

ARTICLE

# Comparative pandemics: the Tudor–Stuart and Wanli–Chongzhen years of pestilence, 1567–1666<sup>†</sup>

Timothy Brook

Department of History, University of British Columbia, 1873 East Mall, Vancouver, BC, V6T 1Z1, Canada  
Corresponding author. E-mail: [tim.brook@ubc.ca](mailto:tim.brook@ubc.ca)

## Abstract

The Black Death is a secure feature of European and west Asian history; in Chinese history, by contrast, the record of mass epidemic outbreaks over the same centuries is not. As a step towards integrating these two zones into a global history of disease, this article establishes a timeline of roughly a thousand major outbreaks in Ming–Qing China during the century 1567–1666. On the basis of these data, comparison is made of how pandemics were received and interpreted in two delimited zones, the Chinese province of North Zhili (now Hebei) and Tudor and Stuart England, with particular attention to differences in their literary incorporation, religious meaning, and political resonance.

**Keywords:** comparative history; Emperor Wanli; Elizabeth I; Ming China; pandemic; plague

As the virus SARS-CoV-2 surged globally in the opening months of 2020, European-language commentators in the West had a common point of reference, the Black Death.<sup>1</sup> SARS-CoV-2 is not *Yersinia pestis*. Viral rather than bacterial, it interacts with human hosts in a different manner from plague, exhibits lower rates of mortality, and responds to different therapies. Still, the social character of the infection and the scale of its spread, and our responses, have inspired associations with what our fourteenth-century ancestors feared as the fourth horseman of the Apocalypse. This resonance derives not merely from western Eurasia's experience with plague; it also depends on its fashioning of pestilence as a literary trope. In English literature, the richest plague-writing was in the Tudor–Stuart period, when writers put the disease to use as moral demonstration, escapist entertainment, and political critique. The visibility of the English literary response has in part determined the temporal focus of this article.<sup>2</sup> The trope is still with us. As an acquaintance whose mother died of the disease said to me in late May, 'This is the plague. It may be COVID-19, but this is the plague.'

<sup>†</sup>I have benefited greatly from the advice of colleagues: my thanks to Alison Bailey, Jerry Brotton, William Callahan, Marta Hanson, Wilt Idema, Tim Newfield, Andrew Schonebaum, and Kate Swatek.

<sup>1</sup>Examples from the current pandemic: Timothy Brook, 'Blame China? Outbreak Orientalism, from the Plague to Coronavirus', *Globe and Mail*, 13 February 2020, <https://www.theglobeandmail.com/opinion/article-outbreak-orientalism-from-the-plague-to-coronavirus-why-is-the-west/>; Ian Buruma, 'Virus as Metaphor', *New York Times*, 28 March 2020, <https://www.nytimes.com/2020/03/28/opinion/coronavirus-racism-covid.html>; Walter Scheidel, 'Why the Wealthy Fear Pandemics', *New York Times*, 9 April 2020, <https://www.nytimes.com/2020/04/09/opinion/sunday/coronavirus-economy-history.html>.

<sup>2</sup>Rebecca Totaro, 'Introduction', in *Representing the Plague in Early Modern England*, ed. Rebecca Totaro and Ernest B. Gilman (New York: Routledge, 2011), 14; see also Rebecca Totaro, *Suffering in Paradise: The Bubonic Plague in English Literature from More to Milton* (Pittsburgh: Duquesne University Press, 2005).

Among historians of Europe, the Black Death gained a second tropic identity during the nineteenth century, which general readers could find in Francis Gasquet's *The Great Pestilence*.<sup>3</sup> Gasquet's argument, that demographic collapse shifted the balance between labour and capital, shaped how twentieth-century historians mobilized the plague to reimagine Europe's historical course. Less cautious writers, from Barbara Tuchman to Jared Diamond, have used his argument to propose that the Black Death led to the Renaissance in Italy, capitalist agriculture in Britain, the absolutist state in France, and more generally the modern world, making us not just the plague's victims but its heirs.<sup>4</sup>

But who is this 'we'? Reading Chinese commentary on COVID-19 early in 2020, I was struck that commentators writing in Chinese did not turn to the Black Death to give historical definition to their responses. That association seemed to have no purchase. Their collective memory has been constructed differently, to conceive of the onset of the modern world in other terms. The narrative shared across the Chinese political spectrum is that modernity was forged in opposition to the perfidious West, without a pathogen in sight – unless opium can be reclassified as one. If they remember any historical epidemic, it is the 1910 plague outbreak in Manchuria, which Wu Lien-teh (1879–1960), a Penang physician trained at Cambridge and Johns Hopkins medical schools, managed with great skill at the invitation of the Qing government. Wu's comprehensive medical and social response demonstrated that China could function responsibly in the modern world. It also educated Chinese in the value of public health measures such as quarantine and face masks.<sup>5</sup> No longer proof of China's 'backwardness', an epidemic could now provide evidence of China's capacity for state-led modernity.<sup>6</sup>

When Chinese doctors in Wuhan saw the partial genome of the virus in late December 2019, their first association was not plague in Manchuria or Europe, but the previous coronavirus, SARS. Several texted this finding to colleagues within their professional networks to alert them to the danger. But SARS is a political hot potato for the Chinese Communist Party. China's failure to control the SARS outbreak in 2002, requiring the intervention of the World Health Organization, was a political embarrassment the Party wished never to repeat. For using the term in their internal communications, eight Wuhan doctors were disciplined for what their police summons termed 'illegal behaviour'. They were made to sign statements that their internal communications opposed the Party's interests, and that the SARS diagnosis was incorrect. One of them, the ophthalmologist Li Wenliang, succumbed to the disease on 7 February 2020 in the hospital where he worked, a tragedy that ignited a firestorm of disgust among Chinese.<sup>7</sup>

<sup>3</sup>Francis Gasquet, *The Great Pestilence (1348–9): Now Commonly Known as the Black Death* (London: Marshall, Hamilton, Kent & Co., 1893). On the nineteenth-century epidemiology underpinning Gasquet, and its rejection in the twentieth, see Faye Getz, 'Black Death and the Silver Lining: Meaning, Continuity, and Revolutionary Change in Histories of Medieval Plague', *Journal of the History of Biology* 24, no. 2 (1991): 274–89.

<sup>4</sup>E.g. Barbara Tuchman, *A Distant Mirror: The Calamitous Fourteenth Century* (New York: Alfred A. Knopf, 1978); William McNeill, *Plagues and Peoples* (Garden City, NY: Anchor, 1976); and, more recently, Jared Diamond, 'The Germs That Transformed History', *Wall Street Journal*, 22 May 2020, <https://www.wsj.com/articles/the-germs-that-transformed-history-11590159271>. Although captive to the errors of McNeill and others regarding China's role in the Black Death, a useful historiographical overview is Guido Alfani and Tommy Murphy, 'Plague and Lethal Epidemics in the Pre-Industrial World', *Journal of Economic History* 77, no. 1 (2017): 314–43; see also James Belich, 'The Black Death and the Spread of Europe', in *The Prospect of Global History*, ed. James Belich, John Darwin, Margret Frenz, and Chris Wickham (Oxford: Oxford University Press, 2016), 93–107. All these interventions signal the need to supplement Europe's experience with Asia's.

<sup>5</sup>Christos Lynteris, 'Why Do People Really Wear Face Masks during an Epidemic?', *New York Times*, 13 February 2020, <https://www.nytimes.com/2020/02/13/opinion/coronavirus-face-mask-effective.html>.

<sup>6</sup>On the role of epidemiology in fashioning the modern state in Asia, see Robert Peckham, *Epidemics in Modern Asia* (Cambridge: Cambridge University Press, 2016).

<sup>7</sup>Li Wenliang's discharge sheet was posted online: Wuhan shi gonganju Wuchang fenju Zhongnan lu jiepai chusuo (Zhongnan Road Substation of the Wuchang Division of the Wuhan Municipal Police), 'Xunjie shi' ('Warning'), no. 20200103, signed Hu Chifang and Xu Jingui (signatures unclear), dated 3 January 2020, <https://www.bbc.com/zhongwen/simp/chinese-news-51371586>. The incident is described in Fang Fang, *Wuhan Diary: Dispatches from a Quarantined City*, trans. Michael Berry (New York: HarperCollins, 2020). To calm the outrage, the Party sent an investigation team, which

So there are many back stories to the COVID-19 pandemic, and they differ between China and the West. This article asks whether it might be helpful to understand that difference by comparing the experience of epidemics in Ming China (1368–1644) and Tudor and Stuart England (1485–1714), focusing on the century ending with the Great Plague of London in 1665–66. This preliminary exercise in constructing a global history of infectious disease takes on three tasks: reflecting on the challenge of equal comparison; constructing chronologies to establish a material foundation for the comparison; and examining how the two cultures conceptualized and narrated epidemic disease. I am not confident that the differences explain how people in China and the West are dealing differently with the contemporary crisis, but, to the extent that difference matters, I hypothesize that it is likely to be found in the relationship between the subject and the state.

