The Manchurian Plague and COVID-19: China, the United States, and the "Sick Man," Then and Now

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 \Im See also the COVID-19 & History section, pp. 402–445.

In this article, I explore the historical resonances between China's 1911 pneumonic plague and our current situation with COVID-19. At the turn of the 20th century, China was labeled "the Sick Man of the Far East": a once-powerful country that had become burdened by opium addiction, infectious disease, and an ineffective government. In 1911, this weakened China faced an outbreak of pneumonic plague in Manchuria that killed more than 60 000 people. After the 1911 plague, a revolutionized China radically restructured its approach to public health to eliminate the stigma of being "the Sick Man." Ironically, given the US mishandling of the COVID pandemic, observers in today's China are now calling the United States "the Sick Man of the West": a country burdened by opioid addiction, infectious disease, and an ineffective government. The historical significance of the phrase "Sick Man"—and its potential to now be associated with the United States—highlights the continued links between epidemic control and international status in a changing world. This historical comparison also reveals that plagues bring not only tragedy but also the opportunity for change. (Am J Public Health. 2021;111:423-429. https://doi.org/ 10.2105/AJPH.2020.305960)

n February 3, 2020, the Wall Street Journal published a fierce op-ed piece criticizing China for its handling of the coronavirus outbreak in Wuhan. The essay, by Bard College political scientist Walter Russell Mead, slammed the government of the People's Republic of China (PRC) for its "self-serving" and "ineffective" response to the virus and predicted a future meltdown of China's "brittle economy" as a result. The virus, according to Mead, had "shaken confidence in the Chinese Communist Party at home and abroad." As a result, Beijing's geopolitical footprint would shrink, and the virus would usher in the return of the United States as the world's sole superpower.1

Mead's article caused a huge stir in China not because of its inaccurate predictions but because of its title:

"China is the Real Sick Man of Asia." By using the phrase "Sick Man of Asia" in the headline, the Wall Street Journal employed a trope that has a long history as a negative stereotype of China and the Chinese. Reaction in China was swift: the PRC government denounced the article and expelled three Wall Street Journal journalists. US observers castigated China for suppressing freedom of the press, but the PRC Foreign Ministry instead pinned the blame on the wording of the article: "[t]he editors used a racially discriminatory title, triggering indignation and condemnation among the Chinese people and the international community."2

What did "the Sick Man" mean for China when the term first emerged more than 100 years ago, and why is the Sick Man trope still so significant today? Here I consider the context of disease and public health in China at the turn of the 20th century, a moment when China under the Qing dynasty (1644–1911) was labeled "the Sick Man of Asia": a oncepowerful empire that had become burdened by disease, opium addiction, and an ineffective government. In 1911, this weakened China faced a deadly epidemic of an airborne plague, a disease that caused tens of thousands of deaths and had a profound impact on China's emerging modernity. A consideration of the 1911 pneumonic plague offers compelling resonances with our current airborne crisis of COVID-19. This historical comparison not only reveals insights into the current PRC response to the COVID-19 pandemic but also raises the question of who might inherit the mantle of the "Sick Man" in the 21st century.

THE SICK MAN AT THE TURN OF THE CENTURY

In the 19th century, Western observers used the phrase "Sick Man" to castigate any government that was failing as a result of corruption and indifference, but it was most frequently used to criticize non-Western countries.3 Originally used to critique the Ottoman Empire, by the late 19th century the "Sick Man" phrasing was frequently applied to China, a previously successful empire that had been defeated in war, had been rocked by famine, and was experiencing erosion of its sovereignty at the hands of Western and Japanese imperial powers.⁴

In 1896, the British-owned North China Herald called China the "Sick Man of the Far East," a country that could be cured only if it transformed its approach to education, overhauled its justice system, and got rid of incompetent government officials.⁵ In 1905, the *New* York Times also called China "The Sick Man of the Far East," a once-great empire that was now an object of derision around the world.⁶ In these uses of the phrase, the "Sick Man" referred to the Qing dynasty, the last imperial government of China and a political system that seemed incapable of responding to the crises it faced.

