

DOCTORS, REFORMERS, AND DEMON DISEASE: CHOLERA AND PUBLIC HEALTH  
REFORM IN NINETEENTH-CENTURY GREAT BRITAIN

by

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(Under the Direction of Benjamin Ehlers)

ABSTRACT

This study explores how the first three cholera epidemics in Great Britain provided opportunities for struggles over authority to be played out among medical professionals, the British public, and the state. Cholera played a foundational role in motivating public health reform and strongly influenced the ways in which the British government interacted with its population. Over the course of the three epidemics, cholera increasingly became a state sanitation issue rather than an individual health issue, and responses focused on public health reform and prevention rather than medical treatment and cure. The cholera epidemics changed the way local and state agencies interacted as the centralized state government struggled for control over local governments. Cholera also altered the interactions between the public and the state through the imposition of health regulations, while also demonstrating the necessity of collaboration between the medical profession and the state in public health policy.

INDEX WORDS: Centralization, Cholera, Disease, Epidemics, Epidemiology, General Board of Health, Great Britain, Medical practitioners, Medicine, Nuisances, Public Health Acts, Public health movement, Quarantine, Sanitary reform, State authority, Dr. John Snow

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B.A., Wofford College, 2010

A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment  
of the Requirements for the Degree

MASTER OF ARTS

ATHENS, GEORGIA

2013

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August 2013

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## INTRODUCTION

“Thus did this fatal disease rise like a demon bent on destruction; it took its course, not heeding mountain, sea, climate, nor clime; death was its object, man its victim, and the uttermost parts of the world its destination; wherever its cold hand was extended, nature shrunk—the people died; the traveler on the desert, the priest at the altar, the merchant at his trading, the prisoner in his cell, saw the noon-day sun, but before even, were numbered with the dead. Death struggled with time itself, and gnawed the moments that separated him from his victim.”<sup>1</sup>

--John Hogg, M.D., *London As It Is*

When cholera first arrived in Great Britain in late 1831, it was a mysterious disease that inspired widespread fear among many Europeans. Asiatic cholera<sup>2</sup> first erupted as a pandemic in 1817 on the Indian subcontinent. British doctors observed and wrote about the disease, but it was not of immediate concern to the people in Great Britain until it extended its reach to Europe during the second pandemic in the late 1820s through the early 1830s. British newspapers tracked the westward progress of cholera as it approached from Eastern Europe until it eventually arrived on British shores in November of 1831. As cases of cholera erupted throughout the country in 1832, it seemed to attack cities at random and with inconsistent severity, which only increased the mystery surrounding the disease and its origins. Although its causes and methods of effective treatment are well documented today, cholera perplexed doctors, scientists, and all sectors of society in the early nineteenth century. Before the development of germ theory, medical professionals debated whether or not cholera was contagious for much of the nineteenth century. A wide variety of cures, preventives, and treatments arose out of the

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<sup>1</sup> John Hogg, M.D., *London As It Is* (New York: Garland Publishing, Inc., 1985), 107.

<sup>2</sup> Also referred to as Cholera Morbus, Spasmodic Cholera, and Malignant Cholera in nineteenth-century sources.

multiple theories about the causes and transmission of cholera, which further added to the confusion and uncertainty, or “cholera phobia,” surrounding the disease.

Medical science today defines cholera as an acute, secretory diarrhea caused by the Gram-negative bacillus *Vibrio cholerae* transmitted through contaminated water and food. The disease had probably existed on the Indian subcontinent for centuries, but it didn’t spread beyond its endemic borders until 1817 during the first of six worldwide cholera pandemics that occurred before 1923. The first European epidemic in 1831-1832 was part of the larger second pandemic. The seventh and longest pandemic on record began in 1961 and is still ongoing in many parts of the world. Occurring in both endemic and epidemic patterns, cholera is currently endemic in over fifty countries, most of which are in Africa and Asia, and it kills approximately 100,000 of the 3-5 million people affected each year. The disease can occur seasonally where it is endemic, and epidemics can arise in a long cycle overlapping with the existing endemic outbreaks. Population density and poor sanitation and health infrastructure contribute to high fatalities in epidemic cholera, but environmental factors are also important, such as the occurrence of floods or other natural disasters that can lead to substantially increased outbreaks.<sup>3</sup>

The severe symptoms of cholera include massive watery diarrhea that can lead to hypotensive shock and death within hours of the first symptom. Vomiting is a common feature, particularly early in illness, and the characteristic rice-water stool of cholera develops with continued purging. Endemic cholera can produce milder forms of these symptoms. Most deaths from cholera are caused by severe dehydration but can be prevented through fluid replacement therapy. Rapid rehydration with intravenous fluids is used to treat patients suffering from severe

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<sup>3</sup> Jason B Harris, MD; Regina C LaRocque, MD; Firdausi Qadri, PhD; Edward T Ryan, MD; Stephen B Calderwood, MD, “Cholera,” *The Lancet*, Volume 379, Issue 9835, 30 June–6 July 2012, pp. 2466–2476, [http://dx.doi.org/10.1016/S0140-6736\(12\)60436-X](http://dx.doi.org/10.1016/S0140-6736(12)60436-X).

dehydration. Although the treatment is relatively simple, the administration of and collection of resources for this treatment are not always simple, which means cholera still causes many fatalities. Transmission can be prevented by the provision of safe, clean water and adequate sanitation, but these conditions unfortunately do not exist in many impoverished areas throughout the world today, and they were a fundamental contributing factor to the epidemics of the nineteenth century. Although any person is susceptible to infection by the cholera bacterium, cholera remains predominant among the poorer classes of society as it did in the nineteenth century.<sup>4</sup>

Nineteenth-century medical professionals disagreed on the method of transmission of cholera, and reports from other parts of Europe could not confirm the effectiveness of quarantine. The regulation of cholera through quarantine was both a medical and social topic of controversy. Medical practitioners disagreed on whether quarantine was truly effective, and the working class, the sector of society most affected by the quarantine regulations, objected to the restrictions forced upon them. Even though quarantine regulations were not strictly enforced after the first epidemic, the question of contagion continued to arise in discussions of the disease.

Other social concerns played an important role in how people, including medical practitioners and the state government, reacted to the cholera outbreaks. Class tensions over the Reform Act and Anatomy Act during the 1831-1832 epidemic had a major impact on how people responded to medical treatment and government regulation. However, the interactions between medical professionals, the government, and the wider British public changed throughout

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<sup>4</sup> Jason B Harris, MD; Regina C LaRocque, MD; Firdausi Qadri, PhD; Edward T Ryan, MD; Stephen B Calderwood, MD, “Cholera,” *The Lancet*, Volume 379, Issue 9835, 30 June–6 July 2012, pp. 2466–2476, [http://dx.doi.org/10.1016/S0140-6736\(12\)60436-X](http://dx.doi.org/10.1016/S0140-6736(12)60436-X).  
Richelle C. Charles, Edward T. Ryan, “Cholera in the 21<sup>st</sup> Century,” *Current Opinion in Infectious Diseases* Vol. 24(5):472-477, October 2011.



the following epidemics in 1848-49 and 1853-1854. Within the crisis atmosphere that permeated social and political interactions in 1832, working-class people actively voiced their concerns about cholera policies and sought to protect themselves against perceived threats, such as in the cholera riots, without major legal consequences. Along with these social factors, the uncertainty surrounding cholera made it possible for different segments of society to compete for authority, including medical practitioners, government representatives, and the working class. However, by the second major cholera outbreak in 1848, the expansion of bureaucratized government agencies, especially related to public health and sanitation, extended the reach of state authority further into the lives of the working class in a way that prevented the same kind of popular reactions that were possible during the previous epidemic. The strength of centralized government agencies continued to grow, and by the 1853-1854 epidemic public health authorities had gained a more secure footing in their efforts to develop infrastructure and regulate public sanitation. Additionally, the waves of cholera outbreaks had become an expected part of British life and caused less fear and panic than in previous epidemics.

The major conflicts of authority and social anxiety that accompanied the first epidemic brought to light major issues related to health, sanitation, and the ability of the government to regulate and control public actions during times of crisis. These concerns heavily influenced the rise of sanitary reform in the 1840s and the continual expansion of centralized state authority, and they demonstrate the crucial link between the first cholera epidemic and the rise of the public health movement. However, this relationship between the 1831-1832 cholera epidemic and the movement for public health and sanitary reform has often been overlooked or understated in the scholarship on the disease. Cholera began emerging as the subject of social histories in the late 1950s, and by the 1960s it had become one of the most commonly written about historical

diseases. Many early histories, such as Norman Longmate's 1966 work *King Cholera: The Biography of a Disease*, relied heavily on the writings of doctors and clergy who chronicled the epidemics.<sup>5</sup> Examining the disease throughout nineteenth-century Britain, Longmate's work presents a triumphal narrative of the success of modern science and the accomplishment of European progress through the "conquest of cholera."

R. J. Morris' 1976 work *Cholera 1832: The Social Response to an Epidemic* focuses on the first cholera outbreak and explores the relationships, institutions, and means of social control that Britain used to maintain stability among its people.<sup>6</sup> More than a cause of public health reform or component of class tension, Morris sees the cholera epidemics as a threat to social stability and the response to cholera as a test and challenge to the functioning of British society, including ways of understanding natural events, technology and resources, administrative skills, values, and social cohesion. Morris describes the crisis atmosphere during the epidemic and the unstable relationship between the working class and the medical profession, but he ultimately argues that, in comparison to other European cities attacked by cholera, the limited extent of riots and disturbances connected to the epidemic demonstrated the inherent stability of British society. In *The Return of the Plague: British Society and the Cholera 1831-2*, published in 1979, Michael Durey makes a similar argument.<sup>7</sup> He examines the response of British society to the epidemic and the ways in which cholera affected the concurrent social, economic, and political change of the time period, but he rejects the causal relationship between cholera and the agitations surrounding the Reform Bill and industrial disturbances. He also argues that cholera did not

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<sup>5</sup> Norman Longmate, *King Cholera: The Biography of a Disease* (London: Hamish Hamilton, 1966).

<sup>6</sup> R. J. Morris, *Cholera 1832: The Social Response to an Epidemic* (New York: Holmes & Meier Publishers, 1976).

<sup>7</sup> Michael Durey, *The Return of the Plague: British Society and the Cholera, 1831-2* (Dublin: Gill and Macmillan Humanities Press, 1979).

really contribute to the sanitary reform movement until the middle of the nineteenth century because people failed to realize the relationship between disease and social conditions and concluded from the epidemic that there was a need for moral reform rather than sanitary reform. Durey claims the 1832 epidemic did not inspire the central government to create any long-term policies regarding public health, and they did not see a need to establish a permanent national public health system when the ad hoc measures seemed to work just fine. He concluded that British society was fundamentally stable and handled the cholera epidemic with resiliency in a way that reflects how the nation endured the pressures of urbanization, industrialization and the population growth of the first half of the nineteenth century.

Other literature on cholera, such as Peter Baldwin's 1999 work *Contagion and the State in Europe, 1830-1930*, analyze the evolution of disease prevention and public health throughout history by exploring epidemics in terms of political motives and state intervention in the treatment of and reaction to disease.<sup>8</sup> One goal of his study is to engage with Erwin Ackerknecht's article "Anticontagionism between 1821 and 1867" in which Ackerknecht argues that state methods of disease regulation reflected national politics, with liberal nations preferring environmentalist understandings of disease through their implementations of sanitary reform (anticontagionism) and autocratic governments preferring the more repressive contagionist methods of quarantine.<sup>9</sup> Baldwin rejects this theory by arguing that few nations translated understandings of contagionism or anticontagionism into their methods of state intervention. Instead, Baldwin asserts, governments blended these ideas and adopted prevention practices according to other factors that included geography and the specific moment in time in which the

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<sup>8</sup> Peter Baldwin, *Contagion and the State in Europe, 1830-1930* (Cambridge: Cambridge University Press, 1999).

<sup>9</sup> Erwin Ackerknecht, "Anticontagionism between 1821 and 1867," *Bulletin of the History of Medicine*, 22 (1948), 562-93.

epidemic occurred. Baldwin's two chapters on cholera compare state action, such as the use of quarantine, and the readjustment of strategies in response to epidemics of cholera in England, France, the German territories, Sweden, and Russia. Margaret Pelling also objects to Ackerknecht's argument in her 1978 work *Cholera, Fever and English Medicine, 1825-1865*. Pelling considers the terminology of "contagionist" and "anticontagionist" to be inadequate and misleading, and she argues that compromise and complexity more accurately characterized the negotiations of disease prevention, at least in the English case. Her book focuses on the treatment and reaction to cholera as one of the most demanding and notorious epidemics of the nineteenth century.

Pamela Gilbert's 2008 book *Cholera and Nation: Doctoring the Social Body in Victorian England* also explores the treatment and reaction to cholera.<sup>10</sup> However, reflecting the linguistic turn, Gilbert examines the language of nation and social body used by medical and sanitation authorities in reference to cholera treatment while also looking at the representation of cholera through narratives of masculinity, addiction, professionalization, sanitation, social and political reform, and empire. She also looks at how race and gender increasingly influenced conceptions of the disease, and her work focuses on the impact of cholera on nineteenth-century British culture rather than on social or medical history.

Christopher Hamlin's *Cholera: The Biography*, published in 2009, provides a comprehensive scholarly survey of cholera and its meaning throughout the world from the early nineteenth century up through the early twenty-first century.<sup>11</sup> He personifies the disease as "Citizen Cholera" and explores how it gained a sort of political status as a public enemy through

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<sup>10</sup> Margaret Pelling, *Cholera, Fever and English Medicine, 1825-1865* (Oxford: Oxford University Press, 1978); Pamela Gilbert, *Cholera and Nation: Doctoring the Social Body in Victorian England* (Albany: State University of New York Press, 2008).

<sup>11</sup> Christopher Hamlin, *Cholera: The Biography* (Oxford: Oxford University Press, 2009).

its incorporation into administrative structures. However, he argues that the coexistence of cholera and social unrest was a coincidence and that people were focusing on immediate, local issues rather than class concerns during epidemics.

The sanitary and public health movement is often associated with epidemics later in the nineteenth century and a growing awareness of dangerous living conditions of the working poor rather than with the first epidemic of cholera. Although historians have been correct in arguing that the 1831-1832 cholera epidemic was not part of the so-called sanitation revolution or public health movement, they often deny or fail to acknowledge the significance of the first epidemic in causing people to reevaluate their beliefs about the relationship between society, disease, and medicine. The first cholera outbreak occurred at a crucial time for medical professionals who were growing in numbers and making increasing efforts to professionalize and standardize their training and qualifications. The social anxiety surrounding the first cholera epidemic offered an opportunity for medical practitioners to demonstrate their authoritative and specialized knowledge and secure their professional status. The unexpected arrival of epidemic cholera also prompted the formation of a Central Board of Health along with local boards that set the precedent for future, more permanent organizations of centralized power to regulate responses to cholera and other diseases.

Examining the first three major British cholera epidemics in 1831-1832, 1848-1849, and 1853-1854 provides an opportunity to evaluate the role of cholera in transforming the relationships between the British people, the medical profession, and the government within the complex social context of population growth, class tension, industrialization, and scientific advancements up through the middle of nineteenth-century Britain. This can be done by comparing medical perceptions of the origins and transmission of cholera, methods of prevention

and treatment implemented by doctors and government agencies, and public reactions throughout the three epidemics. Factors such as the debate over whether or not cholera was contagious, the contentious enforcement of quarantine, the status of medical professionals, and the development of boards of health can be traced throughout the epidemics to reveal the transformation of the relationships between the state, the medical community, and the broader public. Through these comparisons, we will better understand cholera's impact on the social changes and public health reforms that occurred throughout the nineteenth century, as well as the extent to which people accepted or implemented these changes.

The first chapter focuses on the arrival of cholera in 1831 and the influence of concurrent social concerns, such as the Anatomy and Reform Acts, on the reaction to the epidemic and methods of response. It draws connections between the cholera epidemic, early discussions about the need for sanitary reform, and government intervention into public health matters. The second chapter examines the second major cholera epidemic in 1848-49 and the different factors that affected the national experience of cholera in comparison to the previous epidemic. It explores the changing medical perceptions of cholera and the growth of government concerns with public health matters. The third chapter shows how cholera became less of an anomaly and more of an ordinary aspect of British life by the third epidemic in 1853-1854, and it evaluates the role of Dr. John Snow in altering medical understandings of the disease. The epilogue draws conclusions about how political pressures and social concerns influenced the interactions of common people, medical professionals, and government authorities during cholera outbreaks, as well as how the epidemics contributed to transformations in sanitation and public health reforms. It also considers Britain's response to cholera within an international context, specifically in

comparison to the experiences of France and the United States, to help identify how much of it was unique to British society.

While each cholera epidemic offers a vast amount of material to be explored on its own at a more detailed level, taking a broader view by exploring the three major epidemics together offers a different insight into the impact of cholera outbreaks on British society. This comparative approach traces the development of important social trends related to the role of medicine, government, and public health in the lives of British people throughout the early and mid-nineteenth century. Widening the scope also makes it possible to consider the influence of contextual factors that helped shape the national experience of cholera and its significance in the public health movement. This approach reveals how the first cholera epidemic played a foundational role in motivating sanitary and public health reform and how cholera strongly influenced the ways in which the British government interacted with its population.

## CHAPTER 1

### “The Demon Disease Invades British Shores”

Between five and six o'clock in the evening of September 3, 1832, a great disturbance broke out at the corner of New Cross and St. George's Road in Manchester. Several thousand people, mostly from the lower, working classes, thronged the streets carrying a coffin and heading toward the cholera hospital in Swan Street. Inside the coffin was the headless body of a four-year-old boy. The mob had formed after the body of the boy had been exhumed and found with a brick in place of his head. Because the boy had been a patient at the cholera hospital only the night before, the doctors were immediately accused of murder and a riot was launched as growing crowds marched toward the hospital in outrage. The riot resulted in massive damage surrounding the Swan Street hospital including broken windows, torn down gates, the demolition of a new hospital vehicle used to transport patients, and the destruction of furniture inside the hospital itself. The mob didn't disperse until the arrival of the police and military and the exertions of a Catholic priest were finally able to subdue them.<sup>12</sup> A later inquiry found that the boy had not been murdered, but a hospital worker had removed his head. Although the worker escaped before he could be arrested, the boy's head was found in the worker's lodgings and sewn back onto the body before reburial.<sup>13</sup>

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<sup>12</sup> *The Times*, London, 5 Sept 1832; *Poor Man's Guardian* Vol. 1, 1831-1832, *Radical Periodicals of Great Britain* (New York: Greenwood Reprint Corporation, 1968), 525; Alan Kidd and Terry Wyke, eds., "Introduction," *The Challenge of Cholera: Proceedings of the Manchester Special Board of Health 1831-1833* (Great Britain: Record Society of Lancashire and Cheshire, 2010), xxix-xxxi.

<sup>13</sup> John Knott, "Popular Attitudes to Death and Dissection in Early Nineteenth-Century Britain: The Anatomy Act and the Poor," *Labour History*, No. 49 pp. 1-18 (Nov., 1985), 9.



One of the worst riots in 1832, the Swan Street cholera hospital riot in Manchester was a manifestation of the complex atmosphere of class tension, political change, and social anxiety that prevailed in Britain in the 1820s and 1830s. Debate over parliamentary reform, growing working-class discontent, and fear of dissection contributed important elements to the social context of the first cholera epidemic that devastated the country from 1831 to 1832. Some historians have argued that cholera and social unrest was a coincidence and that people were focusing on immediate, local issues rather than class concerns.<sup>14</sup> However, the interconnected concerns of the working poor related to bodysnatching, dissection, and parliamentary reform cannot be separated from the concurrent anxieties about cholera. The backdrop of social and political tension transferred directly to the invasion of an unknown disease and cholera became a stage where struggles for authority were played out under the guise of scientific advancement and reform. Though not part of the public health movement, the outbreak of cholera in 1831 and 1832 provided an opportunity for medical practitioners to solidify their status as a respected and authoritative profession of the middle class, and the bewildering effects of the first encounter with epidemic cholera created the necessity of forming a Central Board of Health that would precede more permanent alliances of medical and governmental authorities in a centralized body of power later in the century.

## **Social Context**

### **Medical Bodies and Political Bodies**

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<sup>14</sup> Christopher Hamlin, *Cholera: The Biography* (Oxford: Oxford University Press, 2009).

Popular beliefs and practices regarding death and burial came into increasing conflict with the advancing field of medicine from the late eighteenth century and into the nineteenth century as the growth of British anatomy schools and competition with French anatomy schools created an increased demand for corpses. Dissection had traditionally been reserved for the post-mortem punishment of murderers, but this practice didn't produce enough subjects for the growing numbers of medical students. As far back as the seventeenth century grave robbers had been exhuming corpses for dissection, but this practice became a more commercialized activity by the eighteenth century as men called resurrectionists stole bodies from their graves and sold them to anatomy schools. Exhumation and dissection threatened popular cultural and religious practices regarding the body and death. Not only did dissection assault the identity and dignity of the body and the repose of the soul, it also associated doctors with the process of death in the very final practice of dissection, which provided for an uneasy relationship between the poor and the medical profession. Though fears of dissection were not exclusive to the popular culture of the poor and working classes, the more affluent of society were usually not the ones at risk of having the bodies of loved ones stolen from their graves.<sup>15</sup>

The very real fear of bodysnatching caused the lower classes to distrust physicians and fear medical institutions and hospitals. The Burke and Hare case in 1828, in which two men were tried for murdering at least sixteen people in order to sell their bodies for dissection, magnified the fear of hospitals.<sup>16</sup> Fear of being "burked" was still a prominent concern when the *Bill for preventing the Unlawful Disinterment of Human Bodies, and for Regulating Schools of Anatomy*, was submitted to Parliament on March 12, 1829 by Henry Warburton, a member of Parliament

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<sup>15</sup> Ruth Richardson, *Death, Dissection and the Destitute* (New York: Routledge & Kegan Paul, 1987), 37, 52-55, 76, 98.

<sup>16</sup> John Knott, "Popular Attitudes to Death and Dissection in Early Nineteenth Century Britain: The Anatomy Act and the Poor," *Labour History*, No. 49 (Nov., 1985): 6.

of Benthamite politics.<sup>17</sup> This bill proposed that any unclaimed bodies of paupers who died at the workhouse would be donated to anatomy schools for dissection. To Warburton and other supporters of the bill, this seemed like a beneficial, utilitarian solution to eliminate the need for resurrectionists and another possible repeat of the Burke and Hare case. However, to the working poor who often could not pay to claim the bodies of loved ones from the workhouses or needed time to gather money for burial, the Anatomy Bill punished the poor and targeted their bodies for dissection, effectively redefining poverty “from being seen as a state of pitiable misfortune to one of criminal responsibility.”<sup>18</sup> Although the first bill failed, it created tension between the ruling class and the lower classes and contributed to social anxieties. The cholera epidemic had already started raging throughout the country when Warburton introduced a second Anatomy Bill to Parliament in 1831 that was passed the following year. Anatomy riots erupted while at the same time regulations were being enforced that removed cholera patients to hospitals and demanded the immediate burial of cholera victims in designated cholera burial grounds, which further exacerbated the level of social anxiety and solidified lower class distrust of doctors.<sup>19</sup>

Just a few days before Warburton introduced the second Anatomy Bill, Lord John Russell had introduced the third Reform Bill, which drew political attention and public response away from the Anatomy Bill.<sup>20</sup> The Reform Act crisis had been ongoing since Lord John Russell introduced the first Reform Bill to Parliament in March of 1830.<sup>21</sup> The proposed Whig reform would redistribute parliamentary seats and lower the property requirement for the franchise,

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<sup>17</sup> Richardson, 108, 146.

<sup>18</sup> Richardson, 156.

<sup>19</sup> Richardson, 202.

<sup>20</sup> Richardson, 194.

<sup>21</sup> Marjie Bloy, “The Reform Act Crisis,” *The Victorian Web*, content last modified April 1997, links last added 20 February 2000, <http://www.victorianweb.org/history/reform.html>.

thereby extending voting rights to many of the middle class.<sup>22</sup> In the 1820s, both working-class and middle-class reformers had played important roles in the movement for parliamentary reform, but the bill proposed in 1830 only offered gains to the middle class. This created a division where the working class and middle class once had common cause against the upper class. The third Reform Bill passed in Parliament in June of 1832 much to the displeasure of working-class radicals like Henry Hetherington, the publisher of the unstamped working-class weekly newspaper the *Poor Man's Guardian*.<sup>23</sup> Hetherington's periodical demonstrated the class tension caused by the Reform Bill and the contentious political debates dividing segments of society. He wrote about the "tyranny of middle-men" and argued that once the middle-class gained power in Parliament, they would abandon any sentiment toward the working-class in order to maintain their superiority over them.<sup>24</sup> The intense political debate surrounding parliamentary reform from the late 1820s through 1832 coincided with the contentious Anatomy Bill, and together they created an atmosphere of political and social anxiety that would be exacerbated by the arrival of cholera.

### **Spreading the News**

The *Times* of London delivered news to the British public as one of the most prominent and enduring newspapers for much of the nineteenth century and provided much of the day-to-day news coverage of the epidemic. However, not all sectors of society would have read the reports in the *Times* about the arrival of cholera. Literacy rates steadily increased throughout the

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<sup>22</sup> Glenn Everett, "The Reform Acts," *The Victorian Web*, content last modified 1987, links last added 31 December 2010, <http://www.victorianweb.org/history/hist2.html>.