### Comparative epidemics

Plague was a recurring and disturbing presence in English life from the reign of Elizabeth I to that of Charles II. Its visitations infected cities and towns according to no schedule anyone could analyse or predict. The pathogen infected people, but so too did it worm its way into the core of the Elizabethan literary imagination, generating ‘new approaches to perceiving and representing the world’, in the words of the scholar of Elizabethan literature Rebecca Totaro. A basic narrative was crafted, representing the plague as

an unstoppable force that surprised its victims and exposed them to unfathomable hardship. In their accounts, all sources of security fail as mothers watch their infants die, grieving fathers bury their sons, friends avoid friends, religious and civic leaders neglect those in their care, even the best of physicians and other caretakers are unable to offer relief to those in their charge, and dishonest practitioners of physic prey on people who are desperate for aid. Adding to the misery, people die in flight from infected areas, refused lodging by those in the country who fear them; prayer fails; graves fill to overflowing; and those who survive face the concomitant challenges of famine, poverty, and the temptation of quick money offered by pawn brokers and usurers.<sup>8</sup>

From this basic narrative arose a range of crisis-related discourses that even today influence how we imagine and write about the world. Totaro argues that our discourses rest on ‘the unique threat and trauma produced by plague in the sixteenth and seventeenth centuries’.<sup>9</sup>

Historians of Tudor and Stuart England and its literature have no difficulty incorporating plague into their accounts, whether as context or as central point of reference, thanks to a long scholarship that provides the groundwork for later research.<sup>10</sup> By comparison, historians interested in the presence and impact of pandemics in China work in a historical and historiographical vacuum. This has meant relying on the insights of our Europeanist colleagues when posing questions and choosing methods. At first glance, the similarities between what we read of epidemics in the early modern world and what we find in Chinese sources are striking. One could easily take Totaro’s account of the Elizabethan narrative and trace most of its elements in Chinese writings of the same period, but push further and differences emerge. What happens within the body of a Chinese infected with *Yersinia pestis* is the same as what happens within the body of a Genoese infected with the same disease, allowing for slight differences in nutrition and underlying

---

produced an anodyne report mildly reprimanding the Wuhan police: see David Burdanski, ‘Reclaiming Doctor Li’, *China Media Project*, 19 March 2020, <https://chinamediaproject.org/2020/03/19/reclaiming-doctor-li/>.

<sup>8</sup>Rebecca Totaro, *The Plague Epic in Early Modern England: Heroic Measures, 1603–1721* (Farnham: Ashgate, 2012), 3.

<sup>9</sup>Totaro, ‘Introduction’, 15.

<sup>10</sup>An early comprehensive resource is J. F. D. Shrewsbury, *A History of Bubonic Plague in the British Isles* (Cambridge: Cambridge University Press, 1970).

disease burdens. But what that infection produces – socially, politically, economically, religiously, emotionally, artistically, and medically – need not be the same. The two cases share some elements, not all.

Chinese historiography has paid limited attention to epidemics. The first study in English of epidemics in the Ming is the classic article that Helen Dunstan published in 1975 based on her undergraduate dissertation. Dunstan sets the comparative stage for her contribution on the second page of her article when she observes that no historian of medieval or early modern Europe ‘would think of approaching his subject without an awareness of the chronology of at least the more notorious outbreaks of serious epidemic disease’.<sup>11</sup> For instance, no history of Shakespeare’s London in 1603, when plague closed the theatres, could leave it out. Yet almost no historian of Beijing in 1587 would think of including the epidemic that struck the capital and the country that year, in large part because we have no shared framework of analysis to fit epidemics to whatever main story we might wish to tell.<sup>12</sup> In Chinese history, disease is part of the wallpaper of Ming times, not a shaping factor. This is at last starting to change, thanks to recent developments in the growing field of the history of Chinese medicine,<sup>13</sup> as well as the new palaeogenetics that in the past decade has used genomic analysis to track the movement of pathogens, plague in particular, across the globe.<sup>14</sup>

Before launching a comparison, we need to consider what diseases we are dealing with. There is no question that the pathogen driving the main outbreaks in England between 1567 and 1666 was the plague, *Yersinia pestis*. For China during the same period, we do not know. Dunstan was surely correct in insisting that the outbreaks in the late Ming were not all due to a single pathogen.<sup>15</sup> A plausible case has been made in the Chinese literature for *Yersinia pestis*, at least for north China,<sup>16</sup> but other diseases – smallpox, typhus, typhoid, dysentery, cholera, influenza – must have been in play, particularly late in the dynasty when famine exposed populations to malnutrition diseases and warfare disrupted public health. Some syndromes, such as smallpox, had clear linguistic markers when an author chose to apply them, but most outbreaks are generically reported as *yi* (epidemic) – events more than syndromes.

Over the past decade, palaeogeneticists working on organic human remains in Europe and Russia have sequenced dozens of complete genomes of historical diseases, allowing researchers to situate ancient pathogens in their phylogenetic relationships with each other and with diseases that exist today. For some outbreaks, we now have more than the often imprecise documentary evidence that was relied upon in the past. Identifying historical diseases matters not so that we can reduce them to what we are familiar with, but so that we can use epidemiological knowledge to understand better their human and social impact. Chinese colleagues have yet to do this work, however – and not because China is a stranger to genomic research; quite the opposite. Public and private labs in Canton, Shanghai, and Beijing took an early lead in sequencing the SARS-CoV-2 genome. Not doing that research on ancient DNA suggests an inhibition, which may derive from the politics of genetics. In China, genetic science is tasked with serving the narrative of an ancient,

<sup>11</sup>Helen Dunstan, ‘The Late Ming Epidemics: A Preliminary Survey’, *Ch’ing-shih wen-t’i* 3, no. 3 (November 1975): 2.

<sup>12</sup>Even a historian as steeped in the sources as Ray Huang could devote an entire book to 1587 without mentioning the epidemic; Ray Huang, *1587, a Year of No Significance: The Ming Dynasty in Decline* (New Haven: Yale University Press, 1981).

<sup>13</sup>See, for example, Marta Hanson, *Speaking of Epidemics in Chinese Medicine: Disease and the Geographical Imagination in Late Imperial China* (London: Routledge, 2011).

<sup>14</sup>The new post-genomic plague research includes Robert Hymes, ‘A Hypothesis on the East Asian Beginnings of the *Yersinia pestis* Polytoomy’, in *Pandemic Disease in the Medieval World: Rethinking the Black Death*, ed. Monica Green (Kalamazoo: Arc Medieval Press, 2014), 285–308; also his unpublished ‘Plague in Jin and Yuan: Evidence from Chinese Medical Writings’. See also Timothy Brook, *Great State: China and the World* (New York: HarperCollins, 2020), chap. 3.

<sup>15</sup>Dunstan, ‘Late Ming Epidemics’, 17–18.

<sup>16</sup>The strongest academic proponent of treating the late Ming epidemics as plague is Cao Shuji: see his ‘Shuyi liuxing yu Huabei shehui de bianqian (1580–1644)’ (‘The Spread of Plague Epidemics and Social Transformation in North China’), *Lishi yanjiu* (*Historical research*) 1 (1997): 17–32; also Cao Shuji and Li Yushang, *Shuyi: zhanzheng yu heping – Zhongguo de huanjing yu shehui bianqian, 1230–1960* (*Plague: War and Peace – China’s Environment and Social Transformation, 1230–1960*) (Jinan: Zhongguo huabao chubanshe, 2006). Cao relied almost entirely on gazetteer entries for his research, as I do in this article.

healthy, and unified Chinese race.<sup>17</sup> It could be feared that the discovery that global pathogens may have originated in China might lead to China being cast as the sick man of Asia.<sup>18</sup> The sick man image was first applied in the nineteenth century to the Ottoman empire – the sick man of Europe – the memory of which was enough to predispose modern Ottoman historians not to address epidemics as a historical topic.<sup>19</sup> A similar anxiety may be at work in China. I am confident that one day we *will* have the genomes of the pathogens that burdened much of China through the late sixteenth to mid seventeenth century, and that plague will be among them, but the evidence is not yet in.