Surprisingly, many Chinese intellectuals at the turn of the century did not dismiss foreign criticism but instead used the "Sick Man" trope to express their own dismay at China's situation. Some, including the famous reformer Liang Qichao (1873–1929), used the phrase to link the health of the nation to the health of its individual citizens. Citing China's opium addiction, malnutrition, and lack of hygienic awareness, Liang declared that the entire population of 400 million were "sick men," and

therefore China was a "sick country."⁷ Under the pen of disappointed Chinese reformers, the language of the "Sick Man" trope could become highly medicalized, full of disease, pathogens, and bodily rot.8

There were many reasons why Chinese intellectuals in the late Qing linked the political health of the nation to the physical health of individual bodies. In the Chinese language, "to cure" and "to rule" can be expressed with the same word, zhi (治), and for centuries traditional medical discourse included political metaphors for governance.9 Chinese modernizers were also deeply influenced by their understanding of social Darwinism, which linked a biological "survival of the fittest" to the fate of nations. It is important to note that, relative to its long history, China did experience a dramatic increase in epidemics in the 19th century as a result of increased population density and the impact of imperialism. 10 The political, social, and medical crises of the late Qing brought an increasing consciousness that health itself could be a central element of governance, reform, and even revolution.11

In 1911, a major epidemiological crisis in China's northeastern region helped to cement the conceptual link between the health of individual bodies and the political health of the country. That winter, a deadly airborne disease—the pneumonic plague—emerged from China's Manchurian borderlands. Examining China's experience in the 1911 Manchurian plague shows how epidemic control became a crucial element in the country's maintenance of national sovereignty and a key strategy in its fight against the "Sick Man of Asia" label. Contemplating this airborne epidemic also reveals numerous thoughtprovoking resonances with our COVID crisis today.

COMPARING AIRBORNE CRISES

The first resonance between COVID-19 and pneumonic plague resides in the zoonotic origin of both diseases. The virus that causes COVID-19, SARS-CoV-2, emerged in bats in China's remote southwestern borderlands with Burma and Laos. How it moved from bats to humans in the fall of 2019 has not yet been determined, but scientists suspect an intermediary animal that humans handled as part of market-driven consumption of wild meat products. 12 Similarly, in the fall of 1910, humans encountered the bacillus that causes plague, Yersinia pestis, when markets spurred exploitation of animals on another Asian borderland, a part of northeastern China on the border with Russia and Mongolia known as Manchuria. This region is home to a burrowing groundhog-like animal—the marmot that became an attractive source for furs at the turn of the century. The trapping and skinning of millions of marmots resulted in the transfer of Yersinia pestis directly into the lungs of humans and gave rise to the pneumonic plague. 13

The involvement of the lungs in both COVID-19 and the pneumonic plague has important implications for their modes of transmission. In pneumonic plague, Yersinia pestis infects the alveoli, causing a high fever and a painful, bloody cough and ultimately leading to failure of lung function. The sputum expelled in coughs can travel through the air and can be inhaled directly into a new host's lungs. It is through this mode of transmission that the plague takes its most contagious and deadly form. With no treatment available in the early 20th century, in 1911 the disease had a 100% mortality rate. 14 Although COVID-19 is

far less deadly than pneumonic plague, its primary manifestation as a lung infection has similar implications for both its mode of transmission and strategies for its control. As pneumonic infections transmitted from human to human through the air, both diseases require interventions in the most difficult to control of all human activities: moving, gathering, and even breathing.

Although separated by more than 100 years, similar timing and similar technologies facilitated the rapid spread of both pneumonic plague and COVID-19. The 1911 plague exploded in Manchuria around the Chinese New Year, a time when millions of Chinese traditionally travel home to be with their families. COVID-19 also emerged in the lead-up to the Chinese New Year in December 2019 and January 2020. In both cases, modern transportation afforded rapid spread of the disease. In 2020, the SARS-CoV-2 virus traveled from Wuhan to domestic locations via high-speed train and internationally via direct flights around the world. 15 In 1911, Yersinia pestis traveled along the recently developed China Eastern Railway (part of the Trans-Siberian Railway that now links Vladivostok to Moscow), a modern transportation vector that quickly spread the disease to major urban centers in China's northeastern heartland. It was in these cities that the largest number of people died in the winter of 1910–1911 and the most dramatic struggles took place to understand and contain the disease.

The nature of the pneumonic plague was once as mysterious as COVID-19 is today. In 1911, scientists working in Asia had only recently identified the microorganism that caused plague (*Yersinia pestis*), then known as *Bacillus pestis*), and many unanswered questions remained about the plague's ecology,

epidemiology, and infectivity—the same questions scientists today are asking about SARS-CoV-2.¹⁶ How long could the pathogen last outside the body of the host? How far could it travel? How could it be killed? What were the seats of the disease, the nature of the lesions? Which vector or mode of transmission was responsible for infection?

