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Public Health, Authority, and the Colonial State: Cholera in India

J'Nese Williams

J'Nese Williams is a Mellon Fellow of Scholars in the Humanities at the Stanford Humanities Center where she is working on a book about building authority in colonial administration and scientific work in the British Empire.

James McNabb Cuningham, *Cholera: What Can the State Do to Prevent It?*
(Calcutta: Printed by the Superintendent of Government Printing, India, 1884)

Francis A. Countway Library of Medicine, 11.G.340

<https://id.lib.harvard.edu/curiosity/contagion/36-990060830980203941>

According to David Arnold, “Like any other disease, cholera has no intrinsic meaning. ... But in nineteenth-century India, it acquired enormous meaning and significance from its various cultural and political contexts.”^[1] In the 19th century, cholera killed swiftly and in great numbers, first in India, and then across the globe. It became feared worldwide, with individuals and governments struggling to determine a response. James McNabb Cuningham’s monograph, *Cholera: What Can the State Do to Prevent It?* (1844), outlines one strategy for meeting the challenge. He treats cholera from the standpoint of public health and what the British government in India could and should do to manage outbreaks. Cuningham was well placed to articulate the proper role of colonial government in preventing cholera. He had joined the Bengal Medical Service in 1851, and later became an official in the Sanitary Commission to examine the health of British troops, before finally becoming head of the Sanitary Commission for all of India.^[2] *Cholera* began as the introduction to his last report as Sanitary Commissioner, but he decided to publish it separately in 1884.^[3] In outlining a plan for government, Cuningham’s work rested on particular understandings of India, cholera, and the nature of British rule, and it can be read as a justification for

the Government of India's cholera strategy. Situating *Cholera* within these contexts reveals the possible meanings that it held for Cuningham's contemporaries and for the book's earliest readers in Harvard's libraries.

Cholera, India, and Empire

The first Indian cholera epidemic of the 19th century began in 1817. Its spread was linked to British military campaigns, but it affected soldiers and civilians alike. Subsequent outbreaks coincided with periods of unrest in the colony, including the Rebellion of 1857 or the First War of Indian Independence. Cholera affected the health of British troops during the 1857–1858 campaign, and several senior officers died of the disease.[4] The events of 1857 drew government attention to the health of British soldiers in India. This concern led to the creation of a royal commission to examine the health of the army in India, and the findings indicated that fevers and cholera were the leading identified causes of illness and death.[5]

The results of the royal commissions added statistics to British prejudices about the Indian environment's effect on human physiology. The longstanding conviction that disease could be caused by miasma or features of the environment provided a convenient explanation for cholera's presence in India.[6] Cuningham made his view of the matter clear in *Cholera: What Can the State Do to Prevent It?* He claimed that cholera had been in India since the beginning of recorded history.[7] Some prominent members of British society went further and blamed Indian habits. They insisted that "filth" in India brought disease. Health reformers in Britain, like Florence Nightingale, felt that it was part of the "civilizing mission" of the British Empire to bring cleanliness into India, linking government-backed sanitation to empire.[8]

According to Arnold, "many Indians, too, saw a connection between cholera and conquest," but in a completely different sense.[9] Cholera may have existed in India for generations, but it was not until the British military campaigns that it became a widespread problem. James Annesley, an English doctor who spent 25 years in India, queried people familiar with Indian histories, perhaps as research for his 1825 work, *Sketches of the Most Prevalent Diseases of India*. He reported to friends in London that cholera had not manifested as an epidemic disease in India until the outbreak of 1817, concurrent with war against the Maratha Empire. From the position of Hindus, British troops had brought disorder to India by camping in sacred sites and ignoring caste rules. The religious rituals that developed around the disease, as compared to the more established ritualization of smallpox, also suggested a shorter history of epidemic cholera.[10]

British officials tightened the association between empire and cholera by reading

political meaning into Hindu religious responses. Sometimes rituals involved messengers and the delivery of tokens from village to village. People or animals might be driven out of villages as scapegoats, and some travelers presented themselves as mediums for the vengeful gods or spirits causing the outbreak. All of these practices made the British anxious. After the 1857 uprising, British officials feared this sort of religious practice, which they believed had been a prelude to the violence that year. Furthermore, British officials classified Hindu rituals as superstitions that proved the superiority of the British way of handling the disease.[11]

