# Central Sanitation:

## Why Centralization Caused the Downfall of the Early Public Health Movement in Victorian Britain.

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in London from 1831 to 1832 caused a sufficient crisis to prompt the creation of local boards of health

capacity, it only made sense to engage in prevention.[12] Chadwick also hoped that pursing preventative measures against destitution would increase the popularity of the much-detested New Poor Law.[13] An outbreak of typhus in 1838 prompted Chadwick and health reformers to

sanitary reform by gaining significant public support.[17] Although Chadwick did not officially join the Health of Towns Association, he influenced it from behind the scenes. Thus, its propaganda for public health also promoted the sanitarian ideas outlined in Chadwick's Sanitary Report. The Health of Towns Association was extremely successful in campaigning for public health, accumulating support from across British society.[18] As a result, awareness of the need for public health measures spread rapidly in Britain and the desire for public health reform ceased to be controversial. Rather, controversy was provoked by the sanitarian solutions proposed by Chadwick that became intertwined with the early public health movement. Though Chadwick's sanitarian approach to public health became controversial, it should be noted that it was never universally hated. After all, the Sanitary Report and the Health of Towns Association were also quite successful in promoting Chadwick's vision of how sanitary reform should be conducted. However, Chadwick's plan to centralize public health would cause issues which could not be dismissed through promotion alone. Even among the working classes, opinion on Chadwick's sanitary measures would vary dramatically, from support to apathy to opposition.[19] Had Chadwick's ideas of sanitary reform not become entangled with the early public health movement, there would likely have been far less controversy and debate surrounding the implementation of public health legislation.

One final aspect to note when examining the opposition to the early public health movement is the longstO0 Tw .s 3.1 Tc -.nding ongs, fr(0 Tw  t)-2 (o no)5 (t)

Chadwick was a main author, was seen by many as heavy handed and cruel. For this reason, there were many who would oppose any project in which Chadwick was involved.[20] It could be argued that the early public health movement would have faced opposition anyway simply due to Chadwick's involvement, even if he had not pushed for centralization. However, that opposition would not have become nearly as significant as it had if Chadwick had not given his opponents greater reasons to oppose him by insisting on a centralized public health authority. Though this period saw a great rise in the popularity of the early public health movement, it would also see small but growing groups of opposition start to appear.

A significant amount of debate surrounding the direction in which Chadwick was taking the early public health movement came from sections of the medical community. In the mid-Victorian period, the science behind how disease spread was not yet fully understood. One theory on the cause of disease was known as the miasmatic theory of infection. This posited that illness was the result of breathing in foul odors, referred to as miasma, which came from contaminated soil, air, and water. Chadwick used the miasmatic theory as the basis for his 1842 Sanitary Report, since it was still the most commonly accepted theory of disease among medical practitioners of the time. Chadwick's own interpretation of the miasmatic theory was that the infectious miasma could come from local sources, not just the general atmosphere and climate of an area. Such local sources could include filth, trash, and human waste, the last of which was often left to gather in cesspools due to a lack of town planning. Thus, Chadwick's solution to Britain's public health problem was to remove such local causes of miasma through cleanup, drainage, and sewers.[21]

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[20] S.E. Finer, *The Life and Times of Sir Edwin Chadwick* (London: Methuen & Co., 1952), 113.
[21] Mervyn Susser, and Zena Stein, *Eras in Epidemiology: The Evolution of Ideas* (Oxford: Oxford University Press, 2009), 55.

consistent in their push for centralized public health, and were unable to adapt to advances in medical knowledge.[25] They wanted to create a sense of uniformity in practice when it came to a central sanitary authority.[26] Chadwick himself seemed completely closed off to new research: he did not see public health as a problem to be solved through medical science, but rather through engineering and administration.[27] For this reason, aside from a few prominent medical men whom Chadwick had personally picked, knowing that they would not contradict his own views,[28] the medical community had little power over how the sanitarians shaped the early public health movement.