<sup>23</sup> E. P. Thompson, *The Making of the English Working-Class*, (New York: Random House, 1964), 810-816.

<sup>24</sup> *Poor Man's Guardian* Vol. 1, 1831-1832, *Radical Periodicals of Great Britain* (New York: Greenwood Reprint Corporation, 1968), 145-191.

nineteenth century, but possibly half of the population could not read in the 1830s.<sup>25</sup> Newspaper circulation had also been rapidly growing and reached an unprecedented level in 1829.<sup>26</sup> In the 1830s the Newspaper Stamp tax and paper duty kept the price of daily newspapers too high for even some of the middle class to purchase, but coffeehouses and public houses, where an individual paper would be passed among many people, offered the opportunity of reading daily papers to a wider audience, though this did not include the many country parishes where rural people seldom encountered a daily paper. Despite these limitations on the circulation of the *Times*, it was the leading daily newspaper up until the middle of the nineteenth-century and held great influence in public affairs, whether for good or bad.<sup>27</sup> Although it may have “taken the official rather than the right view of public questions,” the *Times* performed a service to its readers by providing “an immense and never-ceasing stream of information” and provided at least a relatively reliable account of contemporary events and prominent public perceptions.<sup>28</sup>

Cheap newspapers, or “penny papers,” designed for the working classes often had more defined agendas, such as Hetherington’s radical paper the *Poor Man’s Guardian*. First published in July of 1831, the primary focus of Hetherington’s paper was the “tax on knowledge,” or the newspaper stamp tax, and other contentious issues like the Reform Bill.<sup>29</sup> Because of the leading working-class political agenda of the paper, it mentioned cholera only a few times, mostly in short advertisements or case reports. In the February 18, 1832 issue of the *Poor Man’s Guardian* an article mentioned the arrival of cholera in order to blame the Whig government for allowing

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<sup>25</sup> Scott Bennett, “The Editorial Character and Readership of the ‘Penny Magazine’,” *Victorian Periodicals Review*, Vol. 17, No. 4 pp. 127-141 (Winter, 1984), 128.

<sup>26</sup> Richard D. Altick, *The English Common Reader: A Social History of the Mass Reading Public 1800-1900* (Chicago: University of Chicago Press, 1957), 329.

<sup>27</sup> Altick, p. 348, 355.

<sup>28</sup> William Dodgson Bowman, *The Story of “The Times”* (New York: The Dial Press, 1931), 1-2.

<sup>29</sup> *Poor Man’s Guardian* Vol. 1, 1831-1832, *Radical Periodicals of Great Britain* (New York: Greenwood Reprint Corporation, 1968).

the contagion to spread through commerce. The article also sought to arouse its working class readers to form a united front in demanding “the restitution of [their] unalienable rights” because “better at once perish in the attempt to work the salvation of yourselves and your posterity, than tamely endure the excruciating agony of the fatal Cholera!”<sup>30</sup> These comments demonstrate how the cholera epidemic could be used as a place for contending class issues and rights of authority.

Charles Knight’s *Penny Magazine* was also intended for the working class but had a very different self-stated purpose than the *Poor Man’s Guardian*. It was one of the most successful cheap periodicals of the 1830s with a circulation of 100,000 in the first year.<sup>31</sup> Sponsored by the Society for the Diffusion of Useful Knowledge, the *Penny Magazine* offered a broad selection of subjects with an emphasis on “practical knowledge” that included natural history, art and antiquities, travel narratives, biographies, and “established facts in Statistics and Political Economy” and avoided “the violence of party discussion, or the stimulating details of crime and suffering.”<sup>32</sup> Even though the magazine was launched on March 31, 1832 in the midst of the spreading cholera epidemic, it mentioned the disease only once in its entire first year of publication in an anecdote in the July 28<sup>th</sup> edition that told about Indian rituals for banishing cholera from towns.<sup>33</sup>

### **Cholera Reaches British Shores**

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<sup>30</sup> *Poor Man’s Guardian*, 283.

<sup>31</sup> Altick, p. 395. Knight originally claimed that the first year achieved a circulation of 200,000, but Altick cites a letter by Knight that stated the actual number was 100,000.

<sup>32</sup> Charles Knight, *The Penny Magazine of the Society for the Diffusion of Useful Knowledge* (London: Charles Knight, Pall-Mall East, 1832), p.iii, 1.

<sup>33</sup> Knight, p.166.

On November 5, 1831, the *Times* of London confirmed the arrival of cholera in Sunderland, a port town at the mouth of the river Wear on the northeastern coast of Britain, and assured readers that “all precautions will immediately be taken as respects the port of Sunderland, both by Government and the local authorities.”<sup>34</sup> Despite its hope that people would avoid unreasonable panic, the report did not ease public fear by subsequently announcing “the now indisputable fact that this disease is contagious” which “will also produce measures that will tend to intercept much of the danger.”<sup>35</sup> The belief that cholera was contagious spurred much debate within the medical community and caused alarm among the public, not only because of the epidemic nature of the disease, but also because it entailed the enforcement of quarantine regulations. These precautionary measures met resistance in many parts of the country, primarily in urban areas, in part because of the potential harm they could inflict on the economy of the city and the individual household.

Though it was not unusual for medical professionals and government agencies to dispute the contagious nature of diseases that attacked the population, public confusion only increased as this debate continued and newspapers received conflicting reports about the outbreak of cholera in Sunderland. In a letter to the Editor in the November 7<sup>th</sup> issue of the *Times*, a correspondent denied that cholera had arrived in Sunderland. Claiming, “There has been certainly two sudden deaths at the Infirmary, but on the whole the town never was more healthy,” the correspondent blamed “a few alarmists among the medical department” for reporting false information about infirmary cases.<sup>36</sup> Just three days later, the *Times* printed extracts from private letters with contradictory information on local conditions in Sunderland. One account “from a respectable

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<sup>34</sup> *The Times*, London, 5 Nov 1831.

<sup>35</sup> *The Times*, London, 5 Nov 1831.

<sup>36</sup> *The Times*, London, 7 Nov 1831.

solicitor at Sunderland” firmly contradicted the newspaper reports that cholera was in the town and attributed the illnesses to “a few cases of common cholera, not Asiatic.”<sup>37</sup> The letter immediately following this report declared the exact opposite information: “I am sorry to say we have now several cases of cholera with us, and all precautions are taking.”<sup>38</sup> Though the majority of the letters in this column affirmed the presence of Asiatic cholera in Sunderland, the reluctance of many of the contributors to acknowledge its arrival suggests an underlying fear of facing the epidemic. It also reflects the initial confusion about how to identify cholera and the conflicting messages delivered to an already tense and anxious public.

## **Medical Response**

### **Choleraphobia**

As cases of cholera erupted throughout the country in 1832, great fear and panic arose among the British people because of the speed with which the disease attacked its victims and took their lives. At times it attacked so swiftly and unexpectedly that “perhaps the patient, on awaking out of his sleep, and having gone to bed in health, is all at once most violently affected with spasmodic pain in the bowels, sickness, and purging; and his pulse is hardly to be felt” or, even more frightening, “a man is well at breakfast and dies before noon.”<sup>39</sup> People read in publications such as the *London Gazette*, one of the British government’s official journals of record, about the abhorrent physical conditions induced by cholera in which “the skin is deadly cold and often damp, the tongue always moist, often white and loaded, but flabby and chilled

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<sup>37</sup> *The Times*, London, 10 Nov 1831; Before the 19<sup>th</sup> century, the term “cholera” was sometimes used for any gastrointestinal illness characterized by severe diarrhea or vomiting. The term Asiatic cholera was used to specify the epidemic strand of cholera that originated in India.

<sup>38</sup> *The Times*, London, 10 Nov 1831.

<sup>39</sup> Society for the Diffusion of Useful Knowledge, *The Working-Man’s Companion: The Physician: I. The Cholera* (London: Charles Knight, 1832), 51.



like a piece of dead flesh.”<sup>40</sup> Though the characteristic signs of cholera include vomiting and severe diarrhea with evacuations of a liquid rice-water stool, most contemporary descriptions of the disease did not emphasize these symptoms as much as the body’s appearance. The *London Gazette* claimed vomiting and purging were “far from being the most important or dangerous symptoms.”<sup>41</sup> Instead, the description focused on how the patient looked: “the features become sharp and contracted, the eye sinks...the lips, face, neck, hands, and feet, and soon after the thighs, arms, and whole surface assume a leaden, blue, purple, black, or deep brown tint.”<sup>42</sup> Other contemporary descriptions conjured horrifying images of a victim’s appearance “expressive of terror and wildness” in which “the features of the face seem contracted and shrunk; the lips are blue, the eyes seem to be sunk in the head, and there is a ghastly look about the mouth,” the fingers are shriveled, the skin is deadly cold, and the pulse becomes nearly undetectable.<sup>43</sup> These disturbing images haunted British minds and contributed to the impression of cholera as a terrifying and alarming disease that took on a much greater symbolic significance than other ailments even though it did not impact mortality rates as much as some prominent endemic diseases like tuberculosis.<sup>44</sup>

Some of the methods of treatment officially recommended by the Central Board of Health included wrapping the patient in hot blankets, repeated rubbing with flannels and camphorated spirits to keep the body warm, and placing bags of hot salt or bran to restore heat to certain parts of the body. The circulation could be restored and sustained by giving the patient

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<sup>40</sup> Henry Halford, *London Gazette*, 25 Oct. 1831, p. 2191.

<sup>41</sup> Henry Halford, *London Gazette*, 25 Oct. 1831, p. 2191.

<sup>42</sup> Henry Halford, *London Gazette*, 25 Oct. 1831, p. 2191.

<sup>43</sup> *Interesting Original and Selected Notices of the Cholera Morbus* (Liverpool: E. Smith and Co., 1831), 10; *The Physician*, 57-58.

<sup>44</sup> Margaret Pelling, *Cholera, Fever and English Medicine, 1825-1865* (Oxford: Oxford University Press, 1978), 5; Pamela Gilbert, *Cholera and Nation: Doctoring the Social Body in Victorian England* (Albany: State University of New York Press, 2008), 7.

hot brandy and water, five to twenty drops of an essential oil like peppermint in a glass of water, or some warm broth with spice. Only in severe cases when medical aid could not be obtained did the Central Board recommend administering twenty to forty drops of laudanum to the patient in a warm drink. These measures were only recommended for the earliest stages of cholera before professional medical aid could arrive.<sup>45</sup>

However, because cholera was a new and mysterious disease, medical practitioners took a wide variety of approaches to its prevention and treatment. Many physicians recommended the same or similar measures as the Central Board of Health, but numerous other suggested methods appeared in publications during the course of the epidemic. Some of the preventive recommendations and cures were relatively mild, such as steam baths, acupuncture, and rubbings, but other methods could be more harmful than helpful to the patient's health, such as dousing with ice water, rectal injections of turpentine, cauterization of the stomach skin with boiling water, and bleeding.<sup>46</sup> The confusion and uncertainty surrounding cholera and the contradicting opinions about its prevention and treatment, along with the alarming images described of its symptoms, all contributed to a widespread "choleraphobia" and panic during outbreaks.

### **"Useful Knowledge" About Cholera**

As cholera continued to penetrate the interior of the country in late 1831 and early 1832, medical professionals attempted to assure a skeptical public of the competence and legitimacy of medical authority through the distribution of information about the epidemic. Though medical opinion was still divided on the question of contagion, publications tended to support the

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<sup>45</sup> Henry Halford, *London Gazette*, 25 Oct. 1831, p. 2191.

<sup>46</sup> Peter Baldwin, *Contagion and the State in Europe, 1830-1930* (Cambridge: Cambridge University Press, 1999), 37.

government policy of quarantine. The Society for the Diffusion of Useful Knowledge, an organization established in 1826 with the purpose of providing cheap but well-produced publications designed to impart useful information to the newly literate working classes, sponsored a successful series of occasional, cheap works that were small enough to be held in one's pocket and read at opportune moments.<sup>47</sup> In 1831 an issue of *The Working-Man's Companion* series was dedicated to the description, history, and avoidance of cholera. The pamphlet was designed to encourage public deference for medical authority and "show them that it is only in such persons that they can safely trust."<sup>48</sup> This goal supported the legitimacy of medical practitioners by prompting people to make "application to skilful men, instead of reliance on ignorant and unprincipled persons" when sick.<sup>49</sup>

The pamphlet discussed a wide range of topics including general knowledge about anatomy and common diseases, as well as details of the progression of cholera, its symptoms, treatment, and prevention. While much of the pamphlet reiterated information that was already widely distributed in newspapers and other publications, it also highlighted moral, class, and, to some extent, racial perceptions of cholera. In its description of the progress of cholera, the Society emphasized the relation between dirty living conditions and the occurrence of disease. They described the outbreak of cholera in Jessore, India, "a crowded and dirty town," and its arrival "in the dirty and miserable quarters of Calcutta, among a poor and half-starved population" living in "the narrow, dirty, unpaved lanes" of the city.<sup>50</sup> The pamphlet stressed the

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<sup>47</sup> Valerie Gray, "Charles Knight and the Society for the Diffusion of Useful Knowledge: A Special Relationship (1827-1846)," *Publishing History* No. 53, pp.23-74 (Chadwyck-Healey: Cambridge, January 2003), p. 24, 47.

<sup>48</sup> Society for the Diffusion of Useful Knowledge, *The Working-Man's Companion: The Physician: I. The Cholera* (London: Charles Knight, 1832), 9.

<sup>49</sup> *The Working-Man's Companion*, 9.

<sup>50</sup> *The Working-Man's Companion*, 89.

correlation between dirt and disease by declaring, “it was in such a climate, and among people of such habits, that the cholera first showed itself.”<sup>51</sup> It also extended these associations to include ignorance and uncivilized behavior by observing, “Dirt and ignorance, dirt and superstition, dirt and slavery, generally go together.”<sup>52</sup> According to these associations, the people of India suffered a cholera outbreak because their town was crowded and dirty, and their town was crowded and dirty because they were ignorant and uncivilized.

Furthermore, the Society declared, “What tends to remove the wretched slavery, or miserable superstition, or deplorable ignorance of the Eastern and other parts of the world, will tend also to cleanse and purify their cities.”<sup>53</sup> These contentions reveal an attitude of English superiority attached to moral and scientific advancement, which implied that cholera ravaged cities like Jessore and Calcutta so terribly because of their inferior moral and physical conditions. The pamphlet reinforced associations between cleanliness, civilization, morality, and modernization in its statement that “man should go on improving; and that he cannot improve in any one way without a tendency to improve in every other way.”<sup>54</sup> These comments additionally served to support the purpose of the publication of *The Working-Man’s Companion* by purporting to extend “the benefits of useful knowledge,” which would encourage the “spread and increase of all the decent comforts of life, and a freedom gained over sickness and destructive disease.”<sup>55</sup> These perceptions reflect both moral and class-based judgments about people exposed to rampant disease.

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<sup>51</sup> *The Working-Man’s Companion*, 88.

<sup>52</sup> *Working-Man’s Companion*, 108.

<sup>53</sup> *Working-Man’s Companion*, 108.

<sup>54</sup> *Working-Man’s Companion*, 108.

<sup>55</sup> *Working-Man’s Companion*, 108.

However, the moral implications of cholera expressed in the pamphlet by the Society for the Diffusion of Useful Knowledge did not exemplify a purely racial perception of the disease. The same moral implications also extended to the idle, useless, and dirty people of Great Britain. The pamphlet suggested that the people of Sunderland, where cholera first arrived in England, displayed a similar ignorance to the people of India:

Perhaps it may be said that if the people of Sunderland had not been, in some parts of the town at least, notoriously negligent of cleanliness, and of improvident and intemperate habits, the cholera itself would possibly never have found a footing on English ground.<sup>56</sup>

This assertion essentially held the people of Sunderland responsible for allowing cholera to enter the country because of their negligence and intemperate habits. These allegations did not directly blame the general poor or lower classes for the emergence of cholera, but they set up the comparison by acknowledging that the poor were the most affected by the epidemics and by subsequently accusing idle, unclean people of providing entrance to the disease through their ignorance and negligence. This also demonstrates the further separation of the working poor from the middle and upper classes.

The Society for the Diffusion of Useful Knowledge began with an indirect reproach of the English poor for their unhealthy living conditions, but it later articulated its disapproval of the poor more directly when discussing how habits of drinking and eating predispose people to cholera. The opinion that overindulgence or the types of food and drink someone consumed could predispose one to disease was not new or specific to cholera, but the pamphlet directed this belief toward the inferiority of the lower classes by stating, “this is no time to remind any of them, poor people, that their poverty has come of their idleness, or that their poor diet might be

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<sup>56</sup> *Working-Man's Companion*, 111.

better if they were not extravagant and not ignorant.”<sup>57</sup> It implored the rest of society to assist those in poverty with food, blankets, or clothing, but then explained,

If the poor will *also* exert themselves, and not sit still and expect those who are better off to do everything;--if they will spend no money in what is not useful;--if they will be industrious and temperate;--even the cholera, which has swept away millions of people from the face of the globe, may pass over this island almost harmless, and all its dreadful strength be scattered by the winds.<sup>58</sup>

Although the Society’s appeals may appear benevolent and charitable, they are tainted with a prejudiced perception of the poor and a condemnation of their habits. The Society also reprimanded the poor for resisting the good intentions of charitable persons and lacking the ability to take responsibility for their own wellbeing and improvement. Identifying alcohol as a leading cause to many harmful conditions, the pamphlet strengthened the association between alcohol, the poor, and disease. Although the evils of alcohol applied to all of the public, the Society for the Diffusion of Useful Knowledge emphasized, “to live poorly is a bad thing, and to drink is a bad thing; but to live poorly and to drink too, is certain destruction.”<sup>59</sup> Therefore, the poor were responsible for their own harm because of their intemperate and ignorant habits.

The pamphlet’s promotion of the usefulness of knowledge, specifically scientific knowledge, reflected an effort to defend the legitimacy of medical practice and extol the successes of scientific development. In discussing the appropriate treatment of the disease, the Society contended that cholera seemed to be less severe and destructive in “better regulated towns” and “among a people willing to apply whatever science has discovered to be useful.”<sup>60</sup> They believed that the disease yielded to “man’s power over it” through knowledge and “is

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<sup>57</sup> *Working-Man’s Companion*, 161.

<sup>58</sup> *Working-Man’s Companion*, 162.

<sup>59</sup> *Working-Man’s Companion*, 165.

<sup>60</sup> *Working-Man’s Companion*, 202.

checked by his skill and his firmness.”<sup>61</sup> This assessment promoted science and knowledge, as well as morality, as the sources of ultimate authority and power and expressed the growing confidence in science during the nineteenth century. Many people in society, particularly the poor and uneducated, still displayed skepticism toward medical science, trusting in more traditional healing methods. However, the nineteenth century brought a wave of scientific discovery and growth in public fascination with science. This trend translated to medical sciences as well, but convincing people of the authority of medical professionals was often difficult. The pamphlet from the Society for the Diffusion of Useful Knowledge reflects the distrust between the lower classes and doctors and the need to convince them of the legitimacy of medical professionals through the authority of scientific and medical knowledge. At the same time, it demonstrates the medical and scientific authorities’ lack of trust in the poor to contribute to the security and health of the population in general.

### **Medicine and the Government**

The Society for the Diffusion of Useful Knowledge also linked the advancement of society through scientific discovery to the growth of the state and national progress by supporting the government’s role in enforcing the regulations for the wellbeing of society. By asserting that cholera would eventually be “banished from the well-governed regions of the earth” as “man improves in knowledge and virtue, and power” the Society affirmed the necessity of government guidance and associated the prominent role of the state with the improvement of society.<sup>62</sup> Apparent in the previously mentioned newspaper reports and publications, the working classes (the intended readership of the pamphlet by the Society for the Diffusion of Useful Knowledge) had been resistant to some of the instructions of the Central Board of Health.

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<sup>61</sup> *Working-Man’s Companion*, 202.

<sup>62</sup> *Working-Man’s Companion*, 202.

Although not explicitly stated, the pamphlet's comments suggest a response to popular feelings of distrust and an effort to justify the authority of the Board in addition to inspiring confidence in state regulations.

However, many medical authorities received criticism for their support of the Central Board of Health regulations, and not all doctors agreed on the contagion of cholera or the appropriate measures to take against it. Dr. WM. Horsley wrote to the *Times* from Sunderland to dispel the rumors about the presence of cholera and ascribe the ills experienced by the local community to fear and apprehension. He regretted “that a government measure should have been made of this silly affair; and, above all, that the ‘Board’ in London should have issued such a document (in circulation every where) regarding ‘cholera.’”<sup>63</sup> While many medical professionals may have used cholera as a way to increase their influence alongside the government through epidemic regulations, Horsley's statement reveals that conflicting opinions did exist within the medical community. However, many doctors did “seem to agree that filth, cold, damp, famine, or bad food, are predisposers to cholera,” which suggested that the best way to combat cholera, whether contagious or not, was to “set about the removal of filth where it is a matter of public nuisance, and the counseling of its removal where it is purely domestic.”<sup>64</sup> These same recommendations were made a decade later as the movement for sanitary reform began to gain strength in the 1840s, which reveals the early connections between cholera and the public health movement.

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<sup>63</sup> *The Times*, London, 14 Nov 1831.

<sup>64</sup> *Spectator*, 12 Nov 1831, No. 176, p. 1094.



## **State Action**

### **Boards of Health**

Despite the ambiguity surrounding the arrival of the disease, Britain had at least benefited from its isolated position from which it could observe the progress of cholera through Russia, Poland, France, and the rest of continental Europe. In anticipation of the possibility of a cholera epidemic, the government established the Central Board of Health in London in 1831 and encouraged the formation of local boards of health throughout the country to organize precautionary measures and distribute information about prevention and treatment. The Central Board of Health received advice and information from its medical team composed of Major R. Macdonald, Dr. Russell, and Dr. Barry who had all seen and studied cholera in places already invaded by the epidemic.<sup>65</sup> This system placed a lot of importance on the local boards of health, which were composed of the local ruling elite on district boards and a resident clergyman, substantial householders, and at least one member of the medical profession on the divisional boards. The Central Board sent new information and recommendations to the district boards, but it could only act as an advisory board while the local authorities retained most of the decision-making abilities. This meant that the board of health system was permissive and dependent on local, voluntary initiative.<sup>66</sup>

In October of 1831, before the arrival of cholera, the Central Board of Health issued rules and regulations for limiting the spread of cholera to be published by the *London Gazette* and subsequently included in various newspapers and publications.<sup>67</sup> These measures included

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<sup>65</sup> Michael Durey, *The Return of the Plague: British Society and the Cholera, 1831-2* (Dublin: Gill and Macmillan Humanities Press, 1979), p. 77.

<sup>66</sup> Durey, p. 78.

<sup>67</sup> *Interesting Original and Selected Notices of the Cholera Morbus* (Liverpool: E. Smith and Co., 1831), 5.

quarantine regulations, which met with immediate public resistance and disapproval. Many members of the working classes protested these regulations because of the harm they inflicted on trade and the inconvenience they imposed upon people's work, but they also opposed the intervention into their community practices and loss of control over daily activities.

Though medical opinions disagreed on the method of transmission of cholera and reports from the Continent could not confirm the effectiveness of quarantine, the British government enforced regulations that conformed to the belief that cholera was contagious and communicable through physical contact. These quarantine measures were mostly the same as the ones put in place to respond to the plague of past centuries. The application of these measures revealed the disorientation of medical practitioners and government authorities in the face of this new threat: they simply did not know how to respond to cholera so they resorted to old, established methods of control.

### **Quarantine and Preventive Measures**

The Privy Council, a body of royal advisers, had the power to issue Orders in Council and to regulate certain public institutions, which they usually communicated to the British public through newspapers. As early as 1798, parliamentary acts regarding quarantine and public health stated that Orders in Council declared by proclamation or publication in the *London Gazette* qualified as sufficient notice for the people. These proclamations were often reprinted in one or more other publications to ensure the dissemination of important information.

As cholera was spreading across continental Europe, the Central Board of Health emphasized the use of rigorous quarantine in their regulations as the most effective method of preventing the entrance of cholera into Britain since it seemed to spread from city to city through infected people. The Central Board claimed that increased vigilance regarding quarantine

regulations would be successful in preventing the introduction of cholera if people, especially along the coast, dedicated their efforts to preventing illegal contact through smuggling.<sup>68</sup> The proposal also recommended that “in every town and village, commencing with those on the coast, there should be established a local board of health, to consist of the Chief and other Magistrates, the Clergymen of the parish, two or more Physicians or Medical Practitioners, and three or more of the principal inhabitants” in the case that the disease did break through the quarantine defense.<sup>69</sup> The establishment of local boards of health suggests that the Privy Council and Central Board of Health demonstrated prescience regarding the potential threat, but the quarantine regulations indicate a reliance on methods of precedent rather than careful investigation.