These understandings and misunderstandings about cholera in India could remain a local issue as long as cholera stayed local. However, cholera spread out of India after the epidemic of 1826. This outbreak stemmed from the yearly Hindu pilgrimage to Hardiwar, but it spread due to the mobility of commerce, through Persia and Afghanistan into Russia, in 1830. Uprisings in Russian territory in Poland in 1830 and 1831 were met with military force, which spread cholera into Northern Europe. It reached Vienna and Berlin in the summer of 1831, before affecting Britain through the port city of Sunderland, where doctors were initially unsure whether the disease was “Asiatic cholera” or the usual “summer diarrhea” or “cholera nostras” with which they were familiar. Cholera spread across England and Scotland, running its course by about November 1832.[12] With this episode, cholera had become global.

Once cholera left India, other nations claimed a stake in how imperial government in India managed the disease. An international conference was called in 1866 in Constantinople, with further conferences in other locales in 1874, 1875, 1885, 1887, and so on. Sharing British anxiety around the religions of India, Europeans blamed Hindu pilgrimages to sites on the Ganges for starting epidemics and the Muslim Hajj to Mecca for transporting cholera out of India.[13] Under the understanding that the Hajj and India were the cause of cholera in the Middle East, the 1866 conference established the Middle East as a buffer zone, meaning that the Ottoman Empire would host international boards of health in Alexandria and Constantinople to monitor reports of disease from the east and determine whether quarantines and other interventions were necessary. Espousing the idea that cholera was spread by direct contact, European officials encouraged Britain to get cholera in India under control and threatened to embargo ships hailing from Indian ports.[14] At the International Congress on Hygiene in Vienna in 1887, “most non-British delegates were fully convinced that Indian-based cholera was a standing threat to the West.”[15] Thus, in the second half of the 19th century, British officials faced international pressure to do something about cholera in India. However, without an established route of transmission, it was difficult to agree upon a course of action.

Theories of Transmission and Early Measures

Uncertainty about cholera's etiology provided fertile ground for local and international debate. Cholera is now understood to be caused by a comma-shaped bacterium, frequently transmitted through water tainted by fecal matter of infected people. In popular memory, the link to water was discovered in 1854 after John Snow mapped cholera cases in a London neighborhood and traced them to use of a specific water pump.[16] The identification of the comma-shaped bacterium as the cause of cholera is credited to Robert Koch, who was part of a German team studying outbreaks in Egypt and India in 1883 and 1884.[17] Looking back with a progressive view of science, Snow and Koch are milestones on a path to understanding cholera. However, prior to the 1890s, these events were data points in a mass of conflicting information. People generally fell into one of two camps. Contagionists believed that cholera was transmitted from person to person and usually advocated quarantines and sanitary cordons. Anticontagionists believed that the disease was not communicable, instead blaming atmospheric and environmental conditions for its spread. Cuningham and many in the Government of India fell into this second group.[18]

While the debate over cholera's route of transmission continued, it was an open question what measures governments might take. The sides of the issue were not clear cut, because medical officers in India could hold both contagionist and anticontagionist views concurrently.[19] The uncertainty around epidemic disease encouraged British medical personnel in India to see it in environmental and cultural terms. Hot climates were thought to be producers and accelerants of disease. Furthermore, humans in different regions were believed to have different constitutions which made them more or less susceptible to diseases, and cultural practices were assumed to affect health. These qualities tend toward the anticontagionist view of cholera. Colonial medicine also had a history of stressing the importance of local knowledge and observation as opposed to the theorizing of people like Snow, far away in London, or Koch, an investigator with limited time in India.[20]

The value placed on local observation meant that immediately after the 1867 epidemic, many in the Government of India could accept some role for human transmission alongside environmental factors. The progress of that particular outbreak followed pilgrimage routes so closely that human transmission appeared likely.[21] The apparent connection between pilgrimages and cholera convinced some that pilgrimages should be regulated. From a modern understanding of cholera, they would have been perfect transmission events as people bathed and sipped water from the Ganges as part of religious observance. Pilgrims would often take Ganges water home

for others to drink, possibly carrying a dose of cholera bacteria with their holy water.[22] Restrictions on pilgrimages may have helped prevent epidemics, but they would have been devastating for the Hindu community. After the events of 1857, Queen Victoria had issued a proclamation promising that the government would never interfere in religious belief, and the government feared breaking that promise.[23]