For China during the years 1567–1666, I will stick to the umbrella term ‘epidemic’, not ‘plague’. But I also want to make the case for using ‘pandemic’. By one definition, a pandemic is distinguished by four features: a novel pathogen, lack of herd immunity, a high level of morbidity, and efficient transmission.<sup>20</sup> Speaking of a pandemic when many pathogens could have been involved undermines the first feature, but I find the term useful as a way of scaling between single outbreaks and realm-wide epidemiological disasters. Current usage attaches a fifth feature, transmission beyond national boundaries, but I would suspend this feature for Ming China, which in the sixteenth century embraced an area roughly the size of Europe, and replace it with transmission beyond provincial boundaries. In this article, then, I use ‘epidemic’ for an outbreak largely confined to one province, and ‘pandemic’ for outbreaks that were multi-provincial and extended beyond a single year. This definition produces two pandemics between 1567 and 1666. Using the reign eras of the emperors on the throne at the time, I label them the Wanli pandemic (1586–88) and the Chongzhen pandemic (1640–44).

## Epidemic chronologies

England’s chronology of plague outbreaks is well attested. Table 1 displays the twenty-six years of significant outbreaks of plague in England between 1567 and 1666, with the ten years of highest mortality highlighted in bold. Figure 1 visualizes this chronology in quantitative terms by using the ratio of child deaths to baptisms among the urban poor in parishes within London between 1560 and 1669 as a proxy of plague mortality.

China’s chronology is less well attested. To generate one, I have turned to local gazetteers. This genre of semi-official local chronicle was nearly universal across China by the sixteenth century.<sup>21</sup> Every county (of which there were 1,173 in 1640), prefecture (162), and province (15) was supposed to produce one of these multi-volume publications, ideally on a cycle of once every sixty years. The genre employed loosely defined but widely understood categories to organize textual information on the geography, history, administration, and literary remains of a locality. Among these categories, usually appearing as a subsection of a chapter rather than a chapter in its own right, is *Xiangyi* (‘Auspicious signs and anomalies’), *Zaixiang* (‘Disasters and auspicious signs’), or some other combination of similar terms signifying anomaly and disaster. In this section, the compiler recorded events ranging from dragon sightings and earthquakes to the birth of two-headed

<sup>17</sup>On the Chinese political impulse to establish eugenic purity unspoiled by pathogens or alien DNA, to the point of positing an origin independent of Africa, see William Callahan, *China Dreams: 20 Visions of the Future* (Oxford: Oxford University Press, 2013), 104–6.

<sup>18</sup>China’s reputation as the sick man of Asia resurfaced to Western attention during COVID-19: see e.g. Clément Fabre, ‘Qui a peur des épidémies chinoises?’, *L’Histoire* 472 (May 2020): 22–3.

<sup>19</sup>Nükhet Varlik, *Plague and Empire in the Early Modern Mediterranean World: The Ottoman Experience, 1347–1600* (New York: Cambridge University Press, 2015), 3–4, 62.

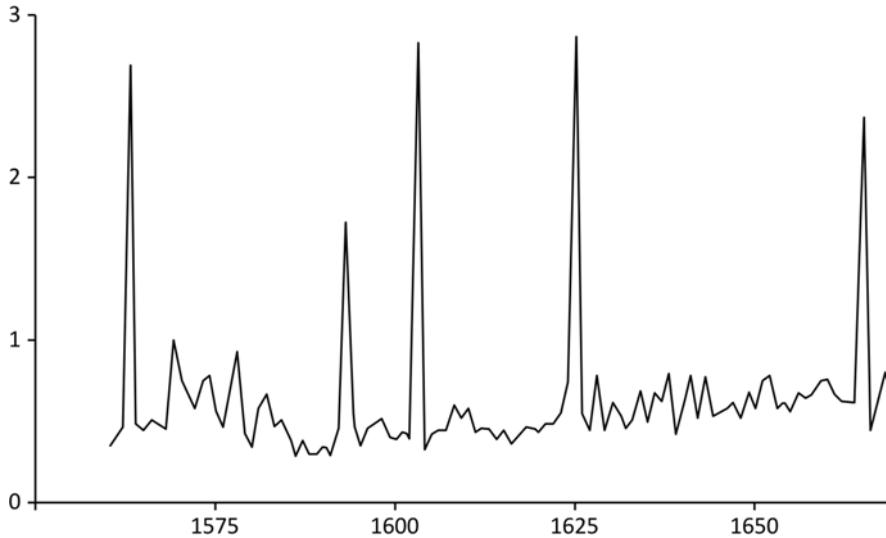
<sup>20</sup>Chloe Sellwood, ‘Brief History and Epidemiological Features of Pandemic Influenza’, in *Introduction to Pandemic Influenza*, ed. Jonathan Van-Tam and Chloe Sellwood (Wallingford, Oxon: CABI International Press, 2010), 41.

<sup>21</sup>For her study, Helen Dunstan likewise relied on the gazetteer genre, relying in part on the compilation of gazetteer references to epidemics in Imura Kōzen, ‘Chihōshi ni kisaiseraretaru Chūgoku ekirei’ (‘Chinese Epidemics as Recorded in Local Gazetteers’), *Chūgai iji shinpō*, 8 parts (1936–7).

**Table 1.** Plague years in England, 1567–1666

Elizabeth I (1558–1603)	1578, <b>1592–93</b>
James I (1603–25)	<b>1603</b> , 1604–08, 1609–11
Charles I (1625–49)	<b>1625</b> , 1626, <b>1636</b> , 1637, <b>1640–43</b> , 1644–47
Charles II (1660–1685)	<b>1665</b> , 1666

Sources: for convenience I have taken these dates from Rebecca Totaro, 'Introduction', 9; and Darryl Chalk and Mary Floyd-Wilson, 'Introduction Beyond the Plague', in *Contagion and the Shakespearean Stage*, ed. Darryl Chalk and Mary Floyd-Wilson (Cham: Springer, 2019), 8.



**Figure 1.** Ratio of child deaths to baptisms among the urban poor in parishes within the city of London, 1560–1669. Source: Neil Cummins, Morgan Kelly, and Cormac Ó Gráda, 'Living Standards and Plague in London, 1560–1665', *Economic History Review* 69, no. 1 (2016): 23, fig. 10.

calves, listed in chronological order. To exemplify the genre, here is the entry for 1644, the year the Ming dynasty fell, in the 1682 provincial gazetteer of Shanxi, to the west of Beijing:

Spring, first day of the first month: a dust storm blocked the daylight in Yangqu; a hen turned into a rooster in Licheng.

Third month: the sun dazzled (as if there were four suns).

Summer, fifth month: thundering in the sky at Ruicheng (fiery light as though the Great Bear was falling in the north-east).

