions in the north, in particular Henan; Kathryn Edgerton-Tarpley studied "cultural responses" to the famine with a focus on Shanxi province; and Hao Ping published another monograph-length study on famine relief in Shanxi.[11] Yet, despite these efforts by Qing historians, the Great North China Famine is still not generally recognized as an important event in modern Chinese history—if textbooks can be considered an indication of this. Even the most recent

[7]Zhang, De'er and Youye Liang, "A Long Lasting and Extensive Drought Event over China in 1876–1878," *Advances in Climate Change Research* 1, no. 2 (2010): 91–99, at 93.

[8]Arthur Davenport, "Report on the Trade of Shanghai for the Year 1877," FO 228/615.

[9]See e.g. Walter H. Mallory, *China: Land of Famine* (New York: American Geographical Society, 1926).

[10]Paul R. Bohr, *Famine in China and the Missionary: Timothy Richard as Relief Administrator and Advocate of National Reform, 1876–1884* (Cambridge. MA: East Asian Research Center, Harvard University, 1972); He Hanwei 何漢威, *Guangxu chunian (1876–1879) Huabei de da hanzai* 光緒初年華北的大旱災 (Hong Kong: Zhongwen daxue chubanshe, 1980). Earlier than that, relevant information could be found in Mallory, *China: Land of Famine*; Deng Yunte 鄧雲特, *Zhongguo jiuhuang shi* 中國救荒史 (Beijing: Shangwu yinshuguan, 1937); and Ho Ping-ti, *Studies on the Population of China, 1368–1953* (Cambridge, MA: Harvard University Press, 1959).

[11]Zhu Hu 朱浒, *Difangxing liudong ji qi chaoyue: Wan-Qing yizhen yu jindai Zhongguo de xin chen dai xie* 地方性流动及其超越：晚清义赈与近代中国的新陈代谢 (Beijing: Zhongguo renmin daxue chubanshe, 2006); Takahashi Kōsuke 高橋孝助, *Kikin to kyūsai no shakaishi* 飢饉と救済の社会史 (Tokyo: Aoki shoten, 2006); Kathryn Edgerton-Tarpley, *Tears from Iron: Cultural Responses to Famine in Nineteenth-Century China* (Berkeley: University of California Press, 2008); Hao Ping 郝平, *Dingwu qihuang: Guangxu chunian Shanxi zaihuang yu jiuji yanjiu* 丁戊奇荒：光绪初年山西灾荒与救济研究 (Beijing: Beijing daxue chubanshe, 2012).

ones rarely mention it, let alone discuss it in any detail.[12] The first to effectively bring what was perhaps the most deadly subsistence crisis of the early modern world to the attention of an audience that far exceeds the narrow circles of late Qing historians and to highlight its broader historical significance was not a China specialist but the leftist writer Mike Davis, who is best known for his critique of capitalist urban modernity. In his award-winning book *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* he examined the effects of the ENSO (El Niño Southern Oscillation)-related famines of 1876–78 and later in the nineteenth century in China, India, Brazil, and elsewhere, highlighting their global and geostrategic consequences, and linking the death of millions to the process of the forced incorporation of these countries into the "modern [i.e. capitalist] world system."[13] But while his argument on the interrelatedness of global climatic anomalies, imperialist expansion, and the formation of the Third World is highly persuasive, it is also problematic—at least as far as the case of China is concerned—in its tendency to apportion unilateral blame to the forces of capitalist imperialism and global weather patterns, and it inadvertently reinforces the victimization narrative that dominates modern Chinese historiography.[14]

Obviously, research on Chinese history of that period has long since gone beyond this kind of simplified and somewhat distorted narrative, but rarely has it been linked so powerfully to the environmental conditions in which it unfolded.[15] This is not to say that China was not a victim of Western imperialism. But should one therefore look at things exclusively through a narrow ideological lens, regard the drought as a local manifestation of a global El Niño colluding as it were with Western imperialism, creating a "late Victorian holocaust" visiting unsuspecting "celestials," immiserating and killing

[12]See for example Pamela Crossley's *The Wobbling Pivot: China Since 1800* (Chichester: Wiley-Blackwell, 2010), where famine generally is just one aspect of the overall chaos of China's nineteenth-century history. One exception is William Rowe who in his *China's Last Empire: The Great Qing* (Cambridge, MA: The Belknap Press of Harvard University Press, 2009) mentions the North China Famine twice, first very briefly in the context of migration to Manchuria, and then, drawing on Mary Rankin's work, as the likely turning point for the rise of local elite activism (211, 251). By 2014 there was just one albeit widely used (university-level) Chinese modern history textbook that devoted about 200–300 characters to the Great North China Famine. Thank you to Zhu Hu for providing this information.

[13]Mike Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (London: Verso, 2001). Davis's book was awarded the World History Association Book Prize in 2002, putting it next to Kenneth Pomeranz's *Great Divergence* and Victor Lieberman's *Strange Parallels*. It has been translated into Italian (2002), Portuguese (2002), French (2003), German (2004, 2011), and Spanish (2006).

[14]A recent example of this re-enforcing of the humiliation narrative is Wei Guang's MA dissertation on historical droughts in Gansu, which says that from 1840 Western imperialism was the main reason the impact of droughts worsened. "Qing zhi Minguo shiqi (1644–1949) Gansu diqu de hanzai yu shehui yingdui yanjiu" 清至民国时期(1644–1949)甘肃地区的旱灾与社会应对研究 (MA diss., Shaanxi shifan daxue, 2014), 15.

[15]See e.g. Edgerton-Tarpley, *Tears from Iron*, and Lillian M. Li, *Fighting Famine in North China: State, Market, and Environmental Decline, 1690s–1990s* (Stanford: Stanford University Press, 2007), covering the politics of famine, among other things, and works such as James Millward's *Beyond the Pass: Economy, Ethnicity, and Empire in Qing Central Asia* (Stanford: Stanford University Press, 1998) and Peter Perdue's *China Marches West: the Qing Conquest of Central Asia* (Cambridge, MA: Belknap Press of Harvard University Press, 2005), who explore the over-extension of empire that is a crucial part of the story told here. It is maybe Ken Pomeranz who comes closest to integrating environmental and economic—though not political—history in his *Great Divergence: China, Europe and the Making of the Modern World Economy* (Princeton: Princeton University Press, 2000) without however any specific focus on droughts and famines.

them in the millions? After all, in the late nineteenth century China was not a British colony, but a still-powerful, if perhaps ailing, empire itself that had just successfully asserted its position at its northwestern frontier, if at some cost. While I appreciate an account that takes the environment seriously and puts the Chinese case into a global perspective, I hope to add more nuance to this argument by looking at the North China Famine of the late 1870s in a local context and long-term perspective. My case study is the Wei River valley in the Guanzhong region in Shaanxi province, not only because this region has not received much attention in the existing literature on the famine, but also and importantly because it was arguably not least due to developments in Shaanxi and the north-western border provinces that the ENSO-related drought of those years developed into such an unprecedented disaster. Stopping short of using the term Holocaust—meaning the ultimate catastrophe, the final conflagration, a systematically planned extinction—I would like to explore to what extent it makes sense to regard the famine in China as a late Victorian tragedy in the sense of a terrible disaster.