Thus, the contagionists, who might have become allies of the early public health movement, instead contested the scientific validity of the sanitarians' miasmatic theory. Chadwick's desire to centralize public health, and thus create an authority that subscribed to only one interpretation of medical science, antagonised potential allies in the medical community. However, opposition from the medical community between 1842 and 1848 remained relatively confined. After all, Chadwick's miasmatic theory reflected the most predominantly held theory of infection at the time, and anticontagionism still prevented contagionist theory from being taken seriously in most of the medical community.[29] Nevertheless, centralization of authority came with centralization of scientific ideas in the early public health movement, alienating some who objected to a dogmatic approach to medical science.

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[25] Oliver MacDonagh, *Early Victorian Government 1830-1870* (London: Weidenfeld and Nicolson, 1977), 141.
[26] Christopher Hamlin, *Public Health and Social Justice in the Age of Chadwick: Britain, 1800-1854* (Cambridge: Cambridge University Press, 1998), 243.
[27] Oliver MacDonagh, *Early Victorian Government 1830-1870* (London: Weidenfeld and Nicolson, 1977), 137.
[28] Lee Jackson, *Dirty Old London: The Victorian Fight Against Filth* (New Haven: Yale University Press, 2014), 73-74.
[29] Erwin H Ackerknecht, "Anticontagionism Between 1821 and 1867: The Fielding H. Garrison Lecture," *International Journal of Epidemiology* 38, no. 1 (2009), 13-14.

Aside from the contagionists, the sanitarians also faced opposition from the small group of reformers whom had been working with Chadwick in the 1830s. As with the contagionists, Chadwick had alienated these reformers through his attempts to centralize public health based on his own sanitary ideas. However, the reasons for opposition from these reformers differed, as some believed that Chadwick's sanitary ideas had extended too far, while others believed he had left out important factors about the spread of disease. The former were a small group of London doctors with whom Chadwick had worked after the 1838 typhus outbreak. As Chadwick developed his Sanitary Report, he came to strongly disagree with these reformers. Despite following the same miasmatic theory as Chadwick, the London Doctors wanted to focus on reducing overcrowding and improving the sanitation of working class housing. While the reformers acknowledged the use of sewers and drainage, this was not the central focus of their ideas on sanitary reform.

Chadwick, on the other hand, saw the dwelling house improvements proposed by the London Doctors as insufficient to solve the issues surrounding public health in Britain. He argued that, if the dwelling house improvements were implemented without sufficient measures of sewerage also being put in place, the problem of poor sanitation in towns would actually become exacerbated. If every family in every town were to be provided with a separate dwelling,

Sanitary Report of 1842.[30] In this way, Chadwick's sanitarian reform was more extensive than that proposed by the London Doctors.

On the other hand, some medical practitioners believed that Chadwick's sanitarian ideas did not effectively encompass the whole issue of public health. As an author of the New Poor Law, Chadwick wanted to avoid any public health solution that might incentivise illness. For this reason, Chadwick rejected the concept that poverty itself could be a cause of disease. If the condition of being a working-class individual, involving overworking and malnourishment, enabled the spread of illness, then a significant amount of relief and social reform would be needed in order to truly address Britain's public health issue. Wanting to avoid such reforms and relief, which would have likely been too philanthropic as well as expensive to pass through parliament, Chadwick dismissed the findings of the medical practitioners who advocated such measures. The sanitarian public health movement of the 1840s would thus be one that acknowledged that disease caused destitution, but did not acknowledge that destitution caused disease. Thus, many felt as though the early public health movement was not dealing with half of this disease feedbestWEMC Span MCID 10 BDC 05 T4 -0.005 T4 -w 7.92.30Td7.92.201.12.388(moTm(31[(WI

sanitarians not dealing with malnourishment in their quest to improve public health.[32] Farr had released conclusions that starvation caused mortality as early as 1839, which was in line with