From the full list of regulations reproduced in the *London Gazette*, it is apparent how the quarantine measures could induce panic and why many people whose livelihoods were restricted by them would resist their enforcement. The regulations ordered the immediate separation of the sick from the healthy and advised that

one or more houses should be kept in view in each town or its neighbourhood, as places to which every cases of the disease, as soon as detected, might be removed, provided the family of the affected person consent to such removal, and in case of refusal, a conspicuous mark (“*Sick*”) should be placed in front of the house, to warn persons that it is in quarantine; and even when persons with the disease shall have been removed, and the house shall have been purified, the word (“*Caution*”) should be substituted, as denoting suspicion of the disease, and the inhabitants of such house should not be at liberty to move out or communicated with other persons, until, by the authority of the local board, the mark shall have been removed.<sup>70</sup>

Furthermore, the Privy Council instructed people to avoid “all unnecessary communication with the public out of doors” and suggested that “all persons who may be employed in the removal of

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<sup>68</sup> Privy Council, *London Gazette*, 25 Oct. 1831, p. 2190.

<sup>69</sup> Privy Council, *London Gazette*, 25 Oct. 1831, p. 2190.

<sup>70</sup> Privy Council, *London Gazette*, 25 Oct. 1831, p. 2190.

the sick from their own houses, as well as all those who may attend upon cholera patients in the capacity of nurses should live apart from the rest of the community.”<sup>71</sup> Anyone recovering from cholera or who had contact with a patient was supposed to be “kept under observation for a period of not less than twenty days.”<sup>72</sup> These strict regulations not only separated families, they aggravated the atmosphere of suspicion, fear, and anxiety that already existed because of the Anatomy Act. People would feel trapped and isolated in their own homes, and many of their daily activities were restricted or forbidden by the regulations. The Privy Council even warned that measures “of a more coercive nature” may be resorted to if circumstances made it “necessary to draw troops, or a strong body of police, around infected places, so as utterly to exclude the inhabitants from all intercourse with the country” if the state felt such action necessary to sustain the quarantine.<sup>73</sup> This imposition of state authority into the lives of families caused resentment toward the government and Central Board of Health, which was only intensified by preexisting fears of dissection and distrust of medical professionals.

### **Commentary on Quarantine Regulations**

A compilation of articles entitled *Interesting Original and Selected Notices of the Cholera Morbus*, published in Liverpool in 1831, reprinted the official Orders and Regulations of the Privy Council concerning quarantine measures along with other information and commentary about the disease.<sup>74</sup> One of the articles reprinted from the *London Gazette*, titled “The Cholera Morbus,” communicated the rules and regulations proposed by the Central Board of Health, including a list of symptoms and treatments, which the Privy Council had ordered to

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<sup>71</sup> Privy Council, *London Gazette*, 25 Oct. 1831, p. 2190.

<sup>72</sup> Privy Council, *London Gazette*, 25 Oct. 1831, p. 2190.

<sup>73</sup> Privy Council, *London Gazette*, 25 Oct. 1831, p. 2191.

<sup>74</sup> *Interesting Original and Selected Notices of the Cholera Morbus* (Liverpool: E. Smith and Co., 1831).

be printed and circulated throughout the United Kingdom, “with a view that all persons be made acquainted therewith, and conform themselves thereto.”<sup>75</sup> The Editorial Prefatory Note of the *Notices* reproached the Board of Health for basing their recommendations on the measures implemented during the plague of 1665 in London. The *Spectator* also reprinted the cholera regulations that had appeared in the *London Gazette* and expressed disapproval of the preventive methods suggested by the Privy Council. After listing the fourth regulation, the editor of the *Spectator* inserted a brief criticism of the regulations, claiming that none of them “seem to have any sanction of law, and many of them, as appears...at a first glance, as little sanction of reason,” and he scornfully posed the question, “How many of them are copied from the old rules against the plague?”<sup>76</sup> The similar complaints from the *Notices* and the *Spectator* about the use of old regulations suggests that the authorities were forced to make their decisions based on a lack of new or useful information about the disease and that the public disapproved of these methods.

By implementing the quarantine regulations, the government authorities were responding in accordance with the Quarantine Act, 1825, which was the most recent major parliamentary act pertaining to infectious disease and quarantine at the time of the cholera epidemic in 1831 and 1832. The act provided measures for responding to “the Plague or other infectious Disease or Distemper highly dangerous to the Health of His Majesty’s Subjects.”<sup>77</sup> The earlier Quarantine Act, 1800, clarified that “His Majesty by Proclamation may declare any infectious Disease to be of the Nature of the Plague.”<sup>78</sup> When the cholera epidemic arrived in England in 1831, the government responded as prescribed in these Quarantine Acts, which entailed treating cholera as an infectious disease of the nature of the plague. Although the Board of Health and Privy

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<sup>75</sup> “The Cholera Morbus,” *Notices*, 5.

<sup>76</sup> *Spectator*, 22 Oct. 1831, No. 173, p. 1019.

<sup>77</sup> Quarantine Act, 1825.

<sup>78</sup> Quarantine Act, 1800.

Council may have been resorting to the only action they thought available, the criticisms published in the *Notices* and the *Spectator* suggest that some people alternatively perceived that government and medical authorities lacked the initiative to conduct full investigations that might reveal more effective preventive measures. These negative reactions also suggest a public resentment toward the tightening of state authority through the implementation of quarantine.

In the conclusion of the rules and regulations issued by the Board of Health, the President of the Board, Henry Halford admitted, “no specific remedy has yet been ascertained; nor has any plan of cure been sufficiently commended by success to warrant its express recommendation from authority.”<sup>79</sup> Despite this admission, the document attempted to strengthen public faith in the power and capability of the Board. President Halford tried to depict the Board as a competent body of authority despite their lack of concrete knowledge by contending that though differing opinions existed about the methods of treatment used in India,

there is reason to believe that more information on this subject may be obtained from those parts of the continent where the disease is now prevailing; but even should it be otherwise, the greatest confidence may be reposed in the intelligence and zeal which the medical practitioners of this country will employ in establishing an appropriate method of cure.<sup>80</sup>

This conclusion conveys an almost defensive tone and seems to be an attempt to justify the authority and actions of the Board of Health. The need to profess the “intelligence and zeal” of the medical practitioners and justify the authority of the Board suggests that Halford perceived there was at least some level of doubt or lack of confidence felt by the public about the ability of the Board to respond effectively to the threat of cholera.

The Central Board of Health also continued to assert its authority through the enforcement of quarantine regulations despite reports from the Continent that they were proving

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<sup>79</sup> Henry Halford, *London Gazette*, 25 Oct. 1831, p. 2192.

<sup>80</sup> Henry Halford, *London Gazette*, 25 Oct. 1831, p. 2192.

ineffective. *The Cholera Gazette*, a compilation of documents dated January 14, 1832 and transmitted by the Central Board of Health, reveals that medical and government authorities persisted with quarantine regulations even though they acknowledged the failures of such measures in other countries. Responding to some accusations that the Board's actions were modeled on the outdated plague regulations, *The Cholera Gazette* defended the logic behind its sanitary measures. The Board acknowledged the "inefficiency of cordons by land" and "the panic, and other dangerous moral, as well as physical effects, caused by vexatious insulations of families and communities" and admitted that many other European nations had considerably reduced their quarantine restrictions, but it persisted in its justification of the maintenance of certain quarantine regulations.<sup>81</sup> This determination to follow through with its initial commands suggests that the Board's insecure influence motivated it to overexert control in the only way it saw available: restrictive quarantine measures.

## **Public Response**

### **Reactions to Quarantine Measures**

Journalists and medical authorities attempted to assuage public concerns and counteract panic through the publication of newspapers, magazine, pamphlets, and notices. For example, the *Spectator* insisted that cholera was not a "formidable enemy" to those who practiced care and temperance, and it advised its readers not to look to any precautions other than care and a physician.<sup>82</sup> The *Interesting Original and Selected Notices of the Cholera Morbus* included the Privy Council's official Orders and Regulations regarding quarantine measures, but it also included several other publications with the purpose of counteracting the probable panic and

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<sup>81</sup> *The Cholera Gazette, Consisting of Documents Communicated by the Central Board of Health With Intelligence Relative to the Disease, Derived From Other Authentic Sources* (London: S. Highly), 6.

<sup>82</sup> *Spectator*, 22 Oct. 1831, No. 173, p. 1025.

alarm produced by the article in the *London Gazette* concerning those rules and regulations.<sup>83</sup>

The prefatory editorial note of the *Notices* indicated that the editor did not approve of the government's actions because they were too restrictive and ineffective. In many ways, the general tone implied an effort to discredit the information distributed by the Central Board of Health and to neutralize the effects of the official instruction of the Privy Council. An examination of this compilation of notices reveals many of the anxieties expressed through print media and other public channels concerning the interference of state regulations as well as some of the moral concerns associated with cholera.

The editor of the *Notices* cited an article from the *London Courier* that censured the Central Board of Health for not consulting with doctors such as Dr. James Johnson, who was, "from his long acquaintance with the disease in India, and, from his high standing here as a physician, a better authority, perhaps, than any other in this country."<sup>84</sup> The Editorial Note criticized the decisions of the Board of Health for demonstrating impractical knowledge about cholera and causing unnecessary alarm through its recommended regulations. According to the editor, one of the major problems with these recommendations was that they appeared to simply be adapted from regulations enforced during the time of the "great plague," which he claimed was highly unlikely to ever appear again. This editorial article in the *Notices* demonstrates the widespread dissatisfaction with quarantine regulations, the conflicting opinions about the causes and treatment of cholera among medical professionals and state authorities, and a lack of faith in the leadership and competency of the Board of Health, Privy Council, and other local authorities to respond effectively to the threat of disease.

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<sup>83</sup> *Interesting Original and Selected Notices of the Cholera Morbus* (Liverpool: E. Smith and Co., 1831).

<sup>84</sup> "Editorial Prefatory Note," *Notices*, 4.



That the Central Board of Health struggled with an uneasy public is made clear in a magazine article from the *Spectator*, which responded to President Halford's announcement of the regulations. Expressing a lack of faith in the actions taken and the recommendations issued by the Board of Health, the editor's remarks appeared as an accusation of incompetence or failure on the part of the Board to serve the public:

Instead of a set of rules, which we fear will be found wholly impracticable—and a description of symptoms, with which the whole of the reading public are theoretically as conversant as himself—and a catalogue of medicines, good to be kept as preventives, which had been published in all newspapers many months before it obtained the sanction of his name—we regret that Sir Henry Halford did not furnish us with a few plain facts by which to regulate the extent of our apprehensions, which are always greater as their object is undefined.<sup>85</sup>

These comments portray the Board's actions as inadequate and useless, essentially discrediting the Board as a reliable source of information and public guidance. The editor also criticized the quarantine measures for being restrictive to personal liberty, and he condemned them as inconvenient and useless precautions that would only aggravate the occurrence of a cholera epidemic. He pointed out the failure of such methods to work in other parts of Europe where the worst of the cholera epidemic only passed after the precautions were abandoned.

Elaborating on the injuries that would be inflicted by the regulations, the editor argued that the reporting of cholera by ignorant officers who would not care enough to thoroughly investigate the cases of disease could result in the unnecessary condemnation of people to hospitals. He warned that for any disease that remotely resembled cholera there would be

a family condemned to one or two alternatives, either to send a beloved child or parent to a public hospital, where they would never be permitted to look on him again, alive or dead; or to be imprisoned within their dwelling-place for not less than three weeks, and possibly for a much longer period.<sup>86</sup>

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<sup>85</sup> *Spectator*, 29 Oct. 1831, No. 174, p. 1049.

<sup>86</sup> *Spectator*, 29 Oct. 1831, No. 174, p. 1049.

These remarks offer insight into why people distrusted hospitals and feared that those sent to hospitals would never be seen again. These concerns were also connected to anxieties about quarantine measures and suspicion of medical and government authority.

Even while Britain prepared to enforce quarantine regulations, reports from the Continent indicated that such measures proved ineffective to stop the spread of cholera. In the *Notices*, a writer from the *London Medical Gazette* cited the statements of Kaiser Friedrich Wilhelm III of Prussia about the ineffectiveness of quarantine measures to check the progress of the epidemic in Prussia and that the measures of isolation were threatening to become more harmful than the disease itself if they continued to prevent people from working. The article warned that England should learn from the mistakes of other countries and not attempt to enforce the same ineffective regulations that would only damage trade.

### **Moral and Racial Commentary**

Despite the writer's adamant rejection of quarantine measures in the *London Medical Gazette*, he lightened his criticism of the Board of Health through a racial commentary on the available information from India. The Board of Health had received criticism for not consulting with people who had observed cholera in India, but the writer argued that

accounts given by the India practitioners, and, in particular, the circumstances of their opinions having been, in some essential points, refuted by the history of the disease in Europe, have led us to doubt very much whether any advantage would have been derived from the assistance of these gentlemen in the Board.<sup>87</sup>

He discredited Indian practitioners for believing cholera was not contagious and using ineffective treatments. Even if these beliefs were useful in India, he argued, the cholera in Europe did not fit the same model. Instead of being guided by the opinions of Indian practitioners, he concluded "that a set of intelligent men, with minds free from preconceived notions, and with no favourite

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<sup>87</sup> "Can Cholera Be Excluded or Confined?" *Notices*, 17.

theory to maintain, are more likely to arrive at safe conclusions.”<sup>88</sup> This distrust of the opinions of Indian practitioners reflects a general doubt of the value of Indian opinion, and the effort to distinguish between “Indian cholera” and “European cholera” suggests a discriminatory attitude of European superiority compared to Indian inferiority. It did not seem unusual to the British writer that there would be something inherently different between the European and Indian version of the disease or that Indian knowledge and experience was of no value compared to the capabilities of “intelligent” British men, despite their relative lack of knowledge about the subject. Although the writer clearly exhibited a discriminatory perception of Indian knowledge and capability, he did not incorporate racial assumptions about the nature or origin of cholera itself. This suggests that no straightforward accusations were directed at India for the outbreak of the cholera epidemic even though the British still considered themselves to be more advanced than the Indian people.<sup>89</sup>

Even though British writings tended not to place particular blame on any country for the spread of cholera, many people maintained an air of English superiority as they hoped the country would escape the epidemic. Despite its recognition that the spread of cholera had “excited very serious alarm in the minds of most persons, of the middle and higher classes of people in London,” an article from the *Examiner* reproduced in the *Notices* suggested that the English people should have the least fear of all people in Europe.<sup>90</sup> The author considered the English to be superior to the rest of Europe in ways that made them less susceptible to the disease. This also implied that if Britain managed to avoid the epidemic it would not be due to the efforts of medical officers of the Board of Health. It had been observed that the penetration

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<sup>88</sup> “Can Cholera Be Excluded or Confined?” *Notices*, 17.

<sup>89</sup> “Can Cholera Be Excluded or Confined?” *Notices*, 17.

<sup>90</sup> “From the Examiner,” *Notices*, 20.

of cholera was most severe among the classes living in the worst socioeconomic conditions, but the *Examiner* author considered the entire English population to be of superior physical condition than the rest of Europe and therefore less predisposed to the disease. Not even the highest classes in Continental Europe escaped this judgment since “the court and aristocracy of Vienna are, perhaps, the most corrupt and dissipated in Europe; and it appears that amongst them the ravages of the cholera has been proportionate to their condition, nearly as great as amongst the poorer classes, whose debility is occasioned by want.”<sup>91</sup> These conclusions suggest a more nationalistic than racial prejudice toward the victims of disease but still indicate a moral association with the predisposition to cholera. Because the “corrupt and dissipated” aristocracy of Vienna was susceptible to cholera, the implication was that the English people were not only healthier but more honorable and moral as well. Additionally, because the English considered themselves to be “a cleanly people” and incomparable to the rest of Europe, they doubted “the prudence of the interference of Government at the present moment” and were resistant to the inconvenient imposition of quarantine restrictions.<sup>92</sup>

Several of the *Notices* mentioned the well known observation that the poor were the primary victims of cholera, and this correlation was accompanied by an undertone of moral judgment concerning the use of alcohol, specifically strong liquor, by the poor. The consumption of alcohol, especially the gin that the poor often drank, was thought to make people vulnerable to cholera, and the proliferation of the disease among the poor was partially attributed to “their immoderate use of spirituous liquors.”<sup>93</sup> These reproaches of the habits of the poor were usually followed with appeals to the middle and upper classes of society “to think often of

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<sup>91</sup> “From the *Examiner*,” *Notices*, 20.

<sup>92</sup> “From the *News*,” *Notices*, 23.

<sup>93</sup> “The Cholera: From the *Liverpool Mercury* of Nov. 4,” *Notices*, 41.

the poor who every where surround us, and who must be every where ill clad, ill fed, ill housed, and exposed to that constant depression of mind, which, more than any other circumstance, invites and encourages the malady” by providing them with soup, warm clothing, and materials for cleaning.<sup>94</sup> This advice concluded with the hope that “one good effect from the apprehension which it [cholera] has already excited, will at least thus have been produced, and the general habits of the lower orders may, possible, be in the end very much improved, both in a moral and physical point of view.”<sup>95</sup> These hopes suggested that while the poor should be pitied, their habits, health conditions, and cleanliness reflect their need for moral reform, and they are to some extent responsible for their illness. These moral judgments did not factor prominently in the public conversation about cholera, but they persisted as an underlying component of popular understandings of the disease and they influenced beliefs on how to treat and prevent it.

### **Mixed Reviews**

In the initial stages of the epidemic, the local boards of health and medical professionals were accused of creating false alarm through the unnecessary enforcement of quarantine and other precautionary measures. The November 14<sup>th</sup> issue of the *Times* relayed a particularly critical report from Sunderland that “the commercial part of this port are very indignant at the measures pursued,” especially since only a few cases of serious illness were discovered.<sup>96</sup> The report further reprimanded the Medical Board for causing such mischief and announced that the “medical men were severely censured for the unnecessary and destructive alarm they have

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<sup>94</sup> “The Cholera: From the *Liverpool Mercury* of Nov. 4,” *Notices*, 41.

<sup>95</sup> “The Cholera: From the *Liverpool Mercury* of Nov. 4,” *Notices*, 41.

<sup>96</sup> *The Times*, London, 14 Nov 1831.

created.”<sup>97</sup> The author of this report then turned to the incompetence of the government for not learning from experience that the quarantine of trading ships was pointless and concluded: “Can any thinking man come to any other conclusion than that the authorities do not possess a share of common sense?”<sup>98</sup> These examples reveal popular resentment toward the authority of medical professionals and the state government and a distrust of their competence to act in the best interest of the people.

However, while many of the letters included in the *Interesting Original and Selected Notices of the Cholera Morbus* criticized the government proclamations and assertions of contagion, some expressed support for the actions of the Board of Health. One letter reasoned that

the instructions issued by Government in the *Gazette* of last night, for the prevention of the cholera morbus, and the remedies proposed by the Board of Health in the event of its arrival in this country, are so judicious, that every method should be adopted for circulating the information as widely as possible, particularly among the poorer classes of the community.<sup>99</sup>

The writer hoped the newspaper would publish the information since the *Gazette* had limited circulation and to which the poor had little access. He even recommended that the instructions “should be struck up on the door of each parish church, workhouse, and police station in the metropolis, and along the eastern and south-eastern coasts.”<sup>100</sup> This letter suggests some support within the community for the Board of Health policies, though it is a minority view of those included in the *Notices*. However, this perspective may just be underrepresented in the *Notices* since the editor clearly took a critical and disapproving stance against the Board of Health.

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<sup>97</sup> *The Times*, London, 14 Nov 1831.

<sup>98</sup> *The Times*, London, 14 Nov 1831.

<sup>99</sup> “Cholera: To the Editor of the *Morning Chronicle*,” *Notices*, 37.

<sup>100</sup> “Cholera: To the Editor of the *Morning Chronicle*,” *Notices*, 37.

Despite the policy taken by the government, many doctors believed cholera was not contagious and disagreed with the use of quarantine. The people most affected by the measures, the working poor, saw the regulations as restrictive and potentially threatening. The insistence on the contentious measures of quarantine contributed to the broader atmosphere of social tension in which many people of the working classes demonstrated popular distrust and suspicion of medical authorities. In the midst of debates over the Reform Act and Anatomy Act, the uncertainty about the causes and treatment of cholera and the effectiveness of quarantine created a space in which authority could be contended among the medical practitioners, members of parliament, rising middle class and discontented working class. This particular social environment of class tension, working-class discontent, and social anxiety affected the public responses to the cholera epidemic and laid the groundwork for the major health and sanitation reform movement and expansion of centralized state authority that would gain momentum by the middle of the nineteenth century.

## **Conclusion**

By the end of 1832, the cholera epidemic in Britain had all but faded away, but only after taking approximately 32,000 lives with it.<sup>101</sup> Most of the local boards of health dissolved, as they had been designed to do, leaving few lasting public health improvements. The nature and causes of cholera continued to perplex medical professionals and commoners alike until germ theory fully developed later in the century. Although the first cholera epidemic did not directly lead to the public health movement that gained momentum in the middle of the nineteenth century, it created an avenue for further contentions between the lower classes, medical professionals, and government authorities.

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<sup>101</sup> R. J. Morris, *Cholera 1832: The Social Response to an Epidemic* (New York: Holmes & Meier Publishers, 1976), p. 79.

While both the medical profession and centralized administrative bodies like the Central Board of Health attempted to use the epidemic to strengthen their legitimacy as public authorities, the lower classes attempted to maintain control over their daily lives and resisted medical and state intervention. By bringing existing social tensions to the surface, cholera underscored concerns about morality and class, but even more so, it provided a stage for the struggle of authority between the poor and working classes, the growing middle-class medical profession, and the expanding government. By the middle of the nineteenth century when the next two cholera epidemics attacked Britain (1848-1849 and 1853-1854), government authorities had expanded their power of intervention at the local level through the increase in sanitary regulations and growth of public health institutions. However, the British population and government agencies faced new challenges during the second major cholera epidemic in 1848 and 1849.



## CHAPTER 2

### “The Destroying Angel: Public Health Reform During the 1848-1849 Cholera Epidemic”

In the sixteen years that separated the first and second cholera epidemics, many aspects of British society had changed. Several acts of legislation had been passed in the 1830s that altered the relationship between the people and the state and that increased the government's power to regulate working and living conditions. The Factory Act of 1833 regulated the working hours of women and children; the Poor Law Amendment Act of 1834 established workhouses throughout the country; the Municipal Corporations Act reformed the election process for municipal corporations; the Registration Act of 1837 made it compulsory for all births, marriages, and deaths to be registered at a Registry Office; another Factory Act in 1847, called the “10-Hour Act,” restricted the working hours of women and children to a maximum of ten hours a day; and another Poor Law Act in 1847 replaced the Poor Law Commission with a Poor Law Board that brought poor relief further under parliamentary control.<sup>102</sup> Much of this legislation met with resistance from the working class people whose lives were affected by the imposition of state regulation. Women and children resented the restrictions on their ability to work because it meant less income for their households; the poor would often rather starve than go to the workhouses where they were treated like criminals; and the compulsory registration of births, marriages, and deaths allowed the government to further regulate its people. However, these acts of legislation paved the way for the burst of public health legislation that began in the late 1840s.

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<sup>102</sup> Marjie Bloy, “Victorian Legislation: A Timeline,” *The Victorian Web*, content last updated 20 December 2006, <http://www.victorianweb.org/history/legistl.html>.

## Social Context

### Urban Growth

Immense industrial growth in the late eighteenth and early nineteenth centuries had resulted in rapid urban growth throughout Europe, especially in England. Early nineteenth-century England experienced a faster urban growth rate in relation to its national population than it had in the later eighteenth century, and London's population multiplied dramatically over the first half of the nineteenth century. In 1801 London's population stood at 948,040, but by 1821 it had reached 1,274,000. This number dwarfed the populations of other cities like Vienna, which only had twenty-five per cent of London's inhabitants, and Berlin, which had less than sixteen per cent of that number. By 1810 London was nearly fifty per cent larger than Paris, the second largest city in Europe. The ratio of urban to rural populations within England grew as well, with 2,362,000 inhabitants (more than thirteen per cent of the total population of England and Wales) living in London by 1851.<sup>103</sup> Though London's population far outnumbered all other urban areas in Britain, other manufacturing towns and a few large seaports in England actually grew at a faster rate. At the beginning of the nineteenth century, about twenty per cent of inhabitants in England and Wales lived in towns of more than 5,000 people, but by 1851 that number had risen to more than fifty-four per cent. At the beginning of the nineteenth century, London was the only town with a population of over 100,000, but by the middle of the century ten towns with that many inhabitants existed and about twenty-five per cent of Britain's population lived in them.<sup>104</sup> Communication and interaction between London and provincial towns also increased as trade

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<sup>103</sup> Christopher Chalklin, *The Rise of the English Town, 1650-1850* (Cambridge: Cambridge University Press, 2001), p. 9.

<sup>104</sup> Anthony S. Wohl, *Endangered Lives: Public Health in Victorian Britain* (Cambridge, MA: Harvard University Press, 1983), p. 3.

expanded and travel improved within the country. This increase in local mobility drew people from the countryside into towns.<sup>105</sup>

The first half of the nineteenth century also brought substantial increases in aggregate real income and average real incomes to Great Britain. Though income distribution may not have changed significantly during this time, the growth in wealth still benefited a large portion of the working population and slowly increased the purchasing power of their incomes. However, these increases did not necessarily result in improved living conditions for the working class population. High housing densities and insufficient provision of public services, including water, sanitation, paving and street cleansing, in the overcrowded working-class neighborhoods created unsanitary living conditions conducive to the spread of epidemic diseases like cholera.

