THE PUBLIC HEALTH MOVEMENT IN VICTORIAN ENGLAND, 1831-1875

THESIS

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In early Victorian England, a coalition of men of Government and the local community established a centralized and uniform policy toward public health. The long and arduous campaign (1831-1875) for public health impelled the need to solve the serious social, political and economic problems spawned by the Industrial Revolution. This study concludes that Britain's leaders came to believe that Government indeed had an obligation to redress grievances created by injustice, a decision which meant the rejection of *laissez-faire.* Through legislation based on long study, Parliament consolidated the work of sanitation authorities, trained medical officers, and essential environmental improvements. The public sanitation program soon decreased the mortality rate by breaking the frequent cycle of cholera, typhoid, typhus, and dysentery plagues, all this notwithstanding that no doctor of that age knew that bacteria and viruses caused disease.
PREFACE

The Public Health Movement of Victorian England stemmed from the social, economic and political problems created by industrialization. Unprecedented social change focused attention on such issues as poverty, public health, working conditions, and education. By mid-century, government involvement in social affairs had begotten a plethora of recommendations on how to rid England of these social evils, especially the improvement of public sanitation. The national government and local communities attempted to design a comprehensive program to achieve this goal. This study focuses on the conflicting social, economic, and political forces enjoined by the Public Health Movement, a subject neglected for almost a century.

The major primary sources, for the crusade for public health legislation are Hansard's Parliamentary Debates, House of Commons, Sessional Papers, and United Kingdom Statutes.

The most important secondary accounts are Derek Fraser, The Evolution of the British Welfare State (1973); Henry Jephson, The Sanitary Evolution (1925); and Anthony Wohl's Endangered Lives (1983), and The Eternal Slum (1977).
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PROLOGUE

THE GENESIS OF SANITARY REFORM, 1597-1830

The concept of sanitary reform, like most social ideals, originated in an era when men had to fight for their lives or perish from unknown causes. The host of diseases which waged warfare against mankind was incomprehensible to the nineteenth-century observer. In the early years of Queen Victoria's reign, a paradox emerged, which depicted human conditions in England, especially London, at their worst. In 1840, an estimated 40,000 children who lived in London were members of destitute families or orphaned, and fifty per cent of them were dead before the age of five. In this great city more than two million people breathed the pollution of open sewers and cesspools as well as the stench of shallow graves and slaughterhouses.¹

Spawned during Tudor times and nurtured for two centuries thereafter, these evils had grown through neglect. When England broke with the Papacy, the suppression of most monasteries and the confiscation of Church property ensued. Thus was lost a valuable relief agency for the poor, the sick, and the indigent, who had nowhere else to turn. Not until the Elizabethan Poor Laws of 1597 and 1601, did Parliament begin its long quest for a workable relief program. The purpose of these acts and the many modifying statutes

¹
was to relieve the aged, to provide assistance for the infirm, and to dispense jobs for the poor. The result was a division of classes which the landed gentry found acceptable.\textsuperscript{2}

By 1665, the greatest concern facing England, as well as the Continent, was the outbreak of the plague (Black Death). In rapid succession orders were issued on how to keep streets, houses, and dwellers safe. Nonetheless, between 6,000 and 10,000 people died each week in London. Medical and sanitary science could not cope with the plague until the "Great Fire" had consumed the mansions of the rich and the shacks of the poor. The "Plague Bell" for England tolled once again in 1720, with the arrival of an Eastern plague in France. This alarm became the second turning point in the movement toward public health measures in Great Britain.\textsuperscript{3}

But what could be done to prevent such catastrophes? Dr. Richard Meade (1673-1734) had an idea. In a work entitled \textit{A Discourse on the Plague} (1720), he argued that infectious areas could be managed. Every civil magistrate should proclaim that the Commonwealth is dependent upon the welfare of the individual. Parliament responded to the pleas of Meade in 1720 by passing a bill containing most of his suggestions, but the following year, Parliament repealed most of the legislation achieved through Meade's foresight because the plague subsided. Other arguments
surfaced. The aristocracy denounced a quarantine (central to the containment of the plague) as unconstitutional. Secondly, a Council of Health, desired by Meade, was unenforceable and costly. The barons, moreover, scoffed at the notion that Britain should copy French programs on plague control. Ironically, the third objection surfaced again in 1830, when Edwin Chadwick reintroduced public health reforms which emulated France's successful program.4

Chadwick's cause was endorsed by three British military physicians. Sir John Pringle (1707-1782), in his Observations on the Disease of the Army (1752), James Lind (1716-1794) and Gilbert Bane (1749-1834), co-authors of a manual on maintaining the health of soldiers and sailors, all advocated the use of fresh air, fresh water, and fresh foods. The principles of good health, advocated by these men, were supported by George Baker (1722-1809) and F. Thomas Percival (1740-1804), who saw a correlation between environment, people, and devices while doing research in Devonshire; Percival perceived that one cause of endemic colic was the use of lead filled vats in fermenting cider. Percival was a founder of Britain's first Board of Health (1795). Their works stimulated debate in academic and professional circles. Though their influence on the general populace was minimal, the Industrial Revolution gave impetus to their theories.5
While Britain fought the American Revolution, the Industrial Revolution at home impelled profound economic and social changes. In agriculture, farmers abandoned the open-field system. Following closely behind the closure of the open-field system, farmers employed the new technological accomplishments of Jethro Tull, Charles Townshend, and Robert Bakewell. But these new farming techniques including the seed drill, selective breeding of livestock and winter fodder required large capital expenditures which small owners and leaseholders could not afford. Many small farmers (yeomen) who could not prove ownership of land lost their land. Forced to live on wages alone, those who remained in rural areas lived (or suffered) an existence hardly better than that of a sharecropper.6