focus of the early public health movement. In the Sanitary Report of 1842, Chadwick argued that

there were eight Commissions of Sewers in London

However, as centralization of the early public health movement led to the establishment of powerful sanitary authorities, engineers began to believe that Chadwick meant to dominate and control the engineering profession. Before the General Board of Health, such an authority manifested in the Metropolitan Sanitary Commission of 1847. This commission was dominated by Chadwick, who now took on a far more critical tone towards engineers. In a report, the Metropolitan Sanitary Commission concluded that engineers often ignored the optimal approach to sewerage because they were paid by a percentage of projected costs. Thus, it was not in the

functioning model.[46] Thus, between accusations of corruption and a shift towards inferior designs, Chadwick had strained the relationship between himself and engineers by 1848. Again, centralization of the public health movement meant that only the ideas of the central sanitary authorities, in this case Chadwick, would be accepted, while any criticism was met with fierce opposition. Chadwick's sewer design would be used whether the engineers liked it or not.

private war against the water companies in 1845 in an attempt to keep them in line. This resulted in the 1847 Waterworks Clauses Act, which limited water company profits, penalized water companies that did not provide a legitimate demand for supply, forced water companies to provide for public services, and required sufficiently clean water at high pressure.[49] Central authority over public health had burdened the water companies with restrictions.

Meanwhile, the urban landlords had been able to get rich quickly by rapidly constructing dwellings without building regulations. They were able to generate large profits by renting these cheaply constructed dwellings to tenants, despite the fact that they had insufficient drainage and sanitation.[50] These slum owners opposed public health reform in parliament, convincing other middle class members who had not seen the terrible conditions of the slums for themselves to help them.[51] Groups of private economic interests such as these chaffed at regulation, desiring above all freedom of enterprise and competition in order to maximize profits. Centralization of public health threatened this, as it would bring about a high degree of public control over private enterprises, higher standards, and a reduction of competition. Disliking the prospect of government sticking its hand in the marketplace, businesses became some of the early public health movement's most powerful enemies in parliament due to their economic influence.[52]

Centralization in the early public health movement also faced significant opposition from local government. Prior to the early public health movement, sanitary matters were the responsibility of various local authorities. These authorities were so numerous that their

[49] R. A. Lewis, *Edwin Chadwick and the Public Health Movement 1832-1854* (London: Longmans, Green and Co, 1952), 104-105, 117, 131-138.
[50] Oliver MacDonagh, *Early Victorian Government 1830-1870* (London: Weidenfeld and Nicolson, 1977), 135.
[51] Royston Lambert, *Sir John Simon 1816-1904 and English Social Administration* (London: MacGibbon & Kee, 1963), 87[illegible] MacDonagh, *Early Victorian Government 1830-1870* (London

jurisdictions and responsibilities overlapped, often leading to administrative confusion. Furthermore, local authorities were often corrupt and inefficient in their duties. Chadwick realised that the organized and extensive sanitary reforms that he envisioned would be impossible to effectively implement if left to these many incompetent local boards. Thus, Chadwick sought to abolish these various local boards and replace them with a smaller number of more effective authorities with greater centralized power. However, the pre-existing local boards would not let go of their power so easily and fought ferociously against the

removal out of the hands of locals and put it in those of an overarching authority.

in parliament would use the confusion surrounding the sanitarians' medical and engineering conflicts to their advantage in disputing Chadwick's centralized public health plans.[58]

