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**Cholera: The Social Topography of the 1854 Broad Street Outbreak**

It was the year of 1854 on the twenty-eighth day of August, within the working-class neighborhood of Soho on the West End of London where the 1854 cholera outbreak began. On this day, the five-month old Lewis infant, daughter of London policeman Thomas Lewis and his wife Sarah Lewis, suddenly began vomiting and defecating watery, green-tinged stools with a pungent stench. After calling the nearby doctor, Sarah Lewis proceeded to wash the infant's soiled clothes in a bucket. Removing the clothes, Lewis then tossed this water into the cesspool in front of her home.[1]

As it would turn out, the Lewis infant had contracted cholera. and Sarah Lewis' action would set off the beginning of the Broad Street Cholera outbreak that would take the lives of 616 people within the geographical area in the span of one month.

This cholera outbreak was unique from other previous outbreaks in the way that its effects were clearly concentrated within a certain area of London. John Snow's renowned epidemiological maps were later able to utilize the isolated geography of this outbreak to pinpoint the cause of the transmission of cholera.

What is important to note however, is that this isolated geography of the Broad Street cholera outbreak and the victims of this particular outbreak were not arbitrary or coincidental. Rather an analysis of the victims and social topography of this outbreak reveals socio economic inequities embedded within the urban design and history of the area of Soho that would ultimately culminate in the death of hundreds of working class Victorians.

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[1] Steven Johnson, *The Ghost Map*, (New York: Riverhead Books, 2006).

Following the 1854 cholera outbreak, a committee called *The Cholera Inquiry Committee* was appointed by the Vestry of St. James's, Westminster, "for the purpose of investigating the causes, arising out of the sanitary condition of the Parish, of the late outbreak of Cholera in the districts of Golden Square and Berwick Street."[2] This committee report, authored by "Mr. Marshall," identified the history, circumstances, and hypotheses of the outbreak. The section on the "Character of the Population" of this report identified how the area most affected by the cholera outbreak was "composed of the families of labourers, mechanics, and journeymen (many of them tailors)."[3] Compared to other Victorian diseases such as tuberculosis which cut across class lines, cholera's victims largely consisted of a working class population.

Indeed, an 1849 Times article letter to the editor stated "The cholera is the best of all sanitary reformers, it overlooks no mistake and pardons no oversight."[4] Even before cholera's mode of transmission was identified, Victorians saw that cholera spread *exclusively* in areas that lacked proper sanitary conditions. A 1932 medical magazine article stated "Give food to the hungry, clothe the nake, remove the filth from the habitations of the poor, and the cholera will quickly disappear."[5] As demonstrated by these mainstream media writings, many Victorians recognized the social inequities that lied behind disease, however it was not until decades after the 1854 cholera outbreak when the *tangible* correlation between disease and material conditions

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[2] The Cholera Inquiry Committee, "Introduction," *Report on the Cholera Outbreak in the Parish of St. James, Westminster, during the Autumn of 1854*, (July 1855), iii.

[3] The Cholera Inquiry Committee, "General Report," *Report on the Cholera Outbreak in the Parish of St. James, Westminster, during the Autumn of 1854*, 51.

[4] "London, Wednesday, September 5, 1849" Times (London, England) 5 September 1849. The Times Digital Archive. Web. 9 Dec. 2022.

[5] Winslow Forbes, *Medical Magazine,* I (1832), 261-62.

was confirmed and believed by the public that sanitary reform could directly target the inequities embedded within the urban landscape.

During the 1854 cholera outbreak, English physician John Snow tracked the particular pattern of transmission of cholera within this working class district. Although preexisting knowledge of the time relied on the miasmatic theory of disease that presumed that the disease spread through the "foul, nauseating, and noxious vapours from the untrapped gully-holes and ventilators throughout the district,"[6] *The Cholera Inquiry Committee*'s report used John Snow's epidemiological findings to ultimately hypothesize that the disease spread through "a poison rather than an atmospheric, terrestrial or electric influence…for the affected district stood alone in its intense suffering although embraced on all sides by closely populated neighborhoods which almost escaped."[7] Within the class-segregated West end neighborhood that the 1854 outbreak occurred in, cholera acted like a poison, selectively killing individuals of a working class background without the means to an alternate water source to the Broad Street pump (that John Snow discovered to be the contaminated cholera source). The report states "that the want of good sanitary arrangements in certain houses operated by compelling the residents to resort to the pump for drinking-water; and that, on the contrary, in certain instances where the drains were in good order, the cisterns were clean and the inhabitants did not send to the pump."[8] Several residents that lived within the geographical area of the outbreak were found to have avoided contracting cholera because they did not utilize the contaminated water source of the Broad

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[6] The Cholera Inquiry Committee, "General Report," *Report on the Cholera Outbreak in the Parish of St. James, Westminster, during the Autumn of 1854*, 62.

[7] The Cholera Inquiry Committee, "General Report," *Report on the Cholera Outbreak in the Parish of St. James, Westminster, during the Autumn of 1854*, 85.

[8] The Cholera Inquiry Committee, "General Report," *Report on the Cholera Outbreak in the Parish of St. James, Westminster, during the Autumn of 1854*, 80.