The problem of housing density included both the number of people per habitation and the number of houses per acre. By the 1830s and 1840s, back-to-back housing had become very common in many towns, which increased the proximity of people to each other as well as the overflowing sewers and cesspools.<sup>106</sup> Although the numbers varied, most large towns experiencing rapid growth rates in the early nineteenth century had up to 300 people living per acre in the primarily working-class districts. Often the only sections of large towns with significantly smaller population densities were neighborhoods that consisted of larger houses separated by more sufficient space, which were usually occupied by people of the middle or upper classes.<sup>107</sup> These factors of population density fit into the patterns of urban social segregation based on occupation, trade, wealth, and status that were common in most cities and

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<sup>105</sup> Chalklin, p. 16.

<sup>106</sup> Flinn, p. 3-4, 6.

<sup>107</sup> Chalklin, p. 26-27.

towns. For example, in the middle of the nineteenth century the poorer trades were concentrated in East London, and many individual crafts were located in other specific areas of the city.<sup>108</sup>

With a nearly 150 per cent growth in population within the span of fifty years, London's infrastructure could not meet the growing demands of sufficient housing, waste management, water supply, and street paving and cleansing. Thousands more people were living in overcrowded habitations and neighborhoods than a few decades before, and they were contributing greater amounts of waste and refuse to nearby cesspools, sewers, and streets. Though municipal sewer and waste management agencies existed, they were managed on a local level, and a lack of coordination over jurisdiction or lack of funding often resulted in some neighborhoods not receiving proper attention. With such a rapid increase in demand, these agencies simply could not meet the heightened need of their services. Other large urban centers, like Liverpool and Manchester, experienced similar problems, though on a smaller scale. These circumstances not only made cities and large towns more susceptible to epidemic outbreaks, especially of a waterborne filth disease like cholera, but they also created prime conditions for the rapid spread of disease, which resulted in higher death counts. This contributed to the much greater devastation experienced by London during the second cholera epidemic in 1848 and 1849 than it had during the first outbreak of the disease.

Many factors affected the quality of nineteenth-century urban life, almost all of which would be addressed by proponents of public health reform in the middle of the century: the adulteration of food, the quantity and quality of housing, sanitation, paving, sewerage, water supply, open spaces, working conditions, and the public provision of basic social services such

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<sup>108</sup> Chalklin, p. 27.

as education.<sup>109</sup> The confluence of these factors created prime conditions for a disastrous cholera outbreak. After the cholera epidemic subsided in 1832, the Central Board of Health and other local institutions that had formed to respond to the outbreak dissolved, and the management of public spaces and services experienced few lasting changes. By 1848, the same unsanitary living conditions, insufficient waste removal services, and contamination of water supplies still existed. The rapid increase in urban populations and the inability of towns to keep up with the demands of such growth only exacerbated the preexisting conditions, making British society even more susceptible to another outbreak of cholera.

## **Medicine**

### **Medical Theory and Practice**

Medical professionals continued to debate and theorize about the causes and mode of transmission of cholera during and after the second epidemic in 1848 and 1849. Although other diseases caused more deaths, the “frightful agony” inflicted by cholera made it “a far more appalling form of pestilence, and have inspired mankind with a much more intense desire to discover its hidden cause and to avert its tremendous effects.”<sup>110</sup> Medical practitioners continued to direct a lot of attention toward trying to understand how cholera was generated and spread, which produced several theories. In light of the recent epidemic, an article in the *London Times* explained several of the prominent theories about cholera and identified some of their criticisms. The zymotic theory, “following the old humoral pathologists,” compared “the action of morbid poisons in the blood to that of yeast on wort.”<sup>111</sup> As yeast’s contact with other substances produced a chemical change of fermentation, this theory stated that animal matter in “the state of

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<sup>109</sup> Flinn, p. 7.

<sup>110</sup> *Times*, London, 13 September 1849, p. 7, col. a.

<sup>111</sup> *Times*, London, 13 September 1849, p. 7, col. b.

chemical change called putrescence” could cause an “analogous state of change or fermentation,” which could produce “all the phenomena of febrile disease.”<sup>112</sup> This chain of events resulted in the reproduction of the cholera poison in the putrescent blood. The zymotic theory was an older doctrine that had been discarded by many medical minds by 1849, though it still had some supporters.

The animalcular theory attributed “the phenomena of cholera to the ravages of microscopic insects,” like those that cause damage to vegetables.<sup>113</sup> This idea developed from the observation of an “immense development of insect life which often preceded pestilence,” but it was criticized for not explaining the variations of temperature and weather during cholera outbreaks.<sup>114</sup> Observing that cholera didn’t occur on board ships at sea unless brought on by a previously inflicted crewmember, advocates of the telluric theory believed “the poison of cholera to be an emanation from the earth.”<sup>115</sup> However, this theory did not provide explanations for how the cholera poison was generated or spread. The electric theory apparently had many supporters though it failed to explain how cholera could persist “under all possible fluctuations of the atmospheric electricity, as well as during its undisturbed equilibrium” without exhibiting any corresponding fluctuations.<sup>116</sup> A more recent hypothesis, the ozonic theory, attributed “cholera to an alleged *deficiency*, and influenza to an affirmed *excess* of ozone in the atmosphere.”<sup>117</sup> Ozone was thought to oxidize and deodorize all putrescent exhalations, providing a purifying effect on the air, which also purified the blood in the lungs and stimulated the “performance of the vital

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<sup>112</sup> *Times*, London, 13 September 1849, p. 7, col. b.

<sup>113</sup> *Times*, London, 13 September 1849, p. 7, col. b.

<sup>114</sup> *Times*, London, 13 September 1849, p. 7, col. b.

<sup>115</sup> *Times*, London, 13 September 1849, p. 7, col. b.

<sup>116</sup> *Times*, London, 13 September 1849, p. 7, col. b.

<sup>117</sup> *Times*, London, 13 September 1849, p. 7, col. b.

functions.”<sup>118</sup> A deficiency of ozone thus resulted in an excess of carbon in the blood and of putrescent exhalations in the air, which fulfilled all the supposed conditions for an outbreak of cholera. Another theory connected cholera with “the putrescent emanations of sewers, graveyards, &c., not merely as predisposing influences, but as actually containing the specific volatile cause of the disease,” but the article’s author believed this hypothesis had “no solid foundation.”<sup>119</sup>

The above-mentioned theories of cholera’s origin and diffusion were based on specific environmental causes or atmospheric conditions which did not consider the disease to be transmitted by contagion. The debate over whether cholera was or was not contagious had been a central aspect of medical discourse during the first epidemic, and the question of contagion was interlocked with the controversial enforcement of quarantine. By the second epidemic in 1848 and 1849, quarantine measures had mostly been abandoned in response to cholera, but the “grave questions of contagion and quarantine” still lingered.<sup>120</sup> After providing the evidence used by each side of the issue, the author of the *Times* article argued that “the question is conclusively settled in the non-contagious sense” because experience had shown the inefficacy of quarantine regulations and that nurses and physicians who treated cholera patients were no more likely to contract cholera than others.<sup>121</sup> Although the author’s opinions in the *Times* article do not represent the entirety of British medical thought at the time, they do suggest that the belief in cholera being contagious was less common than during the first epidemic. Also, the existence of such a variety of detailed alternative theories implies that a large portion of medical thought had rejected the belief that cholera was contagious.

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<sup>118</sup> *Times*, London, 13 September 1849, p. 7, col. b.

<sup>119</sup> *Times*, London, 13 September 1849, p. 7, col. c.

<sup>120</sup> *Times*, London, 13 September 1849, p. 7, col. c.

<sup>121</sup> *Times*, London, 13 September 1849, p. 7, col. c.

The category of “medical professionals” remained broad and heterogeneous throughout the middle of the nineteenth century, and not all doctors followed the same path as private practitioners. The position of District Medical Officer was not always a desired or sought-after job, but many doctors found employment in this role since the private medical field could be quite competitive. These Medical Officers contributed to the transformation of professional medical practice through their participation in new structures of social medicine created by reform legislation in the 1830s and 1840s. The Poor Law Amendment Act of 1834 had already altered the relationships between medical practitioners and the sick poor by abolishing the old parish-based structures of poor relief in exchange for larger geographic Unions in which District Medical Officers treated the poor in their homes. The new role of medical practitioners among the poor and the lasting effects of the 1831-1832 cholera epidemic combined with increasing concerns about public health conditions to help transform the role of medical practitioners. Within this context, Medical Officers were increasingly perceived as state agents concerned with broader issues of social medicine rather than independent physicians.<sup>122</sup> The Public Health Act and Nuisances Removal and Diseases Prevention Act of 1848 further defined the role of Medical Officers as government agents performing medical duties on behalf of the state and in the interest of society as a whole. This role of medical professionals contrasted sharply with the role of the private physician who practiced independently and in the interest of individual patients. This partial transformation of the medical profession made the government response to the cholera epidemic of 1848-1849 possible because it provided the infrastructure necessary to enact Officer of Health Dr. John Sutherland’s plans for containing the epidemic, such as instituting house-to-house visitations and creating houses of refuge.

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<sup>122</sup> Michael Brown, *Performing Medicine: Medical Culture and Identity in Provincial England, c.1760-1850* (Manchester: Manchester University Press, 2011), p. 173.



## Medical Practice and Public Health Reform

A new interest in medical statistical studies also helped encourage public health reform by demonstrating the correlation between bad sanitation, disease, and death. The Civil Registration Act of 1836 and the establishment of the General Register Office in 1837 helped transform medical practice by providing a civil register (instead of an ecclesiastical one) of births, marriages, and deaths that included all of society.<sup>123</sup> Edwin Chadwick succeeded in getting cause of death added to the register, which made it possible for medical practitioners like William Farr to compile statistics on the number, causes, and geographical distribution of deaths. William Farr had trained as a doctor in Paris and London and began practicing in London in 1833. With a strong interest in public health issues, he was appointed the Compiler of Abstracts at the General Register Office where he led the important new study of “vital statistics.” These detailed statistical records became essential information for the groundbreaking work of Dr. John Snow on cholera in the late 1840s and 1850s, as well as other public health studies carried out by local Medical Officers of Health later in the century.<sup>124</sup>

The use of statistical medical knowledge was only one aspect of the merging of medical practice with state-led social reform. This trend had begun with the cholera epidemic in 1831 and 1832 when medical “practitioners came to frame their vocational identities in terms of expert knowledge and an active engagement with the care of the social body.”<sup>125</sup> The widespread fear and uncertainty that characterized the first cholera epidemic and put pressure on the British government had created circumstances in which medical professionals could assert their authority based on a specialized knowledge that would serve the public good. However, the

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<sup>123</sup> Brown, p. 173-174.

<sup>124</sup> Flinn, p. 27-28.

<sup>125</sup> Brown, p. 152.

expansion of newspaper advertising over the years helped to damage the reputation of the medical profession. Newspaper columns were filled with advertisements for serums, pills, and powders to remedy any ailment, many of which claimed to protect against or heal cholera. The failure of these false appeals and products of “quackery” resulted in “public contempt” of the medical field.<sup>126</sup> Because of the unstable status of medical professionals, their assertion of authority was not necessarily successful and was often uncoordinated and inconsistent. However, the efforts of successful and respected practitioners began a slow trend toward a more solidified medical identity along with the process of professionalization that extended throughout the nineteenth century. The medical profession in general became increasingly self-confident in the capabilities of their medical expertise, in part because of a larger trend of increasing confidence in scientific progress.

Though doctors’ abilities to heal or cure illness in the 1830s and 1840s had not really improved over the course of several decades, they still asserted authority through their specialized medical knowledge and supported the professionalization of medicine through more institutionalized forms of medical training. However, this trend did not mean that all medical professionals supported the increasing collaboration between medical practice and government authority. Many physicians had no interest in the enhancement of their social and political power through state-controlled avenues, and most remained primarily concerned with their private practices. The medical profession as a whole continued to transform throughout the nineteenth century but remained a heterogeneous body of practitioners with various goals and beliefs.<sup>127</sup>

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<sup>126</sup> *London Medical Gazette*, 2 Nov 1849 (London: Longman, Brown, Green, and Longmans, 1849) p. 759.

<sup>127</sup> Brown, p. 175, 194-195.

## Physical and Moral Reform

Many sanitary reformers, like Edwin Chadwick, believed in the correlation between morality and health and used it in their arguments about the need for more public health regulations: because poor sanitation led to moral degradation, the only way to save the poor from their immorality was through improved public sanitation. This theme appeared in religious understandings of the epidemics as well. The cholera epidemic was described as a “Destroying Angel” whose hand had been stopped by the mercy of God.<sup>128</sup> To the author of a September 27, 1849 article of the London *Times*, the epidemic demonstrated the power and presence of God and reminded men of their weakness. Without the scourge of diseases like cholera and the subsequent dispensation of mercy by God, “men would stagnate into a moral apathy, and forgetting the existence of a God, would forget the duties which He has enjoined.”<sup>129</sup>

The cholera outbreak was seen as a reminder from God that people should not forget their Christian duties of charity and justice and should live a more devout life since the epidemic “was made more violent by the omission of kindly acts and the neglect of beneficent laws.”<sup>130</sup> Not only was the individual at fault for calling upon himself such retribution, but the “loss of life and the loss of money” suffered during the cholera outbreak were “penalties by which Almighty Wisdom punishes the delinquencies of Governments and States.”<sup>131</sup> The author of the *Times* article gave thanks for the abatement of the cholera epidemic but called for continued moral reform by both the individual and the state government. This religious perception of the relationship between disease and morality paralleled the medical perspective of the connection

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<sup>128</sup> *Times*, London, 27 September 1849, p. 4, col. a.

<sup>129</sup> *Times*, London, 27 September 1849, p. 4, col. b.

<sup>130</sup> *Times*, London, 27 September 1849, p. 4, col. b.

<sup>131</sup> *Times*, London, 27 September 1849, p. 4, col. b.

between physical and moral wellness. Both viewpoints provided arguments for widespread public health reform.

From the multiple reports written by and to the General Board of Health, it is clear that the new sanitary improvement measures were focused on the poorest neighborhoods. When expressing their desire for more power over the execution of the Nuisances Removal and Diseases Prevention Act, the General Board of Health argued that “the poor and helpless” needed their protection “from preventible sickness, suffering, and premature disablement, and death” that resulted from neglect of the sanitary measures regulated under the Act.<sup>132</sup> The members of the General Board recognized that cholera and other diseases attacked all classes of society, including the poorest and the wealthiest, but the association between the need for sanitary improvement and the poor remained prevalent. This association was evident in the regular intertwining of the administration of poor relief and the execution of sanitary regulations under the local authority of the parochial Boards of Guardians.

### **Localization and Epidemic Constitutions**

The idea that epidemic and contagious diseases frequented the filthiest, most unsanitary districts where the poor, working-class people lived was central to Dr. John Sutherland’s theory of the “localization” of epidemics, which strongly influenced his perceptions and analysis in his report for the General Board of Health on the 1848-1849 cholera epidemic.<sup>133</sup> Dr. Sutherland believed that cholera did not attack as randomly as it first seemed but rather acted according to certain fixed laws. The most important of these laws was “*localization*, or, in other words, that property which is possessed by certain states of the constitution, or by certain well-marked

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<sup>132</sup> *Execution of...the Public Health Act*, p. 35-36.

<sup>133</sup> Dr. John Sutherland, *Report of the General Board of Health on the Epidemic Cholera of 1848 & 1849* (London: W. Clowes & Sons, Stamford Street, 1850).

characteristics of special localities, by virtue of which the epidemic obtains such power over the resisting vital forces of individuals, as to produce that class of phenomena usually ranked under the general designation of cholera.”<sup>134</sup> This meant that certain locations or certain individuals could be more vulnerable to cholera outbreaks. Some localizing causes of cholera might include errors of diet, overcrowding, defective ventilation, unwholesome water, injurious effect of town refuse, dampness in the subsoil, defects in the internal economy of large tenements, defective sanitary alterations, overcrowded graveyards, exhalations from putrescent mud, drunkenness, or fatigue.<sup>135</sup>

As Dr. Sutherland described, someone with an “epidemic constitution” might suffer from “general malaise,” uneasiness of the stomach, painless diarrhea, slight dyspepsia, flatulence, derangements of the nervous and vascular systems (such as “transient sensations of giddiness”), a tendency to sore throat, or symptoms of influenza.<sup>136</sup> Though these symptoms may be prevalent in many areas without leading to an epidemic outbreak, Dr. Sutherland argued that when “predisposed by irregular and dissipated habits,” these conditions had resulted in fatal attacks of cholera where “the weakened vital stamina, after resisting to a certain point, suddenly gave way” in these predisposed individuals.<sup>137</sup> Others without this epidemic constitution were supposedly able to resist attacks of cholera, at least enough to survive. However, Dr. Sutherland stated that epidemic conditions were most likely to result from the confluence of causes related to atmospheric impurity, imbalanced digestive functions, and weakened vital stamina.<sup>138</sup>

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<sup>134</sup> Sutherland, p. 4.

<sup>135</sup> Sutherland, p. 8.

<sup>136</sup> Sutherland, p. 4.

<sup>137</sup> Sutherland, p. 4.

<sup>138</sup> Sunderland, p. 7.

## Physical and Moral Wellness

Dr. Sutherland's analysis of the relationship between the human constitution and disease entailed a connection between an individual's physical wellness and moral wellness. The "irregular and dissipated habits" that weakened a person's resistance to cholera included "specific acts of intemperance in food or drink, over-fatigue, or perhaps alarm."<sup>139</sup> While there may be truth to the claim that over-fatigue would weaken a person's immune system and make him/her more vulnerable to contracting cholera, this description indicated a belief that cholera victims were, at least partially, at fault for predisposing themselves to the disease through their bad habits or immoral activities. Additionally, Dr. Sutherland argued that "social evils," such as disease, death, pauperism, and crime, resulted from human neglect and the failure to make the "free choice" of obedience and health.<sup>140</sup> If British society continued in its neglect, he predicted a "progressive descent in the health and productive power of its people, and a corresponding degradation in their moral and social condition, of which, indeed, a low sanitary state must now be considered as an almost invariable exponent."<sup>141</sup> This connection between poor health and the negative characteristics of neglect and dissipated habits was not new; the belief that overindulgence in food or alcohol made you susceptible to cholera had been prevalent during the previous cholera epidemic. However, Dr. Sutherland's report demonstrates the perpetuation of this moralistic component within medical thought through the middle of the nineteenth century. The concept of localization and the importance of a sanitary environment added a new dimension to contemporary medical understandings of cholera, but it still confirmed the correlation between health, sanitation, and morality.

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<sup>139</sup> Sutherland, p. 4.

<sup>140</sup> Sutherland, p. 3.

<sup>141</sup> Sutherland, p. 3.

Dr. Sutherland further emphasized the connection between moral and physical health by arguing that the sanitary evils which propagated epidemics also “have a direct influence in degrading the human race, and in leading to ignorance, vice, and crime.”<sup>142</sup> In other words, epidemic disease directly correlates to human immorality, and poor sanitary conditions lead to “a debased state of health both of body and mind,” even to the point of producing criminals.<sup>143</sup> By including these assertions in his report on the epidemic, Dr. Sutherland expressed a medical opinion about the associations between cholera, sanitation, and morality. Though he did not specifically refer to the working class population, his assumptions about people living among such sanitary evils indicated that the poor, working class people forced to live in these unhealthy conditions were thus characterized by immoral behavior. This analysis did not necessarily assume that the poor were inherently immoral since they were products of their living conditions, but it did cast a broad, negative generalization over the character of working class people. Dr. Sutherland also noted that epidemics usually occurred in the same localities, commenting that though the disease may occur randomly in other places, “its violence is spent where its purifying influence is most required.”<sup>144</sup> This assertion indicated that “purification” was required among those living in poor, unsanitary conditions as a result of their own misdeeds that had caused their debased state of physical and mental health.

Dr. Sutherland’s comments on moral and physical health reflect an unending cycle of poverty, filth, disease, and immorality. The only way to break this cycle would be to enact widespread public health reforms to improve sanitary conditions. In this way, the rise of public health was more than just a social reform movement; it was a moral reform movement as well.

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<sup>142</sup> Sutherland, p. 5.

<sup>143</sup> Sutherland, p. 5.

<sup>144</sup> Sutherland, p. 5.

Whether public health reformers were motivated by an altruistic sense of duty to the poor and suffering or by their own self-interested fear of the spread of disease, they considered physical improvement as the basis for further moral or social improvement.<sup>145</sup> This moral component of public health reform demonstrates continuity from the first cholera epidemic to the second. From the time the disease arrived on British shores, understandings of cholera were characterized by moral implications. The rise of a public health movement based on sanitary reform did not eliminate the moral component attached to cholera; it merely recast the role of the state in addressing these issues of morality and disease.

### **Epidemiological Thought**

The understanding of cholera as a non-contagious disease dependent on individual epidemic constitutions and localizing conditions demonstrates a shift in epidemiological thought. The concept of environmental or miasmatic (atmospheric) causes of disease was not new, but the focus on specific, local sanitary causes that could be improved for the avoidance of disease represented the transition toward preventive measures based on sanitation and public health reform rather than the often ineffective attempts to cure disease. However, this shift in focus from curative to preventive action also represented the minimization of clinical medicine in the wake of increasing state intervention through its expanding public health infrastructure. Though some medical practitioners like Dr. Sutherland or Dr. John Snow played important roles in identifying the relationship between filth and disease and working for widespread improvements in living conditions and disease prevention, many members of the medical profession remained outside of the public health movement. The focus of private medical practitioners remained on the treatment and curing of illness, while the goal of public health reformers was to prevent

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<sup>145</sup> Wohl, p. 6-7.



disease. Some reformers like Edwin Chadwick even looked down upon doctors for attempting to cure disease through ineffective treatments rather than focusing on the prevention and eradication of disease.<sup>146</sup> So while the burgeoning public health bureaucracy often appointed doctors as Medical Officers of Health and based its understanding of epidemiology on contemporary medical thought, a large part of the medical profession remained distant from the state public health infrastructure.

## **State Action: Public Health Legislation**

### **Quarantine**

During the first cholera outbreak in 1831-1832, the Central Board of Health in London (the temporary government agency set up to prepare for the epidemic and to communicate with local authorities) initiated quarantine regulations before cholera even arrived on British shores. The Central Board maintained its position on the necessity of strict quarantine throughout the epidemic despite popular resentment toward the regulations. When cholera returned to Britain in 1848, the laws of quarantine were still in place, but the enforcement of quarantine regulations had gradually relaxed over time, even occasionally being abandoned altogether in response to some diseases. As the cholera epidemic continued into 1849, the General Board of Health submitted a report to Parliament on the results of their inquiry into the system of quarantine. They concluded that quarantine was not effective in combating the cholera epidemic, or the majority of other epidemic diseases, and that “the true safeguards against pestilential diseases are not quarantine regulations, but sanitary measures.”<sup>147</sup> The result of the General Board’s *Report*

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<sup>146</sup> Roy Porter, *Disease, Medicine and Society in England, 1550-1860 / prepared for the Economic History Society by Roy Porter*, Second Edition (Cambridge: Cambridge University Press, 1993), p. 56-57.

<sup>147</sup> General Board of Health, *Report on Quarantine* (London: William Clowes & Sons, 1849), p. 5.

*on Quarantine* was an adamant proposal for “the entire discontinuance of the existing quarantine establishments in this country, and the substitution of sanitary regulations.”<sup>148</sup> These conclusions were influenced by several factors: the relative failure of quarantine measures to prevent the spread of cholera during the 1832 epidemic, the General Board’s observations of the “localizing conditions” of the 1849 epidemic, and changing perspectives on epidemiology and public sanitation.

Dr. John Sutherland, a medical officer for the General Board of Health, confirmed the futility of applying the system of quarantine to cholera in his report on the 1848-1849 epidemic. He argued that past experience had shown the spread of cholera to be dependent on an “epidemic constitution” and “suitable localizing circumstances in the population,” which proved its non-contagious nature.<sup>149</sup> Because the use of quarantine was based on the assumption that the disease was contagious, its use against the non-contagious cholera was ineffective and unnecessary. Furthermore, Dr. Sunderland argued, the application of quarantine measures to cholera actually created a more dangerous situation for the people who it affected because it did not prevent the spread of the disease and merely isolated those people most vulnerable to it.

After the cholera epidemic of 1848-1849, more medical practitioners and legislators saw quarantine as a hindrance to the administration of sanitary measures, and its enforcement was no longer required in response to cholera. The use of quarantine continued but primarily just in relation to ships in port. Throughout the middle of the century trading ships exposed to certain diseases could be held in port until disinfected, but this process was often irregular and inconsistent. By the late nineteenth century, quarantine had transformed into a politicized matter

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<sup>148</sup> *Report on Quarantine*, p. 127.