Thus, when a Public Health Bill was finally put forward in 1848 based on the Sanitary Report, it did not pass as smoothly as Chadwick would have hoped. That bill, proposed by Viscount Morpeth, envisioned a central authority that would come to be known as the General Board of Health. This central authority was to be a board that consisted of five members and would be overseen by government. The central board would oversee local boards that could be set up if requested by a petition of one-fiftieth of the locality's inhabitants. In company towns, local boards would be formed from members of the corporation as well as some elected members if applicable. In other towns, representatives of their local board would be chosen by election. When a petition of one-fiftieth of a locality was submitted, a report by an inspector from the central board would follow. If this report agreed that a local board was necessary, then the jurisdiction would be defined, the appropriate number of board members would be determined, and a local board could then be created. The central board had a great deal of power over the local boards. While the local boards could take some actions on their own, they were also compelled to appoint a surveyor, appoint an inspector of nuisances, and undertake the various sanitary improvements recommended in the Sanitary Report. Permission from the central board was required to dismiss surveyors, and engineering projects could not be undertaken without first getting approval from the central board. If an engineering project was given approval, it became mandatory and could no longer be cancelled. Finally, the central board had a significant degree of control over the local boards' finances. For the time being, London was to be excluded from this bill until the Metropolitan Sanitary Commission concluded its report. The enemies of

[58] Oliver MacDonagh, *Early Victorian Government 1830-1870* (London: Weidenfeld and Nicolson, 1977), 143.

centralization quickly raised their voices in opposition, decrying what they saw as the return of
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undesired government patronage and an attempt to end local government. Others were simply concerned that London would not yet be included.[59]

Such voices would be heard in parliament, where the bill was being debated. In 1847, discussion of public health measures in the House of Commons had been largely uncontroversial. It was agreed that: public health measures were necessary, as they outweighed self-interest; it was a shame that such measures had been delayed for so long; and the metropolis should be included in a public health scheme.[60] However, when the details of the Public Health bill were placed before it in 1848, the House of Commons became divided over the issue. Although public health measures were still considered necessary, some members of parliament expressed concern over the centralization in the proposed bill. One, "

However, the House of Lords had a far more favourable view of the Public Health Bill. There was no argument over the issue of centralization among the Lords, and if anything, they expressed the desire to give even more power to the central board. The only real concern expressed by the Lords was the exclusion of London; yet this was far from a complaint, as they felt that London should be included as soon as possible.[64] The Lords expressed disappointment at the Commons' gutting of the central board's power. The Earl of Ellenborough, "objected to the amendments of the Commons, as they might lead to jobbing in the local boards" (jobbing referring to corrupt board members, who would use their positions as a means to make money rather than to improve their communities). Although they wished to restore the bill to its original state, the House of Lords realised that they needed to make concessions in order for it to pass the Commons.[65] Thus, while they could not restore all of the central board's power, the Lords restored the central board's control over the local boards' loans. The central board was also given the power to arbitrarily create local boards in areas with a mortality rate of twenty-three per thousand (the national average was twenty-one per thousand) without the need of a petition. Thus, the Public Health Act came into being in 1848 just as a new cholera outbreak began, with the General Board of Health as a

centralization had

answer. Rather, better ventilation would prevent the buildup of such a miasma because fresh air could purify it.[68]

The Quarantine Report revealed the General Board's dogmatic approach to science. Medical authority had been centralized in the General Board, yet it would not adapt to new medical developments, so medical professionals began to oppose it. Whereas contagionism had been rejected by most of the medical community earlier in the decade, anticontagionism had become far less prominent by the time the Quarantine Report was released. Many now believed that different diseases could be spread in different ways, some through miasma and some through contagion.

problems for the public health movement. As only the outdated ideas of the central authority were accepted, the scientific authority of the General Board was called into question.