The agricultural reforms were significant, producing increased production with new techniques and crops but industrial changes were more far-reaching. The factory system replaced the domestic system, first in the textile trade and later in mining, not only increasing production and efficiency of human energy, but also by creating new wretchedness. The dwindling income of cottage laborers led to a dispersement of population. Industrial centers with water, coal, and other resources drew laborers from the countryside. This new urban movement caused serious problems in housing, sanitation, paving, and lighting. The new town, however, was not a home where a man could find beau-
ty, leisure, learning, religion, or many of the benefits of civilization.\(^7\)

But the Industrial Revolution did increase production and bring cheaper (if not better) products to the market place. The wealthy manufacturers, and the new bourgeoisie, soon allied with the aristocracy and dominated the political scene for almost a century. Between 1792 and 1801, foreign commerce also expanded a development which the advocates of laissez-faire cited in support of their theories. The only real losers during this period were the poor, who experienced acute distress from crop failures in 1794-1795 and 1800-1801. A food shortage, rising prices and low wages, notwithstanding the wars against revolutionary France, all combined to produce riotous conditions in England. The poor, who did not understand the principles of economic pressures, believed their only recourse was to obtain a voice in government.\(^8\)

In 1815, Great Britain reached the apex of military prestige with Napoleon's defeat at Waterloo. But the enormous cost of twenty-two years of war diluted the joy of victory.\(^9\) To pay for this costliest of conflicts, the London government, of course, raised taxes which "touched every imaginable object possessed or acquired by the rich and poor alike."\(^10\) The wealthy, however, could recoup their losses through indirect taxation of a protective nature, whereas the poor received no compensation. The pri-
mary example of protection was the Corn Law of 1815, which levied a high tariff on imported wheat. But this measure fell short of Parliament's expectation, for the end of the wartime boom ushered in a long and severe depression. Though continental markets again were open, war-ravaged Europe had no money to buy England's manufactured goods, long held back by embargos and blockades. Surpluses forced layoffs, thereby swelling the ranks of the unemployed, which included, too, some 400,000 demobilized troops. The Corn Law made matters worse by excluding foreign grain until home-grown corn (wheat) reached the famine price of eighty shillings (4½) per quarter. Thereafter, the government would admit grain duty-free. The Corn Law, therefore, forced the destitute and unemployed to pay more for their bread.11

Hungry and ill clothed, the poorer classes succumbed to many illnesses which wracked their frail bodies. Since, the urban and rural laborer did not partake of the benefits of the industrial society, a paradox arose. From 1760 to 1830, the London government took little heed of the physically weak, because they had no power to create a disturbance. The capitalist class, preoccupied with its own problems, also ignored the plight of the working classes who perforce developed a sense of helplessness and bitterness against the circumstances and leaders which kept them in subjection and penury.12
Thus, postwar England was confronted by serious problems. Depreciated money, low wages, high prices and taxes, all made it impossible for the laborer to improve his lot. The liberal Lord Byron indeed, lamented that in all his travels to Europe's battlefields and war-torn cities, he had never witnessed such wretchedness as he had seen since returning to England. Fear of the French Revolution and Jacobin radicalism not only delayed political reform in Britain, but also led the government to adopt repressive measures which in turn provoked radical agitation. Journalists such as William Cobbett demanded parliamentary reform to extend the franchise. But Ultra-Tory refusal to redress grievances incited the radicals to violence. The Spa Fields, London, riot, December 2, 1816, caused Parliament to retaliate by passing the Coercion Acts (March 1817), which only added fuel to the fire. A second riot, known as the Peterloo Massacre, took place at St. Peter's fields, Manchester, August 16, 1819. Parliament's response was the reactionary Six Acts which aroused hostility toward the cabinet, but with the discovery of the "Cato Street Conspiracy" (February 23, 1820), it recovered its popularity. Deprivation of personal liberties such as freedom of the press and public assembly and the right to bear arms seemed insignificant when compared to the plot of twenty radicals to assassinate the cabinet and establish a republic. These acts of violence persuaded the ruling
elite to oppose even moderate reform, lest such action encourage Jacobinism to take root in England. The future of political reform rested with younger men like Robert Peel and William Huskisson, who saw repression as a negative force which must be replaced.\textsuperscript{13}

An unreformed Parliament, however, was not the only obstacle on the road to social democracy. Due to an inefficient and tradition-bound national bureaucracy, enforcement of laws and regulations remained with local officials of the parish, county or town, especially the Justice of the Peace. "The existing mechanism of local government was scarcely adequate for more than the simplest problems of a rural community."\textsuperscript{14}

Opponents of constitutional reform, like Toulmin Smith, believed local government better served the welfare of the people. Thus, the bitter struggle over reform hindered local authorities, who not knowing what to do, chose to do nothing. The writings of Adam Smith, Thomas Malthus, and David Ricardo, moreover, influenced the economic thought of the Victorian Age.\textsuperscript{15}

Smith preached the doctrine of no governmental interference with business, because artificial restraints would impede the working of natural law. "Let things alone" carried over easily into political reform, if only because such a dictum suited the interests of the ruling classes. But the plutocracy and aristocracy ignored Smith's admoni-
tion that wages should be increased. To the manufacturer, profit was the primary goal, not the welfare of the employee. Thus, the new bourgeoisie did not perceive the interdependency between the capitalist and the worker.16

Malthus helped stabilize an already pessimistic attitude toward reform with his mathematical calculations about the relationship between wages and population. His advocates argued that if increased wages resulted, the population also would increase, becoming so large that no improvement in the welfare of the poor would occur. Thus the subsistence theory of wages and population conceived by Malthus explained poverty in such a way that it became useless to attempt relief at all.17