The belief in a human vector of transmission in the Government of India was short-lived. In his 1867 report as acting Sanitary Commissioner, J. M. Cuninghame accepted that infection was probably spread through contact with the fecal material of infected people, but his 1884 *Cholera* is frankly anticontagionist. Mark Harrison points to a shift in belief among colonial officials, tracing the change through Cuninghame's yearly reports. His reversal was driven by several factors, including local data collected by the statistical officer, Dr. Bryden, which suggested meteorological origins for epidemics, and his own tour of cholera-stricken districts in the 1869 epidemic, which lacked a distinct distribution pattern.[24]

The Government of India tackled the cholera issue with an anticontagionist outlook and a reluctance to interfere in Indian religions. After 1867, the European community insisted on some use of quarantines, which the British government sought to avoid as disruptive to trade. With these conditions in play, the Government of India aimed at sanitary improvements to manage cholera. Cuninghame felt that sanitary measures might be early steps on a path of reform in drainage and water supply. The first efforts targeted the military and European population. Waste removal, better designs for barracks and bungalows, and restriction of the movement of Indian people into these "sanitary cordons" brought down the European casualty rate.[25]

In 1863, the Government of India concluded that improving troop health also required attention to the health of the general community.[26] Motivations ranging from the "civilizing mission" to the necessity of protecting trade also supported the push to extend sanitary administration to the general public. Each presidency, or administrative region, of India would have its own sanitary commissioner to contribute to the annual report of the Sanitary Commissioner of the Government of India. Starting in 1871, larger towns near army settlements were encouraged to set up governments by a municipal act with health provisions, including medical officers. These measures were optional. To appease the international audience, the British instituted port quarantine and extended sanitary cordons to include Indians who worked closely with the White towns. The British avoided interfering with pilgrims or improving sanitation at important sites. Some feared backlash to interventions in pilgrimages despite evidence that sanitary reforms at a religious fair in Hardiwar in 1867 were positively received. Ramasubban points to the expense of instituting major

public health reforms as the real reason for the limited response of the British government. The sanitation measures kept White enclaves healthy, and the continued sickness among the masses became more evidence for British stereotypes about the Indian population and landscape.[27]

Cunningham's Practical Approach

J.M. Cunningham wrote *Cholera* after decades of government sanitary work to manage cholera epidemics. By the 1880s, the colonial medical establishment was out of step with the contagionist views of Europe and Britain, and the Government of India's resistance to quarantines and sanitary cordons was contrary to international norms. British doctors in the *Lancet* condemned Cunningham's insularity and insistence on the superiority of cholera data collected in India. In 1870, the *Lancet* criticized the meteorological theory of cholera and spoke unfavorably of Cunningham's *Report on the Cholera Epidemic of 1872*, claiming that his conclusions were contrary to all popular theories.[28] Cunningham would have known about the opposition to his ideas, and *Cholera* can be read as a defense of the colonial government's stance.

Cholera ends with a scathing indictment of contagion theory. Cunningham insists that the theory had provided no practical benefits, but led "to all the evils of quarantine, loss of personal liberty, worry and annoyance, social misery and anxiety, with grievous injury to trade." [29] Cunningham further complains that the theory caused neglect of sanitary reforms that could do actual good. He characterizes the International Sanitary Boards in Alexandria and Constantinople as agents of evil policies.[30] And yet, Cunningham begins *Cholera* mildly, with an insistence that he did not wish to "put forward any new theory in regard to cholera, or to support any of the numerous theories which have been advanced by others"; instead, he wanted to consider cholera from a "purely *practical* point of view." [31] In short, *Cholera* is an argument against contagion theory in the guise of an impartial survey of facts.