As time went on, the General Board's centralized authority was further challenged as its scientific basis faced more high-profile competition. In 1849 physician John Snow published "On the Mode of Communication of Cholera". His findings contradicted the official medical theory of the General Board and would play a large role in the decline of anticontagionism in the 1850s and 1860s.[71] He concluded that cholera was transmitted through the consumption of contaminated substances rather than through the atmosphere, a conclusion in line with contagion theory.[72] Based on this, Snow concluded that cholera was a disorder of the digestive system instead of a disorder of the blood, as was commonly thought.[73] Although Snow's theory was not yet broadly accepted by the medical community, the nature of the criticisms he received demonstrate a shifting in the understanding of disease. Critics called into question Snow's claim that cholera was an intestinal disease, as well as his claim that cholera infection was only caused by consuming contaminated water, asserting that it could also be caused by air. This demonstrates that miasmatic theory was still being used, but also that was not the only cause of infection being considered. Furthermore, the specificity of different diseases was being examined which contradicted

success for his work with chloroform, despite criticism from the medical community and the General Board of Health.[74]

Even as Snow's theory became more popular, the General Board only considered consumption of contaminated water to be a predisposing factor, and continued to insist that miasma was the immediate cause of disease. Snow's rise to prominence led him to administer chloroform to Queen Victoria in 1853 for the delivery of her son, Prince Leopold.[75] Scientists with novel theories of disease had thus begun to earn prominence, creating competition for Southwood Smith and the other prominent scientists working with the General Board. Centralization of the early public health movement had created a dogmatic approach to science and restricted what could be considered official medical ideas. This led a large portion of the medical community to turn against the General Board, calling its scientific authority into question.

Similarly, the centralized authority of the General Board was being called into question over its approaches to engineering. In 1852 the Institution of Civil Engineers, which had remained quiet about the General Board of Health's sewer scheme up until this point, began expressing their discontent. There were two

works. The second flaw was the focus on a centralized design. Unlike Chadwick, who took a highly systematic approach to constructing sewers, engineers took a decentralized anti-systematic approach. As a centralized authority, Chadwick did not look at individual cases but rather applied the same generalized system to every town he could. In contrast, the engineers examined individual cases and looked for the best way to implement sewers according to locality rather than an overarching plan, recognizing that variation was necessary when dealing with variable individual cases.[77] In response to attacks on their profession, civil engineers fought to show that a more local and specific approach to sewer design was superior to that of an overarching, dogmatic central authority. Engineers would play a prominent role in the downfall of the early public health movement, as they worked with politicians to block improvements and questioned the effectiveness of the General Board of Health.[78]

Private economic interests also continued to block the General Board of Health's ability to make improvements in their resistance against the regulations that came with centralization. In 1850, Chadwick published a Report on the Supply of Water to the Metropolis, in which he argued that the nine remaining London water companies should be consolidated into a single water supply and drainage service. Chadwick maintained that there was no reason the principle of centralization that defined the Public Health Act should not also be applied to London. After all, it was apparent to even a follower of miasmatic theory, who did not believe that consuming contaminated water caused disease, that the water supply of most Londoners was unacceptably foul.[79] The General Board of Health echoed Chadwick's report in 1851, asserting that the water

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[77] Christopher Hamlin, "Edwin Chadwick and the Engineers, 1842-1854: Systems and Antisystems in the Pipe-and-Brick Sewers War," *Technology and Culture* 33, no. 4 (1992):

companies should be taken over and put in the hands of a central government agency. The General Board concluded that the companies had failed London during the recent cholera epidemic, as the water they had provided was too poor in quality and low in quantity for proper sanitation. Furthermore, the stinking water that had been distributed contributed to the miasma, increasing mortality.[80] Unfortunately, recommendations to buy out the water companies were never acted upon, and further attempts to secure a good supply of water for London resulted in failure. A Metropolitan Water Act had been introduced in 1852 to apply some degree of regulation to the water companies, requiring that they filter their water, for instance. However, the water companies did not always comply with such regulations. London would not be provided with a constant supply of clean water for many years to come,

cemeteries would be bought out, and national cemeteries would have places for both Anglicans and Dissenters. The fact that these reforms would mean the loss of eight cemetery companies and three thousand undertaking jobs in the metropolis created much opposition among metropolitan members of parliament. Despite this, Chadwick's scheme came out of parliament as the Metropolitan Interments Act in 1850, the only significant change being that the General Board of Health would be put in charge of administering it rather than a new commission.[82]