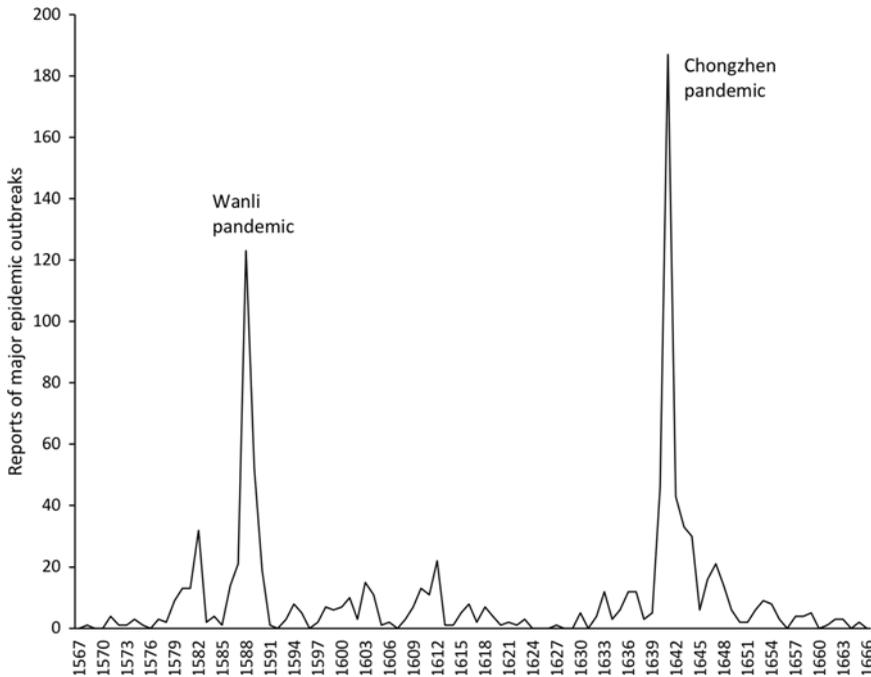
Autumn, eighth month: thundering in the sky at Qinzhou; a major epidemic in Lu'an (the infected produced a bubo; those who vomited watery blood no-one dared look after; when entire families died, no-one dared bury them); a great bumper harvest at Wenshui.<sup>22</sup>

Although the information is sparse and unthematized, it is well dated, precisely located, and helpfully raw in the sense of not yet having been edited for other uses. This genre is the main source

<sup>22</sup>*Shanxi tongzhi (Comprehensive Gazetteer of Shanxi)* (1682), 30.41b–42a (the parenthetical comments appear in the original text). I have omitted the Lu'an reference from my dataset, as it replicates – though also interestingly rephrases – a reference it has taken word for word from a more local gazetteer, that of Lucheng county.

**Table 2.** Epidemic years in China, 1567–1666

Longqing (1567–72)	1568, 1571–72
Wanli (1573–1620)	1573–75, 1577–79, <b>1580–82</b> , 1583–86, <b>1586–90</b> , 1591, 1593–95, 1597–1606, 1608–09, <b>1610–12</b> , 1613–20
Tianqi (1621–27)	1621–23, 1627
Chongzhen (1628–44)	1630, 1632–39, <b>1640–44</b>
Shunzhi (1644–61)	1645–55, 1657–59, 1661
Kangxi (1662–1722)	1662–63, 1665

**Figure 2.** Gazetteer reports of major epidemics in Ming China, 1567–1666.

from which I have generated a set of data of major epidemics for the years 1567–1666. For convenience, I have mined the texts from gazetteers recording climate distortions over the past three millennia that Zhang De'er and her team published in 2004.<sup>23</sup> These I have supplemented with a few citations from a compilation on the history of catastrophes in the Beijing region published the same year by Yu Deyuan and his team,<sup>24</sup> as well as my own reading of Ming sources. When compiling these data, I excluded references purely to 'epidemics' (*yi*). Instead, the gazetteer had to identify the outbreak as a 'great epidemic' (*dayi*), as a 'pestilence' (*wen*), or as having 'erupted on a large scale' (*da zuo*, a phrase commonly used of typhoons) or 'spread copiously' (*shengxing*) or similar phrase.<sup>25</sup> These filters generated 1,008 references to major epidemics between 1567 and 1666, drawn from an almost equal number of sources.<sup>26</sup> These findings are displayed in table 2 and visualized in figure 2.

<sup>23</sup>Zhang De'er et al., eds., *Zhongguo sanqian nian qixiang jilu zongji* (Compendium of Chinese Meteorological Records of the Last 3,000 Years) (Nanjing: Jiangsu jiaoyu chubanshe, 2004).

<sup>24</sup>Yu Deyuan, ed., *Beijing lishi zaihuang zaihai jinian* (Chronology of Historical Disasters and Catastrophes in Beijing) (Beijing: Xueyuan chubanshe, 2004).

<sup>25</sup>Marta Hanson, *Speaking of Epidemics*, 17 and 170, n. 3.

<sup>26</sup>I first generated a dataset of 1,412 references for the Ming period. Of these, 893 date from the period 1567–1644. To bring the dataset up to the Great Plague of London of 1665, I added another 115 references for the period 1645–65. No gazetteer anywhere in China records a major epidemic in 1666.

**Table 3.** Epidemic years in North Zhili, 1567–1666

Longqing (1567–72)	1571
Wanli (1573–1620)	1574, 1580–81, <b>1582</b> , 1584, <b>1586–88</b> , 1599–1600, <b>1610</b> , 1612
Chongzhen (1628–44)	1630, 1635, 1637, <b>1640–44</b>
Shunzhi (1644–61)	1647, 1652–55

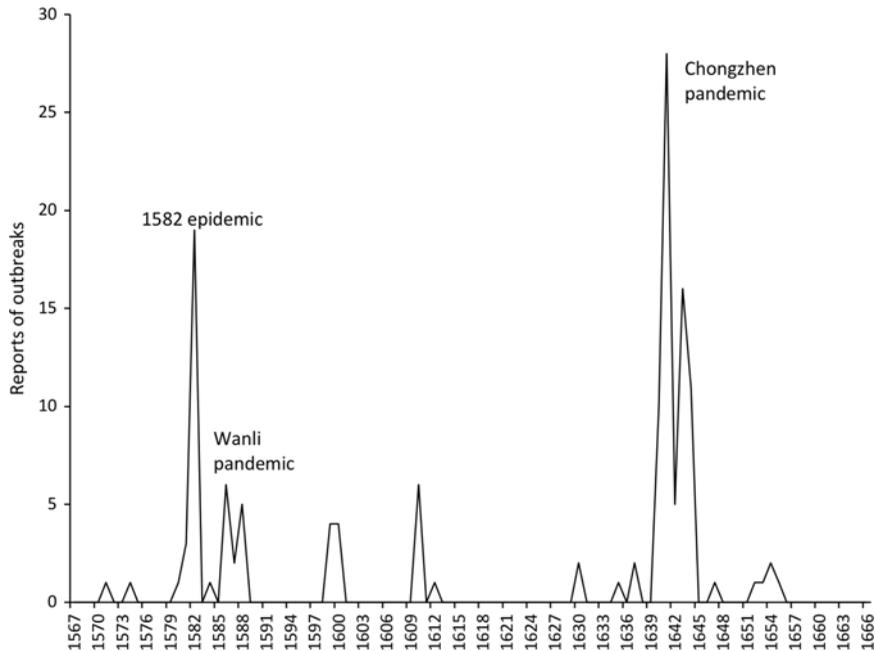
**Figure 3.** Gazetteer reports of major epidemics in North Zhili, 1567–1666.

Table 2 identifies eighty-three years of major epidemics in China, of which sixteen have been marked for high mortality. That China was free of major epidemics for only seventeen of these hundred years makes for an awkward comparison when the other case was epidemic-free for seventy-four. To adjust for this difference in scale, I reduced the Chinese dataset to major epidemics in only one province, North Zhili, or the Northern Metropolitan Region (loosely coterminous with the modern province of Hebei). The results are shown in table 3 and figure 3.

Recalculating the China data to one province reduces the number of years of major epidemics from eighty-three to twenty-six, in the process removing the reigns of Tianqi and Kangxi altogether, and the number of years of outstanding severity from sixteen to ten. Although this reduction yields the same number of pestilence years and of years of high mortality as in England (a coincidence entirely unintended), the cases are not perfectly in scale. North Zhili had only 7% of China's registered population in the Ming, but was an area half again as large as England, with a population at least triple that of England.<sup>27</sup> What they shared, though, was a national capital. Beijing's population was possibly three times that of Elizabethan London

<sup>27</sup>On North Zhili's population as a percentage of that for China, see Liang Fangzhong, ed., *Zhongguo lidai hukou, tian di, tianfu tongji* (*Statistics on China's Population, Arable Land, and Land Taxes through the Dynasties*) (Shanghai: Shanghai renmin chubanshe, 1980), 205. For the population of North Zhili, I adopt Martin Heijdra's smaller 'guesstimate' in 'The Socio-Economic Development of Rural China during the Ming', in *The Cambridge History of China*, vol. 8: *The Ming*

(750,000 versus 250,000) and, later, twice that of Stuart London.<sup>28</sup> Despite this difference, the cities enjoyed the comparable status and functions of a capital where a court convened, an administration worked, and resources and people were concentrated.