In the first instance, one can certainly argue that the famine in Shaanxi was a historically much more significant event than even contemporaries of the disaster acknowledged. While it is difficult—perhaps impossible—to separate the consequences of drought from those of war, the historical record clearly emphasizes the latter. The documentation of drought and famine is scarce in comparison and kept entirely separate. This is particularly true when it comes to the victims of disasters. Victims of war are commemorated as martyrs and heroes. Victims of famine disappear in mass graves. They leave nothing to celebrate, nothing that could be of any use in some kind of edifying historical writing, certainly not in local histories that are meant to evoke the "loyalty and filial piety, morality, and righteousness" (*zhongxiao jieyi* 忠孝節義) of a place, as Jiao Yunlong does in his preface to the local history of Sanyuan, written in 1880, shortly after the famine.[16] Then, following on that, a closer analysis of the conditions that produced the famine shows that it was an event that has been a long time in the making, with climatic conditions and political, military, and economic developments equally playing important roles. Western imperialism was a factor at least in so far as the expansion of the Qing Empire was part of the same global process, even if ultimately it would play out quite differently for the Qing than for the British. Therefore, calling it "late Victorian" seems to give too much credit to the European power and lets Qing China get away without having to face its own history.

I will first reconstruct the history of droughts and other disasters in the Guanzhong region during Qing times as it is documented through the "records of auspicious and inauspicious events" or disaster chronologies (*zaiyi* 災異, *xiangyi* 祥異, *jinxiang* 祲祥) in a few selected county histories, with the aim of assessing the relative significance of the 1877–78 drought and famine at the local level. Given the large number of droughts and famines in this region, the questions are to what extent and in which way the crisis of 1877–78 stood out from the others, what can be said about causation, and how the various crises relate to other historical events. These questions are explored further by looking at how two different literati witnesses perceived of the events and how they chose to remember them—or not. Wang Yong 王庸 (*juren* of 1875), a native of Shandong

[16]Jiao Yunlong 焦雲龍, ed., *Sanyuan xian xinzhi* 三原縣新志 (1880).

province who in the 1860s and 1870s spent many years in Shaanxi and Gansu as a member of the secretarial staff of provincial officials, has left a startling account of the famines of those years. He offered straightforward explanations of the respective causes of the disasters he experienced at different times and in different places: warfare in Gansu in 1865 and three years of drought in Shaanxi from 1876 to 1878.[17] But more importantly, the misery he had witnessed continued to haunt him, which is why a decade after the events he finally published his record of famine refugees. In contrast, Liu Guangfen 劉光蕡 (1843–1903), who was one of the most prominent scholars of the Guanzhong school of learning (Guanxue 關學) of his time and became famous as a modernizing reformer in his later years, remains largely silent about the famine of 1877–78. As a native of Xianyang County he lived right at the center of the disaster and could thus have provided an insider's perspective. However, while it is clear that hunger was not an unknown experience to him, his early biographer does not consider this noteworthy either. If anything, it is the genocidal warfare of the early 1860s more commonly known as the Hui or Muslim Rebellion that merits attention.[18] The author of his chronological biography, writing in the late 1940s, goes even further when he begins his account with the lost battles of the First Opium War and the signing of the treaty with the British, which opened the first five treaty ports to foreign trade.[19] This was what mattered in his view. It was this manifestation of China's weakness that Liu was fighting with his various reformist projects. But could somebody like Liu really have been affected so little by a crisis that probably reduced the local population by one third? How does the experience of famine figure more generally in his life? How does this all relate to Davis's argument?

LOCAL RECORDS OF FLOOD AND DROUGHT IN THE GUANZHONG REGION

The data that forms the basis of the following discussion is limited to the sections covering the Qing dynasty (1644–1911) in the chronologies of disasters from the local histories of Sanyuan (where Wang Yong experienced the famine in 1878) and Xianyang (where Liu Guangfen comes from), both of which belong to Xi'an Prefecture, as well as Huazhou (where the incident that ignited the Hui Rebellion happened) and Weinan and Dali (two of Huazhou's immediate neighbors) in Tongzhou Prefecture to its east.[20] In addition, the record of Shaanxi province as a whole has been consulted, as well as Yuan Lin's comprehensive collection of data on disasters in China's

[17]Wang Yong 王庸, "Liuminji xu" 流民記敘, first preface to his *Liuminji* 流民記 (1886). Wang's first preface is dated 1881, the second 1884.

[18]*Chongxiu Xianyang xianzhi* 重修咸陽縣志, ed. Liu Anguo 劉安國 (1932), j.7: 11b–13a.

[19]Liu Guyu nianpu bianweihui 《刘古愚年谱》编委会, ed., *Liu Guyu nianpu* 刘古愚年谱 (Xi'an: Shaanxi lüyou chubanshe, 1989), 1. This chronological biography was originally written by one of Liu's disciples, Zhang Pengyi 張鵬一, in 1939.

[20]"Zaiyi" 災異, in *Sanyuan xian xinzhi* 三原縣新志, ed. Jiao Yunlong 焦雲龍 (1880), j.8: 11b–14a (covers 1648 to 1879, though the record as such goes back to Han times); "Xiangyi" 祥異, in *Chongxiu Xianyang xianzhi* 重修咸陽縣志, ed. Liu Anguo 劉安國 (1932), j.8: 1a–6b (covers 1691 to 1721 and 1847 to 1900, though this record goes back to Zhou times and continues to 1931); "Xingjian zhi" 省鑒志, in *Sanxu Huazhou zhi* 三續華州志, ed. Wu Bingnan 吳炳南 (1882, 1915 printing), j.4: 1a–6a (covers 1662 to 1884, this record goes back to 1593); "Jinxiang" 祲祥, in *Xinxu Weinan xianzhi* 新續渭南縣志, ed. Yan Shulin 嚴書麟 (1892), j.11: 10a–17a (covers 1651 to 1889, this record goes back to Sui times); "Shizheng" 事徵, in *Dali xian xuzhi* 大荔縣續志, ed. Zhou Mingqi 周銘旂 (1885), j.1: 1a–14b (covers 1849 to 1879).

northeastern provinces.[21] I am assuming that in an environment where drought was "a frequent life experience"[22]—according to Yuan Lin's study, Shaanxi experienced drought in two out of three years and "relatively severe drought" every fourth year[23]—those events that are recorded in the local histories were experienced as particularly disastrous. These would have been droughts that lasted for longer than one season and in the most severe cases for more than one year, often coinciding with periods in which local communities were particularly vulnerable to such severe weather events.