Unfortunately, the now overstretched General Board could not bring this scheme to fruition due to blatant opposition from the Treasury, which prevented them from purchasing cemeteries. Both those in the Treasury as well as the General Board's new president, Lord Seymour (who had replaced Viscount Morpeth), shared a common belief that private enterprise and unrestricted capitalism created the most efficient results. Due to their distaste for Chadwick's use of patronage and centralization over business, they stalled the Metropolitan Internments Act until it died.[83] On top of this failure, the General Board had established itself as an enemy of burial companies in much the same way as it had with the water companies. Economic interests, including water companies, burial companies, and slum landlords, would use their established connections in the government to resist the Public Health Act.[84] To such private interests, centralization of the early public health movement meant greater restriction, loss of profits, or even loss of their entire business. As a result, they became powerful enemies of the General Board, blocking its ability to put out effective sanitary solutions.

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[82] R. A. Lewis, *Edwin Chadwick and the Public Health Movement 1832-1854* (London: Longmans, Green and Co, 1952), 238-258.
[83] Ibid.
[84] Ibid., 330.

Local government also continued to be a strong opponent of the centralizing efforts of the General Board of Health. As previously noted, the General Board could only establish local boards in areas that submitted a petition of one-tenths of local inhabitants or in areas with a high mortality rate. While these local boards did have a degree of autonomy, they functioned more as a body through which the General Board could exercise its central authority. The General Board retained coercive power over the local boards' finances and could appoint a surveyor to local boards as a permanent official. The General Board's success thus depended on its ability to convince localities to petition for a local board, at which point central control over the area's sanitation could be exercised. While the cholera epidemic of 1848 to 1849 had diverted the attention of the General Board away from this goal, it had also demonstrated the importance of implementing sanitary measures. It also contrasted traditional local officials, who were corrupt and slow to act, with the General Board, which worked tirelessly for the year the epidemic lasted by using emergency powers to enforce rapid sanitation.[85] Thus, petitions for local boards began coming in quickly by 1849. Local boards began sending reports back to the General Board with recommendations for public health improvements based on Chadwick's sanitarian ideas. This included information on drainage, ventilation, sewer structure, possible sources of miasma, and cost-

government. The Engineering Institute and the metropolitan radicals also fought each other for control of local power.

focus on them.[90]

but more generally to encourage their proceedings, the public would by this time have had good water, and that at a price so trivial as scarcely to be worth consideration." [93] However, they did not prevent Commons from reconstituting and reducing the power of the General Board, likely due to the amount of negative attention this would bring. It was agreed that the General Board should be renewed due to the continuing threat of cholera.[94] Though renewed, the General Board had lost much of its centralized power. It had also lost Chadwick, who had been the guide of the early public health movement since 1842. Opinion on this change was mixed. In the newspaper *Leader*, Chadwick's loss was lamented, as he had done so much to improve the nation's health over the years.[95] On the other hand, an article in the *Newcastle Journal* was glad of the changes to the General Board and suggested that it had failed nationally for the same reasons it had failed in London.[96] Centralization had caused the downfall of the General Board in two ways. It encouraged a

towards contagion.[97] In 1855 the suggestion of engineers that sewers should be implemented based on specific local factors was adopted. There would be no more single central solution to sanitary infrastructure. Sir John Simon was given the position of Medical Officer in the now severely-weakened General Board. Simon resolved to take a gentler approach, expanding centralized public health gradually through national consents rather than through Chadwick's abrasively uncompromising approach.[98] Simon would embrace the role of local government in public health that Chadwick had rejected.[99] This allowed him to set up local boards in 568 communities from 1858 to 1868, whereas only 103 communities had set up local boards under the General Board of Health.[100] As the new face of the public health movement, Simon would work alongside local government. In 1858 the waste pouring from London's sewers into the Thames began emitting a horrible smell that permeated the city in an event known as the Great Stink.

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