Ricardo, a student of Malthus, attempted to prove that wages paid to laborers must be of a subsistence level. Natural law, he affirmed, regulated increases and decreases in the labor supply. Thus the regulation of wages by government would be unfair, because it would help one class at the expense of another. The laissez-faire theories of Smith, Malthus and Ricardo, of course, were used by factory owners to justify maintaining the status-quo. Malcontents needed only to be reminded that cheap foreign goods could undersell British products.18

Until the 1820's, Parliament, though aware of evils existing in society, did nothing to remove them. An attitude of complacency toward abuses prevailed. Someday life
would be better. Meanwhile, the corn laws, enclosures, low wages, and high taxes reduced thousands of urban workers to pauperism and, thus, raised the threat of revolution.¹⁹

The suicide of Lord Castlereagh on August 12, 1822, however, brought into the cabinet Liberal Tories like George Canning and William Huskisson. Robert Peel, Secretary for Home Affairs, reformed the criminal code in the interest of humanitarism, and Huskisson, financier and president of the Board of Trade, reduced tariffs on imported goods. Frances Place, a master tailor and reform advocate, persuaded Joseph Hume, a radical M.P, to improve the lot of common laborers. After securing a position on an investigative committee, Hume produced enough evidence to secure the approval of Peel and Huskisson for the repeal of the Combinations Act on June 21, 1824. The spirit of repeal continued to surface. The adoption of a sliding scale for the Corn Law in 1828, the repeal of the Test Act in 1828, and passage of the Catholic Emancipation Act in 1829, all demonstrated the changing sentiment of Parliament. More liberal reforms had to await the fall of the Tory cabinet of the Duke of Wellington (November 16, 1830) and the ascendancy of Earl Grey.²⁰

Determined to have Parliamentary reforms, Grey chose able colleagues to redistribute seats and extend the suffrage. Gross inequalities existed, for pocket boroughs returned officials automatically to office, and bribery and
deceit marked rotten borough elections. On March 21, 1831, Lord John Russell introduced an extensive reform bill, which won widespread approval throughout Britain, but in the House of Commons legislation passed by only one vote. Public opinion strongly favored the bill. Throughout the realm a cry went up for "The Bill, the whole Bill, and nothing but the Bill." Conflict occurred in Parliament between the House of Commons and the House of Lords, resulting in the flip-flopping to cabinet control between Lord Grey and the Duke of Wellington. But public opinion was not denied; finally on June 4, 1832, Lord Grey's ministry secured a reform bill. The Reform Bill stopped short of equal constituencies or universal manhood suffrage, but broke the grip of complete aristocratic control. The middle class now possessed a strong voice in elections, but more important, public opinion now displayed a desire for reforms. Property qualifications were high, but urban and rural laborers remained disenfranchised. With the aristocratic grip broken and middle class now enfranchised, the working classes expected concessions.

Although the working man remained outside the political arena, the first ray of hope for factory reforms came from Jeremy Bentham, whose utilitarian philosophy declared that government should pass laws to bring the greatest happiness of the greatest numbers. Adam Smith's system of laissez-faire had failed to achieve this goal. Thousands
of workers still lived in poverty and unsanitary conditions, earning wages barely sufficient to keep them alive. Forced to work in adverse conditions for long hours, the plight of the worker was deplorable. John Stuart Mill joined Bentham in the 1820's to denounce the fallacies of laissez-faire. The real objective, according to Mill, was the equitable distribution of money. These new economic ideas quickly spread among middle-class youth, who debated them in round table discussions. Lectures and pamphlets emphasized the need for humanitarianism, for when a large segment of the population lived under adverse conditions, a blot on civilization existed. This awareness brought men and institutions to seek political and economic reforms which ultimately resulted in the passage of sanitary legislation for all classes.23
NOTES


11 Ibid., p. 33; R. J. Evans, *The Victorian Age, 1815-1914* (London: Edward Arnold Ltd., 1950), p. 29; George


15Jones, "Chadwick," p. 56.


17Jones, "Chadwick," p. 54.

18Ibid., p. 58.

19Ibid., pp. 57-58.

20Trevelyan, *British History*, p. 220; The Combination Act (1799) prohibited the growth of trade unionism and reflecting the insensitivity of government toward workers' needs.; The Test Act made it impossible for anyone other than church of England members to participate in military service or government jobs.


22Ibid., pp. 210-216.

23Evans, *The Victorian Age*, p. 28.
CHAPTER I

THE POOR LAW, PAUPERISM AND PUBLIC HEALTH, 1831-1847

During the fall and winter of 1831-32, Grey's ministry began the difficult task of amending the Elizabethan Poor Law, in order to help unemployed workers, especially in the South of England where riotous conditions existed. On February 1, 1832, Lord Althorp, Chancellor of the Exchequer, announced the formation of a Committee of Inquiry to look into the issue of the Poor Laws, "a subject of great magnitude." Members of this select committee were Dr. Charles Blomfield, Bishop of London; Dr. Richard Summer, Chairman and Archbishop of Canterbury; Sturgis Bourne; Nassau William Senior; the Reverend Henry Bishop; Henry Gawler; William Coulson; James Traill; and Edwin Chadwick.¹