An analysis of the data shows a clear pattern of clusters of disasters: severe drought and famine in 1691–92 and 1720–21 (the final years of the Kangxi reign), in both cases government relief is recorded. At the same time large numbers of people starved to death or were forced to become famine refugees—indicating that relief came too late or did not reach them at all. In 1691 in Xianyang "one could buy a child for one *sheng* of rice, people fled, nine of ten houses were empty." The Sanyuan record tells of refugees who tried to make a living in the neighboring provinces and that only "later when one could rely on government relief the scattered people came together again" (entry for 1692). In Huazhou "the people were starving. Epidemics followed the famine" (1691). The drought of 1720–21 has been described by the compilers of the Shanxi provincial history in the late nineteenth century as the only one that could compare, in terms of its geographic extent, with the event in 1877–78.[24] Apparently, after the experience of 1691 the government was prepared to mount a vigorous relief campaign of which the local history of Sanyuan gives a brief account. But still, the Xianyang record emphasizes that "many fled" and in Huazhou "people were starving." It is after these disastrous experiences that the Qing government systematically built up its famous civilian granary system. Another thirty years later the next serious province-wide drought is recorded, but only the Huazhou record mentions it and highlights not the suffering but the kindness of the relief received from the emperor (1750). The second half of the eighteenth century saw another series of droughts in the early 1770s (this time Huazhou records "famine"), but overall it appears as if the more localized Wei River floods were a more dominant threat in this period. It is also noteworthy that there are no recorded corresponding crises to the two known major El Niño events in 1685–87 and 1782–83.[25] Drought became again the major calamity towards the end of the century, in particular

[21]"Xiangyi" 祥異, in *Xuxiu Shaanxi tongzhi gao* 續修陝西通志稿, ed. Yang Hucheng 楊虎城 and Shao Lizi 邵力子 (1934), j.199 (covers 1738 to 1911); Yuan Lin 袁林, *Xibei zaihuang shi* 西北灾荒史 (Lanzhou: Gansu renmin chubanshe, 1994). The majority of Yuan Lin's sources are local histories, but he also draws on dynastic histories, collections of memorials, archival materials, and surveys conducted in the first decades of the twentieth century to complement the local data.

[22]Greg Bankoff, "Cultures of Disaster, Cultures of Coping: Hazard as a Frequent Life Experience in the Philippines," in *Natural Disasters, Cultural Responses: Case Studies toward a Global Environmental History*, ed. Christof Mauch and Christian Pfister, 265–284 (Lanham: Rowman & Littlefield, 2009).

[23]Yuan Lin, *Xibei zaihuang shi*, 36.

[24]This is based on the "Record of famine relief" in the provincial history of Shanxi (*Shanxi tongzhi*) compiled in the late nineteenth century, quoted in Andrea Janku, "'Heaven-sent Disasters' in Late Imperial China: The Scope of the State and Beyond," in *Natural Disasters, Cultural Responses*, 233–264, at 240.

[25]See Davis, *Late Victorian Holocausts*, 271 for a table of major ENSO events.

in the early 1790s. This coincides with the beginning of the troubled final years of the Qianlong reign, when the Qing desperately fought the White Lotus insurgents. The record for this period is less clear-cut, but it is worth noting that it encompasses two strong El Niño events (1790–93 and 1803–04). Although drought and famine remained at threatening levels until around 1810, there is no mention of any government relief for this period.

The first decades of the nineteenth century were characterized by extreme cold events and flooding, the latter particularly affecting people living close to the Wei River, as is reflected in the frequent Wei River floods in the Huazhou record. In the nineteenth century, major droughts leading to famine occurred in 1830, 1835–36 (roughly concurrent with what is labelled an m+ El Niño event in 1836), 1846–47, 1877–78, and 1900. No cause is indicated in any of the sources under review here for what appears to have been a major subsistence crisis in 1868. The record is ambiguous. While the provincial history indicates a "summer drought" in 1867, the Wei River valley counties appear to have rather suffered from excessive rain. According to Yuan Lin's data, 1868 was a very bad famine year for most of Shaanxi, but this probably cannot be attributed to the localized occurrence of drought (Dali), flood (Xianyang), hail (Dali), and insect infestations (Weinan) alone.[26] The warfare that had ravaged the Guanzhong region since the outbreak of the Hui rebellion in 1862 and the arrival of the Nian rebels in 1868 appear to have played their part in turning volatile environmental conditions into famine, while the occurrence of locust plagues, rat infestations, wolf attacks, and epidemics in the 1860s indicate a generally bad state of what is perhaps best called "environmental governance." Huazhou and the other counties of Tongzhou Prefecture suffered from localized summer droughts and locust plagues in 1857–58 and 1862, and floods in 1863 and 1867. Government relief is mentioned in the provincial history for 1846–47, though only for two counties in the northern part of the province. The county histories mention government relief in 1877–78.

How then is it possible to assess the relative severity of drought and famine conditions? From 1830 onwards, some of the records under examination here contain price data (cf. Table 1).[27]

While people in Xianyang clearly had to suffer high price spikes in 1877, prices were even higher in 1847, and especially in 1868. In 1847 one *dou* of wheat cost four strings of cash—clearly more than in 1877 when it was three, and in 1868 the price had even jumped to six strings of cash. In 1877/1878 people in Xianyang (and probably Xi'an Prefecture generally) also appear to have been better off than those in the counties in Tongzhou Prefecture (Weinan and Huazhou), but still far worse than those in neighboring Sanyuan, with grain prices less than half of those in Tongzhou. How bad the situation was in the Tongzhou counties is shown in the comparison with post-disaster prices in Weinan (1880) that were only a tiny fraction of those in 1877. While grain prices clearly indicate a serious food crisis, the record overall

[26]Yuan, *Xibei zaihuang shi*, 533, 798, 1065, 1475, 1697–98.

[27]See He, *Guangxu chunian Huabei de da hanzai*, for comprehensive analyses of the price data for 1877–78 for all of the five major affected provinces.

TABLE 1. Grain price data.

