1 Introduction: China and the Making of Global Health

In the twenty-first century, public health is increasingly studied and understood in international terms. What we now call 'global health' is a product of recent historical processes generating an area of research and practice that treats the health of populations in a planetary context. This Element argues that there is no global health without China. The territories and peoples associated with China have played vital roles in the emergence of this discipline, and they remain central to its policies and practices. This significance is a consequence of two connected but contrasting functions: widespread understandings of China as a place where infectious diseases originate; but also the active agency of Chinese peoples in identifying new ways to control and end epidemics.

It is therefore possible to tell two stories about China's role in events shaping modern international health, one dark, one light. In the former, repeated epidemic outbreaks in the early twentieth century justified interventions by transnational organisations; these projects on Chinese soil shaped subsequent mid-century strategies to manage the health of the world's populations, but largely came to an end after the Chinese Communist Party (CCP) took control of mainland China. After 1978, a post-socialist transition gave rise to new configurations of health governance that eventually created the conditions for Covid-19 to become a global pandemic in 2020. In this narrative, which has generally predominated in anglophone scholarship, China and Chinese actors have remained marginal to the history of international and global health. Recent textbooks and overviews have generally focused on familiar institutions and Euro–American actors in China: the League of Nations, the Rockefeller Foundation, the Pan-American Health Organisation, and the World Health Organization (WHO) (Palmer 2010; Packard 2016; Cueto, Brown, and Fee 2019; Cueto 2020).

Yet that story leaves significant gaps. Early twentieth-century epidemics also contributed to the establishment of a domestic community of globally engaged biomedical researchers. Considering Chinese perspectives in conjunction with familiar tales suggests that China has indeed served as a space of epidemic genesis, but also of creativity and reinvention, in which administrators developed new models of health care during mid-twentieth-century decades of war and revolution even as traditional practitioners presented alternatives to Western biomedicine. The 1949 establishment of the People's Republic of China (PRC) introduced a new era of socialist internationalism, marked by participation in Soviet-led health programmes as well as Chinese initiatives to establish connections across the non-aligned world using medical diplomacy. The rich and varied history of Chinese involvement in global health – replete

with stories both light and dark – thus offers a means to make sense of present-day crises.

What was China? This is a complex question, since across the twentieth century, the peoples, languages, and territories identified as Chinese underwent manifold radical transformations. The schism between the PRC and the Republic of China on Taiwan (ROC); the emancipation of Hong Kong from British rule; and the wavering and uncertain status of 'Overseas Chinese' as a category incorporating not only those who returned to the PRC during the Cold War from communities in Indonesia and elsewhere but also those who left for North America, Europe, and other distant shores (Kuhn 2008; Zhou 2019): the diversity of these experiences suggests that there is not one China, or Chinese people. Likewise, the sovereign borders allegedly demarcating 'China' reveal remarkable ethnic, linguistic, and cultural range, from aboriginal Taiwanese communities to the many minority peoples of Yunnan, Xinjiang, and other border provinces. And in the conversations connecting China, Chinese culture, and Chinese medicine, all too often a uniform view of 'China' is assumed (Zhan 2009, 191). Here, I attempt to discuss the variety of communities identifying as Sinophone (Chinese-speaking) – but because much of the available literature focuses on the PRC, that polity unavoidably dominates the discussions that follow.

Several key themes provide connecting strands. One is the secular trend over the twentieth century that is sometimes described as China's demographic transition: a propitious decrease in death rates and increasing longevity. The reliability of statistics from the PRC is a complicated question (Banister 1987; Ghosh 2020), but the trend seems clear. In the history of medicine, this is sometimes depicted in epidemiological terms: a fall in infectious disease incidence, coupled with a rise in chronic disease morbidity and mortality. These trends have consequences for how we understand China's role in international and global health. First, they indicate the changing role played by China in the global origin and spread of epidemics: a sharp decline in transmission over the twentieth century has been countered by the emergence in recent decades of novel influenzas and coronaviruses. Second, they indicate the transformation of the PRC from a state that received foreign aid to one that distributed it, as domestic health systems gained global recognition for their successes. Third, they indicate shifting priorities for Chinese health systems – of significant consequence for global medical research.