The political climate then afforded an excellent opportunity to address this national problem. Imbued with the ideals of Jeremy Benthan, the Commission began its study, but soon encountered the opposition of vested interests who wanted to preserve the existing system. Three schools of thought emerged. The first believed additional relief was not needed. Saving the old Poor Law was possible with better selection of magistrates or with the introduction of paper money. The second group argued that with proper man-
agement of pauper labor, a profitable venture would occur, thereby eradicating the problem itself. The last and most influential school included Sumner, Blomfield, Bourne, and Senior, all members of the Royal Commission. These men advocated, at least in part, the repeal of all existing poor laws and practices. All three groups admitted that the system contained abuses. Thus, the duties of the commission, as the members saw it, were to eliminate the abuses and to persuade Parliament to revise Poor Law administration. The work of previous committee indicated exposure to incompetence and corruption alone was insufficient to bring about reform. Parliament instructed the committee to report its findings to them by the end of November 1832.2

The Commission's investigation disclosed a variety of procedures for dispersing poor relief, practiced by 1500 parishes. Interpretations of the Elizabethan Law of 1601 varied from lax principles of "setting the poor to work" to ridding the parishes completely of paupers. Some parishes insisted that work such as digging in gravel pits or resurfacing roads be performed in exchange for relief. Since the Speenhamland Act of 1795, Berkshire magistrates had supplemented wages according to a scale tied to the cost of a loaf of bread. Adoption of this act was widespread.3

Prior to 1834, prevailing law and custom established patterns of residence and mobility throughout Britain.
Open and closed parishes created pools of labor in rural and urban centers. For example, in some small parishes, landowners were able to keep strangers out simply by pulling down every vacant cottage and preventing the construction of new residences. Thus, the depopulation of one rural area could result in a surplus population for others. Some new industrial centers attracted migrant workers who dared not apply for relief for fear, if detected, their punishment would be transportation back to the agricultural settle of origin. Both urban and rural areas displayed the same ambivalence toward conditions of poverty and relief.4

In 1832, the poor rate in England exceeded £7,000,000, a heavy tax burden which created a paradox. Agricultural and industrial employers demanded the availability of laborers either for seasonal work or the fluctuating cycles of trade, but at the same time, they quibbled about the high poor rates they had to pay to maintain an adequate labor supply.5

The final edition of the commission's Report filled fifteen volumes. This collection clearly revealed the evils of extirpation and the allowance system. The wage level was determined by the parish, not by the value of labor to employers. Hard work, in a sense, penalized hard workers. The allowance system did not force a worker to depend on his own labor; therefore, he had no more motivation than a slave. The system also destroyed the farmers'
discretionary use of the labor supply, for where labor rate systems operated, farmers had to keep nonessential workers.6

The separation of pauper labor from that of an industrious person became the more obtainable goal rather than suggestions for the use of wage supplements or doles, minimum wages, and labor rates. Segregation could be attainable though the workhouse, and this labor made the workhouse less attractive to those already on public doles.7

As the Report explained, the workhouse test with its principle of "less eligibility" was essential to the success of the plan:

Nothing is necessary to arrest the progress of pauperism, except that all who receive relief from the parish should work for the parish exclusively as hard and for less wages than independent labourers work for individual employers.8

Chadwick, the creator of the "well-regulated workhouse," insisted that it would meet the needs of the able-bodied worker. The workhouse would drive paupers into the regular market and protect the overseer, for it tested individuals without regard to deceit and intimidation.9 These reforms, the Report argued, were necessary for the creation of a free-labor market:

First the labourers become more steady and diligent; next, the more efficient labourer makes the return to the farmers' capital larger and the consequent increase of the funds for the employment of labour enables and induces the capitalist to give better wages.10
The result would be a situation which permitted the workman, free in status, to earn as much or as little as he wanted while allowing the employer to use the worker as often as necessary.

The remainder of the Report focused on procedures for implementation. Despite the return to the Elizabethan idea of the workhouse, a newly created agency, centrally located, now would regulate previously unchecked officials. The parish, once the principal enforcer or the Poor Law, merged into the Poor Law union, and vestries, also a remnant of the past, would become remodeled. The Justices of Peace lost their powers. A professionally trained and paid staff of local bureaucrats would replace overseers, and newly invented scientific instruments such as scientific notation would provide more efficient service.¹¹

The Report's argument made an immediate appeal to public opinion, for it promised the elimination of corruption, rampant in the old system. The overseers corrupted by terror; the vestries, by greed; and the JP's, by popularity, resulted from the old system. The regulatory Central Board would consist of three equal commissioners who could select assistants. The Royal Commission now requested the government to draft a bill based upon its recommendations. On March 17, 1834, Nassau Senior and Sturges Bourne received the necessary summons from the Cabinet. For almost a month consultation between the committee and the Ministry ensued.
Finally, on April 17, 1834, the scene shifted to the House of Commons, where Lord Althorp, the Chancellor of the Exchequer, introduced the new measure. The bill received a warm reception in the House. Critics of Chadwick's and Senior's brainchild were small in number, but vocal. The radical William Cobbett argued that the government should provide dietary supplements for workers. He asked:

> Is not the state of the country, and the hellishness of the system, all depicted in this one disgraceful and damaging fact, that the magistrates, who settle on what the labouring power ought to live on, allow less than is allowed to felons in the Gaols?\(^{13}\)

The argument was not without some credence, but eventually, when reports taken in 1842 on the sanitary conditions began, evidence suggested otherwise.