Teams of researchers from different nations came to Manchuria to study these questions through work in laboratories, clinics, and the field, as well as through investigations into what anthropologist Christos Lynteris has called "ethnographic plague" data: studies of how the habits of different ethnic groups made them more or less vulnerable to the disease. 17 The overwhelming uncertainty about plague generated a wide and sometimes bizarre array of experiments. Researchers chased down wild marmots on the prairie to take rectal temperature readings, extracted urine from the corpses of victims to determine whether it contained the plague bacillus, and placed gerbils in buckets next to dying plague patients to gauge the potential for human to animal transmission.¹⁸

At the onset of the epidemic, scientists could not even agree on the most basic nature of the Manchurian plague. This uncertainty led to a debate about a central issue found in COVID-19 control today: the use of masks. In 1911, researchers from Russia and Japan assumed that plague was transmitted by rats and fleas, but Chinese researchers discovered that this version was centered in the lungs and passed from human to human through the air.¹⁹ Believing the epidemic to be airborne, Chinese clinicians mandated mask wearing for their personnel, whereas European and Japanese medical workers eschewed masks as worthless-until

alarming deaths among foreign doctors indicated that the plague was indeed airborne and masks were thus a useful preventive measure.²⁰

The presence of foreign researchers in Manchuria in 1911 highlights the most significant difference between then and now: the status of China in the geopolitics of the early 20th century. Today, China's well-established public health infrastructure and highly centralized government assumed responsibility for the response to COVID-19, but in 1911 China's political situation was radically different. Since the mid-19th century, foreign powers had been chipping away at Qing territory, and this "semi-colonial" condition was clearly manifested in Manchuria. Japan controlled the railway that ran toward the southerly parts of Manchuria, and Russia controlled the railway's east-west portion. Cities along the railway were divided into Chineserun and foreign-run zones.

Fearing that Russia and Japan might use epidemic control as an excuse for further territorial expansion, the Qing government established its first-ever central public health organization—the North Manchuria Plague Prevention Service—and hired the Cambridge-educated Chinese-Malayan physician Wu Lien-teh (Wu Liande) as director.²¹ Determined to protect its sovereignty through mastery of Western medicine, under Wu's leadership China adopted the same draconian plague control methods of its foreign occupiers.

Epidemic control measures in 1911 possessed some approaches familiar to us from our current COVID-19 experience, but the violence with which measures such as quarantines were enacted is shocking to current sensibilities. ²² In Manchuria's densely populated cities, thousands of soldiers enforced cordon sanitaire, with shoot-on-sight orders for

those attempting to escape. Police went door to door searching for plague victims. If a corpse was found, family members and neighbors were pulled from their homes and placed into guarantine. Those who showed signs of plague were forcibly removed and sent to "plague hospitals," makeshift warehouses for the dying with few provisions for treatment or comfort. The homes and possessions of the dead were burned with the goal of preventing infection, and even the bodies of the dead were burned in mass pits, a grave affront to Chinese custom that was nevertheless carried out by the Qing government on its own citizens.²³

As we find today in US public opinion about government responses to COVID-19, in 1911 there were strong differences of opinion in China about the policies used to control the plague. Some Chinese observers reacted with shock at the violence of "Western medicine" and saw its methods as nothing more than a foreign assault on the bodies of Chinese people. Some claimed that thousands died not from the plague but as a result of the plague control measures themselves.²⁴ By stark contrast, other Chinese observers embraced plague control policies as the new scientific standard for modern government and praised the Qing court for aggressively adopting even the most horrifying of foreign techniques. For these modernizers, if China was to overcome its status as the "Sick Man of Asia," it needed to manage what they perceived as the country's unruly and unhygienic population, and thus extreme and sometimes violent methods were justified.²⁵

By the spring of 1911, authorities in Manchuria had credited these draconian policies for stopping the epidemic. The pneumonic plague had not traveled to other countries, and in Manchuria itself deaths had been "minimized" to an estimated total of 60 000.26

Although it was a humanitarian disaster, the plague also created an opportunity for China to radically rethink the relationship of health and governance. As Sean Hsiang-lin Lei has shown, the 1911 plague convinced some Chinese elites that Western medicine was politically superior to China's own medical traditions. With its holistic approach to the body, Chinese medicine could not diagnose the plague as a discrete, "notifiable" disease, and with its focus on individual cure, Chinese medicine had no capacity for mass population management techniques such as quarantine, disease mapping, and disinfection.²⁷ For modernizers, Westernstyle public health could help China escape its "Sick Man" fate by allowing the country to control epidemics, preserve its sovereignty, and prove its fitness to exist in the modern world. This commitment to a new kind of public health inspired by the experience of the 1911 plague—would become central to China's social and political transformations in the 20th century.