To make his point, Cunningham represents the habits of the colonial medical establishment as strengths. Medical personnel in the *Lancet* had criticized Cunningham's—and by extension, the colonial medical community's—focus on locally collected data and experience.[32] By contrast, *Cholera* argues for the importance of local observation and suggests that governments should allow data, instead of theory, to guide their responses to epidemic disease. Only data could show which strategies worked.[33] Cunningham criticizes other governments for adopting measures based upon theory and dedicates the bulk of his book to arguing that data collected by the colonial state indicated that quarantines and cordons had no effect on disease

transmission. He suggests instead that general sanitary measures and departure from affected areas were the only methods proven to improve outcomes.[34]

The introduction to *Cholera* insists that it is a practical work, focused only on finding policies supported by facts. Yet the work asserts that contagion theory pushed other nations to institute quarantines and cordons, and critiques these measures as a means to refute contagion theory. Cunningham spends significant time describing Robert Koch's research and isolation of the cholera bacillus in order to refute his conclusions and shame the European medical community for eagerly accepting his findings.[35] Cunningham also advances theories of his own, raising the anticontagionist theory that disease was caused by atmospheric conditions. He further speculates that cholera had always been global, and the milder diarrheal complaint called "cholera nostras" in Britain and elsewhere was the same as "Asiatic cholera." [36] Among his closing statements on sanitation measures, Cunningham insists that he had proven that cholera was a disease of locality and disproven contagion doctrine.[37]

Cholera's conclusions generally correspond with the Government of India's interests. Cunningham denies a link between pilgrimages and cholera, directly contradicting the international community's opinion.[38] Cunningham discounts the use of quarantines, which government in London and India saw as "inconvenient and as detrimental to their commercial and political interests." [39] This alignment of Cunningham's research with government preferences might suggest coordination, as argued by S. J. Watts. Mark Harrison suggests instead a "selective, pragmatic and occasionally cynical use of medical expertise." [40] Cunningham's work reflects the long-standing culture of colonial medical science in India, including its use in governance and its suspicion of theories perceived to come from outside, like Koch's cholera bacterium. Even once Koch's theory became widely accepted in the 1890s, officials in India continued to advance "climate, physical environment, and social behavior as contingent factors in cholera epidemicity." [41] *Cholera* was the product of an ethos that did not cease with acceptance of Koch's theory.

Harvard's *Cholera: What Can the State Do to Prevent It?*

The physical copy of *Cholera* in Harvard's library bears some details of its specific history. From the inscription on the page opposite the bookplate, we can presume that the book was in Allahabad in 1885. Allahabad and Hardiwar experienced frequent cholera outbreaks in the 19th century. They were both pilgrimage sites in northern India on the Ganges River, and they "became sites of contestation between the

population more generally and the colonial state” around pilgrimage and disease control.[42] Harvard’s *Cholera* was present in a cholera hotspot when it was still a matter of intense debate.

It is not clear when the book made the jump to the United States. The bookplate indicates that it was purchased through the Robert Charles Billings Fund to the Boston Medical Library. A stamp on the reverse of the title page implies that it entered the library on June 11, 1923. If this assumption is accurate, the book was purchased shortly after the influenza pandemic of 1918, which was spread by war, like early cholera epidemics. *Cholera* may have been intended to provide some historical context for a reassessment of the latest pandemic the world had endured. It is worth noting that in 1923, the book was 39 years old, and the understandings of cholera that it advanced were obsolete. Perhaps for scholars then, as now, it was already an artifact of the overlapping histories of disease, British colonization of India, and public health.

Notes

[1] David Arnold, *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth Century India* (Berkeley, CA: University of California Press, 1993), 198.

[2] Mark Harrison, “Cunningham, James MacNabb (1829–1905), military surgeon and medical administrator,” *Oxford Dictionary of National Biography*, 23 September 2004, <https://doi.org.stanford.idm.oclc.org/10.1093/ref:odnb/32664>.

[3] James McNabb Cunningham, *Cholera: What Can the State Do to Prevent It?* (Calcutta: Printed by the Superintendent of Government Printing, India, 1884), vii.

[4] Arnold, *Colonizing the Body*, 168–171; Radhika Ramasubban, “A History of Public Health in Modern India: 1857–2005” in *Public Health in Asia and the Pacific: Historical and Comparative Perspectives*, eds. Milton J. Lewis and Kerrie L. Macpherson (London: Routledge, 2008), 87–105, here 88–9.

[5] Ramasubban, “A History of Public Health in Modern India,” 87–88.

[6] James Beattie, *Empire and Environmental Anxiety: Health, Science, Art and Conservation in South Asia and Australasia, 1800–1920* (Houndmills, UK: Palgrave Macmillan, 2011), 39–45; Arnold, *Colonizing the Body*, 25–26, 28.