Another integrative theme involves the rich medical pluralism that has characterised decision-making around health in Sinophone populations. Foreign observers have been quick to attribute the distinctive features of Chinese responses to Covid-19 to 'Confucian culture' or the authoritarian

nature of the PRC state – but such glib generalisations gloss over a variety of attitudes and beliefs that shaped epidemic responses and health administration throughout the twentieth century. Simple dichotomies between Chinese and Western medicine would be misleading here, since ideas about medicine and modernity became fundamentally intertwined in the Chinese context during the early twentieth century and Chinese medical professions coalesced through conflict with physicians trained in Euro–American traditions (Lei 2014). In the early twentieth century, international health became an arena for contestation between medical practitioners trained in different traditions over the authority to represent China on a global stage. In the Cold War, initiatives to 'combine Chinese and Western medicine' implicitly codified the dichotomies they allegedly sought to overturn. And in the post-socialist period, the transgression of animal–human boundaries in wildlife farming, partly in the service of an expanding Chinese pharmaceutical industry, gave rise to global concerns about zoonotic disease transmission conceptualised in biomedical frameworks.

A third connecting strand, then, is that of the importance of interspecies relationships to both the emergence and management of infectious diseases. Observers of Covid-19 and other recent epidemics in China have pointed to the significance of dynamics linking humans, animals, and pathogens, in which transgressive encounters between wild animals and middle-class consumers have eluded the reach of health administration with pathogenic results (Zhan 2005; Evans 2020; Keck 2020). Yet the history of public health in China reveals alternative understandings of the relationships connecting humans, animals, and environments. It reminds us that the pernicious dynamics that led to intensive industrial farming and the cultivation of wildlife, which created the conditions in which novel pathogens could arise, are the result of global social and economic processes. It also suggests that interspecies entanglements in China have positively contributed to public health structures and strategies.

This Element builds on existing scholarship on the history of global health and the history of medicine in China. Like definitions of China and Chineseness, the meanings and scope of public, international, and global health have changed over time. In what follows, I seek to use terms appropriate for the period under consideration. 'Public health' was formulated in the nineteenth century as a set of relations between medicine and society concerned with sanitary reforms and infectious disease control; in the late twentieth century, historians interpreted the concept in expansive ways, incorporating more perspectives and temporalities. The scholar Dorothy Porter offers a useful definition of public health as 'the history of collective action in relation to the health of populations' (Porter 1999, 4). In the late nineteenth and early twentieth centuries, the term 'international health' was commonly understood to

encompass discussions and activities relating to the coordination of epidemic response and control across national and imperial borders. It was only in the 1990s that the term 'global health' began to replace 'international health', referring to efforts to prioritise the health of the entire planet's population over national interests (Brown, Cueto, and Fee 2006, 62).

The history of international health thus finds its origins in colonial medicine and imperial neglect (Bashford 2004; Harrison 2016; Pearson 2018). Yet its projects also fostered revolutionary nationalism and anti-colonial socialist internationalism (Waitzkin et al. 2001; Lo 2002; Anderson and Pols 2012; Solomon 2017; Pols 2018). Recent histories of global health have understandably tended to focus on key organisations in the Global North that have declared their mission to improve the health of the world's populations, most notably the Rockefeller Foundation and the World Health Organization; in this respect they have still put Westerners at the centre of the story (Palmer 2010; Packard 2016; Cueto, Brown, and Fee 2019). The result has been an incomplete picture of the role of China in international and global health. While familiar characters and organisations from canonical narratives do appear in the following pages, sometimes prominently, this Element seeks to give primacy to Chinese perspectives.