1830	Huazhou	great drought (大旱)	one *dou* of grain cost 1.5 Tls of silver (斗粟白金一兩五錢)
1836	Weinan	great famine (大饑)	one *dou* of wheat cost 1,200 *qian* (麥斗一千二百錢)
1847	Xianyang	harvest failure, great famine (無禾大饑)	one *dou* of wheat cost more than four strings of cash (斗麥易錢四緡有奇)
1868	Xianyang		grain prices jumped to six strings of cash for one *dou* of grain (三月糧價飛漲斗粟六緡)
1868	Weinan	great famine (大饑)	one *dou* of wheat cost 4,000 to 5,000 *qian* (麥斗四五千錢)
1868	Dali		one *dou* of rice cost 3,000 *qian* (三月糧價昂貴斗米錢三千有零)
1877	Xianyang	great drought, harvest failure (大旱無麥)	one *dou* of wheat cost more than three strings of cash (斗麥易錢三緡有奇)
1877	Sanyuan	great drought in Shanxi, Henan and Shaanxi (晉豫秦皆大旱)	one *dou* of wheat cost 1,700 to 1,800 *wen* (斗麥至錢一千七八百文)
1877	Weinan	great drought (大旱)	one *dou* of wheat cost 4,000 to 5,000 *qian* (斗麥四五千錢)
1878	Huazhou	great drought (大旱)	one *dou* of rice cost more than 4,000 *qian* (斗米四千餘錢)
1880	Weinan	rich harvest (歲豐)	one *dou* of wheat cost 150 *qian*, barley several dozen (ten) *qian* (斗麥百五十錢大麥數十錢)

remains ambiguous. How, then, is the crisis of 1877–78 singled out as an unprecedented event in the chronologies?

In the entire local history of Xianyang County (printed in 1932, more than five decades after the event) exactly forty characters are devoted to the famine of those years:

> In the third year of the Guangxu reign (1877) there was a great drought and no wheat harvest. One *dou* of wheat cost more than three strings of cash. People ate the bark of trees and the roots of wild grass, so that there was nothing left of it. Some even ate weathered rocks. They called it "divine noodles." Many died.
>
> 光緒三年大旱無麥，斗麥易錢三緡有奇，人食樹皮草根殆盡，甚或啖山石之朽灰，名曰神麵，死者甚眾。[28]

Here it was the need to resort to "famine foods," and the fact that even those were exhausted that marked those years as particularly bad. Sanyuan is the only county in Xi'an Prefecture with a local history that was compiled immediately after the famine.[29] But even though the preface evokes the desolate condition of the place

[28] *Chongxiu Xianyang xianzhi*, j.8: 5b.

[29] In this respect the record for Shaanxi as a whole is decidedly different from that for Shanxi where the governor, Zeng Guoquan, had asked for local histories to be compiled immediately after the conclusion of the famine relief campaign in 1879 to prepare for a new edition of the provincial history. See Andrea Janku, "Wei Huabei jihuang zuo zheng: jiedu *Xiangling xianzhi* 'zhenwu' juan" 为华北饥荒作证：解读《襄陵县志》《赈务》卷, in *Tian you xiong nian: Qingdai zaihuang yu Zhongguo shehui* 天有凶年：清代灾荒与中国社会, ed. Li Wenhai 李文海 and Xia Mingfang 夏明方, 479–508 (Beijing: Sanlian shudian, 2007), 480.

when the scarcity of people and the abundance of uncultivated land are mentioned,[30] just twenty-nine characters deal with the two years of drought:

> In the third and fourth year of the Guangxu reign (1877–1878) there was a great drought in Shanxi, Henan, and Shaanxi. In Sanyuan the price for one *dou* of wheat went up to 1,700 to 1,800 *wen*. Countless people died from hunger.
>
> 晉豫秦皆大旱。三原斗麥至錢一千七八百文，餓斃無算。[31]

Here the geographic extent of the drought is highlighted to show the severity of the ensuing disaster. As in the case of the Xianyang record, there is no mention of any relief. And as observed above, grain prices and the severity of disasters do not always correlate very well. The Huazhou record laconically says:

> 1877. Great drought. Baiya Lake had dried out. Great famine. The people were unable to sow. People ate each other. In the tenth month government relief started.
>
> 大旱，白崖湖竭，大饑，民失種，人相食，十月開賑。
>
> 1878. One *dou* of rice cost more than 4000 *qian*. The roads were filled with people dying of hunger. Half of the population has fled. In the sixth month relief stopped. Altogether more than 226,000 poor and very poor people had received relief and more than 13,990 *shi* of wheat and beans have been distributed.
>
> 斗米四千餘錢，道殣相望，逃亡者半，六月賑撤，共賑極貧次貧二十二萬六千餘口，用麥豆一萬三千九百九十餘石。[32]

This would have come to about 0.06 *shi* (or, if one *shi* very roughly equaled 100 liters, 6 liters) for each person entitled to relief—hardly enough to survive for one month. But most importantly, government relief is mentioned only after the future existence of the entire community is seriously under threat—indicated by the failure to sow seeds, that here could also be read metaphorically to mean the loss of (male) descendants—and the occurrence of cannibalism. In brief, even though there were bad famine years that saw many people starve earlier in the century, these earlier cases make no mention of resort to famine foods, a huge geographic extent of the disaster, or indeed cannibalism. One has to go back to the late Ming disasters to find similar accounts.

This first analysis sufficiently shows that, while clusters of disasters and a few major crises can be clearly established, much of the data remains largely meaningless without considering the more localized events alongside the big ones occurring at the same time, as well as the rationale compilers might have followed when they drafted the records or magistrates when they reported—or not—local disaster conditions. Even the major events remain hard to understand without a thorough investigation of the social, economic, and political context. What seems to be obvious is that it was not the drought alone that turned the years 1877–78 into the major disaster that stands out from all the

[30]Jiao Yunlong, "Chongxiu Sanyuan xian xinzhi xu" 重修三原縣新志序, in *Sanyuan xian xinzhi*: 三原關輔名區，舊稱富庶，今則土地荒蕪矣，人凋殘矣。

[31]*Sanyuan xian xinzhi*, j.8: 14a.