OVERTHROWING THE SICK MAN

Only a few months after the pneumonic plague subsided, republican revolutionaries overthrew the Qing dynasty and put an end to 2,000 years of imperial rule in China. The new republic took to heart the important lesson about health and sovereignty learned during the Manchurian plague. If China was no longer going to be the Sick Man of Asia, its leaders argued, it would require a powerful central government that could discipline its citizens and create a strong nation. Sun Yat-sen, the

leader of the 1911 revolution (and, interestingly, a physician of Western medicine), placed strong government authority at the center of his program for creating a modern China. In Sun's formulation, the goal of China's revolution was not to achieve individual freedom but to achieve the freedom of the nation from foreign domination. This strong, autonomous nation would require healthy, disciplined bodies to support it.²⁸

This vision proved difficult to achieve in the first half of the 20th century as China struggled with invasion, civil war, and violent mass political upheavals. Medical historians such as Mary Brazelton, Wayne Soon, and Nicole Barnes have shown how even in the midst of the catastrophic 1937 to 1945 invasion by Japan, Chinese health reformers were able to initiate small but meaningful public health interventions such as vaccination programs, blood banks, and nursing corps.²⁹ Even in their darkest hour, China's elites still remained deeply committed to chipping away at the "Sick Man" label.

The realization of a public health predicated on the creation of a powerful centralized state and a disciplined citizenry finally emerged after the establishment of the People's Republic in 1949. The link between health and the nation was clearly illustrated in the "Patriotic Hygiene Campaigns" initiated by the PRC in the 1950s. During the Korean War, China accused the United States of using germ warfare against its population, and in response the government launched a nationwide propaganda blitz encouraging citizens to clean streets, destroy pests, receive vaccinations, and otherwise "do hygiene" to protect the motherland. Long after the war's end, these hygiene campaigns remain a regular fixture of life in the PRC and have even been part of China's

COVID-19 response.³⁰ Seven decades of consistent messaging on the part of the PRC government has helped to create an expectation in today's China that individual health behaviors are directly linked to the status of the nation.

There are of course limits to the "then and now" links that can be drawn between the legacy of 1911 and the crisis of 2020. Nevertheless, one point is clear: those seeking an understanding of China's current response to COVID-19 need not turn to ancient Confucian culture to explain everything from universal mask wearing to compliance with draconian restrictions on personal freedoms.³¹ China's moves to control COVID-19 today are based on a centurylong experience of placing hygienic modernity at the center of national identity. Both the PRC's initial lack of transparency about the disease—a deep-seated fear of the truth about health failures being exposed—and its aggressive measures to control the epidemic can be attributed in part to China's long struggle with the Sick Man of Asia image.

THE TABLES TURNED?

It should now be clear why the Wall Street Journal's "Sick Man" op-ed struck a deeprooted nerve for PRC officials. But the article's true significance resides elsewhere: it may have opened the door for a historic reversal of the "Sick Man" label. Reading the essay today reveals a deep, sad irony: in February 2020, the Wall Street Journal and most observers in the West were highly critical of China's handling of the virus but absolutely failed to consider that the United States would fare much worse. The numbers of confirmed COVID-19 cases and deaths (as contentious as those numbers might be for some) show how different our

reality is today: as of the writing of this article, the PRC (with a population of 1.4 billion) has reported 90 509 cases and 4739 deaths, whereas the United States (with a population of 330 million) has reported 7 156 562 cases and 205 268 deaths.³²