To understand those perspectives, and the history of China's role in international and global health more generally, it is necessary to survey the ways in which health and medicine became central to governance there. Here, a fourth overarching theme of the Element emerges, which follows the intensification of biopolitical relationships between Chinese states and peoples over the twentieth century. By 'biopolitics', I refer to the Foucauldian concept that perceives populations and their biologies as a central concern of governments (Campbell and Sitze 2013, 14). This Element is concerned with the specific roles that biopolitical approaches to governance have played in Chinese contexts, especially the growing strength of biopower over the twentieth century. In this respect, it builds on important previous scholarship. Ruth Rogaski has traced how, from the mid-nineteenth-century establishment of hyper-colonial treaty ports, the concept of *weisheng* connected a variety of hygienic practices to Prussian and Japanese concepts of public health. In these dynamics, the state exerted *biopower*: control over and regulation of its population's health (Rogaski 2004). David Luesink has argued that Chinese concepts of political anatomy in which the body provided a mirror for the state supported advocacy for the adoption of anatomical knowledge by early twentieth-century medical professionals. This development in turn laid the foundations for an 'anatomo-politics' in which the state established power over individual bodies (Luesink 2017). In the early twentieth century, across Asia, scientists and physicians

constituted an important group among nationalist revolutionaries. Hans Pols and Warwick Anderson suggest that scientific training facilitated a kind of anti-colonial sentiment that was distinct from literary or historicist forms of nationalism (Anderson and Pols 2012, 97).

The history of medicine in twentieth-century China reveals not only the ways in which governance became intertwined with health, but also the increasing prominence that medicine occupied in international relations. At the beginning of the century, a 1905 article labelling China the 'Sick Man of the Far East' appeared in the *New York Times*. This parallel with nineteenth-century descriptions of the Ottoman Empire as the 'Sick Man of Europe' described the political vulnerability of the Qing dynasty, China's last imperial regime, to predation by European powers (The Sick Man of the Far East 1905; Amelung 2020, 9). Over the course of the century, medicine moved from the realm of metaphor to become a more direct concern of foreign policy. As we will see in Section 1.2, the 1910 outbreak of pneumonic plague in north-east China sparked Russian and Japanese imperial adventures into Qing territory, and in the Second World War epidemics spurred a variety of foreign aid donations and interventions. Erez Manela has argued that the case of smallpox eradication demonstrates the importance of public health to diplomatic history in the Cold War context (Manela 2010, 301–2). And upon the 2020 outbreak of Covid-19, the re-emergence of accusations calling China the 'sick man of Asia' sparked a vigorous backlash from representatives of the PRC (Rogaski 2021).

The following discussion proceeds broadly chronologically through the twentieth century. A longer view might have delved further into early and early modern epidemic management, or the history of missionary medicine in China, or regional networks of medical exchange in East and South-East Asia. Likewise, constraints of space preclude giving due attention to the significance of histories of mental health, sexuality, or disability in the narratives surveyed. This Element instead focuses on epidemic and infectious diseases in the more recent past as a period of remarkable social and medical transformation across the Sinophone world. Sections 1.1, 1.2, and 1.3 consider the end of the Qing dynasty and the early years of the Republic that succeeded it, an era largely marked by political infighting and regional warlord separatism. The second section considers the ambitious projects of the 'Nanjing Decade', the period between 1927 and 1937 when the Nationalist Party consolidated control over the Republican state in central and coastal regions. The third section discusses international commitments in public health by the PRC and ROC governments in the Cold War era, and the fourth section places current trends in the management of Covid-19 in the context of the recent history of post-socialism in the PRC and exclusion from global health governance in Taiwan.

1.1 Defining Medicine in China

The establishment of the modern Chinese nation state in the early twentieth century was inextricably tied up with early collaborations in international health. The crumbling Qing empire used public health to grasp at power when a deadly epidemic broke out in the north-eastern ancestral homeland of its rulers. And men trained in Western medicine – a profession that some chose for its symbolic significance, with attendant imagery of healing the nation as a body – played key roles in the Xinhai Revolution which ended that empire. The novel practices and theories of hygiene they studied sought to address the epidemics then prevalent in East Asia; in so doing, they came into conflict with the great range of medical traditions that had long been in use in China.

A diversity of medical traditions existed among Chinese-speaking peoples by the year 1900. Learned physicians drew on knowledge of medical classics such as *The Yellow Emperor's Inner Canon* (*Huangdi neijing* 皇帝內經) or the *Golden Mirror of Medicine* (*Yuzuan yizong jinjian* 御纂醫宗金鑑) (see Figure 1). They trained through extensive apprenticeships, often reflecting prestigious medical lineages. A lack of regulation meant that physicians using herbal medicine, acupuncture, and/or moxibustion competed with specialists in surgery, women's disorders, and other sub-fields in a thriving and decentralised medical marketplace. Travelling folk healers offered fortune-telling services, sold drugs, and offered prayers, and massage therapists and tooth-pullers also offered their wares in this realm (Andrews 2013, 211).