[7] Cunningham, *Cholera*, 4–5.

- [8] Arnold, *Colonizing the Body*, 97–8; Mark Harrison, “The Great Shift: Cholera Theory and Sanitary Policy in British India, 1867–1879” in *Society, Medicine, and Politics in Colonial India*, eds. Biswamoy Pati and Mark Harrison (London: Routledge, 2018), 37–60, here 47.
- [9] Arnold, *Colonizing the Body*, quotation 171, 178.
- [10] S. J. Watts, *Epidemics and History: Disease, Power, and Imperialism* (New Haven, CT: Yale University Press, 1997), 178; Christopher Hamlin, *Cholera: The Biography* (Oxford, UK: Oxford University Press, 2009), 43–44, 48, 54; Arnold, *Colonizing the Body*, 172.
- [11] Arnold, *Colonizing the Body*, 171–178, 183–189; Amna Khalid, “Of Cholera, Colonialism and Pilgrimage Sites: Rethinking Popular Responses to State Sanitation, c. 1867–1900,” in *Society, Medicine, and Politics in Colonial India*, eds. Biswamoy Pati and Mark Harrison (London: Routledge, 2018), 90.
- [12] Mary Wilson Carpenter, *Health, Medicine, and Society in Victorian England* (Santa Barbara, CA: Praeger, 2010), 38–42; Hamlin, *Cholera*, 19–28, 125–7.
- [13] Arnold, *Colonizing the Body*, 186; Khalid, “Of Cholera, Colonialism and Pilgrimage Sites,” 74–97.
- [14] Harrison, “The Great Shift,” 37; Ramasubban, “A History of Public Health in Modern India,” 90–91; Arnold, *Colonizing the Body*, 191–2.
- [15] Watts, *Epidemics and History*, 174.
- [16] Hamlin, *Cholera*, 180–4; Carpenter, *Health, Medicine, and Society in Victorian England*, 36; Watts, *Epidemics and History*, 169.
- [17] Hamlin, *Cholera*, 213–15.
- [18] Harrison, “The Great Shift,” 46; Khalid, “Of Cholera, Colonialism and Pilgrimage Sites,” 76.
- [19] Harrison, “The Great Shift,” 41–42.
- [20] Arnold, *Colonizing the Body*, 23–44.
- [21] Arnold, *Colonizing the Body*, 184, 192; Harrison, “The Great Shift,” 37.
- [22] Arnold, *Colonizing the Body*, 184.
- [23] Arnold, *Colonizing the Body*, 190.

- [24] Harrison, "The Great Shift," 40–46, 55.
- [25] Ramasubban, "A History of Public Health in Modern India," 89.
- [26] Arnold, *Colonizing the Body*, 96–7.
- [27] Ramasubban, "A History of Public Health in Modern India," 90–1; Watts, *Epidemics and History*, 174; Khalid, "Of Cholera, Colonialism and Pilgrimages Sites," 74–97.
- [28] Mark Harrison, *Public Health in British India: Anglo-Indian Preventive Medicine 1859–1914* (Cambridge, UK: Cambridge University Press, 1994), 208–211.
- [29] Cuningham, *Cholera*, 143.
- [30] Cuningham, *Cholera*, 143–144.
- [31] Cuningham, *Cholera*, viii, emphasis his.
- [32] Arnold, *Colonizing the Body*, 19; Harrison, *Public Health in British India*, 210–11.
- [33] Cuningham, *Cholera*, viii–x.
- [34] Cuningham, *Cholera*, viii, see for example ix, 23–5, 26–7, 32–3, 35, 58, 60, 65–6, 137–8; Harrison, "The Great Shift," 48.
- [35] Cuningham, *Cholera*, see for example 2–3, 31, 70, 109–126.
- [36] Cuningham, *Cholera*, 29, 60, 66–9; Hamlin, *Cholera*, 19–28, 125–7.
- [37] Cuningham, *Cholera*, 135, 137.
- [38] Cuningham, *Cholera*, 122–3.
- [39] Harrison, "The Great Shift," 55.
- [40] Harrison, "The Great Shift," 56.
- [41] Arnold, *Colonizing the Body*, 194–5, quotation 195.
- [42] Khalid, "Of Cholera, Colonialism and Pilgrimages Sites," 74–6, quotation 76.