When juxtaposed, tables 1 and 3 show different chronological profiles. England did not suffer the hard years that North Zhili faced in the 1580s. For its part, North Zhili was not burdened by outbreaks in the decades on either side of 1600. There is brief overlap between the Ming national data and the English data for the year 1603, when an outbreak coinciding with the death of Queen Elizabeth killed more than one-sixth of Londoners and stimulated a burst in plague-writing, though North Zhili did not report a single major epidemic that year.<sup>29</sup> Nor does the Great Plague of London in 1665 find the slightest sympathetic ripple in the Chinese data.<sup>30</sup> This non-consilience between datasets is only what we should expect when comparing locations at such distance from each other. Although epidemics in separate locations can be forced by the same change in global climate, synchronicity cannot be assumed, as every outbreak begins as a local event contingent upon immediate circumstances.<sup>31</sup>

To bridge the difference between the tables, it helps to add a third case, which I have taken from Nükhet Varlik's study of the plague in the Ottoman empire for the period 1570–1600. Plague was active somewhere within that empire every year.<sup>32</sup> The Ottoman experience over these three decades is more similar to Ming China (where the only exempt years were 1570, 1576, 1592, and 1596) than to Elizabethan England. This mirroring between the Ottoman and the Ming should come as no surprise, both realms being large enough to have hosted plague somewhere. Further, when we compare the peak Ottoman plague years (1578, 1586–87, and 1597–99) with the peak epidemic years of the Wanli era (1582 and 1586–88), an intriguing overlap emerges around the years 1586–87. In China, this was when the climate turned cold and dry, pushing much of the country into a famine that ended only when warmer temperatures returned in 1589.<sup>33</sup> This was the perfect condition for disease outbreak, as Ming officials well understood.<sup>34</sup> Given the similarity with the Ottoman experience, the late 1580s would appear to be a moment of global climate downturn, even if England was spared.

Where tables 1 and 3 do coincide strongly is in the early 1640s, when both England and China were caught in a climate shift. As Geoffrey Parker has shown, the years between 1640 and 1644 were difficult across much of the globe, a period of shocking cold and severe drought that had palpable political and economic effects worldwide. Temperatures plunged in 1640 and stayed at record lows for the next four years; Scandinavia recorded its coldest winter ever in 1641;

*Dynasty, 1368–1644*, part 2, ed. Denis Twitchett and Frederick W. Mote (Cambridge: Cambridge University Press, 2008), 440.

<sup>28</sup>Using John Graunt's calculation of London's population in 1665 as 460,000: see Ian Sutherland, 'John Graunt: A Tercentennial Tribute', *Journal of the Royal Statistical Society* 126, no. 4 (1963): 550.

<sup>29</sup>Charles Whitney, 'Dekker's and Middleton's Plague Pamphlets as Environmental Literature', in *Representing the Plague in Early Modern England*, ed. Totaro and Gilman, 201–18.

<sup>30</sup>For China beyond North Zhili, I have found only two reports of major outbreaks in 1665, localized in two counties in Shandong and Fujian provinces: *Fushan xianzhi* (*Gazetteer of Fushan County*) (1931), 8: Zaixiang; and *Taining xianzhi* (*Gazetteer of Taining County*) (1704), 3: Xiangyi. So the Great Plague of 1665 did not reach in China.

<sup>31</sup>Timothy Brook, 'Differential Effects of Global and Local Climate Data in Assessing Environmental Drivers of Epidemic Outbreaks', *Proceedings of the National Academy of Sciences* 114, no. 49 (December 2017): 12847, [www.pnas.org/cgi/doi/10.1073/pnas.1717723114](https://doi.org/10.1073/pnas.1717723114). For a similar argument, see Ricci P. H. Yue and Harry F. Lee, 'Drought-Induced Spatio-Temporal Synchrony of Plague Outbreak in Europe', *Science of the Total Environment* 698 (1 January 2020), <https://doi.org/10.1016/j.scitotenv.2019.134138>.

<sup>32</sup>Varlik, *Plague and Empire*, chap. 6, esp. 189.

<sup>33</sup>Timothy Brook, 'Nine Sloughs: Profiling the Climate History of the Yuan and Ming Dynasties, 1260–1644', *Journal of Chinese History* 1 (2017): 37, table 1.

<sup>34</sup>As Zhong Huamin, an official involved in famine relief, explained to Emperor Wanli in 1594, 'after a great famine, there cannot but be a great epidemic'; *Ming shenzong shilu* (*Veritable Records of the Reign of Emperor Shenzong of the Ming*) (Taipei: Zhongguo yanjiuyuan lishiyuan yanjiusuo, 1962), 277.1b.

harvests everywhere that year arrived late or not at all; Charles I abandoned London in January 1642 in the face of famine; in Bavaria that June, hailstones weighing up to a pound crushed crops standing in the fields.<sup>35</sup> The downturn was probably set off by the eruption of Komagatake in Japan in 1640, then made worse by the eruption of Parker Peak in the Philippines the following year.<sup>36</sup> Parker's litany of disasters through these years grounds his argument that it was the climate of the early 1640s that precipitated a 'general crisis of the seventeenth century' that was global. Against this backdrop, the fact that both England and China were marked by regicides in the 1640s – Chongzhen by suicide as rebels descended on Beijing in 1644, Charles I by execution in 1649 – appears less coincidental or random than it might otherwise.

Having established the fact that England and China suffered major epidemics over the same period, albeit not on the same schedule, we can now turn to the more difficult question of whether and how to differentiate the experience of pandemic in these two realms. The focus from here on will be on the Ming case, which for most readers will be less familiar than the Tudor and Stuart experience.

### The Wanli pandemic

The Wanli pandemic began with a surge of outbreaks in 1586 in North Zhili and Shanxi. It spread across north China in 1587, and then moved south to engulf provinces up and down the Yangzi valley in 1588. As it happened, North Zhili was largely spared in what was otherwise the peak year of the pandemic, 1587. Figure 3 registers major outbreaks that year in only two locations in the province, Beijing and Xingtai county. As Xingtai lay 500 kilometres by road from the capital, these are unlikely to have been the same disease.<sup>37</sup> Far worse for North Zhili was 1582, five years earlier, when, according to the gazetteer of Shuntian prefecture, in which Beijing was located, 'corpses were strewn about, as though the sickness were passing among them, so that even the closest of relatives did not dare enter [the houses of the sick] to offer condolences'.<sup>38</sup> The scale of the disaster in 1582 is evident in the number of reports across the province, yet the documentary record consists solely of brief notices in local gazetteers. Because of the national dimension of the outbreaks in 1587, this pattern of reporting changes for the Wanli pandemic, which reached the attention of the court as the 1582 epidemic did not.

The first reference to any major epidemic in the Wanli era in the *Veritable Records*, the reign-by-reign chronicle consisting of documentary extracts taken from the daily court diary, appears on 8 June 1587.<sup>39</sup> The entry reports that an official in the Ministry of Rites, which handled the public protocols of the regime, submitted a memorial (as communications to the emperor were termed) noting the mounting evidence of omens and disasters – earthquakes in the north-west, a fire inside the palace, widespread sickness – and suggesting that the emperor show a penitent awareness of the people's suffering by reducing his consumption, in particular by cutting back on the orders he had placed with the imperial silk workshops on the Yangzi delta, which hugely burdened

<sup>35</sup>Geoffrey Parker, *Global Crisis: War, Climate Changes and Catastrophe in the Seventeenth Century* (New Haven: Yale University Press, 2013), 4–5, 226, 360.

<sup>36</sup>For recent reconsiderations of dendrochronological and volcanic data attesting to a major worldwide downturn in 1640, see M. Sigl *et al.*, 'Timing and Climate Forcing of Volcanic Eruptions for the Past 2,500 Years', *Nature* 523 (30 July 2015): 545; and Rob Wilson *et al.*, 'Last Millennium Northern Hemisphere Summer Temperatures from Tree Rings, Part I: The Long Term Context', *Quaternary Science Reviews* 134 (15 February 2016): 12.

<sup>37</sup>Distance by road is based on Huang Bian, *Yitong lucheng tuji* (*Illustrated Record of Routes within the Unified Realm*) (1570), reprinted in Yang Zhengtai, *Mingdai yizhan kao* (*Studies of the Courier System in the Ming Dynasty*) (Shanghai: Shanghai guji chubanshe, 2006), 209.

<sup>38</sup>*Shuntian fuzhi* (*Gazetteer of Shuntian Prefecture*) (Beijing, 1886), 69: Xiangyi.