[32]*Sanxu Huazhou zhi*, j.4: 4a. This chronology includes a brief account of the local relief campaign, presumably to demonstrate that local authorities could not be blamed for the riotous looting that had leapt over from neighboring Pucheng.

other crises experienced under Qing rule by its documented occurrence of survival cannibalism (in Huazhou and Weinan in the sample examined here). The situation can be better understood if seen as the combination of the culmination of a series of minor and more localized crises that had haunted the region (such as minor floods and a drought in Huazhou and locust plagues in Weinan in the late 1850s) together with a general decline of government support throughout the nineteenth century and the outbreak of open rebellion in 1862. The conflicts between the Han and Muslim populations and the consequences of the various natural hazards mutually exacerbated each other, and by 1877, when the rebellion had shifted to the Yili region, pressure increased due to funds drained from the system and grain extracted from the northern provinces, in particular Shanxi (where overall the consequences of the famine were most severe), to support Zuo Zongtang's (1812–1885) military campaign in Xinjiang.[33]

Conspicuously, in this sample of sources there is only one case where private relief aid is mentioned. In 1892, when Xianyang's harvest was destroyed by insect pests, the record tells of one Liu Guyu 劉古愚 who contributed 100 *liang* to fight the food crisis. Guyu is the sobriquet (*hao* 號) of Liu Guangfen, to whom we now turn.

AN INSIDER'S PERSPECTIVE: LIU GUANGFEN

Liu Guangfen was a *juren* of 1875 and one of the most outstanding representatives of Guanxue of his time. He was the only Qing scholar from Xianyang who was honored with a biography in the chapter on "famous scholars" (*ming ru* 名儒) in Xianyang's local history.[34] With the exception of one trip to Beijing, in 1876, to participate—without success—in the national examinations, he spent his entire life in Shaanxi and Gansu, where he held various teaching positions, first in the families of better-off acquaintances, then in various academies. In the 1890s he became a fervent promoter of modernizing reforms. After the Sino-Japanese War he exchanged letters with Kang Youwei (1858–1927), whom he however never met personally.[35] He founded the Bin Restoration Society, engaged in establishing community schools, convinced that education was the key "to provide for the needs of the common people." In 1898 his contact with Kang Youwei implicated him in the failed reform movement, but due to his local prestige and support from the provincial authorities he was able to continue his career in teaching, which culminated in his appointment as the principal of Gansu's newly established modern university (*daxuetang*) in 1903, shortly before his death.[36] Despite this acute concern about the livelihood of the people, if one follows Liu's biographers as well as his own writings, the motivation for this was the "barbarian" threat—be it

[33]How these various competing interests, famine relief in Shanxi, the funding of the military campaign, and Zuo Zongtang's concern for the people in Shaanxi interfered with one another still needs further research. On Zuo's relief measures, see Gao Zhonghua 高中华, "Shi lun Zuo Zongtang de huangzheng sixiang ji qi bianjiang jiuhuang shijian" 试论左宗棠的荒政思想及其边疆救荒实践, *Zhongguo bianjiang shidi yanjiu* 15, no. 3 (2005): 40–45.

[34]*Chongxiu Xianyang xianzhi*, j.7: 11b–13a.

[35]*Chongxiu Xianyang xianzhi*, j.8: 14b–15a.

[36]Chang Woei Ong, *Men of Letters Within the Passes* (Cambridge, MA: Harvard University Asia Center, 2008), 194–96.

in times of antiquity, which Liu evoked in his writings, or the foreign threat to China in his own days, which he hoped to counter with his attempts to modernize in particular Shaanxi's textile industry.[37] Overall this account would fit quite well within Davis's argument. It was the encroaching Western or Westernizing powers that were threatening the peace and quiet. The second major element of his argument, climatic shocks and their consequences, are hardly ever made explicit in Liu's writings, unless one would count general references to the need to improve people's livelihoods as such. Then what did the experience of drought and famine mean for Liu, in particular that of 1877–78, which he must have experienced when he was in his mid-thirties?

Curiously enough, the famine is hardly ever mentioned by his biographers.[38] What was important however was the experience of the violence that erupted in 1862. It was this civil war, in the course of which entire villages were massacred, that was recorded as something that left a mark in Liu's biography and also in the local history—not the famine. According to his biography, Liu, who lost his father as an infant, survived the violence of these years as a young adult hiding away in a place in the mountains, "grinding broken wheat by night and selling pancakes by day," always carrying books with him, which he recited whenever possible, regardless of being ridiculed.[39] So while this is reported to illustrate his dedication to learning and the hardship he had endured, we can still see this experience of disaster as incisive. Would the famine not have left a similar impression? But after telling of the failed examination attempt in 1876 the biographers move directly to Liu's intellectual friendships and their efforts to establish modern schools, or indeed to the foreign humiliations and the need for China to harness herself in order to be able to confront them:

> After having gained the *juren* degree in 1875 he travelled to the Board of Rites [in Beijing] to participate in the national exams, but without success. He returned to devote himself to decades of teaching until the end of his life. At the time China was in a long-term decline (lit.: had accumulated weakness for a long time); the country had been humiliated repeatedly by foreign powers. My teacher resented this deeply, so he dedicated himself to the mastery of classical learning to put it to practical use and he taught the new knowledge, new methods and new technologies to save China.
>
> 舉光緒乙亥科，鄉試赴禮部試不第，乃退居教授數十年終其身，當是時中國久積弱，屢被外侮，先生憤慨務通經致用，灌輸新學新法新器以救之。[40]

A memorial tablet written in 1923 does mention Liu's commitment to famine relief in a minor crisis in the early 1890s and also his promotion of charity granaries. But otherwise

[37]Ong, *Men of Letters*, 198–200.

[38]Apart from Liu's biography in the local history, there is a biography by Chen Sanli 陳三立 published first in 1918 as part of the introductory materials to a collection of Liu's writings ("Liu Guyu zhuan" 劉古愚傳, in *Yanxia caotang wenji* 煙霞草堂文集, reprinted in *Qingdai shiwenji huibian* 清代詩文集彙編 (Shanghai: Shanghai guji chubanshe, 2010, 96–97), an epitaph authored by Li Yuerui 李岳瑞 and Song Bolu 宋伯魯 ("Liu Guangfen muzhiming" 劉光蕡墓誌銘, in *Chongxiu Xianyang xianzhi*, j.1: 49b-51b), and a further memorial tablet added to a later edition of Liu's collected writings by Chen Danran 陳澹然 dated 1923 ("Guanzhong Liu Guyu xiansheng mubiao" 關中劉古愚先生墓表, in *Yanxia caotang wenji*, rpt, 98–99).

