Introduction: Contagious histories

Throughout 2014, an epidemic of Ebola virus disease (EVD) in West Africa dominated the global media. While the World Health Organization (WHO) declared the epidemic a public health emergency, images of makeshift quarantines, field-laboratories, and bagged bodies fueled panic in many countries around the world. The high mortality rate of up to 90 percent, together with graphic details of the symptoms, which may include internal and external bleeding, added to public concerns. In Hong Kong, health authorities stepped up surveillance and rushed to implement Ebola contingency plans. Travelers from West Africa who showed symptoms of fever were quarantined and tested. Authorities in the People's Republic of China (PRC), conscious of the large numbers of Chinese workers in Africa, heightened border controls.

Two other viral infections also caused alarm across Asia. Middle East respiratory syndrome (MERS), a highly pathogenic viral illness, was first reported in 2012 in Saudi Arabia. The Saudi Arabian economy is dependent on some nine million non-national residents, many of them migrant workers from South and Southeast Asia. Every year millions of pilgrims from across Asia converge on Saudi Arabia for the *hajj*, the annual Islamic pilgrimage to Mecca. In May 2015, an outbreak of MERS in South Korea led to the imposition of quarantine measures, the closing of schools, and – amidst public panic – the establishment of specialist MERS clinics in major cities. By mid July 2015, there had been 186 confirmed cases of infection with 36 deaths (Figure 0.1).

Meanwhile, in March 2013, human cases of the novel avian influenza virus H7N9 were reported in China. A WHO announcement about the new virus, which was posted on Twitter, prompted up to 500 retweets per hour.[1] By December 2013, there had been 143 laboratory-confirmed

[1] Sara E. Davies, 'Internet Surveillance and Disease Outbreaks.' In: Simon Rushton and Jeremy Youde, eds., *Routledge Handbook of Global Health Security* (Abingdon and New York: Routledge, 2015), pp.226–238 (226).

Figure 0.1. 'MERS in South Korea, June 4, 2015.' Photograph by Yang Ji-Woong. Courtesy: EPA.

MERS: Panic and protest in Korea

An outbreak of MERS in South Korea in 2015 brought to the fore many of the themes explored in this book: global interconnectedness, the particular social and cultural circumstances that shape responses to novel infections, as well as an epidemic's political and economic ramifications. MERS is a viral respiratory disease caused by a coronavirus (MERS-CoV) and leads to death in approximately 36 percent of those infected. While the disease appears to have been introduced to Korea from the Middle East, it was widely claimed in the media that overcrowded hospital facilities, as well as the practice of 'doctor shopping,' facilitated its spread. The epidemic in South Korea sparked panic across the country and criticism was leveled at the government for playing down the risks and failing to act decisively. In Figure 0.1, two protesters attending an anti-government rally in Seoul hold up red cards. A placard reads: 'Total incompetence of the government for sluggish response!' South Korea is Asia's fourth-largest economy and the epidemic impelled the country's central bank to cut interest rates amidst fears of the economic fallout from MERS.

human cases of H7N9 with 45 deaths. A 36-year-old Indonesian domestic helper, who had visited a live poultry market and slaughtered a chicken across the border in Shenzhen, became the first confirmed H7N9 patient in Hong Kong. This sparked a ban on poultry imports from Shenzhen farms and a heightened alert in hospitals.

What do these epidemics have in common, aside from the fact that they are zoonoses – that is, infections of animal origin? What can they tell us about contemporary Asia? In this book, I explore many of the themes contained in this brief overview of current epidemic threats: South and Southeast Asians in the Middle East; an Indonesian helper crossing the border from Hong Kong to mainland China to visit a 'wet market'; a Chinese diaspora in Africa; the plotting of scattered events as symptoms of a global disorder. The book considers this interconnected but splintered world through the lens of infectious disease, tracing the consequences of new and old interdependencies across Asia: historic networks of trade and culture, mass migrations, booming cities where expanding industry is drawing low-wage workers, as well as growing Asian interests outside Asia. We examine the role of the state in epidemic surveillance, the tensions between national interests and transnational flows, and investigate the asymmetries of a world where globalization is espoused at the same time as the foreign is stigmatized; where epidemics are often ascribed to cultural practices rather than to deeper social and biological causes.