<sup>149</sup> Dr. John Sutherland, *Report of the General Board of Health on the Epidemic Cholera of 1848 & 1849* (London: W. Clowes & Sons, Stamford Street, 1850), p. 10.

concerned with economic gain and the control of international trade rather than medical or sanitary issues.<sup>150</sup>

### **Early Public Health Reform**

The cholera epidemic of 1831-1832 had alerted many people to the need for improved sanitary conditions and methods of responding to outbreaks of disease. This, along with increasing public concerns with the unhealthy working conditions and terrible side effects of industrial labor, led to the emergence of prominent figureheads for sanitary reform, such as Sir Edwin Chadwick. The reform work of legendary public health advocate Edwin Chadwick began with the Poor Law Acts of 1832-1834 but switched in focus with the writing of his sanitary report published in 1842. As Secretary to the Poor Law Commission, Chadwick compiled his *Report on the Sanitary Condition of the Labouring Population of Great Britain* over the course of three years almost entirely on his own. The other three Poor Law Commissioners were reluctant to sign off on its publication because they considered the report to be a radical document for its implications about the correlation between unsanitary conditions and poverty and the measures needed to prevent them. Chadwick took full responsibility for the report and published it in his name alone instead of under the Poor Law Commission. Though Chadwick claimed the leading role in initiating the public health movement, his sanitary report had built upon the work of other men and found its roots in the sanitary enquiries of other doctors and reformers.<sup>151</sup>

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<sup>150</sup> Krista Maglen, "Politics of Quarantine in the 19<sup>th</sup> Century," *JAMA: The Journal of the American Medical Association*, Vol. 290, No. 21 (December 3, 2003), p. 2873; Katrina Towner, "Medicine and Politics: The Abolition of English Quarantine, 1872-1896," *International Journal of Maritime History* 19, No. 1 (June 2007), p. 211-224.

<sup>151</sup> Chadwick, Edwin, and Michael W. Flinn. *Report on the Sanitary Condition of the Labouring Population of Gt. Britain, by Edwin Chadwick. 1842. Edited with an introduction by M.W. Flinn* (Edinburgh: Edinburgh University Press, 1965), p. 1-3.

Despite the failure of the first cholera epidemic to inspire permanent changes in the management of public health, it did provide a model for future efforts to create a state public health infrastructure. The first cholera epidemic also contributed to growing concerns about the living conditions of urban populations. Although the origins of the public health movement in the 1830s and 1840s were more concerned with endemic diseases such as typhus and tuberculosis, cholera still played a prominent role by drawing attention to the need for a permanent board of health to continue the administrative measures that would help prevent other outbreaks. Chadwick's sanitary report pointed to this problem by noting the lack of enthusiasm for public health measures once the threat of cholera had passed.

However, once the alarm faded away, so did the motivation to address related problems of drainage, street and house cleansing, and improved water supplies and sewerage, and the local boards dissolved.<sup>152</sup> Chadwick's report primarily focused on the problem of typhus, or "fever" as it was called, which was both an endemic and epidemic disease, because it presented a constant threat to the British population.<sup>153</sup> In terms of numbers of deaths, typhus had a much greater impact on British society than cholera did in the nineteenth century. However, the mysterious and seemingly unpredictable characteristics of cholera made it a more fearful disease for several decades, and the sudden spikes in mortality during the epidemics took a great toll mentally on the population. Because of these characteristics, cholera remained an important part of the discussion about sanitary reform. The outbreak of the second epidemic in 1848 put cholera in the spotlight of public health reform as Parliament concurrently debated the passage of the Public Health Act and the Nuisances Removal and Diseases Prevention Act.

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<sup>152</sup> Edwin Chadwick, *Report on the Sanitary Condition of the Labouring Population of Great Britain* (London: W. Clowes and Sons, 1842), p. 341.

<sup>153</sup> Flinn, p. 8.

The work of Chadwick and other prominent sanitary reformers had a major impact on the numerous acts of public health legislation that were passed in the 1840s and 1850s. Two of the most important of these were directly influenced by the problem of cholera and the fear of its return. The Public Health Act of 1848, which established the three-person General Board of Health for a provisional five-year period, and the Nuisances Removal and Diseases Prevention Act, 1848 (also referred to as the “cholera bill”) were both proposed in Parliament on November 18, 1847 but not passed until the end of August 1848, only shortly before the cholera epidemic erupted in the fall.<sup>154</sup> Both acts expanded the bureaucracy of state public health officials and extended the powers of those central authorities over individuals, especially those living in the poorer and filthier neighborhoods most frequented by disease. The provisions of the acts also extended state supervision over local municipal agencies, but this imposition of centralized power met with initial resistance from many local authorities.

### **Public Health Act of 1848**

The Public Health Act of 1848 created the General Board of Health with the purpose of executing the provisions and regulations of the Act. It also allowed the members of the General Board of Health to appoint superintending inspectors to assist in the enforcement of the Public Health Act. The Act provided these appointed inspectors, clerks, and secretaries, along with the members of the General Board, with wages from Her Majesty’s Treasury. It further extended the reach of public health regulation by providing for the election of Local Boards of Health to be appointed by Town Councils and/or elected by owners and rate-payers (tax payers) of the district or borough. The elected members had to meet certain qualifications, including the possession of

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<sup>154</sup> *The Public Health Act, 1848; The Nuisances Removal and Diseases Prevention Act, 1848*; Steven Johnson, *The Ghost Map*, 118; Elizabeth Fee and Theodore M Brown, "The Public Health Act of 1848," *Bulletin Of The World Health Organization* 83, no. 11 (November 2005): 867.

a certain minimum value of real or personal estate, which meant that these elected members would all be of at least middle-class social status. The Local Boards of Health were given the power to appoint surveyors, inspectors of nuisances, clerks, and treasurers to enforce the regulations of the Public Health Act within the district or borough and whose wages would come from the General District Rates. The Local Boards could also “appoint a fit and proper Person, being a legally qualified Medical Practitioner or Member of the Medical Profession, to be and be called the Officer of Health, who shall be removable by the said Local Board, and shall perform such Duties as the said General Board shall direct.”<sup>155</sup> The Officer of Health was the only position provided for under the Public Health Act that had to be a legally qualified medical practitioner or member of the medical profession; none of the other positions created by the Act required any medical expertise to perform their designated roles.

The Public Health Act also bestowed upon the local boards of health the power and responsibility to make, alter, discontinue, clean, and empty sewers, as well as the responsibility of cleansing streets and disposing of rubbish, filth, soil, etc. Upon the recommendation of the Officer of Health or any two medical practitioners, the local boards of health also retained the power to inspect private homes that appeared to be in “such a filthy or unwholesome Condition that the Health of any Person is affected or endangered thereby” and require measures to be taken to “whitewash, cleanse, or purify the same, as the Case may require” at the expense of the owner.<sup>156</sup> This bestowed upon the local boards of health the right to exert their authority over private individuals and their residences by enforcing cleansing procedures on the basis of their judgment. It also put the burden of cost for these procedures on the owner of the residence.

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<sup>155</sup> “XL Power to Appoint an Officer of Health.” *The Public Health Act, 1848*.

<sup>156</sup> “LX Houses to be purified, on Certificate of Officer of Health, or of Two Medical Practitioners.” *The Public Health Act, 1848*.

However, the local boards were also given more responsibilities within the community to maintain certain levels of sanitation and enact measures of cleansing streets and sewers.

The new structure of sanitation management created by the Public Health Act did not meet initial widespread acceptance in Parliament. Many of them agreed on the need for such preventive sanitary legislation, but they could not agree on how to go about it. It took Parliament months of negotiation to finally settle on the terms of the act because “there were no models, no good way to choose among several defensible alternatives.”<sup>157</sup> Much of the disagreement revolved around who should plan and carry out projects for sanitary improvement and especially who should be responsible for paying for the projects. The cholera epidemic that had been spreading across Europe in 1848 put pressure on Parliament to reach a compromise before the disease broke out on British shores. The resulting Public Health Act of 1848 left out many of the problematic issues included in the initial bill, such as unsanitary burial grounds, and it left Metropolitan London to its own special legislation due to its size. Additionally, the Public Health Act applied to “Towns and populous Places in *England* and *Wales*” but excluded any place or work under the jurisdiction of the Commission of Sewers, which further complicated the distribution of powers among overlapping jurisdictions and authorities.<sup>158</sup> The end result of the negotiations was a watered down version in which the state public health authorities could essentially only facilitate rather than enforce the provisions of the act among local agencies. This allowed a certain level of autonomy among local boards of health to decide what kind of

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<sup>157</sup> Christopher Hamlin and Sally Sheard. “Revolutions in Public Health: 1848, and 1998?” *BMJ: British Medical Journal*, Vol. 317, No. 7158 (Aug. 29, 1998): p. 589.

<sup>158</sup> *Public Health Act, 1848*.

infrastructural reforms they wanted to adopt, though these plans were still subject to the General Board of Health's approval.<sup>159</sup>

Despite the level of compromise involved in the process of passing the Public Health Act of 1848, many still objected to its new sanitary regulations and the powers of the General Board of Health based on concerns about property rights and personal freedoms. Increasing criticism of the Board of Health over its five-year provisional term lead Parliament to not renew the Act. However, the General Board of Health was reestablished under different leadership and continued on an annual basis until 1858.<sup>160</sup> The Board was dissolved in 1858, and its responsibilities were split between other government agencies: the medical-related functions went to the Privy Council and all other duties were given to the Home Office. This redistribution of responsibilities meant that no single department retained overriding authority over matters of public health.<sup>161</sup> The Public Health Act of 1875 consolidated the previous piecemeal public health legislation into a more unified system of sanitary administration, but the Local Government Board established in the early 1870s to superintend public health responsibilities still had to share public health duties with other state agencies and became increasingly unpopular throughout the late nineteenth century.<sup>162</sup>

### **Nuisances Removal and Diseases Prevention Act of 1848**

Similar to the Public Health Act of 1848, the Nuisances Removal and Diseases Prevention Act of 1848 granted the “Town Council, Trustees, Commissioners, Guardians, Officers of Health, or other Body” who held jurisdiction or authority over “any Dwelling House

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<sup>159</sup> Hamlin and Sheard, p. 590.

<sup>160</sup> Fee and Brown, p. 867.

<sup>161</sup> Paul R. Wilding, "The Genesis of the Ministry of Health," *Public Administration* 45, no. 2 (Summer 1967): p. 149.

<sup>162</sup> Fee and Brown, p. 867; Wilding, p. 150.



or Building in any City, Town, Borough, Parish, or Place” in which was found “a filthy and unwholesome Condition as to be a Nuisance to or injurious to the Health of any Person” the power to “enter such Premises, and examine the same with respect to the Matters alleged in such first-mentioned Notice, and do all such Works, Matters, and Things as may be necessary for that Purpose.”<sup>163</sup> This meant that local authorities had the ability to enter and search private residences after receiving a written notice from “the Town Council, or by any Trustees or Commissioners for the drainage, paving, lighting, or cleansing, or managing or directing the Police of any City, Town, Borough, or Place, or by any other Body of a like Nature, or by any Commissioners of Sewers or Guardians of the Poor” which was “signed by Two or more inhabitant Householders of the Parish or Place to which the Notice relates, stating that, to the best of the Knowledge and Belief of the Persons by whom such Notice is signed...” that the building is “a filthy and unwholesome Condition as to be a Nuisance to or injurious to the Health of any Person.”<sup>164</sup> Additionally,

If upon such Examination, or upon the Certificate in Writing of Two legally qualified Medical Practitioners, it appear that any Dwelling House or Building so examined is in such a filthy and unwholesome Condition as aforesaid...such Town Council, Trustees, Commissioners, Guardians, Officers of Health, or other Body, or such Committee, shall make or cause to be made Complaint before a Justice, who shall thereupon issue a Summons...requiring the Owner or Occupier of the Premises examined to appear before Two Justices to answer such Complaint...<sup>165</sup>

The Act therefore held property owners responsible for the level of cleanliness and conditions of nuisance removal from their property and provided legal repercussions for those who did not comply with the requirements as judged by the local officials or medical practitioners. Along with the Public Health Act, the Nuisances Removal and Diseases Prevention Act of 1848

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<sup>163</sup> *The Nuisances Removal and Diseases Prevention Act, 1848.*

<sup>164</sup> *The Nuisances Removal and Diseases Prevention Act, 1848.*

<sup>165</sup> *The Nuisances Removal and Diseases Prevention Act, 1848.*

expanded the governing powers of local authorities in the form of town councils, commissioners, and officers of health who were in charge of enforcing public health regulations.

According to the Nuisances Removal Act, the written approval of the General Board of Health was also required to “build or open any Hospital for the Reception of Patients afflicted with contagious or infectious Diseases or Disorders.”<sup>166</sup> The Privy Council was given the highest authority when “any Part of the United Kingdom shall appear to be threatened with or affected by any formidable epidemic, endemic, or contagious Disease” to make orders to “direct that the Provisions herein-after contained for the Prevention of epidemic, endemic, and contagious Diseases be put in force in Great Britain...”<sup>167</sup> However, after order by Privy Council, the General Board retained the authority to issue, revoke, renew, or alter any directions and regulations for the prevention of epidemic, endemic, or contagious diseases. The General Board of Health also maintained the authority to issue regulations to “provide for the frequent and effectual cleansing of Streets and public Ways and Places...and for the cleansing, purifying, ventilating, and disinfecting of Houses, Dwellings, Churches, Buildings, and Places of Assembly...for the Removal of Nuisances, for the speedy Interment of the Dead, and generally for preventing or mitigating such epidemic, endemic, or contagious Diseases, in such Manner as to the said Board...may seem expedient.”<sup>168</sup>

Some of the language of the Nuisances Removal Act suggests that the legislation primarily targeted the poor sectors of the population. The twelfth clause of the Act gave “the

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<sup>166</sup> “VIII Notice to be given to General Board, and in Ireland to Commissioners of Health, of Intention to build or open Hospitals, &c.” *The Nuisances Removal and Diseases Prevention Act, 1848*.

<sup>167</sup> “IX Privy Council, &c. empowered to issue Orders for putting in force the Provisions of this Act relative to the Prevention of epidemic Diseases, &c.” *The Nuisances Removal and Diseases Prevention Act, 1848*.

<sup>168</sup> “X After Order by Privy Council, General Board of Health, &c. may issue Directions and Regulations.” *The Nuisances Removal and Diseases Prevention Act, 1848*.

Commissioners for administering the Laws for the Relief of the Poor in England” the authority to “require the Officers and Persons acting under them to inquire into, superintend, and report on the Execution of the Directions and Regulations of the General Board of Health,” along with the power to enforce the execution of those regulations by the local Guardians of the Poor.<sup>169</sup> The following order then continued that the previously mentioned Guardians

acting in the Execution of any such Directions or Regulations as aforesaid...are hereby empowered to enter and inspect any Dwelling or Place, if there be Ground for believing that any Person may have recently died of any such epidemic, endemic, or contagious Disease in any such Dwelling or Place, or that there is any Filth or other Matter dangerous to Health therein or thereupon, or that Necessity may otherwise exist for executing, in relation to the Premises, all or any of such Directions and Regulations as aforesaid.<sup>170</sup>

This gave the Guardians the right to enter into the dwellings of the poor for inspection simply on the belief that someone had died of a contagious disease or there existed an ambiguous “matter dangerous to health” within the building. The Nuisances Removal Act made this specific reference to the authority of the Guardians of the Poor in administering the provisions of the Act within their authorized jurisdiction, i.e. the neighborhoods of the poor, but it made no reference to the specific enforcement of its regulations within the neighborhoods of the middle or upper classes.

The Nuisances Removal and Diseases Prevention Act extended the authority of the General Board of Health over the rural counties and parishes not covered under the jurisdiction

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<sup>169</sup> “XII Poor Law Commissioners, &c. may compel, Guardians, &c. to execute Regulations and Directions of the General Board of Health, &c.” *The Nuisances Removal and Disease Prevention Act, 1848.*

<sup>170</sup> “XIII Power of Entry for the Purpose of enforcing Regulations of the General Board of Health, &c.” *The Nuisances Removal and Diseases Prevention Act, 1848.* By “Guardians of the Poor” the Act means “the Guardians, Directors, Wardens, Governors, Parochial Board, or other like Officers having the Management of the Poor for any Union, Parish, Combination, or Place where the Matter requiring the Cognizance of any such Officers arises,” as explained in Section XXIII “Interpretation of Terms.”

of the Public Health Act of 1848, but it was not to apply to “any District, Parish, or Place in which the Public Health Act, 1848, or any Part thereof, shall be in force, unless and except in so far as the General Board of Health...shall otherwise direct.”<sup>171</sup> This meant that the Public Health Act held jurisdiction over the more populated towns of England and Wales, but the Nuisances Removal and Diseases Prevention Act applied to all other areas of England and Ireland. However, as with the Public Health Act, the Nuisances Removal Act was not to be applied to places under the jurisdiction of the Commission of Sewers. This complicated structure of jurisdiction became extremely problematic in the actual application of the acts’ provisions at the local level.

### **Enforcement of the Public Health Acts**

The terms of the Public Health Act and Nuisances Removal and Diseases Prevention Act of 1848 suggested a relationship characterized by cooperation and effective communication between the General Board of Health and the local boards. However, ambiguity over jurisdictions along with local resistance to the imposition of state authority caused the initial application of the new sanitary provisions to be irregular and ineffective. Aware of some of the difficulties they might face in executing “a new and untrodden field of legislation,” the General Board of Health compiled a report that they presented to Parliament on the initial progress of the Public Health Act and the Nuisances Removal and Epidemic Diseases Prevention Act, along with their explanation for suggesting certain amendments to this legislation.<sup>172</sup> They reached many of the same conclusions as a report by the Metropolitan Sanitary Commission, including

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<sup>171</sup> “V Not to apply to Districts and Places in which the Public Health Act is in force.” *The Nuisances Removal and Diseases Prevention Act, 1848*.

<sup>172</sup> General Board of Health, *Report by the General Board of Health on the Measures Adopted for the Execution of the Nuisances Removal and Diseases Prevention Act, and the Public Health Act, up to July 1849* (London: William Clowes & Sons, 1849), p. 3.

the need to consider cholera “less as a disease to be cured by medicine, than as a pestilence to be checked by measures of prevention” and that the same measures of prevention applied to cholera as to other epidemics.<sup>173</sup> This realization led the Board to focus on cleansing as a necessary measure of prevention that applied to all varieties of epidemic disease, which fell under the provisions of the Nuisances Removal and Epidemic Diseases Prevention Act. Labeling cholera a “pestilence” rather than a “disease to be cured by medicine” suggests that these notions of illness were considered as separate categories and characterizes “pestilence” as a less scientific, more indefinite concept. This perception of a pestilential cholera fits in with common moral associations attached to the disease that depicted cholera as an illness encouraged by neglectful or dissipated habits, often among the poorer population.

The General Board of Health directed the local Boards of Guardians to carry out the necessary measures of internal and external cleansing, which included ordering their medical officers to visit the localities known to be frequented by epidemics and contagious diseases in order to assess which places were in a state dangerous to health and in need of frequent cleansing and removal of nuisances. Confident that the importance of following through with these directions would be immediately evident to the local boards, the General Board of Health was greatly surprised and disappointed to discover that many of the places where cholera had previously broken out had remained in a filthy and unhealthy state. The inspections ordered by the General Board of Health had not been carried out by the local authorities, and “in several conspicuous instances the owners of the ill-conditioned houses...were members of the Local Boards by which these defaults were committed.”<sup>174</sup> The Nuisances Removal and Diseases Prevention Act had granted authority to local bodies to administer and enforce the necessary

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<sup>173</sup> *Execution of...Public Health Act*, p. 7.

<sup>174</sup> *Execution of...Public Health Act*, p. 9.

sanitation measures, but it was only upon visitation from members of the General Board of Health that these procedures were actually put into motion.

The General Board of Health described their visit to the district of Dumfries as a primary example of the response by local authorities. According to the report, Dumfries had experienced one of the most severe cholera outbreaks during the 1832 epidemic but had accomplished little sanitary improvement since then. When the members of the General Board of Health visited Dumfries during the 1849 cholera epidemic, the parochial Board had disregarded all sanitary regulations and recommendations issued by the General Board, including operations of cleansing, setting up a house of refuge, and organizing a system of medical relief, despite the ongoing spread of the disease. Because the local authorities had made no apparent effort to check the increasing mortality from the epidemic, the General Board of Health decided “this was a case requiring a stringent enforcement of the regulations of the Board” and sent one of their medical inspectors, Dr. John Sutherland, “to organize a plan of house-to-house visitation, to open dispensaries for affording medical assistance by night as well as by day, and to provide houses of refuge for the temporary reception of persons living in filthy and overcrowded rooms where the disease was prevailing.”<sup>175</sup> The General Board reported an immediate decrease in the death rate as a result of the adoption of the aforementioned measures even to the point that the disease had nearly disappeared after a couple of weeks. The example of Dumfries depicts the problematic relationship between the central authority of the General Board of Health and the local authorities of Boards of Guardians and boards of health. In their report, the General Board of Health blamed the parochial authorities for the high casualties during the cholera epidemic and chastised them for not enforcing the recommended sanitary regulations. This highlights the

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<sup>175</sup> *Execution of...Public Health Act*, p. 10.

discord that existed between the centralized and local authorities and the subsequent difficulties faced by the Board in enforcing their regulations.

The General Board of Health's disappointment in local authorities was not restricted to those in Dumfries. In the section of the report regarding the "State of Preparation of Local Authorities," the General Board noted that when investigating the enforcement of the Nuisances Removal and Diseases Prevention Act, they "found the parochial bodies, the authorities charged with the local execution of the law, generally unprepared for the exercise of their duties, in some cases entirely ignorant of them, and in others from the dread of expense, very reluctant to perform them."<sup>176</sup> An obvious disconnect existed between the central government agency of the General Board of Health and the parochial agencies of local boards of health or boards of guardians: whether from ignorance or fear of high costs, local boards were not complying with the regulations of the Nuisances Removal and Diseases Prevention Act. The lack of enforcement of the new sanitary legislation suggests a conflict of authority between the local and the central government authorities because the local boards either did not take the authority of the General Board of Health seriously enough to feel compelled to obey their proscribed measures or the local agencies purposefully refused to comply with these state regulations because they considered them unnecessary or invalid.

The members of the General Board had great faith in the effectiveness of their proscribed measures, and their report credited the rapid recovery of Dumfries with the measures initiated by Dr. Sutherland to control the spread of the epidemic, including house-to-house visitation and offering houses of refuge. The General Board also cited evidence from a report by Dr. Sutherland that demonstrated how the districts where house-to-house visitations were

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<sup>176</sup> *Execution...of Public Health Act*, p. 22.

implemented experienced a decrease in the number and severity of cholera cases while the unvisited districts experienced an increase in the number and severity of cholera. Citing Dr. Sutherland's conclusion that "upon the whole...no mind open to the reception of evidence can doubt that much suffering was prevented, and a large amount of human life preserved," the General Board of Health legitimized their authority while also pointing out the inadequacy of local authorities.<sup>177</sup>

### **Problems of Jurisdiction**

However, the insufficiency of local authorities extended to more than just their efforts at implementing health regulations. The General Board of Health found the entire system of local authority to be "defective" in regard to the maintenance of public sanitation because the divided responsibility among the local powers for executing the law frequently conflicted and they lacked "the unity requisite to carry out prompt remedial measures, even when tolerable information existed with reference to them."<sup>178</sup> Part of the problem was the separation of local administrative bodies in respect to the execution and control of works: the works for the water supply were separated from the works for sewerage, which were separated from those for house drainage. Additionally, the works for surface cleansing were separated from the cleansing of sewers and drains, and occasionally the cleansing of the main streets was separated from that of courts and alleys.<sup>179</sup> The General Board concluded that the separation of sanitary services among so many different local administrative bodies, despite the provision under the Public Health Act of 1848 for the consolidation and combination of such bodies, "seriously impeded the execution

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<sup>177</sup> *Execution of...Public Health Act*, p. 17-18.

<sup>178</sup> *Execution of...Public Health Act*, p. 23.

<sup>179</sup> *Execution of...Public Health Act*, p. 23.



of the Diseases Prevention Act.”<sup>180</sup> In other words, the authority to enforce the sanitary measures and regulations proscribed in the Act had been split among too many separate local administrative bodies, which had prohibited the successful implementation of these measures at the local level.

To solve the problem of the separation of local powers, the General Board had proposed the formation of Special Boards of Health composed of members of the various local boards who oversaw the public works in order to unite the directions of these multiple agencies. However, this suggestion was rejected by the law officers who “were of opinion, that the general terms of the statute could not be so construed as to authorise a combination of the local authorities” as proposed by the General Board.<sup>181</sup> Because of this, the regulations continued to be carried out by the multiple separated powers and only with the voluntary cooperation of those local agencies. Even when the local authorities complied with the proscribed measures, the separation of powers caused delay in action. The General Board argued for a stronger centralized authority because, “had it been possible to combine the various authorities, as at first contemplated, a far greater unity and efficiency would have been ensured both in England and Scotland,” but the local boards clearly resisted this kind of centralized control and wanted to maintain their individual powers.<sup>182</sup>

Unfortunately for the General Board of Health, the inefficient separation of local powers was not the only impediment to the successful implementation of sanitary regulations. Some local authorities, such as the Select Vestry in Liverpool, simply rejected orders issued by the General Board that they considered unnecessary. Because of such instances of direct refusal to

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<sup>180</sup> *Execution of...Public Health Act*, p. 24.

<sup>181</sup> *Execution of...Public Health Act*, p. 24.

<sup>182</sup> *Execution of...Public Health Act*, p. 25.

abide by the authority of the General Board of Health, the Board's disgruntled members requested increased powers to prosecute those who violated or failed to comply with the measures and regulations of the Nuisances Removal and Diseases Prevention Act. They realized that sanitary measures could not be effectively enforced if they remained recommendations without any real consequences for disobedience. Thus, they argued, the only way to secure the proper enactment of the sanitary regulations was to place both the power to create such regulations and the power to prosecute those who disobey them under one body of authority, the General Board of Health.<sup>183</sup> However, the consolidation of such powers under a central, superintending body of authority for the enforcement of public health regulations would not really occur until several decades later.