At the turn of the century, these traditions had already encountered what became known as Western medicine, mainly through the intervention of Christian missionaries. Like 'Chinese medicine', the term 'Western medicine' lent seeming coherence to a diversity of approaches to medical theories and practices. Members of the Jesuit order had arrived in China in the 1580s, and once ensconced at the Qing court they imported drugs, treated patients, instructed emperors in anatomical knowledge, and translated medical texts into Chinese and Manchu (Asen 2009; Golvers 2011; Puente-Ballesteros 2011). In the nineteenth century, Protestant missionary organisations came to the forefront of medical interventions, establishing hospitals and medical schools in treaty ports forced open to foreign trade by the Opium Wars (Choa 1990; Minden 1994; Andrews 2014, 51–68). Especially after the 1838 formation of the Medical Missionary Society in China, but also through the European and American missionary societies that had recruited them, physicians stationed at missions across China tapped into a network of transnational colonial medicine, complete with its own publications, funding structures, and recruitment procedures (Choa 1990, 16–18; Lazich 2006). The research supported by this

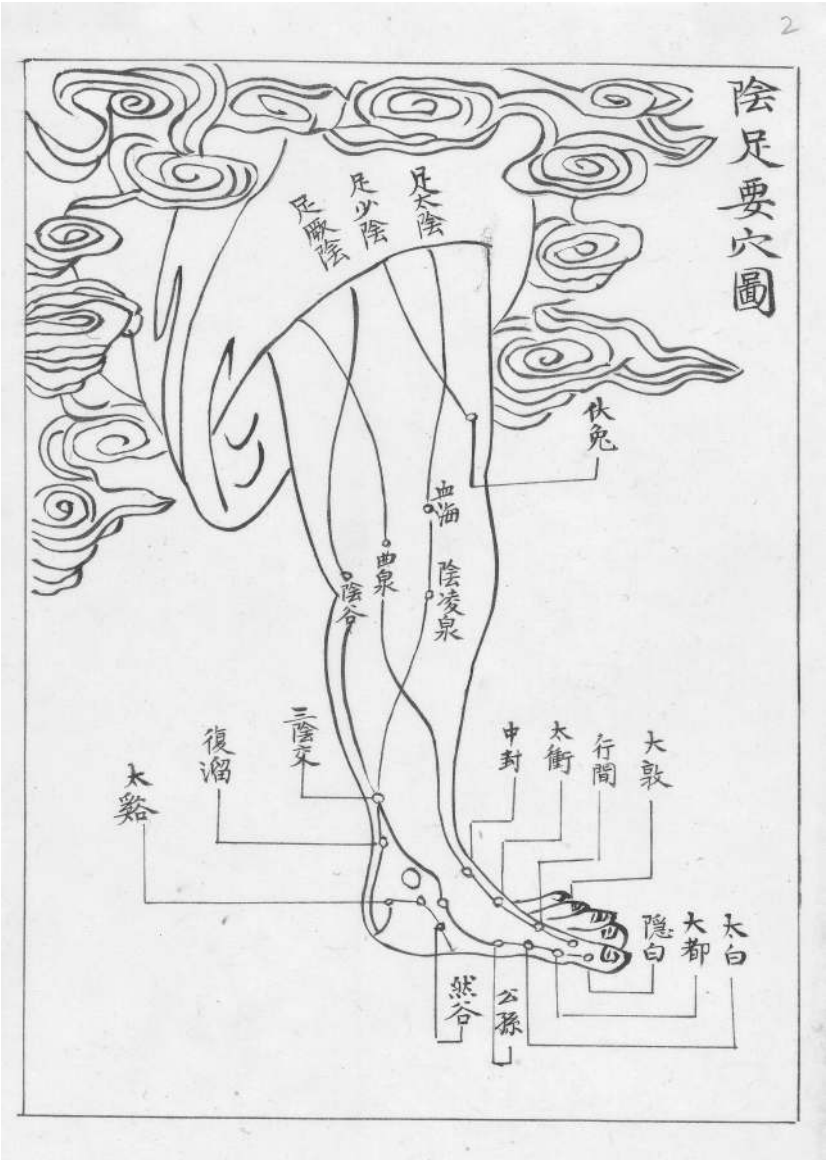

Figure 1 Acupuncture points and meridians of the foot, taken from *The Golden Mirror of Medicine*, first published in 1742. Image courtesy Wellcome Collection, attribution 4.0 International (CC BY 4.0).

network proved formative to the establishment of tropical medicine, a novel discipline that relied on access to experimental subjects in colonies in the service of the expansion of imperial power. It was during his time as a surgeon for the Chinese Maritime Customs Service, for example, that the British

physician Patrick Manson developed theories of parasitic disease transmission, eventually earning the moniker 'father of tropical medicine'; the Customs Service was an administrative product of the Opium Wars, staffed by foreign agents who supervised the collection of taxes at treaty ports (Haynes 2001). In southern China, French physicians established consular hospitals and Pasteur Institutes as part of a strategy to establish imperial influence across the region bordering French Indochina (Bretelle-Establet 1999; Liu 2017; Velmet 2020).

These French doctors made use of long-established pathways. Europe was, of course, not the only region to have a history of medical exchanges with China. Although it is generally assumed that Chinese medical traditions exerted a dominant influence over surrounding regions, South-East Asia was a significant source as well as a destination of knowledge and drugs for Chinese physicians (Thompson 2015). Likewise, Inner Asia was an enduring site for exchanges of medical knowledge between the continent's eastern and western peripheries (Nappi 2009; van Vleet 2015). To the east, as early as the eleventh century, the Korean state of Koryŏ had received medical literature and physician-emissaries from China's Southern Song Dynasty; in return, it provided the Song with rare Chinese medical texts which had been lost there (Chai and Ch'ae 2017, 36–8). Likewise, Japanese physicians had avidly consumed and translated classical Chinese medical texts since at least the early modern period (Elman 2008); by the early twentieth century, as we shall see, Japan had become a crucial site for Chinese students' and writers' exposure to novel medical practices and theories. A broad definition of 'international health' might extend to consider these regional circuits of influence and exchange, as well as more traditional disciplinary networks and organisations.

In contrast to the long-established networks of exchange described above, in European-led transnational sanitary discourses of the early twentieth century, China figured primarily as a dangerous zone harbouring deadly infections. The Qing was maligned for its inattention to sanitation and public health. For example, the proceedings of the 1881 International Sanitary Conference in Washington, DC criticised health in China, saying, 'The only sanitary measures taken in this country are quarantine measures against the importation of cholera' (International Sanitary Conference 1881, 176). And in a discussion of plague in China and India that took place in 1897 during an International Sanitary Conference in Venice, the proceedings noted that 'The English authorities [of Hong Kong] have made laudable efforts to lessen the ravages of the scourge. But the Chinese offer great resistance to the application of hygiene and disinfection measures' (International Sanitary Conference 1897, 317).

It would be inaccurate, however, to say that there were no state-sponsored health initiatives whatsoever in China. For instance, the Song dynasty

(960–1279 CE) saw the establishment and strengthening of state medical institutions and publications, as well as epidemic relief (Hinrichs 2013, 99–102). Much later, the Qing state, under a reform-minded administration, established a Sanitary Office in 1905 as part of a new Ministry of Police. This office took responsibility for inspecting pharmacies, licensing physicians, and a range of other hygienic tasks from street sweeping to epidemic prevention. In the following year, an Office of Health Care assumed new responsibilities for inspecting food and drink, as well as administering public health among the poor, in factories, and in theatres. A Quarantine Department oversaw the prevention of infectious diseases via immunisation against smallpox and enforcing isolation policies, and a Medical Department oversaw the registration of physicians. In 1906, a public hospital opened in the capital of Beijing, with success (Zhu and Cao 2009, 128–33).