Recent infectious disease outbreaks demonstrate how current threats are often viewed in relation to past events. Responses to Ebola, MERS, and H7N9 have been shaped by the experiences of other epidemics, including severe acute respiratory syndrome (SARS) in 2002 and 2003. Allusions to history pervade media coverage of these epidemics, most obviously in recurrent fears about the coming plague. What if Ebola should become airborne? Supposing the influenza virus mutated or different flu strains 'reassorted' to allow effective human-to-human transmission? Accounts of the present repeatedly evoke the future in terms of the past. Could Ebola, or MERS, or H7N9 become the next pandemic, like the 'Spanish flu' in 1918–1919, which killed perhaps 50 million people or more globally, the majority in Asia?

Since the 1980s, particularly with the identification of the human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS), there has been a renewed focus on the threats posed to human societies by infectious disease. Today, Asia is regarded by many commentators as a frontline in the global 'war' against novel pathogens, notably those of animal origin. Experiences of avian influenza from the late 1990s, as well as the outbreak of SARS in southern China, have drawn attention to the region's vulnerabilities. Over 30 percent of the

world's population resides in East and Southeast Asia, with 1.36 billion in China alone. Even though there has been a significant shift from communicable to chronic degenerative diseases as causes of death in recent decades, Southeast Asia still accounts for over a quarter of the global burden of infectious and parasitic diseases, and remains 'an acknowledged hotspot for risk.'[2] According to the WHO, there are six million annual deaths attributable to infectious diseases across the region (Figure 0.2).[3]

The rapid growth of Asian economies has put increasing pressure on natural resources from industry and consumers. Urban expansion, the intensification of agriculture, demands for wood and water, as well as mineral extraction and infrastructural projects, including damming for hydroelectric power and road construction, have all impacted upon landscapes, altering habitats and influencing inter-species interactions.[4] Particularly over the last two decades, Southeast Asia has been viewed as a 'biodiversity hotspot where exceptional concentrations of endemic species are undergoing exceptional loss of habitat' under the pressure of development.[5] Disruptions to ecosystems are understood to have implications for the emergence and spread of infectious diseases. Deforestation and forest encroachment, for example, may drive species that serve as viral reservoirs into new proximity with humans. This was the case with the Nipah virus (NiV), first identified in Malaysia in 1999, which was transmitted to humans via pigs infected by fruit bats flushed out of their natural forest habitat (Chapter 3).

In part as a result of these transformations, Asia is habitually represented in the Western media as a region of teeming megacities, degraded environments, unscrupulous mass-farming practices, and particular cultural habits and behaviors that render it susceptible to lethal infection with upshots for the global order. Political instability, corruption, and uneven development are viewed as contributory factors driving epidemics. In this calamitous history, Asia's biophysical volatility (earthquakes, tsunamis, volcanoes, epidemics) provides the ground for other kinds of catastrophic violence: riots, revolution, and dictatorship. As the journalist Alan Sipress asserts in his book *The Fatal Strain*, Asia 'is

[2] Richard J. Coker, et al., 'Emerging Infectious Diseases in Southeast Asia: Regional Challenges to Control,' *Lancet*, vol.377, no.9765 (February 12, 2011): 599–609 (607).
[3] Jai P. Narain and R. Bhatia, 'The Challenge of Communicable Diseases in the WHO South-East Asia Region,' *Bulletin of the World Health Organization*, vol.88, no.3 (2010): 162.
[4] Peter W. Horby, et al., 'Drivers of Emerging Zoonotic Infectious Diseases.' In: Akio Yamada, et al., eds., *Confronting Emerging Zoonoses: The One Health Paradigm* (Dordrecht: Springer, 2014), pp.13–26 (17).
[5] Norman Myers, et al., 'Biodiversity Hotspots for Conservation Priorities,' *Nature*, vol.403, no.6772 (February 24, 2000): 853–858.