Given China's apparent success in controlling the spread of the virus, it is not surprising that some Chinese observers suggest that the global tables are turning. China was known as the "Sick Man of Asia" in the 19th and early 20th centuries, but elements in China today are now portraying the United States as the "Sick Man of the West." In April, an essay in the PRC state-backed Global Times attacked the hypocrisy of using the "Sick Man" label to describe China's response to the coronavirus, stating that instead "incompetence will be the one word other countries pin on the US, the Trump administration in particular."33 PRC Web sites proclaim that "America is the real sick man of the western world" and warn that the world "should be wary of the American virus."34 Bloggers single out Trump as "the genuine Sick Man of America."35 Chinese social media even boasts a hashtag, "#Meiguo bingfu" (American Sick Man), that has received millions of views.36

Given the active involvement of the state in the PRC Internet, Chinese social media should not be seen as a pure reflection of public opinion. Still, it does not take much government spin to convince the Chinese public that its country's response has been superior when epidemiological numbers alone will suffice: Chinese state television runs the number of positive COVID cases and fatalities in the United States as a perpetual scrolling ticker at the bottom of its news broadcasts. Even those Chinese citizens who are wary of the PRC media

and consume news directly from the United States—cosmopolitan college students, scholars, and businessmen who have a foot in both countries are horrified at the inattention to science. obsession with personal freedom, and lack of solidarity they have witnessed in the US COVID-19 response.³⁷ It is not only Chinese nationalists who suspect that the Sick Man tables have turned as a result of the COVID-19 pandemic. As medical historian Marta Hanson recently observed, perhaps it is time to acknowledge that the mantle has passed from the "Sick Man of Asia" to "Sick Uncle Sam."38

At the turn of the 20th century, China was labeled the Sick Man of Asia, a country grappling with political malaise, opium addiction, and disease. In 1911, an epidemic of a puzzling deadly lung infection highlighted China's underlying problems and cost tens of thousands of lives, but it also jolted the government into altering its approach to medicine and health. Like China at the beginning of the 20th century, the United States at the beginning of the 21st century is a nation mired in political turmoil, suffering through an opioid crisis, and dealing with a deadly epidemic of a mysterious airborne infection. Its failure to control the spread of SARS-CoV-2 has caused observers to label the United States the new "Sick Man" of the world.

Given these compelling comparisons, what, if anything, might the United States learn from China's historical experiences? Lessons are not likely to be learned from the PRC government's specific COVID-19 control policies. China's style of responding to the virus—the complete lockdown of entire cities, mandatory enforced quarantines (which in Wuhan included house to house searches and the separation of infected family members), the total shutdown of

all transportation (including private car traffic), mask wearing sometimes enforced by drone³⁹—reflects not only its particular approach to governance but also its own particular public health legacies.

Instead, it is possible that insight and inspiration might be found elsewhere in this history, including in the very phrase "Sick Man." At the beginning of the 20th century, China's elites paid close attention to critiques from foreign sources. They took the "Sick Man" label seriously and dedicated themselves to overcoming it. In the United States today, most discussions about COVID-19 are wrapped up in domestic political squabbles, and little heed is given to how the rest of the world views our situation: if anything, US leadership has willfully ignored, discounted, and misrepresented the experience of other nations. 40 When the current administration does mention China, it simply blames China for "unleashing" the virus and represents the United States as a hapless victim. 41 The United States needs to take seriously the perspective of those outside of it, particularly the views of a nation it once held in hygienic contempt.⁴²

Finally, it is important to remember that the 1911 Manchurian plague inspired China's government to adopt an entirely new system of medicine. It used the "Sick Man" label as a defiant rallying point, a spur for building national solidarity around the well-being of all citizens. The portability of the phrase "Sick Man"—and its potential to now be associated with the United States—highlights how epidemics are profoundly intertwined with issues of international status. An examination of this history also reminds us that epidemics can serve as inflection points: opportunities to rethink, retool, and even revolutionize approaches to health. AJPH

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CONFLICTS OF INTEREST

The author reports no conflicts of interest.

ENDNOTES

- 1. Walter Russell Mead. "China Is the Real Sick Man of Asia." Available at https://www.wsj.com/articles/ china-is-the-real-sick-man-of-asia-11580773677 (accessed September 25, 2020).
- 2. Ben Westcott, Steven Jiang, and Brian Stelter, "Beijing Expels Three Wall Street Journal Reporters," https://www.cnn.com/2020/02/19/media/wall street-journal-reporters-china-intl-hnk/index.html (accessed September 25 2020). It is important to point out that "Sick Man" was not simply a racist term used by foreigners: Chinese have frequently used the "Sick Man" phrase (in Chinese, bingfu) to critique their own country, as the subsequent discussion will show
- 3. For a fascinating examination of how the "Sick Man" trope was historically applied to the United States during the early republic, see Marta Hanson, "From 'Sick Man of Asia' to Sick Uncle Sam," Current History: A Journal of Contemporary World Affairs 119.817 (2020): 241-244.
- 4. On China as the "Sick Man," see Iwo Amelung, ed., Discourses of Weakness in Modern China: Historical Diagnoses of the Sick Man of East Asia (Frankfurt, Germany: Campus Verlag, 2020); Zheng Wang, Never Forget National Humiliation: Historical Memory in Chinese Politics and Foreign Relations (New York, NY: Columbia University Press, 2012); and Yang