### **Public Response**

The greatest obstacle to the passing of the Public Health Bill was the element of centralization involved in the creation of a General Board of Health in London to oversee all measures of the bill. This issue came up repeatedly in discussions of the bill as it was debated in Parliament throughout the first part of 1848, and it continued to be a problematic point after the Public Health Act was passed later that year. The cholera epidemic that erupted soon after created more tension surrounding the Public Health Act and the centralization of power. The struggle for authority between the General Board of Health and parochial agencies persisted throughout 1848 and 1849 even after the worst of the cholera epidemic had abated. Articles in the *Times* and other periodicals chronicled the ongoing debate and expressed a deep concern

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<sup>183</sup> *Execution of...Public Health Act*, p. 35-36.

about the pressing question, “Shall the sanitary government of the country be for the future central or local?”<sup>184</sup>

### **Opposition to Centralized Authority**

According to a *Times* article from September 26, 1849, the parochial party and city guardians protested the centralization of sanitary control in the form of a single, state-run agency for being “an unconstitutional encroachment on the ‘free-born Briton’s indefeasible right of local self-government;’ and, secondly, as an ‘impertinent and unwarrantable interference’ with the sanitary operations already adopted by the parish-officers.”<sup>185</sup> The parochial party argued that the instructions and orders of the General Board of Health were unnecessary because local authorities already carried out such sanitary measures on their own initiative. Additionally, the parochial authorities contended that they carried out these measures for preventing epidemics in a “more vigorous, more timely, more prudent, more efficacious, and, above all, less expensive” way than the centralized Board of Health.<sup>186</sup> As “men of business,” the city guardians considered themselves to be more knowledgeable than the state government authorities regarding the needs of their own poor, which made them “better qualified to provide for their relief.”<sup>187</sup> The account of the parochial agencies’ argument in the *Times* article emphasized their better qualifications rather than the issue of money, whereas the General Board of Health’s report on the execution of the Public Health Acts placed greater emphasis on the reluctance of local authorities to act because of high costs. Either way, it is clear that the financial burden of sanitary reform was a common concern among local authorities and a contentious point of dispute between local and centralized control.

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<sup>184</sup> *Times*, London, 26 September 1849, p. 4, col. b.

<sup>185</sup> *Times*, London, 26 September 1849, p. 4, col. b.

<sup>186</sup> *Times*, London, 26 September 1849, p. 4, col. c.

<sup>187</sup> *Times*, London, 26 September 1849, p. 4, col. c.

The September 26<sup>th</sup> *Times* article's representation of the parochial argument depicted a direct defiance of the General Board of Health and centralized state control over local affairs. Strongly disagreeing with the parochial opposition, the author argued that the management of burial grounds, slaughterhouses, and manufactories concerned the health of whole cities as well as the whole country, not just the immediate area where they were located. He accused the parish authorities of continually failing to take steps to prevent the spread of epidemic disease or to carry out any necessary sanitary measures. Even when "the Asiatic pestilence itself, following its sure precursor [influenza], came traveling rapidly towards" Great Britain, the "parochial officers did nothing—absolutely nothing."<sup>188</sup> The author further scolded the parochial officials for rejecting the counsel of the medical officers during the cholera epidemic and allowing an unparalleled rate of weekly mortality. The adamant tone of the article's advocacy for the centralization of sanitary control in the embodiment of the "lawful authority of the Board of Health" clearly does not provide an impartial representation of the dispute. The article presents an important insight into the arguments for and against centralized authority over public health reform, as well as how this conflict was represented to the reading public, but it was just one perspective in the contentious debate over local autonomy versus centralized state power.

Even as the Public Health Bill was still being discussed in Parliament during the summer of 1848, local boards within London attempted to sway the public against the proposed legislation. According to an article in *The Westminster Review*, the Corporation of London had attempted to convince the public that the Public Health Bill was "an infringement of the 'Saxon' institutions of the country, and an attempt to supersede local government by centralization."<sup>189</sup> However, most of the public had not been deceived, and they "gradually acquired a conviction

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<sup>188</sup> *Times*, London, 26 September 1849, p. 4, col. c.

<sup>189</sup> *The Westminster Review*, Vol. 49 (New York: Leonard Scott & Co., 1848), p. 224.

that the London Corporation, as a specimen of a Saxon institution...is not exactly one of which the country has any reason to be proud; and that a little ‘centralization,’ or something else that would enforce the reforms...would not be an unendurable grievance.”<sup>190</sup> The article also argued that one of the major problems with the current system of local administration in the metropolis was the divided jurisdictions and that “a unity of administration, without which there can be neither efficiency nor economy in the local government,” was necessary for the sanitary administration of London.<sup>191</sup> However, the author maintained that this kind of unity of administration did not mean “‘centralization’ in the obnoxious sense of the term;” instead it meant that municipal councils would have freedom of action but would also be kept accountable to their duties by centralized state supervision.<sup>192</sup> A reduction in the number of municipal agencies would also result in less rates being required from the people. This argument attempted to soften the connotation of “centralization” by presenting it as a solution to the inefficient and expensive ways of the current system under separate local institutions.

However, at least some of the general public opposed sanitary reform. According to the *Edinburgh Review*, many people considered “all regulations for securing cleanliness and removing filth...as invasions of the privacy of the domestic hearth and the person, and amounting to an impertinent intermeddling” in their personal affairs.<sup>193</sup> Sometimes the centralized sanitary authorities failed to gain the public’s support because their actions were unsuccessful or they abused their power. An article in the *British Quarterly Review* criticized the Metropolitan Commissions’ failure to respond effectively to the deficiencies in surface drainage, and the author protested that the “rate-payers had no voice” in the decisions made by the

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<sup>190</sup> *The Westminster Review*, Vol. 49 (New York: Leonard Scott & Co., 1848), p. 224.

<sup>191</sup> *The Westminster Review*, Vol. 49 (New York: Leonard Scott & Co., 1848), p. 233.

<sup>192</sup> *The Westminster Review*, Vol. 49 (New York: Leonard Scott & Co., 1848), p. 233.

<sup>193</sup> *The Edinburgh Review*, Vol. 91 (New York: Leonard Scott & Co., 1850), p. 113.

Metropolitan Sewer Boards.<sup>194</sup> Part of the problem was that the “commissioners were far too numerous for business, and their Acts were sanctioned by the names of persons of high rank, the Duke of Wellington, for example, and others, whom it was the custom to include in the Commission, but who could not and were not expected to attend.”<sup>195</sup> The article criticized the Commissioners of Sewers for being careless, apathetic, and irresponsible in their duties and accused them of benefiting financially from their positions, sometimes illegally by altering accounts. It also accused the commissioners of taking advantage of the public by levying high taxes on people who connected their house drain to the main sewer and by requiring them to employ the bricklayers of the Commission to build the drain, who would then overcharge the people. For this reason, the author sarcastically “supposed that these Commissioners of Sewers regarded cleanliness as a hurtful luxury, to be, as much as possible, discouraged.”<sup>196</sup>

Because of the deficiencies of the Metropolitan Sewer Board and other agencies, the *British Quarterly Review* article supported the expansion of power delegated to local boards elected by the rate-payers. They would be given the powers to levy rates and to raise money upon the rates to fulfill their responsibilities of directing the majority of sanitary projects and maintenance, such as drainage and street paving. The author of the article supported this plan because, “as a general principle, there will be no more interference on the part of the central authorities than shall be found necessary to secure to each local administration the benefits of

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<sup>194</sup> *British Quarterly Review*, Vol. 9 (London: Jackson & Walford, 18, St. Paul’s Churchyard, 1849), p. 57.

<sup>195</sup> *British Quarterly Review*, Vol. 9 (London: Jackson & Walford, 18, St. Paul’s Churchyard, 1849), p. 57.

<sup>196</sup> *British Quarterly Review*, Vol. 9 (London: Jackson & Walford, 18, St. Paul’s Churchyard, 1849), p. 58.

general experience, and to afford such support as will prevent any more party interests from opposing successfully any sanitary measure obviously for the good of the community.”<sup>197</sup>

### **Conflicting Jurisdictions**

The conflict of jurisdiction within the sphere of localized control provided another obstacle to the successful reform of public health and sanitary measures. The need for the administration of efficient sanitary procedures had increased during the cholera epidemic, and the “ill-timed differences of these conflicting jurisdictions” were publicly recognized in newspaper articles.<sup>198</sup> One *Times* article criticized the “stubborn officials” for being so preoccupied with maintaining their authority over their jurisdiction that they couldn’t spare any time for “so secondary a matter as the arrangements which might possibly arrest the progress of the plague.”<sup>199</sup> With disputes between the Health Committee of the Corporation of the City of London and the Court of Common Council and with “deadly strife between the City of London Board of Guardians and the officer of health for the City of London, because he is under the jurisdiction of the Sewers Commission and of the Corporation,” none of the necessary measures of cleansing and improving sanitation could be successfully carried out to help slow the spread of cholera.<sup>200</sup>

The disagreements over jurisdiction among municipal agencies only heightened the tensions between local and centralized authorities. These disputes also highlighted the relative weakness of the General Board of Health to assert its authority at a local level through often-futile efforts to issue orders and carry out measures of sanitation. It was apparent to observers

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<sup>197</sup> *British Quarterly Review*, Vol. 9 (London: Jackson & Walford, 18, St. Paul’s Churchyard, 1849), p. 69.

<sup>198</sup> *Times*, London, 12 September 1849, p. 4, col. d.

<sup>199</sup> *Times*, London, 12 September 1849, p. 4, col. d.

<sup>200</sup> *Times*, London, 12 September 1849, p. 4, col. d.

that when the Board of Health began “to exercise its discretion, and to use what it imagined to be its powers, it [was] engaged in a contest with the parochial authorities,” who thought “it their first duty to have an opinion and a mind of their own.”<sup>201</sup> The clash of opinion and desire for authority created a deadlock between local and state officials, resulting in insufficient measures to respond to the worsening cholera epidemic. These conflicts of jurisdiction and authority were widely recognized and used to support the transition toward the centralized control of sanitation in the General Board of Health.

## **Conclusion**

Though cholera was no longer a new and unknown disease to Great Britain, enough time had passed since the first epidemic that many people were unprepared for its arrival. The second epidemic caused less terror across the nation, but cholera was still a mystery and caused panic in the vicinity when outbreaks occurred. The majority of medical practitioners and public health officials agreed that cholera was not contagious and that quarantine regulations were ineffective measures in response to cholera, but medical thought still varied widely on how the disease was transmitted and how to best treat patients.

Though the first epidemic had a stronger emotional and psychological impact on the public, the second epidemic took a much greater toll on the population in terms of lives. It is difficult to obtain accurate numbers, but according to William Farr’s *Report on the Mortality of Cholera in England in 1848-1849*, over 55,000 deaths occurred from cholera in England alone over the course of the epidemic in 1848 and 1849.<sup>202</sup> Approximately 14,799 of those deaths occurred in London. The metropolis had fared relatively well during the first epidemic since it

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<sup>201</sup> *Times*, London, 13 September 1840, p. 4, col. b.

<sup>202</sup> William Farr, *Report on the Mortality of Cholera in England, 1848-49* (London: W. Clowes and Sons, 1852), p. 1, 5.



had taken some time for cholera to make its way down the coast from Sunderland, but London experienced one of the most severe outbreaks in the country during the second epidemic. Because Parliament was proposing and debating public health legislation while the epidemic was raging through London's neighborhoods, the need for sanitary reform became even more imperative, as well as controversial. The epidemic of 1831-1832 had laid the groundwork for the emergence of the public health movement, but the epidemic of 1848-1849 served as the influential backdrop for the debates over controversial public health legislation.

The confluence of rapid urbanization and industrialization in the early nineteenth century created several social problems related to the health and rights of the British population. The cholera epidemic of 1848-1849 allowed Parliament and the General Board of Health to point directly to the urgent problems of drainage, waste removal, sanitation, and disease control to support the need for centralized powers of public health administration. However, the public resented the new and intrusive state intervention into their lives, and parochial boards and local administrative authorities resisted the loss of their autonomous control that would result from the reforms in public health legislation. Despite claims that the new public health legislation would be permissive and enable local authorities to accomplish more improvements, tensions only increased between the General Board of Health and local boards of health and parochial authorities. Many medical professionals also vied for influence in the development of sanitary regulations and public health reform. Just as in the first epidemic, cholera served as the backdrop for conflicts of authority between medical professionals, the British public, and the government. Because less time elapsed between the second and third epidemic, much of these conditions would be the same when cholera returned again in 1853, but developments in public health administration and medical knowledge would alter responses to the disease.

## CHAPTER 3

### “Fecalised Water and Air: Epidemiological Breakthrough in the Cholera Epidemic of 1853-1854”

Only five years separated the second and third major cholera epidemics in Great Britain. Medical understandings of the disease and the state response to outbreaks had changed much less between the second and third epidemics than they had between the first and second. However, by 1853 the General Board of Health had been forced to reorganize after its five-year term ended, and it would have to take a new approach towards its interactions with local authorities and parochial boards. Disagreements over how public health measures should be managed and disputes over jurisdiction still impeded progress in sanitary improvements, and the centralization of public health authority remained a controversial issue of public debate. With approximately 24-25,000 deaths<sup>203</sup>, the third cholera epidemic of 1853 and 1854 did not have as great of an impact on mortality as previous epidemics, but a major epidemiological breakthrough made during the 1854 outbreak had a tremendous impact on future understandings and responses to cholera.

#### **Social Context**

About the same time the third major cholera epidemic was approaching Great Britain, the country was entering a war in Eastern Europe. The Crimean War drew the nation’s attention away from public health matters and dominated discussion in Parliamentary sessions. Several public health measures died in the 1854 Parliamentary session as a result of the focus on the war,

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<sup>203</sup> R. J. Morris, *Cholera 1832: The Social Response to an Epidemic* (New York: Holmes & Meier Publishers, 1976), p. 13.

and the events in Crimea dominated the news.<sup>204</sup> Several of the most prominent magazines of the time, including *The Westminster Review*, the *Edinburgh Review*, the *Quarterly Review* or *Blackwood's Edinburgh Magazine*, remained silent on the topic of the cholera epidemic while it was attacking Britain in 1854 and 1855.<sup>205</sup> Magazine articles during those years were dominated by topics relating to politics, international affairs, and especially the war in Crimea.

Though news of the Crimean War drew attention away from domestic issues related to the cholera epidemic and sanitary reform, the war was greatly impacted by cholera as well. Before they even reached the war front, many British troops had succumbed to the cholera epidemic on board the ships carrying them to Europe or as soon as they reached the shore.<sup>206</sup> The military encampments were riddled with disease throughout the war, but cholera was especially prominent. As the epidemic spread through the army camps from July 1854 to February 1855, approximately 18,000 British soldiers lost their lives to cholera.<sup>207</sup> Though the General Board of Health and local authorities worked to improve local sanitation and prevent the spread of cholera on the home front, the epidemics went largely unchecked among the British forces on the war front who suffered from contaminated water sources and insufficient medical services.<sup>208</sup>

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<sup>204</sup> *Fraser's Magazine for Town and Country*, Vol. 50 (London: John W. Parker and Son, West Strand), p. 238-239.

<sup>205</sup> *The Wellesley Index to Victorian Periodicals: 1824-1900*, Vol. I-IV.

<sup>206</sup> *Times*, London, Sept. 2, 1854, p. 8, col b-c.

<sup>207</sup> Andrew D. Cliff and Matthew Smallman-Raynor, "The Geographical Spread of Cholera in the Crimean War: Epidemic Transmission in the Camp Systems of the British Army of the East, 1854-1855," *Journal of Historical Geography*, Vol. 30, Issue 1 (Jan. 2004), p. 33.

<sup>208</sup> Cliff and Smallman-Raynor, p. 38.

## State Action

### **The Reorganization of the General Board of Health**

Sir Benjamin Hall became the President of the reconstituted General Board of Health on August 12, 1854 just as the cholera epidemic was erupting in London. He applied to the Treasury for the employment of two Medical Inspectors and appointed Dr. Sutherland and Dr. Milroy the same day. The duty of the Medical Inspectors was to “advise and assist local authorities in the exercise of their powers under the Nuisances Removal and Disease Prevention Acts, and to aid [Hall] in the performance of [his] functions under the same Acts which empower the General Board to issue regulations and directions for the prevention and mitigation of epidemic disease.”<sup>209</sup> President Hall realized that though the Acts *empowered* the General Board to issue regulations, they had “no effectual power to enforce upon Boards of Guardians the execution of these regulations and directions” and the President could only attempt “urging and aiding the local authorities in their execution.”<sup>210</sup> Thus the struggle for authority between local agencies and the centralized General Board of Health continued. Despite the acknowledgement of this problem during the previous cholera epidemic six years earlier, the General Board had not succeeded in acquiring much real control over local authorities, especially the Metropolitan Boards of Guardians in London.

Through a circular letter sent to the Metropolitan Boards of Guardians on August 12, 1854, the General Board of Health made an effort to respond to the epidemic with more coordination between the central and local authorities. They affirmed the responsibility and

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<sup>209</sup> General Board of Health, *Letter of the President of the General Board of Health, to the Right Honourable the Viscount Palmerston, Secretary of State for the Home Department, etc., Accompanying a Report from Dr. Sutherland on Epidemic Cholera in the Metropolis in 1854* (London: George E. Eyre and William Spottiswoode, 1855), p. 5-6.

<sup>210</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 6.

power of local Boards of Guardians to direct local efforts but made an enthusiastic offer to provide assistance or advice by sending one of the General Board's medical officers or an Inspector from the Poor Law Board to consult on necessary preventive measures and arrangements for treatment of the sick. The circular received mixed results from the Metropolitan Boards. Although "several Boards accepted the offer of advice," many of the others "gave unsatisfactory accounts of their proceedings; several declined assistance on the ground that they were doing all that was necessary, and from some Boards no answers were returned."<sup>211</sup> The General Board's attempt to intervene in the workings of the Metropolitan Board had little success because, "of the few Boards who accepted assistance the majority were not those of parishes which suffered much from the epidemic, and in one or two instances of severely affected parishes, the advice asked for and given was not acted on."<sup>212</sup> These responses suggest some willingness on the part of local agencies to cooperate with state authorities but mostly just for the appearance of cooperation; they still showed reluctance to comply with directions from the General Board.

The "multiplicity of local authorities" was still a major obstacle facing sanitary authorities in all parts of Britain.<sup>213</sup> London especially suffered from the challenges of multiple local and municipal authorities clashing over jurisdiction. President Hall recommended replacing the "existing chaos of local jurisdictions" with Local Boards of Health for the metropolitan

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<sup>211</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 24.

<sup>212</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 24.

<sup>213</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 15.

districts that would have enough powers to address all of the needed sanitary improvements.<sup>214</sup>

Then the details of public health measures could be left to the Local Boards and any larger issues, such as water supply or laying down major sewer lines, could be directed to a more centralized metropolitan Board of Works. These suggestions demonstrate the willingness of the General Board of Health to leave local agencies to their own management, but only if constituted in a manner that met their approval and that would leave major decisions and works to a centralized agency.

In response to the perceived failure of the local boards to initiate “any efficient measures for protecting the public health of the metropolis,” the President of the General Board appointed more Medical Inspectors to inspect the parishes suffering the most from the epidemic.<sup>215</sup> As during the 1848-49 epidemic, these Medical Inspectors were charged with examining the extent to which the preventive measures, cleansing, and removal of nuisances required by the General Board’s regulations were being carried out in each parish, whether sufficient medical attendance was being provided for the sick, whether houses of refuge and hospitals had been properly provided, and whether other measures of relief had been organized. They were additionally instructed to “urge in the strongest manner the necessity of medical house-to-house visitation being carried out,” investigate into the possible local causes of the outbreak, and report on any deficiencies or suggested improvements in the parish procedures.<sup>216</sup> In response to serious complaints, a special section of the medical team was sent to evaluate the quality of the water supply in the southern districts of the city. The President of the General Board assessed the

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<sup>214</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 15.

<sup>215</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 24.

<sup>216</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 24.

reports made by the Medical Inspectors and then sent specific suggestions urging the local authorities to “adopt the steps required for saving the lives of the people.”<sup>217</sup> By sending out their team of Medical Inspectors to the parishes, the General Board of Health intended to “aid the local authorities without interfering with their freedom of action, and to lead them to fulfil the obligations imposed on them by the Statute without resorting to any attempts at compulsion.”<sup>218</sup> This course of action demonstrates how the General Board adjusted their approach in response to the difficulties they experienced with local authorities during the previous epidemic. They could not legally force the parochial Boards of Guardians to take certain actions so instead they attempted to assert some level of control over local sanitary measures through claims of cooperation with parish agencies.

### **A New Approach**

*The Spectator* reported on the reconstruction of the Board of Health and analyzed the potential success of the new strategy of persuasion instead of compulsion. An August 19, 1854 article recognized that Sir Benjamin Hall and Edwin Chadwick took completely opposite approaches to directing the Board of Health and that the transition would bring many changes to the strategies used in managing epidemics and sanitation. President Hall had announced his intention not to command, but “only to counsel, advise, and guide,” and his selection as President of the Board of Health partially resulted from his public advocacy of local self-government.<sup>219</sup> These characteristics embodied the opposite of Chadwick’s strategy of compulsion by a strong central governmental agency. *The Spectator* approved of the change, but

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<sup>217</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 25.

<sup>218</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 25.

<sup>219</sup> *The Spectator*, August 19, 1854, p. 880.

they recognized that “some effectual interference is evidently necessary” and only time would tell if the new approach would produce the desired result.<sup>220</sup> They were optimistic in their hope that local bodies would gladly accept assistance offered by the Board of Health in times of trouble as long as it was not forced upon them.

However, the actions of the General Board of Health suggest that they intended to carry out their sanitary measures at the local level with or without the cooperation of local authorities. If the parish Boards of Guardians did not adopt the President’s suggestions for altering their procedures in order to comply with the General Board’s regulations, further steps were taken to enforce state control at the local level. When local “authorities would not do their duty,” especially during the worst of the cholera epidemic, the President of the General Board “directed the Inspector to call for inquests on the bodies of any persons who had died from neglect.”<sup>221</sup> This course of action was threatened in several cases to “secure compliance,” but it was only carried out in one case “where several lives had been sacrificed in consequence of neglect of the Board’s regulations.”<sup>222</sup> Because the General Board of Health held such limited powers to enforce their regulations at the local level, they were forced to seek alternative methods of ensuring compliance by the local boards and retaining some level of control over the sanitary condition of each parish.

The President of the General Board of Health also formed a Medical Council of thirteen appointed medical professionals with whom he could consult on scientific inquiries during the epidemic:

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<sup>220</sup> *The Spectator*, August 19, 1854, p. 880.

<sup>221</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 25.

<sup>222</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 25.



But upon scientific matters connected therewith, where the medical profession are to be consulted, advised with, laid under contribution for service or information, or called upon to act, I wish to have the aid of a Medical Council, to whom I may submit questions for consideration, and whom I may ask to suggest or undertake such inquiries as may from time to time be necessary.<sup>223</sup>

President Hall recognized that medical and scientific knowledge would be useful in organizing an effective response to the epidemic, but his request for a council of practicing medical professionals suggests that this connection between medical science and public health had not been previously assumed. Even though the General Board of Health employed Medical Inspectors to investigate local conditions, consideration had not previously been given to utilizing the specialized knowledge of medical professionals to conduct a specific scientific inquiry into the causes and characteristics of cholera that could inform the design of public health measures. During the previous cholera epidemics in 1831-32 and 1848-49, a gap had existed between contemporary medical/scientific knowledge and administrative action by public health reformers. This may have partially resulted from Edwin Chadwick's low opinion of the medical profession. Now that Chadwick was no longer the president of the General Board of Health, new leadership had brought a new approach to the problem of cholera epidemics.

## **Medicine**

### **“All Smell is Disease”**

Despite new strategies undertaken by the General Board of Health, many of the same sanitation problems that had encouraged the spread of cholera in 1848 and 1849 still existed in 1854. Issues such as defective drainage, open ditches used as sewers, back-to-back houses with poor ventilation, use of cellar dwellings, neglected street cleansing, and the poor condition or lack of sewer systems persisted in overcrowded neighborhoods where cholera commonly

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<sup>223</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 10.

appeared. In their investigations of metropolitan districts, Medical Inspectors of the General Board of Health found that the condition of the sewerage and drainage of the city had the greatest effect in predisposing certain localities to cholera. They admitted that although “bad water, improper food, want, fatigue, depressing passions, bad health, and especially the existence of other diseases, powerfully predisposed individuals to attacks of cholera, the effluvia arising from collections of night-soil were by far the most influential,” and the atmospheric contamination from open sewers and drains directly contributed to the occurrence of disease.<sup>224</sup>

The Medical Inspectors observed the correlation between cholera and excrement with the concentration of cholera cases around areas with open sewers, poor drainage, and improper waste removal. However, they attributed this connection to the exhalations and “unwholesome gases” released from sewers and drains rather than to a water supply contaminated by the contents of sewers and drains. This understanding of cholera followed the miasma theory in which disease was understood to travel through impure air, often called “effluvia” or “miasma.” This included the belief that bad smells indicated the presence of disease or, as Edwin Chadwick believed, “all smell is disease.”<sup>225</sup> Sanitary reformers noticed that the repulsive stench of open sewers and overflowing cesspools provided a marker for locations likely to have outbreaks of cholera (as well as other diseases like typhus), but they did not realize that this correlation resulted from the unsanitary living conditions and polluted water supply that caused the offensive stink, not the actual smells themselves. The widespread belief that “bad air” caused disease meant that action taken to combat cholera focused on getting rid of the stench from sewers and cesspools, usually by heavily cleansing streets and buildings with chloride and lime.