Meanwhile, a bitter debate ensued in the press. The Tory Press, sensing the doom of the country squire, furious-ly attacked the bill.\(^{14}\) The Courier, Chadwick's enemy, expressed dismay at the Central Board's complete discretionary powers. John Bull described the measure as possessing "most extradoinary and unconstitutional" powers, which would reestablish "the Court of Star Chamber."\(^{15}\) The Globe, brought daily to Parliament by Commissioner William Coulson, supported the bill. The once prosperous Morning Chronicle, with its worthy editor Dr. Black, failed to remark on the Poor law question, believing the issue to be trivial to mention. The Times, however, remained neutral.
The commissioners, of course wanted its support, for *The Times* was one of Europe's most prestigious newspapers. The paper had promised to support the bill, primarily because of a personal obligation to Brougham. Then suddenly on April 30, *The Times* denounced the "plotting pericrania of Mr. Senior." This switch, however, stemmed from a conflict of personalities, not a shift in philosophy. John Walter, editor of *The Times*, changed his mind because of his antipathy toward Chadwick. In short, *The Times* declared war, and *The Globe* and *The Chronicle* were no match for the ferocious John Walter.16

Despite angry debate in Parliament and the press, the Poor Law Amendment Bill became law on August 14, 1834. This significant legislation slipped through both Houses of Parliament, in an exceptionally broken and tempestuous session, notwithstanding the intervention of two severe political crises, a change in Prime Ministership, and two successive cabinet reconstructions within four months of its introduction, without adequate discussion of principle, or detailed examination of details.17

Even before Althorp introduced the bill in Parliament, canvassing for the three commissionerships had begun. Because of the appearance of numerous candidates, station and rank became the primary requisite for appointment to the post of commissioner. The first chosen was Frankland Lewis, a Tory, whose work on the Sturges-Bourne committee and with the Select Vestries Bill had won him recognition. The
second was George Nicholls, whose efforts to secure Poor Law reforms at Southwell had earned him an accolade long before the report of the Royal Commission. The third commissioner was J. G. Shaw-Lefevre, a young Whig and protege of Lord Althorp. Having been offered the post of Secretary to the commission, Chadwick, though earlier passed over as a commissioner, reluctantly accepted this position.18

On April 23, 1834, the commissioners took their respective posts and began to consider assistant commissioners, some 22 in number who would have the task of enforcing the law. For Chadwick, their appointment meant the end to his domination of the commission. The procedure adopted excluded him, for each commissioner corresponded directly with his assistant commissioners, whose duties required extensive travel, numerous meeting, and detailed reports. Each assistant had to inspect his district, interview sometimes under hostile conditions, magistrates, overseers, farmers, and other local officials. Once the inspection was completed, he had to report to commissioners on poor relief in his district. Then came the examination of parish books with tables indicating the average poor rates and thus the amount of the local contribution. The commissioners then established Poor Law unions and appointed within each Board of Guardians. Under the watchful eye of assistant commissioners, the next phase began.19
The by-laws appended to the new Poor Law Bill, required the commissioners to publish an annual report. The first appeared on August 8, 1834. Filled with sobriety, it tried to influence public opinion. Due to editing, those reports did not reflect the true condition of the country. For example, the assertion that no surplus agricultural labor existed is false. At Bedlow Bucks, immigration from the countryside to the manufacturing center of Lancashire forced the resettling of eighty-three persons. The shifting of laborers made it appear that England did not suffer from surplus workers. Another fallacy appeared in the statement about poor law unions. The commission announced that in the first two years 7,915 parishes had been combined into 365 unions, but most of them were located in the south and east, and in rural midlands, areas which were sparcely populated. Western and northern unionization required two more years of hard work and the use of metropolitan police to confront threats of violence. Almost from the start, enforcement of the new poor law required the aid of rural police, and by 1836, the need had become pressing. The second annual report could not conceal how resistance to the law had increased. Southern laborers, slow to perceive how the act would affect them, had begun to challenge the infamous "bastilles," which mandated the separation of families. At Hackingham, Suffolk, Saffron Waldon, Bishop Stratford, and South Molton, the hated workhouses were
burned. The enforcement of the new Poor Law in northern factory districts followed hard on these acts of violence. Here, an unjust law combined with widespread depression to provoke domestic strife.20

Opposition to the new Poor Law, at least in the north, unified with the campaign for the Ten Hours Bill. Old protagonists of the Factory Act now demanded repeal of the Poor Law. The frenzied opposition from Chartists and radical leaders such as Richard Oastler, John Walters, and John Fielden helped to procure petitions for redress or repeal. Thirty-one petitions supported the Act; one hundred twenty-seven requested its amendment, and eighty-two favored its total repeal. Only eight hundred ninety-two people, however, signed the first petition; fifty-six thousand, the second; but 126,769 sought total repeal, a popular demand Parliament could not ignore. On August 14, 1835, D. W. Harvey, Fielden, and Walters induced Commons to appoint a committee to investigate the workings of the Poor Law. The ensuing inquiry interrogated members of the press and Parliament and even the commissioners themselves. Division in opposition ranks, however, resulted in a temporary victory for Chadwick, who also was aided by faithful assistant commissioners. Parliament voted to extend the Poor Law two to three years and impose stricter enforcement.21
With victory apparently won, Parliament shifted its attention to pauperism. If this problem were solved, the Poor Law, Charwick believed, could be made popular. Pauperism, could be eliminated when its causes were identified, for many were preventable. These focused on two complex terms, "voluntary or involuntary pauperism," which divided responsibility between the laborer and employer. Certainly, there were factors such as sobriety, prudence, and industry which the worker could (and should) manage, but there were many circumstances beyond his control. Chadwick's study of the causes of pauperism soon revealed to him the connection between this problem and public health.22

Between 1839 and 1842, Chadwick investigated the prevention of disease and concluded the Registration Act, if properly enforced, could play an important role in achieving this goal. The registration of diseases, the identification of healthy and unhealthy environments, accurate data on mortality rates and population, all could assist in the determination of poor rates and the administration Poor Laws. Unfortunately, the commission did not share Chadwick's enthusiasm for the Registration Act. In 1834, its policy toward diseases was one of turning the blind eye. But the influenza and typhoid epidemics which ravaged London in 1837-38 made it impossible to separate the administration of the Poor Law from public health. These epi-
demics, plus the threat of cholera, strengthened Chadwick's arguments. The revelation that corrupt Poor Law Guardians had embezzled money appropriated for the removal of stinking refuse, offal, and stagnant pools also helped his cause. Commenting on this deplorable situation, Chadwick observed that epidemics had raided the poor rates and thus thrown workers "into a state of destitution for which immediate relief must be given...." Eager to try the new machinery of registration, he appealed to the medical profession to end these plagues.