[39]*Chongxiu Xianyang xianzhi*, j.7: 12a: 稍長回亂，避寇興醴間，夜轉磨屑麥，晝鬻餅於市。

[40]Chen Sanli, "Liu Guyu xiansheng zhuan," in *Yanxia caotang wenji*.

the text is entirely cast to reflect the political discourse of wealth and power that dominated much of the writing of those decades.[41]

This pattern is repeated in Xianyang's local history, which has only a few words on the famine, but a far more detailed account of the Hui rebellion.[42] Apparently, poverty and hunger were part of the everyday, and—importantly—part of the everyday of the poorer strata of the population. By the late 1870s this might have been relatively removed from his own experience, despite the hardship he had experienced growing up in relative poverty and a serious threat to his livelihood during the crisis of 1868, when—according to his own testimony—he and his family only escaped the hunger due to the generosity of one of his better-off friends,[43] just before he became a funded student (*linsheng* 廩生) in 1869.[44] It seems that the massacres were more likely to have had a traumatizing quality. At least they were far more likely to be documented. Thus in summary it can be said that in the local memory the deep wound left by the war between Han and Hui is clearly visible and kept alive, whereas the drought and famine is hardly ever mentioned, and remained unspeakable. This is even more obvious when we look at the local history of Sanyuan published in 1880, when the experience of the famine was still fresh. As mentioned above, it has a twenty-nine-character-long record of the famine, mentioning the death of "countless people." It also has a terrifying, densely printed, six-page-long list with the names of the victims—not of the famine, but of this other catastrophe that happened a decade earlier.[45] The famine victims remain nameless. There is no space for them next to those heroic martyrs.

But does this mean that they were not important and that their deaths were without consequences? Reading about Liu Guangfen's commitment to famine relief in the minor crisis of 1892 we may wonder how he experienced the major crisis in 1877. The only trace of this crisis I have been able to find is a short passage in an epitaph co-authored by his fellow-provincial and reformer Song Bolu (1854–1932):

> In the fall of 1877 the rains failed. There was great famine in Shaanxi. Our revered friend Mr Liu planned together with Mr Bo [Jingwei] and the former Hanlin compiler [i.e. the author himself] to petition the local authorities to ask them to memorialize the emperor to transfer 200,000 *shi* of tribute grain to relieve the starving people. This could not be achieved. Instead there were envious people who reported groundless rumors about him to the authorities, but Mr Liu did not take it to heart.
>
> 丁丑秋不雨。 秦大饑。 先生與柏先生及先編修謀上書當道請奏撥漕糧二十萬石以賑饑黎， 未得。 可有忌者以蜚語上聞， 幾不測，先生處之怡然。[46]

Apparently, he did not care about what must have been some kind of intrigue against him, but he did care about the famine that happened right before his eyes. However,

[41]Chen Danran, "Guanzhong Liu Guyu xiansheng mubiao," in *Yanxia caotang wenji*.

[42]*Chongxiu Xianyang xianzhi*, j.8: 9a–10b.

[43]Liu writes about this in his epitaph for his friend Wang Yinong. This is also where he acknowledges the commitment of his senior friend who was asked to work for the official relief efforts in Xi'an in 1877. "Wang weng Yinong muzhiming" 王翁益農墓誌銘, in *Xianxia caotang wenji*, j.4: 18a.

[44]*Liu Guyu nianpu*, 21.

[45]"Za ji," in *Sanyuan xianzhi*, j.8: 6a–11b.

[46]Li Yuerui and Song Bolu, "Liu Guangfen muzhiming," in *Chongxiu Xianyang xianzhi*, j.1: 49b–51b.

he chose not to write about it, with the exception of that attempt to petition the authorities. He may have witnessed unspeakable situations in those years, but unfortunately there is no way to know. It is noteworthy that his biography in the local history mentions that while Liu experienced difficult situations, most likely referring to the hardship experienced in his youth, he never talked about private affairs to others. He only cared about the country.[47] His reaction to the famine may be explained similarly. Somehow, famine was also an internal issue that should not be exposed to outside criticism. His distress upon learning about the defeat of 1895, however, that made him weep all night, was perfectly gentlemanlike and patriotic and could therefore be mentioned.[48] His philanthropic response to the local crisis in 1892 can be understood as a well-established way for a privileged member of the gentry to give something back to society. But it may also have been related to his experience in the earlier crisis and a desire to contribute to the general improvement of social conditions. Only after the political reform movement received a powerful boost through the defeat in the Sino-Japanese war in 1895, however, was he able to translate the insights he had gained from his intensive studies of the Classics and the painful experience of life in his native Guanzhong into political action.

When he explained his motivation, the experience of hunger seems to have been only a minor factor. He hoped to solve the conflicts between Han and Hui in the frontier regions through the education system,[49] and to "restore the past glory of Bin [i.e. Shaanxi]" and thus start the project of saving China from her poverty and inferiority to the northwest.[50] Essentially this argumentation is a variation of the familiar self-strengthening rhetoric. But the explicit mentioning of the problem of poverty, rather than just military weakness, points to the possibility that his views may have been inspired at least as much by his direct experience of the famine of 1877 and earlier ones as by his indirect experience of military defeat, if not more so. Therefore, it seems to me that the relative silence about a catastrophe that was so severe that in some cases it was marked by mentioning cannibalism in local histories is an eloquent silence. The massacres of 1862 were traumatizing, but they had a clearly identifiable image of an enemy. But who could be blamed for survival cannibalism?

AN OUTSIDER'S PERSPECTIVE: WANG YONG

It has been said about the famine in Shaanxi that "the rich became poor and the poor died."[51] Even though in Shaanxi and, in particular, the densely populated Guanzhong region the consequences of the drought of 1877–78 were indeed less dramatic than in the most severely afflicted parts of Shanxi and Henan, the demographic evidence suggests that the loss of life was still tremendous. Wang Yong, who witnessed the famine in Sanyuan, even thought that five times more people died in the drought-induced famine than in the war a decade earlier. According to his account the city's pre-famine

[47] *Chongxiu Xianyang xianzhi*, j.7: 12b: 雖處困窮，一介不苟，與人談永不及家事，而憂國如焚.
[48] *Chongxiu Xianyang xianzhi*, j.7: 12b: 繞牀以泣.
[49] *Chongxiu Xianyang xianzhi*, j.7: 13a: 以學化其獷悍.
[50] Ong, *Men of Letters*, 194–200.
[51] Wang, *Liuminji*, preface by Zhang Zongli, 3a.

population of 200,000 had been reduced to 40,000. In his perception, by the time the rains returned in the summer of 1878 there were hardly any survivors.[52] The apportioning of demographic loss to either the rebellion or the famine seems to be difficult for historical demographers. Their conclusions, based on the available data for Xi'an Prefecture, are as follows: Jingyang County lost 62.1 percent of its population through warfare, hunger, and epidemics in the 1860s. The further loss of population in the famine a decade later amounted to 17.3 percent.[53] In Gaoling, too, the number of 3,000 men and women who are reported to have died in the famine is tiny if compared to the victims of the rebellion: here the ratio is 15.6 percent loss in the famine versus 60 percent loss through warfare and its consequences.[54] In Sanyuan however, where we saw that the famine was more or less ignored in the local history, whereas the war was one of the dominating events, the statistics look different. Here the loss of population through warfare in the 1860s has been calculated at 57.1 percent. After a quick recovery in the following decade the loss of population caused by the famine of 1877–78 was again 58 percent.[55] (One is almost tempted to suspect that the rebellion was used as a scapegoat to cover up the huge loss due to the famine.) Thus, even if Chinese historical demography is only halfway reliable, Wang Yong's statement must be considered a huge misjudgment. Nevertheless, it still shows how the situation was perceived at a personal level.