<sup>39</sup>This and the following entries appear in *Ming shenzong shilu*, 186.1a–2a. The *Veritable Records* makes no reference to the outbreaks of 1580–82, though it does report the surges in 1593–94 and 1600–02, as well as the peak in 1612; Li Guoxiang *et al.*, *Ming shilu leizuan*, 547–59.

taxpayers. The official was invoking two conventional, albeit politically sensitive, tropes: that disasters signalled Heaven's displeasure with the ruler, and that the emperor should take responsibility through acts of ritual penance as well as policies to succour the people. Three days later, Grand Secretary Shen Shixing (1535–1614), Wanli's senior civil servant, followed the memorial up with a small, concrete proposal to set up public pharmacies around Beijing and to send medical officers to the city's neighbourhoods to dispense medications. Two days later, the emperor followed Shen's suggestion and issued an edict to the Ministry of Rites:

We have heard that in recent days a disastrous epidemic has spread within and beyond the city walls and that the commoners have no money to buy medicines. We instruct you to send skilled doctors from the Bureau of Medicine to examine patients and dispense medicines, thereby manifesting Our concern to save the people from the suffering of their sickness. Following a precedent of the Jiajing era [1522–66], every family will be given a one-time payment in cash.

The following day, 'with the epidemic miasma in full spate', according to the court diary, the ministry dispatched doctors to distribute medicine. Additionally, every family was issued with a voucher for six cents in silver and ten copper pennies (a combined sum roughly equal to two days' wages for menial labour), to be redeemed at the imperial treasury for cash. The instruction also included a warning that soldiers keeping order in the capital must not use this as a licence to fleece their charges. Although there is quiet acknowledgement of disorder in the cosmos, these documents do not reflect on divine punishment. An epidemic was an administrative concern to be addressed through practical responses such as public medicines and income supplements.

Now consider the English case. When plague struck London in 1563, Queen Elizabeth responded through a combination of religious, police, and public health measures. She gave the Archbishop of York a free hand to impose measures to preserve 'good order', consisting not just of 'giving over all wickedness, now at the last when we are in most greatest danger to give over ourselves', but of 'helping the needy and poor'.<sup>40</sup> Her public health measures ranged from lighting bonfires to dispel the miasma causing the sickness to interdicting movement between cities, the most famous token of which was the public gallows erected in the main square of Windsor to threaten any Londoner who should follow her there. She also worked with the Archbishop of Canterbury and the Bishop of London to draw up a nationwide schedule of prayer, fasting, and confession of sins in hope of assuaging God's displeasure. By contrast, although Wanli headed a ritual order culminating in Heaven, he did not lead his people in acts of contrition or moral renovation. He acknowledged responsibility for Heaven's rebuke, but did not require his subjects to do the same. Their wickedness might displease Heaven, but it was up to the emperor to rule in such a way that they not be wicked, and to care for them when they were. Ruler, subject, and godhead formed a different relationship.

But did ordinary people see matters thus? To judge from popular fiction of the Wanli era, a more dramatic thaumaturgy was at work.<sup>41</sup> For them, death by infectious disease was a form of divine punishment that entirely bypassed the emperor and fell unexpectedly and shockingly on their heads, and they turned to whatever means they could to deflect it. Aware of such beliefs, county magistrates regularly performed rites of propitiation to Marshal Wen, the god (sometimes the bureau director) of pestilence, or to whichever other deity was locally recognized as having

<sup>40</sup>Rebecca Totaro, *The Plague in Print: Essential Elizabethan Sources, 1558–1603* (Pittsburgh: Duquesne University Press, 2010), 20, 47.

<sup>41</sup>E.g. Wang Tonggui, *Ertan leizeng (Enlarged Collection of Overheard Conversations)* (1603) (Zhengzhou: Zhongzhou guji chubanshe, 1994), 32, 37; Qian Xiyuan, *Kuaiyuan (Garden of Mischief)* (1613) (Beijing: Wenwu chubanshe, 2014), 294, 407, 439, 498. Some of these stories bear Wanli-era dates to lend verisimilitude, though I have found none dated to 1586–88. I am grateful to Alison Bailey and her graduate students for sharing these examples with me.

standing to intervene in the matter.<sup>42</sup> I use that legal language advisedly, as the prayers and carnivals for driving off demons of pestilence were enacted as though Marshal Wen presided over an underworld court, where the guilty who had evaded punishment in this life would find it in the next and the innocent would be spared.<sup>43</sup> In Wanli-era fiction, ‘pestilence demons’ (*yigui*), the unshriven souls of men and women who had died without proper burial rites and spent their afterlife wandering about doing mischief, usually appear as tiny goblins, red-haired and blue-faced, popping up in dreams or appearing as visions at dusk, often as a street mob, as harbingers of an outbreak.<sup>44</sup> In these stories, a character’s fate was determined by how deftly he handled these implacable goblins.

At the popular level, then, English or Chinese, epidemics inspired fear and caused people to resort to whatever prayers, charms, or other ritual technologies were available, whether Christian/Celtic or Confucian/Daoist. These popular responses in both cases assumed an accountability somewhere within the prevailing belief system that might shelter the innocent, though the notorious indifference of epidemics to moral standing baffled every culture. Ming gazetteers make no reference whatsoever to such popular religious responses, however, so pursuing that comparison is beyond the reach of this article. But we will return to Marshal Wen toward the end.

### The Chongzhen pandemic

The next great outbreak of major epidemics in China began in 1640. Disease swept across northern and eastern China with an intensity far greater than in the years 1586–88. Beginning in the wake of a decade of intense cold and three years of severe drought, the Chongzhen pandemic rushed to an early climax in 1641 and then continued to ride the climate emergency that pushed the Ming toward system-wide collapse in 1644.<sup>45</sup> Accounts of this cataclysm can be found in almost every gazetteer in the country, in which the entries for 1640 and 1641 are often the longest in the disasters list. Here are some sample entries, taken from county gazetteers in North Zhili, describing the first wave of outbreaks in 1640:

Famine through the twelfth and thirteenth years [1639–40]; not a kernel of grain was harvested; the price of a peck of wheat rose to 1.8 taels [ounces] of silver, the price of rice to 1.9; people ate tree leaves and bark and the roots of weeds, later resorting to cannibalism; on top of this came *wen* epidemic, in every village not one man or woman in ten survived.<sup>46</sup>

Famine; people resorted to cannibalism to the point that parents ate their children and women their husbands; major epidemic.<sup>47</sup>

Major epidemic, great famine at harvest; tree bark and weeds were entirely stripped, people resorted to cannibalism; there were villages where no smoke rose from the hearths.<sup>48</sup>

Here are three more reports, also from counties in North Zhili, for 1641:

<sup>42</sup>Marshal Wen was a cult deity in Zhejiang province; see Paul Katz, *Demon Hordes and Burning Boats: The Cult of Marshal Wen in Late Imperial Chekiang* (Albany: State University of New York Press, 1996). The cult was not recognized in the imperial ritual canon, nor were there shrines to Wen in North Zhili, where other deities would have been approached.

<sup>43</sup>These popular responses to epidemics have largely been examined only for the Qing period; see Carol Benedict, *Bubonic Plague in Nineteenth-Century China* (Stanford: Stanford University Press, 1996), 110–28.

<sup>44</sup>For ‘pestilence demons’, see Qian Xiyan, *Kuaiyuan*, 407, 423, 498, 532.

<sup>45</sup>See Timothy Brook, *The Troubled Empire: China in the Yuan and Ming Dynasties* (Cambridge, MA: Harvard University Press, 2010), 249–52; Brook, ‘Nine Sloughs’, 27–58.

<sup>46</sup>*Qiu xian zhi* (*Gazetteer of Qiu County*) (Kangxi), 8: Zaixiang.

<sup>47</sup>*Jiaohe xianzhi* (*Gazetteer of Jiaohe County*) (1673), 7: Zaixiang.

<sup>48</sup>*Feixiang xianzhi* (*Gazetteer of Feixiang County*) (1732), 2: Zaixiang.