In response, three visionary physicians of preventive medicine--Dr. Neil Arnott, Dr. J. Shuttleworth-Kay, and Dr. Southwood Smith--enlisted in Chadwick's camp. Chadwick had long been aware that a cause-result relationship existed between environment and disease; improve the former, and the latter would disappear. It was cheaper, moreover, to prevent a disease than cure it. Evidence amassed by the three physicians supported the reformer's claims. Smith, for example, showed that 14,000 of 27,000 cases of pauperism, or roughly fifty per cent stemmed from some kind of fever. All three physicians recommended 'better ventilation by widening streets and adding windows, that the atmosphere be cleared of the noxious odor of refuge, that the threat of malaria be removed by draining lowlands, and that polluting trades be prohibited from contaminating water supplies.' These imperatives impelled Lord John Russell
to introduce in the Commons the Building Bill, a measure designed to bring sewage, drainage, offal removal, and pure water to working-class quarters. The bill, in sum, would require that improvements already made in wealthier residential areas be done likewise in districts inhabited by the poor.

The reform, of course, encountered stiff opposition in the House. By the end of the 1839 Session, Chadwick had been forced to seek new allies. With the death of Franklin Lewis on April 13, 1839, and the succession of his son George to the chairmanship of the Commission, Chadwick sought the support of Bishop Blomfield. Shocked by the lurid evidence, His Grace moved in the House of Lords on August 19, 1839, that the Government investigate the causes of disease among the working classes and that the result of this inquiry be published. Two days later, Lord John Russell instructed the Poor Law Commissioners, whose terms expired that year, to get in the inquiry. The hour was late, for Britain suffered from the worst depression of her history.26

The provisions of the Renewal Bill and the inquiry monopolized the attention of Somerset House. The North lay prostrate. One-fourth of the population of Carlisle faced starvation. In Sheffield, the poor rates rose from £142 per quarter in 1836 to £4,253 in 1842. Manchester's sale of commodities declined by one-third. In Accrington
in the province of Lancashire, only 100 of 9,000 residents possessed full-time employment. Many families subsisted on boiled nettles. By the end of 1841, one-tenth of the population of England drew poor relief.27

Crying despotism, high Tories, country squires, and radicals joined urban workers and paupers in denouncing the New Poor Law. For three tumultuous years, Russell continued the Commissioner's existence under makeshift renewal bills, but experience and advice from colleagues confirmed his fears, the Poor Law would cost his party the elections. The desperate conditions of the kingdom demanded that the Poor Law be amended. Embittered by lack of public support, Chadwick, his fate bound in the Election of 1841, was persona non grata to the Poor Law Commission. Control of the office, per force fell to friends who resorted to tactics pleasing to the Home Office. Withdrawing completely from the battle over the Poor Law, Chadwick focused his attention on the Sanitary Report.28

To supplement material collected by Poor Law Guardians and the testimony of friends, Chadwick consulted French sources, especially the journals of military physicians who served during the Napoleonic Wars. The Report, liberally sprinkled with details on sewerage, hygiene, and epidemiology, was antagonistic in language, denouncing the practices of local administrations, water companies, sewer commissions, and the medical profession as a whole. The
Report, clearly a propaganda pamphlet, was intended to influence public opinion. For the first time, many Englishmen suddenly acquired a sense of sight and smell. The published report was a complete success.

The published report contained four axioms based on Chadwick's research. The first, expounded in Chapters I-IV, tried to establish the correlation between insanitation, defective drainage, inadequate water supplies, and overcrowded housing with high disease and mortality rates. This section, which comprised half the Report, formed the basis for Chadwick's arguments, but he did not rest his case on research alone. Appealing to the benevolent industrial leaders, he argued that sanitary conditions could change the morals of dependent workers.29

The second axiom, which received only twenty pages, emphasized the economic cost of ill-health. Already a change has occurred, for what had been the foremost issue four years earlier was now relegated to a minor part of the report.30

The third axiom, the social cost of squalor and bad housing, required greater attention, for the issue of lower morals and habits caused by an unsanitary environment had become a greater problem than the cost of neglect. Citing earlier medical studies, Chadwick pointed out that inadequate housing and disease bred intemperance, immorality, and other bad habits. This position not only challenged
traditional middle-class attitudes, but also reversed Chadwick's own thought, for only he had eight years earlier advocated stricter Poor Law administration as a deterrent to poverty.\footnote{31}

The fourth axiom, set forth in Chapter VII, declared that existing administrative machinery was so inefficient that new procedures and standards were necessary to achieve sanitary improvements. Anticipated resistance to new regulations from landowners, sewer commissioners, police, vestries, and privately owned water companies could be overcome through sound argumentation based on fact.\footnote{32}

The Report also called attention to the lack of ventilation in places of work, unsanitary conditions in common lodging-houses, and untreated sewerage, but on the whole, it did not recommend solutions to any of the described problems. Chadwick preferred to let the facts speak for themselves. But the omission of specific recommendations probably was a mistake which delayed legislative action until 1842.\footnote{33}