Who was Wang Yong? Wang Yong was a *juren* of 1875 from Shandong, who had observed the situation in Gansu and Shaanxi since the early 1860s, when he served on the secretarial staff of the provincial educational commissioner. This meant that he was travelling across those provinces helping to organize local examinations. His record is based on what he saw and heard on those journeys. He had his collected notes printed in 1886 under the title *Liuminji* or "Records of Displaced People." Thus, contrary to the large majority of sources on the famine of 1877–78, this text was not produced as a fund-raising pamphlet and its author was not involved in famine relief. His perspective is that of an outsider, a chance observer of a terrible tragedy, and his intention was no more and no less than to save what he had witnessed from oblivion, and also to make it serve as a warning for the future.[56] Thus his text could also be read as a morality tract.[57]

According to Wang's account the wounds the famine had left behind in Shaanxi were as deep as in the other afflicted provinces. In his view hunger was "a hundred times worse than

[52]Wang, *Liuminji*, author's first preface, 1881, 1a; j.2: 20b for the population figures.

[53]Cao Shuji 曹树基, *Zhongguo renkou shi: Qing shiqi* 中国人口史：清时期 (Shanghai: Fudan daxue chubanshe, 2000), 571.

[54]Cao, *Zhongguo renkou shi*, 572. It is worth noting here that mortality rates of 15 percent to 17 percent may appear benign if compared to those of 60 percent to 90 percent in the most heavily affected counties in southern Shanxi. But, actually, they still equal those of the worst subsistence crises in European history. France for example experienced a famine mortality of 10 percent to 20 percent in its worst subsistence crises in the eighteenth century (Andrew B. Appleby, "Epidemics and Famine in the Little Ice Age," in *Climate and History: Studies in Interdisciplinary History*, ed. Robert I. Rotberg and Theodore K. Rabb, 63–83 (Princeton: Princeton University Press, 1981).

[55]Cao, *Zhongguo renkou shi*, 573–574. 23,000 are said to have died in the war, 48,000 from epidemics, and 19,000 fled, never to return, which according to Cao Shuji meant that they also died. In his reckoning the war cost 123,000 lives. After the war the population quickly recovered to around 93,000 and had reached a height of 98,000 when the famine set in. After that 41,000 were said to have survived.

[56]Wang, *Liuminji*, author's second preface, 1884, 2a; preface by Zhang Zongli, 3b.

[57]Wang, *Liuminji*, preface by Ma Ruixi, 1884, 2a.

war."[58] Many of the shocking details he documented, such as the common sale of women and children and suicide stories, are familiar from other famine histories. But he also offers a lot of local detail that drives home what the drought must have meant for the people who had to live through it. The chapter that describes the journey through Shaanxi begins and ends in Sanyuan. One of the reasons the population was so extremely vulnerable was that people had not yet recovered from the earlier disaster. The hydraulic infrastructure had not been maintained recently, but still, the fact that the Zheng Bai Canal had dried out was seen as unusual. It meant that there was a severe lack of drinking water in the city. Wang noted that people considered the reports about drought in the southern part of the province as unreliable, as those areas were not known to suffer from drought—probably an indication of the unusual severity of the drought. While on the road, he observed that the poorest had already left their homes early in 1877 to try to survive in the mountains or flee elsewhere. County-level exams had 30 percent to 40 percent fewer candidates than usual, while the provincial examination had only around one third of the usual number of participants. Wang reports about the practice of "eating the big households" (*chi dahu* 吃大戶), people dying from thirst because wells had dried up, and others getting into brutal fights over official handouts. He described refugees hardly recognizable as human beings and people starved to a degree that they were unable to eat. He discussed official attempts to keep the situation under control and described hierarchies of dying. He documents heart-rending encounters with individual people and families and, by 1878, cases of cannibalism. People did not dare to travel alone. Some were executed for the crime of cannibalism. Others were caught transporting human flesh for sale in restaurants. Wang documents the outbreak of epidemics, mass graves outside of cities, and corpses left rotting on the roads in the countryside. What made the situation so extraordinary was that the harm also reached the scholarly class, and it did so in great numbers. Wang reports that the elders in Guanzhong considered the famine the worst calamity (第一奇劫) in more than 200 years—after the rebellion. This means that while locals thought that the famine was comparable to the late-Ming disasters, the rebellion was even worse.[59] Unfortunately he does not say what their criteria for this judgement were.

Apart from the many heart-breaking stories illustrating the day-to-day struggle of survival at the individual level, one of the most interesting aspects of this source is the new perspective it adds to the familiar accounts of the famine. The conventional story tells of a famine that started in 1876 in Zhili and Shandong and moved to Shanxi and further to the northwest in 1877–78, following the movement of drought conditions across space. Wang's report however starts with war and hunger in Gansu in the 1860s. The chapter on the drought in Shaanxi starts with the massacres of 1862. In 1865–66 he witnessed a famine following the war—the relevant entry in Sanyuan's disaster chronology refers to people dying from cold, there is no mention of famine. When Wang returned to Shaanxi ten years later and discovered signs of recovery, any hope people might have had arising from a fundamentally changed demographic structure—the Muslim population had been literally wiped out[60]—was destroyed again by the well-known El Niño and the

[58]Wang, *Liuminji*, author's first preface (1881), 1b.

[59]Wang, *Liuminji*, j.2.