A year of great drought; a peck of rice cost 1,000 pennies and people resorted to cannibalism; neighbours dared not visit each other and those on the streets dared not walk alone; it reached the point that people ate the bones and flesh of other people and even opened recently dug graves to feed; at the same time *wen* pestilence erupted on a large scale, and of ten, eight or nine died.<sup>49</sup>

Great drought through spring and summer, the sickness spread abundantly, the majority of people died.<sup>50</sup>

Spring: as the major epidemic and the extraordinary famine continued, the epidemic of swollen glands passed from house to house, to the point that within one house the corpses (were found) piled one on top of the other, and even in affluent families not one living person was left behind; County Magistrate Qin set up a dispensary to distribute medicines; come the fifth month [June], locusts suddenly arrived, and the starved caught them to eat in place of food.<sup>51</sup>

These vivid sketches catch the eye, yet they reveal little of the impact of the pandemic on cultural and political imaginations of the era. For more intimate views, we have to turn to the journals that many people kept of the trauma leading to the Ming collapse in 1644–45. One of the most detailed and urgent is the pair of short emotional memoirs that a local author, Chen Qide, wrote about the collapse of his local society in Tongxiang county, 100 kilometres south-west of Shanghai. Midway through the first memoir, of 1641, he writes,

Epidemic disease and dysentery arose and passed back and forth, infecting five or six of every ten homes. Some people were laid in coffins, but those who weren't had to be abandoned to the flies like the corpses of the condemned, left for the vines and rushes to entomb. Who knows how many people simply abandoned their dead and fled for good?

When a second wave struck Tongxiang in 1642, Chen returned to his writing desk to craft a longer memoir. Here is how he writes about the epidemic:

In the fourth and fifth months [May–June] epidemic disease erupted again on a large scale, afflicting eight or nine out of ten households. It got to the point that in a family of ten to twenty members, you could not find a single person who did not get sick, much less one who was in perfect health. At the start people were buried in coffins, but later on they were buried wrapped in reeds. After that their corpses were simply abandoned naked to the worms. When people went out, they didn't dare 'look at their neighbour's left foot' [i.e. look surreptitiously for a sign of how to respond] but relied instead on men of charity to have graves dug in the mud, burying sometimes fifty people in a single grave, sometimes sixty or seventy. In less than three months there were fifty or sixty such mass graves, all filled. How could matters have reached a situation this lamentable, this sorrowful?<sup>52</sup>

This second account is richer in detail than the first, but both pivot on the Confucian crisis that follows an epidemic in which all members of a family die, leaving no-one to perform the rites necessary to ease the dangerous spirits of the dead into the status of benign ancestors. This is why Chen laments. He asks at the end of his first memoir how the lord in Heaven could have come to so loathe and discard his superabundant creatures, and hints at both overpopulation

<sup>49</sup>*Shenzhou zhi* (*Gazetteer of Shenzhou*) (1672), 7: Shiji.

<sup>50</sup>*Quzhou xianzhi* (*Gazetteer of Quzhou County*) (Shunzhi era), 2: Zaixiang.

<sup>51</sup>*Qinghe xianzhi* (*Gazetteer of Qinghe County*) (1872), 5: Zaiyi.

<sup>52</sup>Chen Qide, *Chuixun puyu* (*Simple Words Handed down to Instruct*) (1813), 19a–b, reprinted in *Tongxiang xianzhi* (*Gazetteer of Tongxiang County*) (1887), 20.9b–10a.

and wasteful extravagance as the reasons. He ends this second essay with a warning to survivors: you may think you have ‘enjoyed limitless good fortune’ for having survived the epidemic, but unless you ‘make recompense to Heaven and Earth above and our ancestors below’, disaster must surely strike again. Chen crafts his Confucian disapproval in ingenious ways, yet ultimately, like many a censorious late Ming author, he accepted that the age deserved the punishment it got.

As for what the pestilence was and how it unfolded, Chen was not much interested. Daniel Defoe’s *Journal of the Plague Year*, his reconstruction of a diary of the Great Plague of 1665, offers something of a contrast. Defoe used the plague to drive the narrative of ‘that dismal year’. He too describes public burial pits, but goes so much further, treating them as objects of morbid curiosity (his own) and describing scenes of self-interment, culminating in a lengthy account of what he said and saw during an illicit night visit he made there. Both writers reacted strongly to ‘a time so filled with terrors’.<sup>53</sup> For Defoe, though, the plague provided a setting to examine the world and observe human frailty, whereas, with Chen, it feels more like a path leading him around the familiar ground of a closed moral circuit. Defoe’s account was eagerly read, Chen’s brief memoirs forgotten. They may have been read locally, but they languished in manuscript until a local scholar included them at the end of a slim volume of Chen’s Confucian homilies which he published in 1813. ‘I especially love his record of the famine disaster at the end of the Ming’, the editor writes in his introduction. ‘I shiver when I read it. It’s like walking unsupported on a beam, or crossing the ice in spring and worrying that it’s not cold enough.’ Only one copy of the book survives, and Chen’s accounts might have been forgotten entirely had the editor of the 1887 Tongxiang gazetteer not picked them up and reprinted them as evidence of the extent to which the Chongzhen pandemic devastated the county in 1641 and 1642.

## Contagion

Chen Qide does not address how the epidemic spread, though his phrasing – that diseases ‘arose and passed back and forth’ – hints at the idea of community infection. Although he does not use it, there was a distinctive word for contagion at the time: *ran*. Meaning literally ‘to dye’, *ran* caught the idea of disease moving through a population as dye spreads through cloth. Often the word appears in the collocation *chuanran*, ‘to pass (from one person to another) like dye’. This is the term used today for ‘infection’, a word that, as it happens, was adapted in the Renaissance from *inficere*, the process of dyeing cloth. As Angela Leung has shown, *ran* had long been used in medical literature to describe how a disease might spread through contact with infected items or infected people, including between sexual partners. The importance of the term grew during the second half of the Ming period as physicians became increasingly concerned with treating epidemics.<sup>54</sup> Its importance only struck me in the course of reading *Contagion and the Shakespearean Stage*, a study of contagion as a trope in Elizabethan literature.<sup>55</sup> Having noticed *ran* without paying it any particular attention, I went back, looked for a pattern, and found it.

<sup>53</sup>Daniel Defoe, *Journal of the Plague Year: Being Observations or Memorials, of the Most Remarkable Occurrences as Well Publick as Private, Which Happened in London during the Last Great Visitation in 1665* (London: E. Nutt, 1722); citations from the Project Gutenberg ebook.

<sup>54</sup>Angela Leung, ‘The Evolution of the Idea of *chuanran* Contagion in Imperial China’, in *Health and Hygiene in Chinese East Asia: Policies and Public Health in the Long Twentieth Century*, ed. Angela Leung and Charlotte Furth (Chapel Hill: Duke University Press, 2010), 38–42. See also Michael Strickmann, *Chinese Magical Medicine* (Stanford: Stanford University Press, 2002), 35–38; and Andrew Schonebaum, *Novel Medicine: Healing, Literature, and Popular Knowledge in Early Modern China* (Seattle: University of Washington Press, 2016), 126–8.

<sup>55</sup>Darryl Chalk and Mary Floyd-Wilson, ‘Introduction: Beyond the Plague’, in *Contagion and the Shakespearean Stage*, ed. Darryl Chalk and Mary Floyd-Wilson (Cham: Springer, 2019), 1–11.

Other than two unrelated instances in the late 1520s, Ming gazetteers did not use the term *ran* to describe infection before 1579.<sup>56</sup> It appears that year for the first time in Shanxi province, then two years later across the provincial boundary in North Zhili.<sup>57</sup> This first North Zhili reference is in an entry for 1581 in the gazetteer of Xiong county: ‘Autumn: major epidemic, many people died, whole families *chuanran* so that no-one survived; not until the autumn of the following year [1582] did it cease.’<sup>58</sup> This passage could suggest that *chuanran* referred only to transmission within families, but the six uses of the term in North Zhili gazetteers in 1582 point to community transmission. We have already noted the entry for 1582 in the Shuntian prefectural gazetteer reporting that ‘corpses were strewn about, as though the sickness passed among them (*chuanran*)’. Within Shuntian, the gazetteer of Tongzhou phrases the epidemic as ‘passing (*chuanran*) from house to house’.<sup>59</sup> The Wuqiang county gazetteer records that a *wen* epidemic killed its victims within three days: ‘Friends and relatives did not dare care for them. It then spread (*chuanran*) to the point that some families were extinguished. People close by and far away were in great terror.’<sup>60</sup>