In the following year, the Peel Ministry, prompted the urging of the Prince Consort and the revelations of Chadwick's Report, appointed a royal commission to investigate the health of cities and populous districts in England and Wales and to recommend the best means of eradicating disease under the existing law. The commission should study, too, the prevailing condition of land drainage and
the erection, drainage, and ventilation of buildings. All information gathered would be used to promote amendments to current laws, regulations, and practice. The commission, identical in structure to the poor law commission, of course, received data from opponents of sanitary reform. To counterbalance their efforts Chadwick made sure that an ample flow of suitably prepared witnesses, propaganda, and assistance reached the commission, which published its findings in two reports.34

The first appeared on June 27, 1844, and the second, February 3, 1845. Both paralleled Chadwick's original report of 1842, but contained additional recommendations. The commission found that most of the fifty cities and towns visited did not have adequate drainage; only six had good water supplies, and in some cases, the cities lacked "regular scavengers" or had none at all.35 The report concluded that

Wherever the town is particularly ill-drained, ill-ventilated, and densely peopled, there the connexion between dirt and disease becomes manifest. Wherever the sewerage is defective, and there are stagnant pools and open gutters, and an accumulation of putrefying matter there is fever and its consequences abound, and that ...[those] districts ... correspond very closely with those which have been most neglected by the commissioners of sewers.36

In 1843, Chadwick undertook a private investigation of urban burials, a problem neglected by the commission. His ruthless exposure of undertakers revealed gross mismanage-
ment and the frightful overloading of cemeteries. In 1843, for example, the postal directory of London listed only 275 undertakers, a number too small to service the demand. Thus a situation was created which inflated the cost of burials and forced the poor to join "Burial Clubs." During hard times, the poor often induced death to collect funds from several clubs, and when death came naturally, they had no money for funeral costs. They perforce kept the bodies in the same room in which they slept. Chadwick ruefully concluded that a decaying corpse did constitute a threat to the health of anyone exposed to it and could even cause a fatal disease.37

Chadwick's exposé led to a series of corrective acts distinct from the main body of health legislation, but its timeliness and information aided the cause of sanitary reform, which after 1844 was kept alive by the work of the Health of Town Association. Lord Ashley, Dr. Southwood Smith, and Lord Normanby, all members, held public meetings and published books and pamphlets to keep the issue of public health before a small segment of the English people. They did not reach the wider public, who remained unconcerned and unmoved until Charles Dickens and Anthony Trollope touched them.38

Although social novelists take a prominent place in the history of mid-nineteenth century English literature, few if any indicate before 1840 that the shortness or brut-
ishness of life owed anything to the lack of sanitation. Even after 1842, their description of town life seldom mentioned the need for public sanitation, but when John Barton described Berry Street, the words might have been drawn from the Sanitary Report. And Charles Dickens, who ignored public health in the 1840's, belatedly devoted some time and energy to the problem in the 1850's and 1860's. Thus the public health movement eventually received support from popular literature, but it came too late to be of much use during the "Hungry Forties." 39

By 1845, the efforts of reformers and the Health of Towns Commission still had not produced any legislation on public sanitation. Neither Peel's government nor that of Russell, which succeeded it in 1845, showed enthusiasm for public health measures. Uppermost in the minds of politicians at the time were the problems of the Irish famine and repeal of Corn Laws. These two issues dominated Parliamentary debates during 1845 and 1846, but they did not prevent the passage in the fall 1845 of eleven model acts, sponsored by Joseph Hume. Nine of them dealt with specific public-health issues, but apathy and the cost involved prevented general improvements in the sanitary standards of towns. Lord Lincoln, also failed to move Parliament to discuss sanitary legislation. The issue, therefore, remained dead until March of 1847. 40
On March 30, 1847, Lord Morpeth, a member of Lord Russell's cabinet, attempted to revive Lord Lincoln's bill but withdrew it in the face of strong opposition to centralization and the inclusion of London. He reintroduced it in the House of Lords on February 10, 1848. The Lords considered it before the end of June and appointed a committee to draft amendments. The Commons rejected the measure, but both Houses accepted a compromise on August 31, 1848. With the Queen's assent, the Public Health Act of 1848 became law, culminating an episode which will be discussed in the next chapter.
NOTES


2Finer, Chadwick (London: Methuen and Co. Ltd., 1952), p. 43-44; Mackay, The Poor Law, p. 52.

3Finer, Chadwick, p. 40; Trevelyan, British History, p. 149.

4Great Britain, Parliament, Sessional Papers (House of Commons, XV (1842), 248-249; Fraser, New Poor Laws, p. 31.

5Finer, Chadwick, p. 42; PP. (1832), XIX, 576,969.

6Ibid., p. 72; PP., XXVII (1833), 43; Ibid., XXVII (1834), 63; Ibid., XXVII (1834), 87.

7Finer, Chadwick, p. 74.

8PP., XVII (1834), 263.

9Finer, Chadwick, p. 76.

10PP., XVIII (1837-8), 263.

11Ibid., XVIII (1837-8), 283.

12Ibid., XVIII (1837-8), 287-288.

13Finer, Chadwick, p. 83.

14Ibid., p. 98.

15Ibid., p. 98.

16Ibid., p. 99.

17Ibid., p. 100.
Beatrice and Sidney Webb, *English Poor Law History, the Last Hundred Years*, I, 95.

Finer, *Chadwick*, pp. 105-106.


Finer, *Chadwick*, pp. 105-106; Fraser, *New Poor Laws*, p. 126; Finer, *Chadwick*, p. 126.

Ibid., pp. 128-129; *Parl. Debates* LXIII (1837), 1009.