Figure 0.2. 'Global hotspots for emerging infectious diseases that originate in wildlife.'

Zoonoses: Global hotspots

Over 60 percent of new emerging infectious diseases (EIDs) are zoonotic, including HIV/AIDS, SARS, Ebola, and pandemic influenza. Many other diseases that affect humans, such as smallpox and measles, evolved from animal infections. Socio-economic, ecological, and behavioral factors are understood to be the principal drivers of EIDs and the vast majority of zoonotic diseases have been spillovers from wildlife. Equatorial regions, notably in sub-Saharan Africa and Southeast Asia, are commonly identified as 'hotspots' for zoonotic EIDs with a wildlife origin, on account of their 'human pathogen species richness.' Global distribution models suggest that regions in higher latitudes – including Western Europe – are also at risk, given their dense populations. Figure 0.2, adapted from a 2008 paper in *Nature*, shows the risk from EIDs caused by zoonotic pathogens from wildlife, with darker shades indicating higher risk. The map is based on the 'temporal emergence' of 335 EIDs between 1940 and 2004. Maps play a key role in biosurveillance, in assessing the risk of EID outbreaks, and in helping to quantify the burden of disease. Today, innovations in automated data collection, including Internet text mining and health reporting systems, such as ProMED (Program for Monitoring Emerging Diseases), are enabling new ways of visualizing data to provide a baseline for disease risk assessments. HealthMap acquires and processes data hourly from electronic media sources to provide a view of the global state of infectious disease online and via mobile devices.

Kate E. Jones, et al., 'Global Trends in Emerging Infectious Diseases,' *Nature*, vol.451, no.7181 (February 21, 2008): 990–993.

Simon I. Hay, et al., 'Global Mapping of Infectious Disease,' *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol.368, no.1614 (2013): 20120250.

defined by poverty, superstition, unregulated development, and corrupt, parochial politics.' The WHO's headquarters in the leafy outskirts of Geneva – 'a citadel of efficiency, social order, and good government' – are a far cry from this Asian battleground. The cover of Sipress's book accentuates the message graphically by pinpointing Asia as the locus of influenza emergence. On a map that cuts off the Americas and most of

Western Europe, the islands of Southeast Asia and the eastern Eurasian landmass from Delhi to Vladivostok are covered with clusters of red push-pins, suggesting an 'unfriendly terrain,' or what Sipress calls the 'theater of conflict that is Asia.'[6]

Although diseases such as Nipah are labeled 'emerging' or 're-emerging' in the scientific literature – since they are 'rapidly increasing in incidence or geographic range' (WHO) – Asia has in fact long been viewed in the Western imaginary as a source of contagion: from the Black Death in the mid fourteenth century, attributed to the westward expansion of the Mongol Empire, to epidemics of 'Asiatic' cholera in the nineteenth century, the scourge of smallpox, and more recently, avian influenza. From the eighteenth century, images of smallpox patients, which had been produced in China to assist in the diagnosis and treatment of the disease, circulated in Europe, where they were taken as illustrative of China's unwholesome and backward character. In Western medical discourse, particularly during the nineteenth century, Chinese identity became linked to pestilence with the country imagined as the 'cradle of smallpox' and the homeland of plague. Prevalent Western perceptions of China as the 'sick man of Asia' were interpolated by late Qing commentators, who employed a similar language of pathology and dysfunction to describe China's enfeebled condition.[7] Likewise, from the 1840s – and particularly after the Indian Rebellion of 1857 – cholera was progressively 'Asianized' as Western observers sought to locate the infection's origin in the East, invariably tracing its 'home' to the Delta of the rivers Ganges and Brahmaputra.[8] As recent epidemic events have shown, dormant historical associations may be easily reactivated and inserted into contemporary contexts. During the SARS outbreak in 2003, Chinese-owned businesses in some North America cities were boycotted as sites of possible infection, even though there had been no cases of disease there.[9]

Western epidemic narratives frequently hinge on a geopolitical asymmetry, wherein the origins of infection are tracked to the global South and East, and the expertise to combat this incipient menace is deemed