- Ruisong, Bingfu, huanghuo yu shui shi: "Xifang" shiye de Zhongguo xingxiang yu jindai Zhongguo guozu lunshu xiangxiang [Sick Man, Yellow Peril, and Sleeping Lion: The Images of China From the Western Perspectives and the Discourses and Imagination of Chinese National Identity] (Taipei, Taiwan: Chengchi University Press, 2010).
- "The Condition of China," North-China Herald and Supreme Court & Consular Gazette, October 16, 1896, http://login.proxy.library.vanderbilt.edu/ login?url=https://www-proquest-com.proxy.library. vanderbilt.edu/docview/1369920539?accountid= 14816 (accessed September 25, 2020).
- 6. "The Sick Man of the Far East," New York Times, August 16, 1905, https://www.nytimes.com/1905/ 08/16/archives/the-sick-man-of-the-far-east.html (accessed September 25, 2020).
- 7. Yang Ruisong Bingfu, 38.
- 8. As one writer in an influential late Qing journal phrased it, China's political woes had become "like a mental derangement, an oozing ulcer, or a pestilential epidemic that has paralyzed the viscous innermost recesses of the body, leaving the [patient's] pulse depressed with submerged anger and indignant exhaustion." Hua Sheng, "Lun wai huan zhi you qi" [On the Origins of External Threats], Dongfang zazhi [Eastern Miscellany] 1
- 9. Bridie Andrews, The Making of Modern Chinese Medicine, 1850-1960 (Vancouver, Canada: UBC Press, 2014), 90.
- 10. Alfredo Morabia, "Epidemic and Population Patterns in the Chinese Empire (243 B.C.E. to 1911 C.E.): Quantitative Analysis of a Unique but Neglected Epidemic Catalogue," Epidemiology and Infection 137 (2009): 1361-1368. https://doi.org/10. 1017/S0950268809990136
- 11. On the connection between medicine and reform, see Andrews, The Making of Modern Chinese Medicine; Liping Bu, Public Health and the Modernization of China, 1865-2015 (New York, NY: Routledge); and Ruth Rogaski, Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China (Berkeley, CA: University of California Press, 2004).
- 12. Susanna K. Lau, Hayes K. Luk, and Antonio C. Wong, "Possible Bat Origin of Severe Acute Respiratory Syndrome Coronavirus 2," Emerging Infectious Diseases 26 (2020): 1542–1547. https://doi.org/10. 3201/eid2607.200092
- 13. William C. Summers, The Great Manchurian Plague of 1910–1911: The Geopolitics of an Epidemic Disease (New Haven, CT: Yale University Press, 2012), 120, and Yubin Shen, "Pneumonic Plagues, Environmental Changes, and the International Fur Trade: The Retreat of Tarbagan Marmots From Northwest Manchuria, 1900s-30s," Frontiers of History in China 14 (2019): 291-322
- 14. Roger D. Pechous, Vijay Sivaraman, and William Goldman, "Pneumonic Plague: The Darker Side of Yersinia pestis," Trends in Microbiology 24 (2016): 190-197. https://doi.org/10.1016/j.tim.2015.11.
- 15. A major PRC transportation hub, Wuhan has highspeed train service to China's largest cities, including Beijing, Shanghai, and Shenzhen (see https://www.travelchinaguide.com/china-trains/ wuhan-station.htm). Prior to the pandemic, Wuhan's airport maintained international flights to 100 destinations in 17 countries, including direct flights to New York, San Francisco, Rome, and London (see https://www.flightconnections.com/ flights-from-wuhan-wuh).