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<sup>224</sup> General Board of Health, *Letter of the President of the General Board of Health...Accompanying a Report from Dr. Sutherland...in 1854*, p. 31.

<sup>225</sup> As quoted in Halliday, p. 913, and Johnson, p. 114.

This method may have helped to slow the spread of cholera by temporarily cleaning the streets and preventing the contamination of people's hands, shoes, clothes, etc. that could occur by travelling through the filth and muck of city streets, but cleansing with chloride and lime did not purify the water supply or address the actual source of cholera.

Some doctors and public health reformers, such as Dr. John Sutherland, recognized a connection between cholera and contaminated water supplies, but they believed the foul water was only a predisposing condition of cholera rather than the actual source.<sup>226</sup> Some doctors believed that cholera was a specific poison passed from one person to another; others even proposed theories of cholera as a microorganism or parasite that passed through the human intestinal tract by the ingestion of excrement. However, Dr. John Snow was the only one to develop a complete theory of how cholera passed as an unseen microorganism through feces-contaminated water and into the intestinal tract of its next victim.<sup>227</sup> Because most of the medical and sanitary reform community adhered to the miasma theory of disease, Dr. Snow found it difficult to convince others of his findings as he developed his waterborne theory of cholera during the 1840s and 1850s.

### **The Father of Modern Epidemiology**

Born the oldest of nine in 1813 to a Yorkshire laborer, John Snow grew up with modest means and lived in a poor part of the city among unskilled, manual city workers. Despite his humble beginnings, he managed to complete his elementary education in York and obtain an

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<sup>226</sup> Stephen Halliday, "Commentary: Dr. John Sutherland, *Vibrio cholerae* and 'Predisposing Causes,'" *International Journal of Epidemiology* 31, no. 5 (October 2002), p. 913.

<sup>227</sup> Wade Hampton Frost, M.D., "Introduction," *Snow on Cholera: Being a Reprint of Two Papers by John Snow, M.D.* (New York: Hafner Publishing Company, 1965), p. xvi-xvii.

apprenticeship to a medical practitioner in Newcastle-upon-Tyne.<sup>228</sup> This medical practitioner was a surgeon and an apothecary, which offered Snow training as both a practitioner and dispenser of medicine. It was during this apprenticeship that Snow first encountered cholera while helping treat cholera victims at a nearby coal mine.<sup>229</sup> After completing his six-year apprenticeship, he went on to become an assistant in a general practice in a town near Newcastle and then at another in Yorkshire. Snow finally set out for London in 1836 to continue his medical studies and obtain qualifications to practice. With limited funds, Snow found lodgings near his school, the Hunterian School of Medicine, which was located on the edge of the generally impoverished district of Soho. After passing his qualification exams in 1838, Dr. Snow stayed in Soho to set up his practice.<sup>230</sup> He changed living quarters a couple of times but remained near Soho for the rest of his life.

Dr. Snow soon began establishing himself in the medical profession by joining the meetings of various London medical societies and involving himself in current medical discussions. Although he could have continued practicing as a family doctor without them, he obtained three more medical qualifications and became licensed by the Royal College of Physicians of London.<sup>231</sup> Despite his lack of high social status or independent wealth, Dr. Snow achieved the highest degree of medical practitioner by the age of 37. He continued working as a family doctor but became increasingly occupied with his work on anesthesia, which was first introduced to Britain in 1846. It was his achievements with the development of anesthesia that first made Dr. Snow's name famous in Britain, raising his status within the London medical

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<sup>228</sup> Ed. Richard H. Ellis, "Introduction," *The Case Books of Dr. John Snow* (London: Wellcome Institute for the History of Medicine, 1994), p. xii-xiii.

<sup>229</sup> Ellis, p. xv.

<sup>230</sup> Ellis, p. xvi-xvii.

<sup>231</sup> Ellis, p. xviii.

world. He wrote several treatises on the theory and practice of anesthesiology and laid the foundations for the effective and controlled use of ether and chloroform in medical practice. Dr. Snow's work as an anesthesiologist was so sought after in London that Queen Victoria chose him as her anesthesiologist at the delivery of her eighth child in 1853 when chloroform was just starting to be used as a pain reliever in childbirth.<sup>232</sup> Dr. Snow's rapid rise to success within the medical field reveals his ambition, dedication, focus, and intelligence. These characteristics along with his broad medical experience enabled him to tackle his project on the modes and communication of cholera, which would later earn him the name, the Father of Modern Epidemiology.

The development of Dr. Snow's waterborne theory began much earlier than the 1854 epidemic, but until the outbreak on Broad Street, he lacked sufficient evidence to convince others of his theory that cholera was transmitted through the ingestion of contaminated water. In an article for the *London Medical Gazette* in 1849, Snow expressed many of his ideas about cholera that would later be confirmed by his research during the 1854 epidemic. He stated that cholera was a poison contained in the evacuations of victims that was communicated by drinking water and transferred to other individuals by being swallowed.<sup>233</sup> He also observed that "nothing has been found to favour the extension of cholera more than want of personal cleanliness," which especially affected the working classes who lived in such close quarters with one another and usually had to eat and sleep in the same room as a sick family member.<sup>234</sup> Additionally, the mining population seemed to suffer the most from cholera because of the lack of privies in the

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<sup>232</sup> Johnson, p. 66.

<sup>233</sup> John Snow, M.D, "On the Pathology and Mode of Communication of Cholera," *London Medical Gazette* (London: Longman, Brown, Green, and Longmans, 1849), p. 745.

<sup>234</sup> John Snow, M.D, "On the Pathology and Mode of Communication of Cholera," *London Medical Gazette* (London: Longman, Brown, Green, and Longmans, 1849), p. 746.

coal pits, which made it easy for cholera to spread from contaminated surfaces to unwashed hands to food. By 1849, Snow had already pinpointed contaminated water supplies as the primary suspect for the spread of cholera. He argued that cholera would eventually die out if left to confine itself to the poor and crowded dwellings, but the disease was able to extend itself further “by the mixture of the cholera evacuations with the water used for drinking and culinary purposes, either by permeating the ground and getting into wells, or by running along channels and sewers into the rivers.”<sup>235</sup>

Dr. Snow had to compete with many other theories about cholera. Even the article printed immediately after his in the *London Medical Gazette* argued that cholera was propagated by contagion.<sup>236</sup> The miasmatic theory of cholera still dominated medical views and heavily influenced strategies for sanitary reform, especially as some of the most influential figures in public health at the time supported it, including Edwin Chadwick and William Farr. Because of these circumstances, Dr. Snow’s ideas presented in his 1849 article “On the Pathology and Mode of Communication of Cholera” would not receive wide acceptance until he could compile more concrete proof during the 1854 epidemic.

### **“The Most Terrible Outbreak of Cholera”**

As Dr. Snow described, “the most terrible outbreak of cholera which ever occurred” in Great Britain took place in Broad Street, Golden Square, and the surrounding streets during the 1854 epidemic.<sup>237</sup> These streets were part of the neighborhood called Soho, located on the West

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<sup>235</sup> John Snow, M.D, “On the Pathology and Mode of Communication of Cholera,” *London Medical Gazette* (London: Longman, Brown, Green, and Longmans, 1849), p. 747.

<sup>236</sup> Charles Cogswell, M.D, “On the Propagation of Cholera by Contagion,” *London Medical Gazette* (London: Longman, Brown, Green, and Longmans, 1849), p. 752.

<sup>237</sup> John Snow, M.D. *On the Mode of Communication of Cholera*, Second Ed. (London: John Churchill, New Burlington Street, 1855), p. 38, as printed in *Snow on Cholera: Being a Reprint of Two Papers by John Snow, M.D.* (New York: Hafner Publishing Company, 1965).

End of the metropolis, which once housed some of the wealthiest families in London, including the Prince and Princess of Wales. However, by the middle of the eighteenth century many of the aristocrats relocated further west to build larger estates and townhouses in newer, more fashionable neighborhoods. As the elites moved out, artists and business-owners moved in. Landlords split up the formerly grand townhouses into separate flats to accommodate more residents and lower rents, and the courtyards became junkyards and animal stables.<sup>238</sup> By the middle of the nineteenth century, the aristocrats had all gone, and Soho was a congested, economically diverse neighborhood filled with industrial and small businesses, artists, writers, and family residences. Though it was surrounded by the prosperous neighborhoods of Mayfair and Kensington with their grand, aristocratic townhouses, Soho housed a mixture of lower middle class business owners and the working poor in increasingly overcrowded and unsanitary dwellings.<sup>239</sup>

Cholera outbreaks had been flaring up in pockets across London for months, but in early September of 1854 the disease broke out in the Golden Square district of Soho just a few blocks away from Dr. Snow's offices.<sup>240</sup> He later recorded that approximately 500 deaths of fatal cholera attacks had occurred over the course of ten days within two hundred and fifty yards of the intersection of Cambridge Street and Broad Street, possibly one of the highest mortality rates ever seen in Britain in such a limited area.<sup>241</sup> Many of the Soho residents fled quickly after the epidemic began "so that in less than six days from the commencement of the outbreak, the most

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<sup>238</sup> Steven Johnson, *The Ghost Map: The Story of London's Most Terrifying Epidemic—and How it Changed Science, Cities, and the Modern World* (New York: Riverhead Books, 2006), p. 16-17.

<sup>239</sup> Johnson, p. 18-19.

<sup>240</sup> Johnson, p. 75.

<sup>241</sup> Snow, *On the Mode of Communication of Cholera*, p. 38.

afflicted streets were deserted by more than three-quarters of their inhabitants.”<sup>242</sup> When Dr. Snow heard about the emergence of cholera nearby, he took the opportunity to collect data to support his theory. He drew water samples from the Broad Street pump, the closest water supply to the Soho cholera outbreak, along with other nearby wells, but his examination of the samples did not reveal anything different or suspicious about the Broad Street water. However, Dr. Snow was convinced that something had contaminated the water source even if he couldn’t see it through his microscope. He drew and tested more water samples, and, although he detected what appeared to be some kind of decomposed organic matter in the Broad Street sample, he couldn’t identify anything that pointed specifically to cholera. Dr. Snow decided to change his approach and focus on analyzing the patterns of sickness and death in Golden Square in comparison to which company supplied their water.<sup>243</sup>

### **London’s Water**

In Edwin Chadwick’s positions as the head of the Board of Health and then a member of the Commission of Sewers, he spearheaded the movement for expanding and improving the city’s sewage system in the 1840s and 1850s. As a strong miasmatist, Chadwick blamed disease on the stench from overflowing cesspools. The solution to this was the removal of filth and excrement through more sewers instead of allowing it to pile up in cellars and ditches and waiting to call the night-soil men when they overflowed. The Nuisances Removal and Contagious Diseases Prevention Act of 1848 initiated this transition in waste removal, but it required a newer and more extensive sewer system that could handle the increase in capacity of waste that would flow through it on a daily basis. Over the course of several years, a massive engineering project was undertaken to expand the city’s sewers with the purpose of eliminating

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<sup>242</sup> Snow, *On the Mode of Communication of Cholera*, p. 38.

<sup>243</sup> Johnson, p. 98-100.



all cesspools in the city. These sewers, of course, emptied into the Thames River, the main source of the city's water supply. The growing network of sewers carried more and more of the city's waste into the river, making the Thames one of the most polluted water sources in the world. Thus, despite the good intentions of Chadwick and other public health reformers to improve the sanitation of the city by clearing its streets of exposed drains and overflowing cesspools, they unintentionally succeeded in poisoning the population through its highly contaminated water supply.<sup>244</sup>

In the middle of the nineteenth century, about ten major companies supplied water to London. Two companies controlled the water supply south of the Thames River: Southwark and Vauxhall Company (S&V) and Lambeth Company. These two companies, along with several of the others, drew their water from the Thames River, which meant their supply was contaminated with the raw sewage of the city.<sup>245</sup> When the cholera epidemics erupted in 1848 and 1853, the water companies that drew their water from the lower end of the Thames (including the S&V and Lambeth companies) unknowingly played a crucial role in delivering the cholera bacteria to the neighborhoods they supplied.

The increasing pollution of the Thames River was both obvious and offensive to many Londoners so Parliament eventually passed legislation in the Metropolitan Water Act of 1852 that ordered the water companies to move their intake pipes to fresher waters upriver by August of 1855. The Lambeth company accordingly transferred its piping system to a purer supply of water from the Thames at Ditton, several miles upstream from the city, in 1852, but S&V chose not to immediately comply with the legislation. This meant that when the cholera epidemic began in 1853, S&V was still drawing its supply from the Thames at Battersea where the water

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<sup>244</sup> Johnson, p. 119-120.

<sup>245</sup> Johnson, p. 105.

was much more polluted by sewage from the city. Both water companies supplied the same districts but not the same pumps. These circumstances provided Dr. Snow with the right conditions for his experiment because he could identify which people drank the relatively pure supply from Lambeth and which people received S&V's sewage-filled water. Comparing the numbers of illnesses and deaths from cholera between these two categories could point specifically to the water source as the transmitting agent of cholera.

### **The Broad Street Pump**

Dr. Snow analyzed the General Register Office's list of deaths from cholera that were registered during the week ending September 2<sup>nd</sup> in three sub-districts of Soho: Golden Square, Berwick Street, and St. Ann's. He examined the list and scouted out the locations to find that eighty-three deaths had occurred in the last three days of the week and all of them had taken place within a short distance of the Broad Street water pump.<sup>246</sup> While surveying the area, Dr. Snow found that only ten of the deaths had occurred in "houses situated decidedly nearer to another street pump," but the families of five of these victims informed him that they "always sent to the pump in Broad Street, as they preferred the water to that of the pump which was nearer."<sup>247</sup> Dr. Snow also discovered that three out of these ten cases were children whose school was located near the Broad Street pump, two of which were known to drink the Broad Street water. Walking door-to-door, Dr. Snow spoke with as many residents as he could in the Golden Square, Berwick Street, and St. Ann's neighborhoods to ascertain more specific data about who drank water from which pump and how often. From the results of his survey, Dr. Snow concluded "that there had been no particular outbreak or increase of cholera, in this part of

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<sup>246</sup> Snow, *On the Mode of Communication of Cholera*, p. 39.

<sup>247</sup> Snow, *On the Mode of Communication of Cholera*, p. 39.

London, except among the persons who were in the habit of drinking water” from the Broad Street pump.<sup>248</sup>

After gathering the evidence to support his argument, Dr. Snow met with the members of the Board of Guardians of St. James’s parish, who were the local authorities over the area where the Broad Street pump was located. He presented his argument to the parish guardians and convinced them to remove the handle from the water pump, which they did the following day, September 8th.<sup>249</sup> Although the severity of the epidemic in the area had already begun to wane, the removal of the Broad Street pump at least prevented the resurgence of a second wave of the disease.

Other circumstances also supported Dr. Snow’s theory. A workhouse located in the neighborhood had been surrounded by houses infected with cholera, but only five out of the 535 inmates died of cholera. Dr. Snow discovered that the workhouse had a water pump on the premises, which meant that the inmates never needed to travel to Broad Street for water. Additionally, none of the seventy workmen at the brewery in Broad Street suffered from cholera. The proprietor informed Dr. Snow that the workers never drank water from the pump in the street because there was a deep well in the brewery and malt liquor was distributed to the workers.<sup>250</sup> These cases helped to strengthen Dr. Snow’s argument, along with his map of Soho in which he recorded the numbers and locations of cholera deaths in the neighborhood. Black bars on the map represented each death and the specific household where it occurred. The map only provided a basic layout of the streets and buildings with very few details, but it included the location of the thirteen public water pumps that supplied the greater Soho area. This format

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<sup>248</sup> Snow, *On the Mode of Communication of Cholera*, p. 40.

<sup>249</sup> Snow, *On the Mode of Communication of Cholera*, p. 40.

<sup>250</sup> Snow, *On the Mode of Communication of Cholera*, p. 42.

revealed that the areas surrounding most of the water pumps had very few or no cholera cases near them, but the Broad Street pump was surrounded by multiple cases. Despite some minor errors in the original form, Dr. Snow's map was a groundbreaking contribution to the development of disease mapping and the study of epidemiology.<sup>251</sup>

### **Dr. Snow's Legacy**

Not everyone readily accepted Snow's explanation of how contaminated water increased the risk of cholera, and many still emphasized the role of miasma or "effluvia" from dead organic matter in spreading the disease. In a report to the president of the General Board of Health and both houses of Parliament, the Medical Council delivered their findings from their investigation of the 1854 epidemic. Through inquiries into the water supply of houses and districts suffering from cholera, they found that the abolition of cesspools had "indirectly led to another evil" in which "the excrements of the population are now to a great extent poured into the Thames," and "traces of this abominable filth are found...in the drinking-water supplied to a large part of the population."<sup>252</sup> Despite this realization, the Medical Council was still not fully convinced of the waterborne theory of cholera. They concluded that the "suddenness of the outbreak, its immediate climax, and short duration" in the Soho district indicated "some atmospheric or other widely diffused agent still to be discovered" but ruled out "the assumption, in this instance, of any communication of the disease from person to person, either by infection or by contamination of water with the excretions of the sick."<sup>253</sup> Despite Dr. Snow's extensive

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<sup>251</sup> Johnson, p. 193-194.

<sup>252</sup> Medical Council, General Board of Health, *Report of the Medical Council to the Right Hon. Sir Benjamin Hall, Bart., M.P., President of the General Board of Health, in Relation to the Cholera-Epidemic of 1854* (London: George E. Eyre and William Spottiswoode, 1855), p. 6-7.

<sup>253</sup> Medical Council, p. 7.

work during the outbreak in Soho, the General Board of Health still required further proof before they could concede to the belief that cholera was transmitted specifically by contaminated water.

### **Official Inquiry**

In 1855, Dr. Snow published an expanded second edition of his treatise *On the Mode of Communication of Cholera*, which was based largely on his 1849 article “On the Pathology and Mode of Communication of Cholera.” The 1855 version contained new factual evidence and analysis of mortality and water supplies in London during the 1832 and 1849 epidemics, as well as Dr. Snow’s observations of the 1854 outbreak. In this treatise, Dr. Snow detailed his theory of cholera’s transmission by a waterborne agent and provided supporting evidence from the 1854 epidemic.<sup>254</sup> This treatise prompted an official inquiry into the water supply by the General Board of Health that confirmed the harmful influence of contaminated water. The Medical Officer of the General Board of Health, Sir John Simon, compiled the *Report on the Last Two Cholera-Epidemics of London as Affected by the Consumption of Impure Water*, which was addressed to the president of the General Board of Health and presented to both Houses of Parliament in 1856.<sup>255</sup> The inquiry essentially repeated Dr. Snow’s analysis but on a slightly larger scale. They examined nine registration-districts on the south side of the Thames River where cholera “had been observed to prevail with especial severity,” which included St. Saviour’s, St. Olave’s, St. George’s, Southwark in Bermondsey, Newington, Lambeth, Wandsworth, Camberwell, and Rotherhithe.<sup>256</sup> These districts were selected for the inquiry because they had such high epidemic mortality, their populations lived in similar conditions of

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<sup>254</sup> Wade Hampton Frost, M.D., “Introduction,” *Snow on Cholera: Being a Reprint of Two Papers by John Snow, M.D.* (New York: Hafner Publishing Company, 1965), p. xiv-xv.

<sup>255</sup> Sir John Simon, *Report on the Last Two Cholera-Epidemics of London as Affected by the Consumption of Impure Water* (London: George E. Eyre and William Spottiswoode, 1856).

<sup>256</sup> Simon, *Report on the Last Two Cholera-Epidemics*, p. 4.

wealth, occupation, and cleanliness, and they were supplied with water from either the Lambeth Company or the Southwark and Vauxhall Company, which would mean the only difference would be the quality of water consumed in each household.

For the 1853-1854 epidemic, the Medical Council calculated a rate of 37 cholera deaths to every 10,000 inhabitants in the houses supplied with the clean water from the Lambeth Company and a rate of 130 cholera deaths to every 10,000 living in the houses supplied by the S&V Company, and they concluded, “The population drinking dirty water accordingly appears to have suffered 3½ times as much mortality as the population drinking other water.”<sup>257</sup> The Medical Council compared these results to the cholera death returns for the same districts from the 1848-1849 epidemic and found that the cholera death rate rose from 118 to 130 per 10,000 for the population supplied by the S&V Company and fell from 125 to 37 for those supplied by the Lambeth Company.<sup>258</sup> The Medical Council’s analysis brought them to the conclusion that it was highly probable that, “of the 3,476 tenants of the Southwark and Vauxhall Company who died of cholera in 1853-4, two-thirds would have escaped if their water-supply had been like their neighbours’; and that, of the much larger number—tenants of both companies—who died in 1848-9, also two-thirds would have escaped, if the Metropolis Water Act of 1852 had but been enacted a few years earlier.”<sup>259</sup>

The results of the Medical Council’s official inquiry into the effects of impure drinking water on the mortality of the cholera epidemics would seem to fully support Dr. Snow’s theory that cholera was transmitted by the ingestion of contaminated water. However, the official inquiry concluded, “under the specific influence which determines an epidemic period, fecalised

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<sup>257</sup> Simon, *Report on the Last Two Cholera-Epidemics*, p. 6.

<sup>258</sup> Simon, *Report on the Last Two Cholera-Epidemics*, p. 8.

<sup>259</sup> Simon, *Report on the Last Two Cholera-Epidemics*, p. 9.

drinking-water *and fecalised air equally* may breed and convey the poison” (emphasis added).<sup>260</sup>

The General Board of Health confirmed that water contaminated by fecal matter was the source of cholera, but they did not concede to Dr. Snow’s theory that it was through ingestion alone that the disease was transmitted. The prevalence of the miasma theory still influenced the conclusions of the official inquiry so that they included “fecalised air” as a source of cholera.

Thus, even after the official inquiry by the General Board of Health, many were still reluctant to fully acknowledge Dr. Snow’s explanation of cholera. Despite this partial acceptance of Snow’s arguments at the time, he still “succeed[ed] in convincing his contemporaries that sewage pollution of drinking-water was a major rather than a minor factor in the conveyance of cholera.”<sup>261</sup> Snow died in 1858 and didn’t have the opportunity to collect further evidence of his theory about cholera. However, for the last years of his life he continued studying the same epidemiological principles he had discovered in cholera as they applied to other diseases. His work on the role of water as a significant vehicle for disease transmission and the relative lack of danger from “effluvia” or “miasma” in creating or spreading disease had a crucial impact on the study of epidemiology and the understanding of diseases like cholera.<sup>262</sup>

## **Public Response**

### **Unpopularity of the Board**

As cholera swept the European continent once more in the early 1850s, Britain prepared for the disease to return to its shores again. Some people were less than optimistic about the abilities of the Board of Health to prevent the coming of another cholera epidemic. *Punch*

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<sup>260</sup> Simon, *Report on the Last Two Cholera-Epidemics*, p. 15.

<sup>261</sup> Wade Hampton Frost, M.D., “Introduction,” *Snow on Cholera: Being a Reprint of Two Papers by John Snow, M.D.* (New York: Hafner Publishing Company, 1965), p. xix.

<sup>262</sup> Wade Hampton Frost, M.D., “Introduction,” *Snow on Cholera: Being a Reprint of Two Papers by John Snow, M.D.* (New York: Hafner Publishing Company, 1965), p. xix.

magazine ridiculed the Boards of Health and Boards of Guardians in a sarcastic poem called “King Cholera to his Liege Friends in England.”<sup>263</sup> Calling the Boards of Health and Boards of Guardians “friends” of King Cholera, the poem criticized them for not taking any action and letting disease and filth spread. As the poem claimed, King Cholera “girds up his loins for his struggle” when he comes to England where he meets a tougher opponent than in Continental Europe “with its press, and its wealth, and its curs’d Boards of Health, its sewers, and drains, and inspectors.”<sup>264</sup> According to the poem, because of its public health infrastructure, King Cholera “fears he’d have no chance in Britain” if not for his friends who “are conveniently stuck in the seats his foes fain would sit in:—Boards of Guardians so true, Boards of Health who pooh-pooh, And laugh to scorn doctors and drainers” and “who self-government call not to govern at all.”<sup>265</sup> The poem criticized the Boards of Guardians for not following orders for cleansing towns because they “wish to know by what right they’re dictated to” and “they turn up their nose, and declare they don’t want to be prated to.”<sup>266</sup> In other words, the Boards of Guardians refused to accept orders from a centralized state agency about how they should operate, and because of this inaction, English towns remained filthy and welcoming places for King Cholera to enter. The General Board of Health had no power to ensure the compliance of local authorities. As the poem ended, King Cholera was able to return to England once more because his “old friends,” the Boards of Guardians and Boards of Health, remained stubborn and inactive. Though England could boast of greater wealth and a more developed sanitation infrastructure than other parts of Europe, King Cholera could still succeed because the Boards of Guardians stalled and refused to carry out health regulations and the Board of Health couldn’t force them to comply. This poem

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<sup>263</sup> “King Cholera to his Liege Friends in England,” *Punch*, September 25, 1852, Vol. 23, p. 138.