Street Water pump for drinking purposes. It was later discovered that only "the want of good sanitary arrangements in certain houses" pushed certain families of lesser means to drink the contaminated water, which ultimately led to their disproportionate rates of death.

Thus clearly the epidemiological outcomes of the 1854 cholera outbreak pointed to structural inequalities within the built environment. But despite this, Snow's conclusions were ultimately dismissed by the committee of scientific enquiry appointed by Parliament to inquire into the 1854 cholera epidemic. According to Halliday's *Death and miasma in Victorian London: an obstinate belief*:[9] commenting on Snow's hypothesis that death resulted from contaminated water, this parliamentary committee concluded "After careful enquiry we see no reason to adopt this belief." Instead, the committee was in favor of "the supposition that the choleraic infection multiplies rather in air than in water."[10] Even in the face of Snow's scientific evidence that proved that water was the cause of the 1854 outbreak, the committee somehow continued to believe in the miasmatic theory of disease.

The popular belief that cholera spread through *miasma* or through the filthy air allowed for the individual criminalization of filth. This belief manifested in the broader, social sense that there existed 'two Englands' of the rich and poor. An excerpt from Patterson's *Across the bridges; or Life by the South London riverside* demonstrates this perspective: "They become so subject to sore places and abscesses as to seem rarely free from a rag or bandage on some limb or another. Countless physical deformities exist among them, which grow daily worse under such conditions; any tendency to tubercular weakness gains a great start through lack of fresh milk,

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[9] S. Halliday, "Death and miasma in Victorian London: an obstinate belief." *National Library of Medicine,* (December 2001):1469-71: https://pubmed.ncbi.nlm.nih.gov/11751359/

[10] Committee for Scientific Enquiry. *Parliamentary Papers.* (1854-5): 21,49.

and air, and sleep."[11] The association of filth, smell and predilection for disease with the poor, working class population made these working class populations seem like almost a different type of human. Dickens' *David Copperfield*'s Steerforth claims "Why there's a pretty wide separation between them and us… They are not to be expected to be as sensitive as we are… they have not very fine natures, and they may be thankful that, like their coarse rough skins, they are not easily wounded."[12] As these fictional stories from the Victorian era demonstrate, under the paradigm of the miasmatic theory of disease, Victorians were convinced that the filth and unsanitary living conditions of the poor had transformed these people into a different *type* of human. Thus even in the face of John Snow's evidence that clearly pointed to a specific aspect (the water) of the physical built environment being the cause of cholera, the Victorian government and Victorian public continued to believe that the disease was spread within the air.

Perhaps this refusal to accept Jon Snow's epidemiological findings and scientific evidence reflected the larger public refusal towards state interference in terms of urban sanitation. By continuing to believe the paradigm that cholera, and disease, was spread through the air, and it was the sheer problems of urban *density* that brought about the urban evils of disease and filth, middle and upper class Victorians could continue to criminalize the poorer classes of society without financial investment into sanitary reform. This tendency was further facilitated by the urban design of the city of London, which allowed for the problems of the urban working class to remain invisible to the upper middle class.

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[11]Alexander Paterson, *Across the Bridges, of Life by the South London Riverside*, England: e. Arnold, 1911:39.

[12] Maurice Bruce, *The Coming of the Welfare State, with a Comparative Essay on American and English Welfare Programs*, Rev. ed. London: Batsford, 1966: 53

Particularly in the case of the 1854 cholera outbreak, epidemiological evidence found that "the affected district stood alone in its intense suffering although embraced on all sides by closely populated neighborhoods."[13] An analysis of this particular region of the city of London reveals a top-down planning of the neighborhood that allowed for the problems of urban density to remain segregated and separated from the surrounding class. John Nash's design of Regent Street (1810-1820), which bordered the West of the Soho area, instituted within it a *cordon sanitaire* clearly separating the upper class neighborhood of Mayfair from the working class neighborhood of Soho. In his explanation of his plan, John Nash states his intention to create

> A complete separation between the streets occupied by the Nobility and Gentry, and the narrower Streets and meaner houses occupied by mechanics and the trading part of the community… My purpose was that the new street should cross the eastern entrance to all the streets occupied by the higher classes and to leave out to the east all the bad streets.[14]

Nash's wide boulevard of the Regent Street, filled with commercial facades built for the upper-middle class, acted as a *cordon sanitaire* that would completely separate the West-residing upper class from the East-residing "meaner houses". Furthermore, Nash purposefully excluded entrances into the Boulevard from the East side, instead selectively building conduits for the upper class to enter the urban space of Regent Street through the West side of the street.

By designing the wide boulevard of Regents Street to be a one-way barricade that separated the upper class from the working class of Soho, Nash made the working class

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[13] The Cholera Inquiry Committee, "General Report," *Report on the Cholera Outbreak in the Parish of St. James, Westminster, during the Autumn of 1854*, 85.