[60]Gong Fang 龚方, "Lishi jiyi yu minzu guanxi: cong Shaanxi "Huimin qiyi" tanqi" 历史记忆与民族关系：从陕西的 "回民起义" 谈起, *Heilongjiang minzu congkan* 3 (2012): 87–91.

failing monsoon rains, as well as the continuing military campaigns, which seriously limited the state's disaster relief capacities. There is much to add to Mike Davis's story line. Global capitalist trade dominated by Western imperialist powers were not the only factor that increased the vulnerability of Shaanxi's people to drought and famine. While by the late nineteenth century Shaanxi's economy was certainly not immune to the volatility of national and international trade, it seems reasonable to assume that the local impact of international trade was still limited at that time.[61] Instead, the severity of the famine crisis clearly cannot be separated from the consequences of warfare. Even though Wang Yong identified the drought as the immediate cause of the famine in Shaanxi, the consequences of decades of warfare and local feuding were other major disasters, which were closely related to the deterioration of environmental governance over a longer period. To what extent a fragile environment may have contributed to producing these in the first place is perhaps an impossible question to answer. Obviously, in the big scheme of things one could argue that the Hui rebellion and the ensuing Xinjiang campaign that drained the drought- and famine-suffering provinces of their resources were in themselves consequences of the military and territorial expansion of imperialist powers. But then, the Qing were not entirely passive bystanders either.

CONCLUSION: QING IMPERIALISM, GLOBAL WEATHER PATTERNS, AND POLITICAL ECONOMY

Wang Yong wrote in a genre that made it possible to document what Liu Guangfen might have found unspeakable. Or one could assume that for Liu—who had grown up in relative poverty, had survived a famine thanks to the generosity of a wealthy friend, had witnessed the 1877–78 disaster, and had made a major contribution to local private relief in 1892—the famine was just an ordinary event, perhaps a bit more serious than the common poverty and malnutrition, but still just a manifestation of the overall poverty and weakness of his country, which he frequently deplored in his reform writings. But still, all the evidence shows that the famine was an unprecedented disaster, a terrible tragedy, in no way less unsettling than the massacres that wiped out entire villages during the rebellion or indeed the humiliation of the imperialist wars that happened far away at the other end of the empire. For whatever reason, it was easier to write about the humiliation inflicted by cultural others and foreign powers than about the humiliation inflicted by the lack of food. Therefore, the writings of Liu and his colleagues tended to cast everything in the language of resistance to foreign aggression that if it had not created China's poverty and weakness, at least it had brought it to light, had taken advantage of it, and therefore required some kind of response. In a way, this is not too far away from Davis's argument. Still, there is a another side to it.

Arguably, one could say that in terms of the drought the situation in 1877–78 was not significantly different from earlier crises (notably the one in 1720–21, when the resources

[61]For Gansu in the period immediately preceding the one under discussion here, Peter Perdue concluded that during peace its grain market "proved comparatively immune to sporadic attacks of rebellion, famine, and drought." See his "The Qing State and the Gansu Grain Market, 1739–1864," in *Chinese History in Economic Perspective*, ed. Thomas G. Rawski and Lillian M. Li, 100–125 (Berkeley: University of California Press, 1992), 117.

the state was able to mobilize were much larger than would be the case one and a half centuries later), but that it was due to an over-extension of empire that since the financial crisis in the late eighteenth century the Qing state could not fulfil its obligations towards the people; that compared to other nineteenth-century crises the famine in Shandong was not as exceptional as missionary relief workers presented it, meaning that we are not looking at a crisis that simply follows the movement of drought, but also at a crisis that is the result of the accumulation of various types of disasters over time; that the huge death toll in Shanxi was as much the result of harvest failures as of the high vulnerability of local communities (i.e. limited capacity for local and village relief) produced by the draining of the province's resources for financing the war in the northwest; and thus that the effects of the drought in Shaanxi were so disastrous due to the long-term neglect of hydraulic and other infrastructure, the preceding civil war, and the ensuing military campaign. Going back to the issue about the relationship between climate patterns and historical change, this may raise a question about the role of the Qing Empire and its own expansion and the economic and military needs created by this as much as about the role of Western imperialism and global capitalism.

State capacity thus did not just decline "in lockstep with the empires' forced 'opening' to modernity by Britain and the other Powers."[62] Rather, this decline began to be felt in the late eighteenth century, when the Qing state's own policies had contributed to the weakening of its financial basis. China before the Opium Wars was not an idyllic organic society functioning on the principles of reciprocity that had to wait for "the West" to bring them "modernity" in the form of liberal capitalism with all the inequalities that came with it. It is true that "markets are always made,"[63] but they do not need capitalism to be made. It may be true that "[a]s disconnected from the world market perturbations as the starving loess provinces might have seemed in 1877, the catastrophic fate of their populations was indirectly determined by Western intervention and the consequent decline in state capacity to ensure traditional welfare."[64] But, apart from the fact that the decline of official relief led to much greater involvement of private actors in the provision of public welfare, these structures of inequality were repeated within China herself,[65] if less pronounced, in a process that had been ongoing for centuries, but that was exacerbated by the impact of the global economy at the time of the new imperialism in the late nineteenth century.[66] The question remains whether changes in the economic structure of the affected areas following the Opium Wars of the mid-century had an impact on the ability to cope with the consequences of drought in

[62]Davis, *Late Victorian Holocausts*, 9.

[63]Davis, *Late Victorian Holocausts*, 10.

[64]Davis, *Late Victorian Holocausts*, 290–91.

[65]Andrea Janku, "From Natural to National Disaster: The Chinese Famine of 1928–1930," in *Historical Disasters in Context: Science, Religion, and Politics*, ed. Andrea Janku, Gerrit J. Schenk, and Franz Mauelshagen, 227–260 (New York: Routledge, 2012).

[66]The broader question to ask here would be in how far different notions of development always in one way or another involve the marginalization and impoverishment of some. For an interesting discussion of the link between notions of development, poverty, and famine in the context of British rule in India see Richard Sheldon, "Development, Poverty & Famines: The Case of British Empire," in *Empire, Development & Colonialism: The Past in the Present*, ed. Mark Duffield and Vernon Hewitt, 74–87 (Woodbridge: James Currey, 2009).

1877–78 and later. It appears that the major shift to cotton production in Guanzhong only happened after 1900, and that opium cultivation in the Wei River valley started only after 1870,[67] that is, after or probably triggered by the protracted crises that haunted the area from the early 1860s and the famine in 1865 reported by Wang Yong, all of which together with the civil war increased the disaster vulnerability of communities. This chronology suggests that the new imperialism reinforced and probably superseded a process that had already been well underway.

The question is thus also about the impact of the responses of "authoritarian governments." To speak with Amartya Sen: "The late-Victorian tragedies exemplify a wider problem of human insecurity and vulnerability related, ultimately, to economic disparity and political disempowerment."[68] And this is not a problem of liberal capitalism alone.

[67]Davis, *Late Victorian Holocausts*, 346.

[68]Amartya Sen, "Apocalypse Then: The Little-Known Story of Drought, Famine and Pestilence that Killed Millions at the Turn of the Last Century," *The New York Times*, February 18, 2001, www.nytimes.com/books/01/02/18/reviews/010218.18senlt.html (accessed February 10, 2018).