<sup>264</sup> “King Cholera to his Liege Friends in England,” *Punch*, September 25, 1852, Vol. 23, p. 138.

<sup>265</sup> “King Cholera to his Liege Friends in England,” *Punch*, September 25, 1852, Vol. 23, p. 138

<sup>266</sup> “King Cholera to his Liege Friends in England,” *Punch*, September 25, 1852, Vol. 23, p. 138



demonstrates a common critical attitude toward the Board of Health and a recognized lack of popularity among the people.

After several years of creating laws and enforcing regulations, the General Board of Health remained unpopular among local agencies as well. In the midst of the approaching cholera epidemic and the transition in leadership of the Board, an August 1854 article in the popular *Fraser's Magazine for Town and Country* attempted to defend the General Board of Health against some of the common complaints made about it by both local agencies and the public. The author stated, "We are not half so much surprised at the unpopularity of the Board of health, considering the work it had to do and the powers given for the purpose, as at the fact that it really is able to show a large amount of work accomplished."<sup>267</sup> Part of the problem, he claimed, was that Parliament had not given the Board enough power to do all that it might intend to do, and many of the laws created by Parliament did not have the means to be properly carried out. The article also offered a defense of Dr. Southwood Smith and Edwin Chadwick whose actions, as members of the Board, may have also been partially responsible for its unpopularity. The author recognized that Smith and Chadwick must have offended many people in the fulfillment of their duties, but, despite some faults, they had provided good service.

Despite its unpopularity, the author of the *Fraser's* article pointed out that the Board still managed to accomplish many things beneficial to the public, including saving "thousands of men from death by cholera," teaching towns "how to be wholesome," and diffusing "an extensive amount of accurate sanitary knowledge."<sup>268</sup> The article defended the Board of Health by arguing that it had not been given the necessary tools to carry out its purpose but that it had still managed

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<sup>267</sup> *Fraser's Magazine for Town and Country*, Vol. 50, August 1854 (London: John W. Parker and Son, West Strand), p. 239.

<sup>268</sup> *Fraser's Magazine for Town and Country*, Vol. 50, August 1854 (London: John W. Parker and Son, West Strand), p. 239.

to use its only resource, “its tongue,” to produce some good. The author further argued that the Board “was set to a task of innovation, bidden to tread on a whole army of toes; the owners of the toes cry out, and so we all cry shame on such a Board of Health for having made itself unpopular,” which was an unfair response to the Board’s actions.<sup>269</sup> However, the article expressed hope in the future actions of Parliament to improve the existing laws in ways that would provide more support to the Board of Health and the fulfillment of its purposes. The author also expressed confidence in the sensibility of the public to direct their attention to the problems of filth and fever and to seek ways to defend against them.

Another important issue discussed in the *Fraser’s* article was the relationship of the Board of Health to government offices and the role of the state in managing public health. At the time, any changes made in regard to the authority and responsibilities of the General Board of Health or to the management of public health were subject to the scheduling of sessions of Parliament. This meant that questions of sanitary measures or public health regulations could not be effectively addressed if they arose while Parliament was not in session, or other pressing issues, such as the Crimean War, could overshadow proposed public health measures in Parliament. However, a new connection was to be made between the Home Office and Board of Health in between sessions of Parliament. The author of the article hoped that this relationship would “be used as preparation for some definite and well-developed measure, that shall establish, finally, the care of public health, as an essential portion of the business of the nation.”<sup>270</sup>

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<sup>269</sup> *Fraser’s Magazine for Town and Country*, Vol. 50, August 1854 (London: John W. Parker and Son, West Strand), p. 239.

<sup>270</sup> *Fraser’s Magazine for Town and Country*, Vol. 50 (London: John W. Parker and Son, West Strand), p. 241.

The author of the article also strongly advocated for the control of public health by a centralized state agency instead of being “mismanaged by the discordant action of ten thousand small municipalities or parish vestries” and argued that local boards should not be entitled to assess the safety of habitations of cesspools.<sup>271</sup> He believed that the state should have the responsibility and authority to protect the lives of people in danger by managing public health and sanitation without the approval of local vestries or corporations. Because the maintenance or neglect of public hygiene were “matters of life and death,” the author argued that the “greatest of our representative institutions, namely, the State, alone can take thought in a proper manner” to the performance of public health duties.<sup>272</sup> He consented that local agencies should have a role in addressing public sanitation, but “in grave matters it is for the State to ordain what must be done,” and local self-representation, “perhaps by means of Local Boards of Health,” should only be able to decide how to carry out the state’s orders.<sup>273</sup> The position taken in this article in defense of the Board of Health and in support of stronger government control over public health matters reveals that popular resistance to the growth of centralized state power was still strong enough to be a prominent issue and source of debate. After two cholera epidemics and years of growth in public health reform, the conflict of authority between local agencies and state control continued to be an important and disputed public issue.

### **“There is the Cholera, but no Panic”**

Although the General Board of Health, the local authorities, and the general public often disagreed and came into conflict with one another, the country managed to stay relatively calm

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<sup>271</sup> *Fraser’s Magazine for Town and Country*, Vol. 50, August 1854 (London: John W. Parker and Son, West Strand), p. 241.

<sup>272</sup> *Fraser’s Magazine for Town and Country*, Vol. 50, August 1854 (London: John W. Parker and Son, West Strand), p. 242.

<sup>273</sup> *Fraser’s Magazine for Town and Country*, Vol. 50, August 1854 (London: John W. Parker and Son, West Strand), p. 242.

and controlled as cholera attacked the population for the third time. An article in the *Times* advised readers that if they took the necessary precautions of airing out their houses, cleaning and whitewashing their buildings, purging the cesspools, and clearing the sewers, the “Cholera will desist from its purpose, and pass harmless as a summer rain-cloud over the land.”<sup>274</sup> Though cholera was still a devastating killer, having taken 6,120 lives in the London metropolis within the first ten weeks, the population had grown relatively accustomed to its attacks and felt less alarmed by its approach.<sup>275</sup> According to the *Times*, the population could face cholera’s arrival without panic because “persons in tolerably easy circumstances, whose habitations are reasonably healthy...can almost secure an immunity from choleraic attacks if they will but use the most ordinary circumspection, and bestow a moderate degree of watchfulness upon the sanitary conditions of their families while the cholera is present.”<sup>276</sup> This reaction to the epidemic reflects an attitude of respect for the dangerous potential of the disease but no longer of fear.

Although Britain watched and waited for months as cholera approached from the east once more, the atmosphere of panic that had prevailed during the first epidemic of 1831-1832 did not return during the epidemic of 1853-1854. The *Times* reported in September of 1854 that the population faced the epidemic with a firm temper and great fortitude, and even while the disease continued to ravage the country, there was “no symptom of undue excitement or mental prostration” among the people: “there is the Cholera, but no Panic.”<sup>277</sup> The article explained that the public did not react with terror because they were “fully aware of the extent of [their] danger, and [were] simply employing the best means with which [they were] acquainted to counteract

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<sup>274</sup> *Times*, London, March 13, 1854, p. 8, col. e.

<sup>275</sup> *Times*, London, Sept. 13, 1854, p. 6, col. b.

<sup>276</sup> *Times*, London, Sept. 13, 1854, p. 6, col. c.

<sup>277</sup> *Times*, London, Sept. 13, 1854, p. 6, col. b.

it.”<sup>278</sup> After the epidemic had mostly abated, the *Times* reported in October that one of the “most striking features of the recent outbreak of the cholera in the metropolis is that the Londoners have not been frightened out of their discretion by its presence,” and “they are not rushing about madly to murder the doctors or bakers, or to hang the turncocks for poisoning the water, because the pestilence is among them.”<sup>279</sup> After two previous epidemics, the public had grown accustomed to the patterns of cholera and felt more prepared to respond accordingly. Because they could recognize the warnings of cholera’s approach and take appropriate precautions, they felt prepared for cholera’s arrival instead of surprised and panicked.

The sense of relative preparedness and safety among the public that kept them from panic depended on continued support of sanitary reform. The *Times* urged its readers not to evade the general or parochial rates levied for the promotion of public health because only through the improvements made possible by those rates could the cities be purified “from the noxious influences which, if they are not the direct causes of cholera, at least predispose the human frame for its reception.”<sup>280</sup> The article also lamented the lack of action taken by both the Government boards and the public to improve the sanitary state of the country between epidemics. Through the many deaths in the first several weeks of the epidemic, the population “paid a heavy penalty for the internecine squabbles of Government boards—for the avarice and indolence of vestrymen, and for the general indifference of the public.”<sup>281</sup> The article placed much of the blame on government agencies, but it also found local authorities and the rest of the population guilty of neglect as well. Although the article censured the public for its inaction, the author also advised readers not to place much hope in the General Board of Health. Because the new Board

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<sup>278</sup> *Times*, London, Sept. 13, 1854, p. 6, col. b.

<sup>279</sup> *Times*, London, Oct. 19, 1854, p. 6, col. e.

<sup>280</sup> *Times*, London, Sept. 13, 1854, p. 6, col. c.

<sup>281</sup> *Times*, London, Sept. 13, 1854, p. 6, col. c.

of Health had only just been reconstituted with Sir Benjamin Hall as its president, the author of the article did not consider the Board a sufficient source of help or guidance during the current epidemic. Though some of the Board's published statements contained beneficial suggestions, the article maintained that during "the present crisis it is not to this newly constituted department that we have a right to look for safety."<sup>282</sup> Instead, the article expressed hope in the recently established Medical Council of Health composed of several medical professionals. The author trusted the guidance of the Medical Council and hoped the future cooperation between the Council and the Board of Health would result in great improvements. This viewpoint reveals how the Board of Health continued to struggle with conflicts of authority and legitimacy in their efforts to maintain control over sanitation and public health.

## **Conclusion**

By the end of Britain's third major cholera epidemic in 1854, several changes had occurred in the ways medical professionals, the state, and the general public reacted to outbreaks of the disease. The population had more or less grown accustomed to cholera's patterns of eruptions and recessions, and outbreaks of the disease no longer caused the same kind of unrestrained panic and alarm as when it had first arrived on British shores. Cholera was becoming just one of the many endemic scourges of nineteenth-century British life that the people had learned to live with. Medical perceptions of the disease had varied greatly over the years, and Dr. Snow's major breakthrough in discovering the source of cholera in contaminated water supplies changed the future of epidemiology.

However, medical thought still held on to the theory of miasma and disease-causing effluvia, which derailed full scientific focus on the waterborne causes of cholera. The cholera

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<sup>282</sup> *Times*, London, Sept. 13, 1854, p. 6, col. c.

outbreaks still sparked conflicts between the public, the government, and local boards as various agencies attempted to retain control over responses to the disease. The centralization of state authority had gained a lot of ground, but cholera epidemics still served as a venue for struggles over authority to be played out under the guise of scientific advancement and reform. Cholera had helped initiate the movement toward the improvement of sanitary conditions in the 1830s, and by the middle of the century it had become a major focal point of public health reform.

## EPILOGUE

### “The Sun Sets on King Cholera’s Reign”

#### **International Context**

Britain’s experience with cholera was both unique and similar to those of other nations at the time. The United States experienced several of the same social trends as Britain during its three major cholera epidemics in 1832, 1849, and 1866.

Similar to British attitudes, many Americans initially believed they were too strong, healthy, and physically superior to become victims of cholera since it resulted from “filth, misery, vice, and poverty.”<sup>283</sup> Additionally, the predominately rural U.S. seemed safe from a disease that spread quickly through the densely populated cities of Europe. Similar to British beliefs, widespread American medical opinion agreed that cholera existed in the atmosphere but became deadly to those who had already weakened themselves through intemperance, imprudence, or filth, which could also include sinful acts. To many Britons and Americans alike in the early nineteenth century, poverty and wealth were not accidental conditions but a symbol of one’s behavior, and cholera was considered a disease of the poor whose vices of intemperance, immorality, and impiety doomed them to both poverty and cholera.<sup>284</sup>

As in Britain, the contagious nature of cholera was under debate and the institution of quarantine greatly concerned businessmen in the United States. The predominant medical opinion was against quarantine and sanitary cordons, which were seen as “engines of oppression,

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<sup>283</sup> Charles E. Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 1962, 1987), p. 15.

<sup>284</sup> Rosenberg, p. 55.



despotism, and bureaucracy.”<sup>285</sup> However, as in Britain, some American medical men still supported quarantine regulations in the absence of other options, though the apparent failure of quarantine further supported the anticontagionist theory. Although many medical professionals did not believe cholera was contagious, “most ordinary folk believed that the disease was spread by some specific contagion.”<sup>286</sup> As in Britain, many people of the working class in the U.S. distrusted and despised cholera hospitals because they saw them as “cold and cheerless municipal slaughterhouses, where death was hurried by the ruthless experimentation of attending physicians.”<sup>287</sup>

One of the major differences between the experiences of cholera in Britain and the U.S. was the great numbers of immigrants constantly flowing into the United States. Americans had already been concerned by the great increase in immigration, and they considered it to be a contributing factor to the cholera epidemics. Another difference was the predominance of religious perceptions during the early epidemics. Many Americans perceived the initial epidemic in 1832 as a punishment from God against the sinful, and ministers emphasized morality as a protection against illness. These perspectives existed in Britain but not as predominately. During the 1849 epidemic, many Americans considered cholera to be God’s punishment for the national and personal sins of avarice and materialism that had grown greater in the nation’s prosperity by the middle of the century. However, Christians still believed in the secondary causes of cholera and that they should adhere to the hygienic, sanitary, and dietary measures prescribed against the disease. By 1866, Americans had moved away from strictly religious interpretations of cholera and instead blamed the disease on failures in sanitation. As in Britain, cholera transitioned over

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<sup>285</sup> Rosenberg, p. 79.

<sup>286</sup> Rosenberg, p. 81.

<sup>287</sup> Rosenberg, p. 120.

the course of three epidemics from a primarily moral dilemma to a social problem of public health and the unsanitary living conditions prominent among the poor.

As in Great Britain and the U.S., many of the French considered the poor to be predisposed to cholera during the first epidemic in 1832 because the disease initially attacked the lower-class neighborhoods with a much greater intensity, though it would later spread to the upper classes as well. However, France's experience with cholera varied from Britain's in that its epidemics in 1832 and 1849 both arrived on the heels of revolutionary turmoil. The July Revolution of 1830 brought Louis-Philippe to the French throne through a bloody uprising in Paris, but disillusionment with the new constitutional monarchy among university students led to another bloody uprising in the midst of the 1832 cholera epidemic.

As cholera ravaged the poor, overcrowded neighborhoods of Paris in 1832, social unrest led to bloody riots by people of the lower classes who perceived the epidemic as a "massive assassination plot by doctors in the service of the state."<sup>288</sup> They also believed "that the wealthy had invented cholera as a pretext for poisoning them," and they "literally tore apart the bodies of several suspected poisoners" during their riots in the streets.<sup>289</sup> In some ways these Paris riots resemble the cholera riots in Great Britain because the lower classes of both countries suspected the wealthier classes of targeting them as victims, but the British riots resulted in very few deaths while the Paris riots turned extremely violent. Because of France's history of social unrest, the 1832 cholera epidemic "could easily become fused with France's violent revolutionary past."<sup>290</sup>

The relationship between medical professionals and the French state also differed from that in Britain. Medical education was reorganized shortly after the French Revolution to

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<sup>288</sup> Catherine Kudlick, *Cholera in Post-Revolutionary Paris: A Cultural History* (Berkeley: University of California Press, 1996), p. 4.

<sup>289</sup> Kudlick, p. 4.

<sup>290</sup> Kudlick, p. 4.

incorporate more clinical study, which resulted in a process of medical professionalization in the late eighteenth century that began earlier than in Britain. As the “center of the Western medical world,” French doctors held a much more prestigious role in society than experienced by British doctors at the beginning of the nineteenth century.<sup>291</sup> Both British and French medical professionals debated the contagiousness of cholera and the usefulness of quarantine, and the French were also concerned about the harm quarantine measures would do to business. By the 1830s, contagionist concepts of disease had lost popularity among medical professionals and government officials and the dangers of miasmas became the focus of medical and public health attention.<sup>292</sup>

However, the Paris bureaucracy responded differently than British administration to the epidemics. Like the institution of local boards of health in Britain during the first epidemic, Paris established health commissions, but they operated under the authority of the prefecture of police. These conditions caused tension between the prefecture of police and the health committees, which included doctors and other influential citizens. The assertion of government authority through the health commissions also caused reservations about the establishment of a centralized bureaucratic agency.<sup>293</sup> The medical profession and government administration had enjoyed a cooperative relationship under Napoleon’s reign, but “during the first epidemic, the administration and medical professionals had engaged in an open battle over authority” that ended with the administration establishing itself as “the primary fighter against cholera, having absorbed the social and cultural prestige of the medical community.”<sup>294</sup>

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<sup>291</sup> Kudlick, p. 71.

<sup>292</sup> Kudlick, p. 77-79.

<sup>293</sup> Kudlick, p. 86-89.

<sup>294</sup> Kudlick, p. 138-139.

Although it occurred shortly after the bloody 1848 revolution, the second cholera epidemic in France in 1849 received far less attention in French newspapers and seemed to have little impact on French society. Despite mortality rates equally high as the first epidemic, Parisians seemed to respond with mostly silence to the 1849 outbreak. There were no repeats of the poison riots among the people. It appeared that in 1849, “a clearer sense of cooperation among city administrators, doctors, and Church officials replaced the tensions and conflicts that had characterized their interactions during the first outbreak,” and “a public rhetoric of compassion and calls for granting the urban poor a certain respect replaced the angry, bitter words that had condemned victims of the disease only seventeen years before.”<sup>295</sup> The absence of panic and alarm with which French society responded to the second cholera epidemic may have resulted from the changing attitudes toward the poor who were perceived as objects of pity instead of revolutionary urban maladies. The rise of socialism and a revival of Catholicism in the 1840s also provided new perspectives for the Parisian bourgeoisie on how to appeal to the lower classes and prevent revolt, which also influenced perceptions of cholera. A more solidified bourgeois identity in 1849 allowed the middle-class administrators and medical professionals to respond with more control to the second cholera epidemic.

Britain’s experience during the first cholera epidemic shared several similarities with the United States and France in medical approach and initial public reactions, but its response to cholera began to diverge from the others by the second outbreak. The public health movement erupted in the 1840s and became a primary concern of British society. France and the U.S. also made strides in sanitary reform, but their efforts did not result in the same kind of centralized authority given to a public health agency as in Britain’s General Board of Health. This can

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<sup>295</sup> Kudlick, p. 5.

partially be explained by the extreme necessity of such avid sanitary reform in London. Though Paris experienced many of the same problems of rapid urbanization as well, London had far surpassed any other city in population, and its rapid growth had resulted in urgent social problems on a much greater scale. Arguably the most distinctive factor of Britain's experience with cholera was the conflict between local and state government. The conflicts of authority that played out between local agencies and the General Board of Health largely influenced the responses to epidemics and determined the path of public health reform.

### **Cholera's Legacy**

Even after Dr. John Snow's epidemiological breakthrough at the Broad Street Pump in 1854 and the Medical Council's official inquiry into the London water supply, not enough of the prominent public health figures were convinced of the waterborne theory of cholera to make any significant changes to the sanitary infrastructure. It wasn't until the Great Stink of 1858 that the prevalence of miasma theory finally began to diminish. The summer heat always aggravated the smells of sewage and waste that washed up on the shores of the Thames and remained after the tide went out, but an unusually intense early-summer heat wave in June of 1858 created an unbearable stench along the river that was called the "Great Stink." The repulsive smell got so bad that Parliament had to shut its doors. Avid miasmatisers would have predicted terrifying results in the death registries from the dangerous effluvia and disease-causing smell from the Thames, but much to their surprise, the rates of death from epidemic diseases recorded in William Farr's *Weekly Returns* were completely normal. The disgusted public reaction and the disruption caused by the Great Stink motivated public health authorities to take immediate action in addressing the problem of sewers emptying directly into the increasingly polluted waters of the Thames. By 1865, an advanced and elaborate system of sewer lines had been constructed and

put into operation that carried waste and surface water to the east, away from Central London. This complicated feat of engineering was an expensive undertaking, but it made a major impact in purifying the water supply and improving the health of London's population.<sup>296</sup>

Cholera attacked Great Britain in epidemic proportions one last time in 1866, but the death toll was much lower than any previous outbreak in Britain with approximately 4,000 victims.<sup>297</sup> However, these deaths were concentrated in one section of the metropolis, the East End of London, which meant the mortality rate was extremely high and the outbreak especially disastrous in that area. An investigation by William Farr found that the majority of the cholera victims had been supplied with water from the East London Water Company. Further examination revealed that the new drainage works had not been fully completed and activated in the East End yet, and negligent practices of the East London Water Company had resulted in the contamination of ground water near its reservoir. The links between cholera deaths and a contaminated water supply were even more evident than in the Broad Street pump case. Farr's investigation convinced him of Dr. Snow's views, and widespread approval of the waterborne theory of cholera soon followed. By the end of the nineteenth century, the miasma theory had mostly disappeared from medical and scientific thought and was replaced by germ theory.<sup>298</sup>

Over the course of the three epidemics, medical practitioners were increasingly pushed aside in the discussion of cholera as it became more of a state sanitation issue rather than an individual health issue. Action focused on prevention rather than treatment and cure, and the role of the physician became less significant as public health infrastructure expanded in the 1840s and

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<sup>296</sup> Steven Johnson, *The Ghost Map: The Story of London's Most Terrifying Epidemic—and How it Changed Science, Cities, and the Modern World* (New York: Riverhead Books, 2006), p. 204-208.

<sup>297</sup> W. Luckin, "The Final Catastrophe—Cholera in London, 1866," *Medical History* 21 (1977): p.

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<sup>298</sup> Johnson, p. 209-213.

1850s. Under the influence of Edwin Chadwick, public health administration had gained much ground in its effort for the increased centralization of power. However, by the third cholera epidemic in 1853-1854, the new leadership of the reconstituted General Board of Health realized that it was losing control over local authorities and would have to make efforts toward cooperation rather than compulsion in order to maintain its leadership and influence in public health administration. By 1858, the General Board of Health had lost the struggle and was abolished in favor of locally based power structures.

The year 1858 ushered in a new phase in the relationship between central and local government in Britain. The Public Health Act of 1858 transferred the powers of the General Board of Health to the Privy Council, and a sub-department of the Home Office called the Local Government Act Office was created. The dissolution of the General Board of Health and the passing of the Local Government Act, which intended to decentralize the system, seemed to finally bring victory to local agencies by “releasing localities from the interference and control of the central authority.”<sup>299</sup> However, the functions of the Office were not quite as decentralizing as they appeared.<sup>300</sup> Because the Board of Health had been unpopular, its dissolution in 1858 was celebrated, along with the perceived increase in local powers conferred by the Local Government Act, and many did not see that “the basic powers of the centre were unobtrusively and necessarily preserved in use and in some areas largely extended.”<sup>301</sup> Despite the intentions of the act, the relationship between local and central government was less characterized by independence and separation than by cooperation and centralized leadership. The dissolution of the General Board of Health in 1858 brought a slight lapse in the development of central sanitary

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<sup>299</sup> Royston Lambert, “Central and Local Relations in Mid-Victorian England: The Local Government Act Office, 1858-1871,” *Victorian Studies*, Vol. 6, No. 2 (Dec. 1962): p. 121.

<sup>300</sup> Lambert, p. 122.

<sup>301</sup> Lambert, p. 125.

government in Britain in legislative principle, but in reality the period was characterized by continuity in the administrative practice of the central authority.<sup>302</sup>

The trend in the growth and waning of centralized state power parallels a trend in the severity of the cholera epidemics. The second cholera epidemic of 1848-1849 was the most severe outbreak experienced in Great Britain and coincided with the strongest attempts at state imposition of power over local matters in regard to public health and sanitary reform. The third epidemic in 1853 and 1854 still devastated the British population, but mortality rates had generally decreased, while the strength of the Board of Health had also decreased. Except for the severe eruption of cholera in East London in 1866, cholera lost most of its power after 1854 and did not occur in major epidemic form in Britain again. The General Board of Health also lost most of its power shortly after the third epidemic in 1853-1854 and dissolved in 1858. These parallel trends suggest the prominent influence of cholera in the development of public health measures, as well as the way in which epidemics served as opportune moments for various authorities to compete for control.

By the time cholera had mostly disappeared from Britain in epidemic proportions, the core of centralized public health administration had been established firmly enough to persevere in some form, despite the decentralizing efforts of the Local Government Act. The cholera epidemics had not only changed the way local and state agencies interacted; they had also altered the interactions between the public and the state through the imposition of new regulations. The epidemics also changed the way people viewed medical practitioners, and they demonstrated the necessity of collaboration between the medical profession and the state. Dr. Snow's discovery of the waterborne source of cholera was both an epidemiological and public health breakthrough

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<sup>302</sup> Lambert, p. 149.



because it transformed scientific perceptions of disease transmission while also prompting major urban sanitary reforms in sewer systems and water supplies. Although King Cholera seemed to disappear as suddenly as he had arrived, his legacy continued to have repercussions for nineteenth-century British society.

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