The language of ‘dyeing’ next appears in North Zhili gazetteers in entries for 1588, and then again frequently in the final five years of the dynasty. That the term *ran* should surface early in the Wanli era as major epidemics started to hit North Zhili, becoming a standard way to describe the transmission of the sickness, suggests that contagion had entered popular medical lore (as distinct from its established presence in the professional lore) around this time. Contact with another infected person was now understood to be a risk, so it was safer to leave the infected alone in their homes than to enter and administer aid. The discovery supports Marta Hanson’s finding that Chinese medical theory was transformed towards the end of the Ming when physicians, stumped by the ineffectiveness of traditional therapies, re-theorized the syndromes they encountered as what was called ‘warm disease’, in which contagion was recognized as a factor. It is hardly random that the leading treatise on this new theory was published in 1642, right in the middle of the Chongzhen pandemic.<sup>61</sup>

To contextualize the emergence of the concept of contagion in the worldview of people of the Ming, I find it helpful to adapt Nükhet Varlik’s three-phase model of the impact of a novel pathogen in society: naturalization (integration into the cultural landscape), medicalization (development of new knowledge and treatment), and canonization (creation of a new set of perceptions and body of knowledge to guide how one should respond).<sup>62</sup> The people of the late Ming had no need to naturalize epidemics: they knew them as the final stage of the worst of times. As Chen Qide put it in 1641, ‘If you didn’t die from warfare, you died from famine; and if you didn’t die from famine, you died of pestilence.’ The intensity of the late Ming pestilence years, though, pushed Ming physicians to re-medicalize epidemics as contagious and, more broadly, encouraged people to re-canonize epidemics as events demanding vigilance, social distance, and quarantine, even to the extent of not nursing the ill and not sustaining the ritual reproduction of the Confucian family.

## The literature of contagion and the politics of pandemics

To plot the love story of *Romeo and Juliet*, Shakespeare needed a situation that could have been avoided, leading to fatal consequences that were no-one’s fault: a tragedy, in other words. Friar

<sup>56</sup>The two references to *chuanran* in the 1520s, unconnected to each other, are from Sichuan and North Zhili gazetteers: *Zhaohua xianzhi* (Gazetteer of Zhaohua County) (1845), 41: Xiangyi; and *Luancheng xianzhi* (Gazetteer of Luancheng County) (1683), 2: Jishi. As both are later editions, the term could well have been inserted later by a Qing editor.

<sup>57</sup>*Xiaoyi xianzhi* (Gazetteer of Xiaoyi County) (1726), 1: Xi angyi.

<sup>58</sup>*Xiongqian xianzhi* (New Gazetteer of Xiong County) (1929), 2: Xiangyi.

<sup>59</sup>*Tongzhou zhi* (Gazetteer of Tongzhou Subprefecture) (1697), 1: Zaiyi.

<sup>60</sup>*Wuqiang xianzhi* (Gazetteer of Wuqiang County) (1694), 2: Zaixiang.

<sup>61</sup>Hanson, *Speaking of Epidemics*, 90–4, 100–3. Hanson notes that traditional Chinese medical practitioners, following the late Ming diagnosis, also categorized SARS as a warm disease (163–8). The designation must apply equally to SARS-CoV-2.

<sup>62</sup>Varlik, *Plague and Empire*, 208.

John has a letter to deliver to Romeo explaining that Juliet was only in a medically induced coma, not dead, but he is put into quarantine by city authorities in Mantua on the mistaken suspicion that he has been 'in a house where the infectious pestilence did reign'. The letter does not reach Romeo, and as a result the teenagers commit serial suicide.<sup>63</sup> Plague does not 'explain' the play, but it drives the plot, and is persuasive in doing so because plague was ominously present in the minds of theatregoers. That Friar John's quarantine was unnecessary only heightens the tragedy.

By contrast, Ming literature does not use pestilence in this way. A writer could briefly stage an epidemic to set up a story of someone dying or coming back from the dead, or dreaming that he had gone to the underworld and returned. The storyteller could also conjure up an epidemic when it came time to kill off a character. Otherwise, pestilence does not do much to set atmosphere, reveal character, or drive plot. In his study of medical knowledge in popular fiction, Andrew Schonebaum offers two speculations on why Chinese authors did not place epidemics at the centre of the action. One is literary: epidemics 'did not lend themselves to metaphor well'. Pestilence could be invoked to put human failings in stark relief, but it was not a condition out of which new meanings could be generated. The other is cultural: the topic was 'too gruesome', touching on matters so inauspicious as to offend Chinese moral sensibilities.<sup>64</sup> This seems reasonable, though what is offensive to moral sensibilities depends on social position. The common people may well have had a much less constrained relationship with the threat of death. The Marshal Wen cult, for instance, came with elaborate rituals of supplication that included carnivals of howling demon-chasing and the free exercise of vigilante justice against those who had managed to evade this-worldly law.<sup>65</sup> The popular dramaturgy of pestilence cults in the south makes no appearance in North Zhili gazetteers, yet people there must have expressed their helplessness and terror in the face of situations in which even the gravediggers were 'so terrified that they durst not go into houses where the whole families were swept away together' (to use Defoe's words).

Carnival does more than release social tensions. It has the capacity to project political messages when the powers-that-be fail to meet the needs of the people. Chinese popular culture is particularly prone to assuming the overlay of the political on the social. The appeals made to Marshal Wen and the acts of vigilante justice tended to conform to the choreography of the magistrate's court. The afterlife was an elaborate courthouse, a homology of state administration where justice could at last be found, where mortal sickness was punishment for moral transgression in this life, and also where favours could be sought, punishments waived, and grievances settled. Ming storytellers followed popular beliefs by staging moral dramas as legal battles in the afterlife, though with pestilence providing little more than a ticket to that courtroom.

As acts of political imagination, pestilence cults and popular stories may be thought of as aligning, at a different social level, with the elite interpretation of epidemics as part of a package of cosmic disorder signalling moral decline, administrative failure, and the collapse of the political order.<sup>66</sup> Widespread mortality was evidence of the state's inability to meet the core task of Confucian statecraft, which was to 'nourish the people'. Beyond that failure lay the dynasty's fall. To whisper that consequence was treason, however; hence there is not a word in the gazetteers about linking major epidemics to regime change. That was for the emperor to talk about, not ordinary people. So while the Wanli pandemic, which did not provoke regime collapse, may have had echoes in Wanli fiction, the Chongzhen pandemic was erased from everyone's narrative repertoire. Even so, I would argue, the politics of both pandemics were vividly present for all

<sup>63</sup>Totaro, 'Introduction', 1.

<sup>64</sup>Schonebaum, *Novel Medicine*, 30. There is more work to be done on epidemics in Ming literature. In a private communication, Wilt Idema suggests exploring stories connected to the legend of the white snake demon. In one story, this demon causes an outbreak of pestilence by poisoning wells (reminiscent of the crime with which Jews were charged during the Black Death), then opens an apothecary with her lover, where they do a good trade in medicines that counter the infection.

<sup>65</sup>Paul Katz, *Divine Justice: Religion and the Development of Chinese Legal Culture* (London: Routledge, 2009), 47–50.

<sup>66</sup>Denis Twitchett, 'Population and Pestilence in T'ang China', in *Studia Sino-Mongolica*, ed. Wolfgang Bauer (Wiesbaden: Franz Steiner Verlag, 1979), 35–67.

participants, from the emperor sending out his doctors to heal the sick to the sick huddled inside their homes.

Come 2020, Chinese appeared to be readier to accept administrative supervision than their Western counterparts. They expected the state to take responsibility for the welfare of the people, and were more or less willing to conform to the state's programmes to do so. But beneath this expectation lurked a threat, which was that a failure to act would signal that the regime had lost its mandate. Anxiety on this point may help explain why the Chinese Communist Party's initial response to the outbreak was to suppress the evidence, and then, once that had failed, to impose draconian restrictions to stop the outbreak abruptly. The cost to the Party's dictatorship of doing anything less was far too high. That noted, the experience of the Chongzhen pandemic of the 1640s does not explain the Chinese response to COVID-19 in 2020 any more than the English response to plague in the same period explains the startling ineptitude of the response on the part of the British or American governments this time around. But there is something on the Chinese side – waiting patiently for succour while silently putting the state on notice that its mandate is conditional – that recalls the Ming understanding that survival depends on state responsibility at least as much as on divine clemency.

Timothy Brook is a China historian holding the Republic of China Chair at the University of British Columbia. His most recent book is *Great State: China and the World* (2019).