- 16. On early plague research, see Andrew Cunningham, "Transforming Plague: The Laboratory and the Identity of Infectious Disease," in Andrew Cunningham and Perry Williams, eds., The Laboratory Revolution in Medicine (Cambridge, England: Cambridge University Press, 1992), 209–244, and Robert Peckham, "Matshed Laboratory: Colonies, Cultures, and Bacteriology," in Robert Peckham and David Pomfret, eds., Imperial Contagions (Hong Kong, China: Hong Kong University Press, 2013), 123–147.
- Christos Lynteris, Ethnographic Plague: Configuring Disease on the Chinese-Russian Frontier (New York, NY: Springer, 2016). On international research, see Cornelia Knab, "Plague Times: Scientific Internationalism and the Manchurian Plague of 1910/1911," Itinerario 35 (2011): 87–105.
- On these plague experiments, see Ruth Rogaski, Knowing Manchuria (Chicago, IL: University of Chicago Press, in press).
- Sean Hsiang-lin Lei. "Sovereignty and the Microscope: Constituting Notifiable Infectious Disease and Containing the Manchurian Plague (1910–11), in Angela Leung and Charlotte Furth, eds. Health and Hygiene in Chinese East Asia (Durham, NC: Duke University Press, 2010), 78.
- Christos Lynteris, "Plague Masks: The Visual Emergence of Anti-Epidemic Personal Protection Equipment," Medical Anthropology 37 (2018): 442– 457. https://doi.org/10.1080/01459740.2017. 1423072 See also Christos Lynteris, "Why Do People Really Wear Face Masks During an Epidemic?," https://www.nytimes.com/2020/02/13/ opinion/coronavirus-face-mask-effective.html (accessed September 25. 2020).
- Even though he was an English-speaking British subject from the Straits Settlements (now Malaysia), Wu became a celebrated figure in China's 20th-century medical modernization. See Wu Lienteh, Plague-Fighter: The Autobiography of a Modern Chinese Physician (Cambridge, England: W. Heffner, 1959).
- 22. For overviews of plague control in Manchuria, see Summers, The Great Manchurian Plague; Carl F. Nathan, Plague Prevention and Politics in Manchuria, 1910–1931 (Cambridge, England: East Asian Research Center, 1967); and Mark Gamsa, "The Epidemic of Pneumonic Plague in Manchuria 1910–1911," Past & Present, 190 (2006): 147–184. For contemporaneous examples of plague control in the United States, see Nayan Shah, Contagious Divides: Epidemics and Race in San Francisco's Chinatown (Berkeley, CA: University of California Press, 2001), 120–158, and Guenter Risse, Plague, Fear, and Politics in San Francisco's Chinatown (Baltimore, MD: Johns Hopkins University Press, 2012).
- 23. In Russian-controlled Harbin, thousands of Chinese were crowded into boxcars and locked away for five days to see if any plague symptoms developed; see Gamsa, "The Epidemic of Pneumonic Plague." In Dairen, Japanese authorities built huge camps for detainees policed by soldiers and surrounded by iron walls; see Summers, The Great Manchurian Plague, 71–75, and Robert Perrins, "Doctors, Disease and Development: Engineering Colonial Public Health in Southern Manchuria, 1905–1931," in Morris Low, ed., Building a Modern Japan: Science, Technology, and Medicaler in the Meiji Era and Beyond (London, England: Palgrave Macmillan, 2005). On the mass cremations authorized by the Qing government, see Summers, 21.
- 24. Gamsa, 157, quoting "Manzhouli Haerbin fangyi ji" [A Record of Plague Prevention in Manzhouli and