These efforts were significant in part because the Opium Wars had subjected the Qing to predation by numerous Euro–American powers. As Ruth Rogaski has shown, the resulting hyper-colonial dynamic led to the establishment of 'hygienic modernity' in China's treaty ports: a set of practices which sought to impose public health in a way that reinforced colonial frameworks and their connections to state biopower, as well as discourses of Chinese deficiency within these frameworks (Rogaski 2004). Growing frustration with the impoverished and weak state of the Qing by the late nineteenth century led many intellectuals to see their empire's relationship to other countries in terms of national competition, just at a time when the translation of texts on evolution and especially social Darwinism articulated the significance of the 'survival of the fittest'. They perceived a need for legal and social revolution to enable China to compete among the fittest in a global social order (So 2012; Carrai 2019, 95). So, the reception of eugenics in China made public health relevant to international relations, by virtue of the idea that a healthy population was necessary for China to compete successfully with the empires that had recently extracted so much from the Qing. For instance, Kang Youwei (康有為) and Liang Qichao (梁啓超) promoted early marriage, prenatal care, women's education, and sterilisation of those who should not reproduce as part of the Self-Strengthening Movement, an attempt to make strategic use of Western learning in order to strengthen the military and the economy against foreign encroachment (Chung 2014, 795–7).

Although reform-minded intellectuals in China thus engaged with the long-term challenges facing the Qing, short-term questions of transnational public health remained pressing at the turn of the twentieth century. International health at this time targeted the failures of national governments to prevent epidemics, especially cholera, from spreading across national and imperial borders. A series of International Sanitary Conferences had been convened

for this purpose since the 1850s, and many of their discussions blamed non-Western states for failing to keep diseases within their territories. The Qing occasionally sent representatives to these conferences, even though European delegates dominated the conversation. For example, in 1881 Chen Lanbin (陳蘭彬), the first Qing ambassador to the United States, attended an International Sanitary Conference in Washington, DC (Chen 2018, 345). Several years later, the diplomat and Self-Strengthener Chen Jitong (陈季同) participated in the International Sanitary Conference held at Rome in 1885 (International Sanitary Conference 1885, 64–5).

The many epidemic diseases that afflicted China in the early twentieth century made it an important site for both medical crisis and discovery. In 1894, Alexandre Yersin and Kitasato Shibasaburō (北里 柴三郎) competed to discover the causative agent of the bubonic plague outbreak devastating the British colony of Hong Kong. Shibasaburō, the Japanese student of Robert Koch, was first to identify and publish on the plague bacillus, but Yersin, the Swiss student of Louis Pasteur, provided a more accurate description and pure cultures of what came to be known as *Yersinia pestis*, as well as a conjecture that rats were involved in the transmission of plague (Echenberg 2007, 34–5). The plague exposed and amplified tensions between the city's Chinese and European populations. Official efforts to disinfect buildings in Chinese communities and remove infected patients to isolation hospitals provoked fear, flight, and resistance. Despite the mediating intervention of the Tung Wah Hospital Committee, a charitable organisation run by Chinese merchants, these conflicts persisted until the easing of the epidemic in the autumn of 1894. Throughout the crisis, colonial officials were concerned with stopping the flow of disease – but *not* money, goods, or labour – through the city (Peckham 2016, 83–9).

While British officials fretted over plague in Hong Kong, Chinese colonial subjects posed new medical challenges for an entirely different imperial government. Following the 1895 defeat of China in the First Sino–Japanese War, the island of Taiwan, formerly a province of the Qing Dynasty, was relegated to Japanese rule. Its new overlords promptly applied the model that Japan's home islands had adopted in the 1870s, based on mid-nineteenth-century German centralised systems that emphasised sanitary police and public hygiene via quarantine stations and public hospitals. The perceived success of this process made Taiwan a model for Japanese colonial medicine in Korea, Sakhalin, and other holdings (Liu 2009, 54–60). Over time, as the empire expanded, Japanese administrators sought to institute 'scientific colonialism' in Taiwan as part of a distinctively Asian civilising mission. Colonial medicine constituted a major plan within this strategy to bring science to the island, yet its successful establishment led to the formation of an elite profession of Taiwanese