[6] Alan Sipress, *The Fatal Strain: On the Trail of Avian Flu and the Coming Pandemic* (New York: Viking, 2009), p.7.
[7] Larissa N. Heinrich, *The Afterlife of Images: Translating the Pathological Body between China and the West* (Durham, NC: Duke University Press, 2008), pp.14–37.
[8] Christopher Hamlin, *Cholera: A Biography* (Oxford: Oxford University Press, 2009), pp.39–46.
[9] Huiling Ding, 'Transnational Quarantine Rhetorics: Public Mobilization in SARS and in H1N1 Flu,' *Journal of Medical Humanities*, vol.35, no.2 (2014): 191–210 (201–203); Laura Eichelberger, 'SARS and New York's Chinatown: The Politics of Risk and Blame During an Epidemic of Fear,' *Social Science & Medicine*, vol.65, no.6 (2007): 1284–1295.

to reside in the North and West.[10] This dynamic is reprised in contemporary pandemic thrillers, such as Steven Soderbergh's *Contagion* (2011), where a fictional pathogen wreaks havoc in the United States. The MEV-1 virus in the movie, like the real-life NiV, is the result of environmental despoliation that has pushed the virus's natural hosts – in this case fruit bats – into fatal contact with domesticated animals. While pandemic thrillers may serve to dramatize pandemics in ways that shock the public out of its complacency, they also shape public perspectives and expectations. In *Contagion*, a delirious young man staggers through the bustling streets of Hong Kong; a Japanese businessman keels over in a crowded commuter bus in Tokyo; an epidemiologist dispatched by the WHO to investigate the deadly disease outbreak in southern China is abducted by fearful locals. Asia is represented in the movie through an accumulation of such feverish scenes as the ground zero of infectious disease: it is a high-risk region of violence, capitalist speculation, and the unethical exploitation of the environment. Significantly, Beth Emhoff (played by Gwyneth Paltrow), the 'super spreader' in the movie who works for the global corporation AIMM Alderson, contracts MEV-1 on a business trip to a Macau casino. The association of the casino's gaming tables with infection intimates a prevailing view of Asia as 'the genetic roulette table' for influenza mutations.[11] From the early 1990s, when the term 'emerging infections' gained currency to describe novel pathogens, such as HIV/AIDS (Chapter 5), the pandemic thriller became a popular Hollywood genre. Asia has invariably been imagined in such films as a weak link in global health security. A BBC Horizon documentary on SARS in 2003 articulated a prevalent Western view of Asia, when over the image of a writhing snake in a Chinese wet market, the narrator intoned forebodingly that 'something deadly' was stirring in the East.

What have the consequences been of this geopolitical framing of disease? Conceptualizing Asia as a source of infection that threatens global security has obscured the profound role that disease episodes have played in shaping modern Asia itself. Global histories of disease often include no more than gestural references to Asia. Although the region is singled out as a pandemic epicenter, little attention is paid to the fallout there. Instead, the emphasis is on transmission pathways and on the social and economic shocks produced in the destination countries of the West. The extensive literature on the 1918–1919 influenza pandemic is a case in point. While much has been written about the impact of the

[10] Priscilla Wald, *Contagious: Cultures, Carriers, and the Outbreak Narrative* (Durham, NC: Duke University Press, 2008), p.34.
[11] Michael T. Osterholm, 'The Next Contagion: Closer Than You Think,' *New York Times* (May 9, 2013).

deadly influenza virus in the United States and Europe after the First World War, considerably less study has been made of the infection's eastward trajectory, even though the Asia-Pacific region was the hardest hit by the pandemic. In his comprehensive and popular history, *The Great Influenza*, John Barry devotes less than two pages to India, despite declaring: 'In the Indian subcontinent alone, it is likely that close to 20 million died, and quite possibly the death toll exceeded that number.'[12] Equivalently, although there is an extensive literature on the cholera epidemics that swept nineteenth-century Europe and North America, there are no commensurate studies focusing on the cholera's spread eastwards from 1817 to Indonesia, the Philippines, China, the Korean peninsula, and Japan. One aim of this book is thus to offer a postcolonial critique that decenters Western history and the assumptions about infection that have been built into it – 'provincializing' Europe, in the words of the historian Dipesh Chakrabarty – and thereby offering new perspectives on the inter-dynamics of people, environments, and diseases across Asia.[13]