- Harbin], *Dongfang zazhi* [*Eastern Miscellany*] 7 (1911): 12.
- 25. Wu Lien-teh, for example, described plague victims as gamblers, morphine addicts, and "coolies," men whose primitive and ignorant lifestyles seemed to predispose them to illness and death. Qing official (and Cornell graduate) Alfred Sze even sought advice from European and Japanese public health experts on "the best method for quarantining large bodies of the irresponsible coolie class"; see Gamsa, 153. On Wu's thoughts about plague victims, see Lynteris, Ethnographic Plague, 128–131.
- A figure given in Wu Lien-Teh, Plague Fighter: The Autobiography of a Modern Chinese Physician (Cambridge, England: W. Heffner, 1959), 33.
- 27. Lei, "Sovereignty and the Microscope", see also Lei's extended discussion in Neither Donkey nor Horse: Medicine in the Struggle over China's Modernity (Chicago, IL: University of Chicago Press, 2014). On plague maps in China, see Marta Hanson, "Visualizing the Geography of the Diseases of China: Western Disease Maps From Analytical Tools to Tools of Empire, Sovereignty, and Public Health Propaganda, 1878–1929," Science in Context 30 (2017): 217–280.
- Sun Yat-sen's perspectives are found in his lectures on "San Min Chu I" (the Three Principles of the People), Lecture II on Liberty and Democracy, delivered on March 16, 1924.
- Mary Augusta Brazelton, Mass Vaccination: Citizens' Bodies and State Power in Modern China (Ithaca, NY: Cornell University Press, 2019); Wayne Soon, "Blood, Soy Milk, and Vitality: The Origins of Blood Banking in China, 1943–45," Bulletin of the History of Medicine 90 (2016): 424–454; and Nicole Barnes, Intimate Communities: Wartime Healthcare and the Birth of Modern China (Berkeley, CA: University of California Press, 2018).
- Rogaski, Hygienic Modernity, 285–299. On "Patriotic Hygiene" today, see Xu Huaqing, "Kangji xinguan feiyan yiqing, Xi Jinping congshuji zheiyang tan Aiguo weisheng yundong" [Xi Jinping Discusses How the Patriotic Hygiene Campaign Will Fight the Coronavirus Epidemic], http://www.qstheory.cn/ laigao/ycjx/2020-06/06/c_1126081319.htm (accessed September 25, 2020).
- Pepe Escobar, "Confucius Is Winning the Covid-19 War," https://asiatimes.com/2020/04/confucius-iswinning-the-covid-19-war (accessed September 25, 2020).
- Johns Hopkins Coronavirus Resource Center, "COVID-19 Map," https://coronavirus.jhu.edu/map. html (accessed September 29, 2020).
- 33. Li Hong, "US System Has Failed, Causing a Coronavirus Rescue Mess," https://www.globaltimes.cn/content/1186799.shtml (accessed September 25, 2020).
- "Meiguo shi xifang zhenzhengde bingfu, shijie ying jingxi 'beiguo bingdu"' ["America Is the Real Sick Man of the Western World: The World Should Be Wary of the American Virus"], https://zhuanlan. zhihu.com/p/114904674 (accessed June 30, 2020).
- Guangman Li, "Weishemma shuo Telangpu shi 'Meiguo Bingfu?" [Why Do We Say Trump Is America's "Sick Man?"], https://mp.weixin.qq.com/s?_ biz=MzA4OTIzNDQzMw==&mid=2653030189& idx=1&sn=0c328743158c7df894e056aaa660b8f& chksm=8bc8aa43bcbf235538f10e357a834a1 cc0cdc8fb9b8d59f50e13eec5be683383160 e3e898351&scene=21 (accessed September 29, 2020).

- 36. Weibo, "#美国病夫# #American Sick Man," http://bit.ly/35Dn3cA (accessed June 30, 2020).
- Personal communications with the author via the social media app "WeChat" (May–June 2020).
- 38. Hanson, "From 'Sick Man of Asia' to Sick Uncle Sam."
- For a brief summary of policies in Wuhan, see Emma Graham-Harrison and Lily Kuo, "China's Lockdown Strategies: Brutal but Effective," https:// www.theguardian.com/world/2020/mar/19/ chinas-coronavirus-lockdown-strategy-brutal-buteffective (accessed September 25, 2020).
- 40. For a recent manifestation of this, see President Trump's August 4, 2020, interview with HBO Axios reporter Jonathan Swan, in which Trump erroneously claimed that the United States had fared better with coronavirus control than other nations (https://www.axios.com/full-axios-hbointerview-donald-trump-cd5a67e1-6ba1-46c8bb3d-8717ab9f3cc5.html).
- 41. Courtney Moore, "Trump Blames China for Unleashing Virus," https://www.foxbusiness.com/politics/trump-china-unleashed-coronavirus (accessed September 25, 2020).
- 42. Some US media have recently begun referencing "world opinion" on America's COVID response; however, the focus is predominantly on European voices, and opinion from Asia is muted. See, for example, Tom McTague, "The Decline of the American World," https://www.theatlantic.com/ international/archive/2020/06/america-imagepower-trump/613228/?utm_source=newsletter& utm_medium=email&utm_campaign=atlanticdaily-newsletter&utm_content=20200624&silveridref=NjU2NTA3MjkyMjlx50 (accessed September 25, 2020).