[14] John Nash, "No. 3: Mr. Nash's Explanation of his Plan," *Some Account of the Proposed Improvements of the Western Part of London: By the Formation of the Regent's Park, the New Street, the New Sewer, &c. &c. Illustrated by Plans, and Accompanied by Critical Observations*, (January 1814).

community invisible from the eyes of the upper class. Thus the problems of urban density caused by a growing population, were pushed eastward, outside of Regents Street.

John Simon describes the conditions of these densely crowded neighborhoods in the 1854 *Reports Relating To The Sanitary Condition of the City of London*:

> The inhabitants of open streets can hardly conceive the complicated turnings, the narrow inlets, the close parallels of houses, and the high barriers of light and air, which are the common characteristics of our courts and alleys, and which give an additional anxiousness even to their cesspools and their filth… A man of ordinary dimensions almost hesitates, lest he should immovably wedge himself, with whomsoever he may meet, in the low and narrow crevice which is called the entrance to some such court or alley; and, having passed that ordeal, he finds himself as in a well, with little light, with less ventilation, amid a dense population of human beings, with an atmosphere hardly respirable from its closeness and pollution. The stranger, during his visit, feels his breathing constrained, as though he were in a diving-bell; and experiences afterwards a sensible and immediate relief as he emerges again into the comparatively open street.[15]

Simon's account illustrates the extreme contrast in living conditions that existed between the upper and middle class "open streets" and the working class slums. While the open streets were clean, full of light and air, the inner alleys were packed, tight and filled with cesspools and poor sanitation. It was in this context that the 1854 cholera outbreak occurring in this divided city selectively killed hundreds of working class Victorians.

The working class Victorians in Soho lived completely different lives from their upper- and middle-class neighbors. Yet the history and urban design of the area rendered the working

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[15] John Simon, "First Annual Report," *Reports Relating To The Sanitary Condition of the City of London*, (November 1849).

class Victorians' problems invisible, and a product of 'their own filth.' Separate and invisible from the public, working class populations were transformed in the public eye to be seen as a different type of human. In the public's eyes, the filth and miasma of their everyday environments had made them physically deformed and differently adapted towards disease. As a result, those other than the revolutionary sanitary reformers were hesitant to take active measures to fix these invisible problems of an *other*-ed population. Particularly in the context of the 1854 cholera epidemic where the more comfortable classes enjoyed the benefits of modern sewer and water systems, the cholera's disproportionate burden placed on the working class seemed obvious and unavoidable.

Within this society, the only means to protect the poor from these disproportionate health burdens of disease was to enact sanitary reforms that would go against Victorian ideals of liberalism. Yet these reforms were very necessary in this city where urban problems were directly leading to death. The 1878 *Health Lectures for the People*, stated that "According to health authorities perhaps as much as one-third of the nation's deaths were attributable to defective or inadequate sewers and drains, and to the omission, in general, as Simon put it, 'to make due removal of refuse-matters, solid and liquid, from inhabited places."[16] The 1854 cholera outbreak was only one example of the urban condition that had created a nation where one third of the population was dying from the lack of sanitary means.

Before and following the 1854 cholera outbreak, sanitary reformers such as Chadwick and Farr attempted to institute a system of governmental medical policing on moralistic grounds. These two individuals amongst other reformers recognized the necessity of sanitary reform in the changing Victorian Society. In 1843, Franz advocated for sanitary reform stating:

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[16] J. Fox, "Defective Drainage as a Cause of Diseases', *Health Lectures for the People*, II (1878-9): 79

> Over the supply of water-the sewerage- the burial places- the width of the streets- the removal of public nuisances- the poor can have no command… and it is precisely upon these points that the Government can interfere with most advantage. The Legislature would enact the removal of known sources of disease, and if necessary, trench upon the liberty of the subject and the privilege of property, upon the same principle that it arrests and removes murderers, who, if left unmolested would probably only destroy lives by hundreds, while the physical causes which have been averted to in this paper, destroy hundreds of thousands of lives.[17]

By comparing policing the built environment to policing a murderer, Franz created an understandable moralistic argument behind the necessity for state intervention.

But as we can see through the 1854 cholera outbreak, the existing urban designs and historical constructions of disease created a paradigm that made it difficult for the non-working class population to recognize the struggles of the urban poor and to recognize the necessity for sanitary reform. Approaches to sanitary reform began in the 1830s and continued throughout the nineteenth century. John Snow's direct epidemiological correlations discussed in this paper, that could support the arguments of sanitary reform, were initially disregarded by Parliamentary bodies and the urban public. In this way, the 1854 cholera outbreak, alongside its geographical and epidemiological history and impact, reflects the various layered social constructions that allowed for the invisibility of the brutal conditions of the working class. Medical science and statistics collided with class segregation and top-down policies to ultimately result in the death of thousands of members of the Victorian working class throughout the nineteenth century. Looking back at this collision between science and society from a presentist lens, it may appear backwards and untranslatable to modern society. However upon further reflection, we may find

[17] William Farr, "PP. XXXI', *Fifth Annual Report of the Registrar-General* (1843): 215

resonances of this tension between science and society in the way that we approach climate change reform in contemporary society. It begs the question: how have the historical constructions of the built environment and scientific understanding created a public and governmental body that refuses to recognize a public health emergency?

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