Certainly, over the last 20 years a substantive body of work has been published on the history of medicine and health in South Asia, particularly in relation to epidemics. More recently, there has been a similar focus on East Asia – as attested by the bibliography included at the end of this book. It is not so much, then, that epidemics in Asia have been ignored but that they have not been well integrated into mainstream political history, into wider interregional and transnational histories of disease, or reframed in the context of concerns about the nature and meaning of globalization. Concurrently, political and social histories persist in their tendency to view epidemics as epiphenomena: part of the historical backdrop to more significant political, social, and economic conditions and events. Many history textbooks allude only cursorily – if at all – to infectious diseases. Jonathan Spence's magisterial 700-page overview of modern China from the collapse of the Ming dynasty in the seventeenth century to the present, for example, contains fleeting mention of epidemics, even though we are told that Chinese chroniclers noted of one destructive pestilence between 1642 and 1643 that it 'caused many communities to suffer losses of half or more of their inhabitants.' An observer in Henan province remarked of a devastated city that 'there were few signs of human life in the streets and all that was heard was the buzzing

[12] John M. Barry, *The Great Influenza: The Story of the Deadliest Pandemic in History* (New York: Penguin, [2004] 2009), p.365.
[13] Dipesh Chakrabarty, *Provincializing Europe: Postcolonial Thought and Historical Difference* (Princeton, NJ: Princeton University Press, 2000).

of flies.'[14] Why is disease so conspicuously left out of Asia's political and social history, despite the fact that epidemics have overwhelmed communities in this way? How should historians grapple with this often absent disease context? What would the past look like if we inverted the emphasis, rethinking the history of Asia through the prism of epidemics?

Histories of Asia have tended to focus on the evolution of political and economic systems, social transitions, and military conflict. Transnational approaches have stressed the mercantile and cultural connections across stretches of Asia, emphasizing flows of people, commodities, and ideas. My aim in this book is to write disease back into history. In other words, disease is not viewed as an extraneous phenomenon but is resituated within dynamic political, economic, social, and cultural milieus. At the same time, the book endeavors to integrate area-specific perspectives into a broader interregional framework. I argue that studying epidemic diseases contextually in this way can help us understand critical themes in Asian history: shifting relations between local and state authorities, the causes and after-effects of migration, the expansion of interregional trade networks, modernization, and the development of new forms of citizenship.

In accentuating disease in this way, there is, of course, a risk that predominant Western views of Asia as a singularly pathological space – a disease 'hotspot' in the parlance of contemporary epidemiology – are reinforced rather than critiqued. To suggest that Asian societies are facing unprecedented epidemic threats may imply that the pathogenic menace has in some way been produced by Asian societies themselves. In other words, epidemics may be taken to reflect a society's underlying condition, serving as an index of its health. This has certainly been a recurring theme in Western assessments, where epidemics have often been intuited as the damaging fallout of progress. Outbreaks are signs of a modernizing society out of kilter; of a world gone awry. 'In one sense, this ironic and persistent emphasis on the role of civilization in the causation of disease is no more than a cliché,' the historian Charles E. Rosenberg has observed, 'a variation of traditional primitivistic notions, endless evocations of lost worlds in which humankind had not been corrupted by wealth and artifice – all versions and reiterations of the Garden of Eden's Faustian bargain recast in epidemiological terms.' Epidemic histories may function, then, as a genre of 'moral parable underlining the ambiguous nature of human progress and of our ultimate lordship over the material domain we have presumed to rule.'[15]

[14] Jonathan D. Spence, *The Search for Modern China*. Third edition (New York: W. W. Norton, 2013), p.23.
[15] Charles E. Rosenberg, 'Pathologies of Progress: The Idea of Civilization as Risk,' *Bulletin of the History of Medicine*, vol.72, no.4 (1998): 714–730 (716, 728).