Ibid., pp. 157, 160-161; *Parl. Debates*, LXIV (1842), 1002.

Ibid., p. 163; *Parl. Debates*, LXIV (1842), 1004.

Ibid., pp. 181, 182, 188.


Ibid., p. 58.

Ibid., p. 60.

Ibid., p. 60.

Ibid., p. 61.


Ibid., pp. 236-237.


38 Finer, Chadwick, pp. 236-240.


41 Ibid., pp. 108-110.
CHAPTER II

THE PUBLIC HEALTH ACT AND THE PLAGUE, 1848-1849

The Public Health Act of 1848 stemmed from Lord Morpeth's Public Health Bill, but Chadwick again played a role in its evolution. The Act, however, was tentative and uncertain, reflecting fears of centralization no less than those evoked by the reappearance of cholera in Europe. Amendments to the original bill had created a weak central authority, entitled the General Board of Health, reduced its size from five to three members, and provided a salary for only one. To preserve local autonomy, the Act declared that only in communities where local boundaries and ordinances were undisturbed could the General Board enforce its provisions by Order in Council. Elsewhere, the Act would be implemented through Provisional order, which was subject to debate in the House. These limitations produced a voluntary agreement about plans for sanitary works. The last modification focused on the Board's authority to borrow money and initiate loans. Despite the remonstrances of Chadwick and other social reformers, Parliament passed another permissive bill, little better than the Towns Improvement Act of 1847. The only teeth provided in the bill was the injunction that local boards must take action,
if the death rate exceeded more than twenty-three per cent. With stoic resignation, Chadwick accepted what he could not prevent and began the task of implementing the law.¹

For almost a month, the Board developed strategy for fighting cholera. The resultant Cholera Bill or Nuisance Removal Act, introduced on August 7, 1848, almost immediately became law, the imminent threat of the plague curtailed debate. On September 28, an order of council brought the Nuisance Removal Act into force. The dreaded invasion appeared first in Sunderland. On October 5, 1848, the Board of Health issued its "First Notification of Cholera" to the United Kingdom, and by the end of the month, it had drafted detailed regulations for the prevention of cholera. On October 31, the "Second Notification" appeared, followed on November 3, by the publication of these regulations. Almost immediately a quarrel broke out between the Quarantine Department and the Board, and the Royal College of Physicians worsened the situation by complaining that it was presumptuous of the Quarantine Department to give advice on medical issues. At the roots of the squabble lay professional pride. A majority of the College, however, approved of most of the Board's imperatives. Despite the acrimonious debate over the cause of cholera and other epidemics, many lives were saved, but the death rate would have been much lower had the Board's instructions been universally obeyed, notwithstanding that no
doctor of this age knew that bacteria and viruses caused disease. The discoveries and vaccines of Louis Pasteur belonged to a future generation.  

From the start, local Guardians flagrantly ignored the Board's admonitions. Often they delayed action until the plague was among them. Dr. Sutherland confided, 'I have seen people in affected districts running about in all directions, seeking medical aid, but none was to be found. I have entered houses and seen sick and dying without help.' The centralization imposed by the Poor Law worked too well. Before medicine could be obtained, an order of relief must be obtained. Administrative duties, i.e., "red tape," preceded the need for assistance. In one case, Sutherland recalled, "I witnessed the dismissal of the medical staff and the closing of the dispensary... hundreds died without being able to obtain a single dose of medicine." Poor relief doctrines stood in the way of medical measures, especially the maintenance of houses of relief. Less eligibility worked too well, for Guardians regarded the houses of relief as workhouses by another name and often turned away sick persons who sought relief from the epidemic.  

Lacking authority, the Board of Health was powerless to prosecute those who flaunted or violated its regulations. The Guardians perforce feared no penalty except indictment by a coroner's jury, if it determined that neglect had
caused death. Intolerable conditions which medical officers reported to the Guardians were often "noted and dismissed" or the offending officers were "ordered not to visit the place in question." One coroner described the deaths at Hairbrain Court thus: "There were three corpses, and with them a number of dying, all in agony, lying amidst foetid [sic] and unwholesome vapours from privies and bad drainage." His lurid testimony brought an immediate inquest and a verdict of very great neglect, but no punishment was imposed. Such widespread contempt and disobedience in the midst of a national emergency impelled the Board to seek redress by an appeal to the court of public opinion. Its First Annual Report, baring sensational details, was an effective instrument of propaganda which convinced the public that the Nuisance Removal Act suffered from serious defects. The outbreak of cholera in London (June 1849), moreover, accentuated the Board's complaints.

Despite ample time for preparation, the Guardians of London grossly ignored the Board's instructions with fatal consequences. In the Holborn district of West London, 107 deaths occurred before the Guardians ordered medical officers to search out and report fever nests. As the epidemic spread, some unions attempted to remove offal, but other wretched conditions remained untouched: water supplies polluted by overflowing outdoor privies and effluvium from
privies in the cellars penetrated every room of the house. Sitting rooms took on the appearance and stench of slaughterhouses. Drastic measures were required to halt the march of Death, but Chadwick alas ordered the scouring of sewers. "No filth in the Sewers--All in the River" reported *The Times*, which quickly seized the opportunity to attack Chadwick for this well-intentioned, but tragic blunder.8 "What has Mr. Chadwick done with his 450 Cartloads of Filth?" asked *The Times* during the height of the epidemic.

Has he sent them to fertilize the fields of Kent or Essex...? No he has sent them into the river that the whole metropolis may share his favours and that the poison which is ejected from Westminster may circulate with freedom through Lambeth and Southwark.9

But *The Times* philippic came too late. By July, the water-borne epidemic had caused the mortality rate to skyrocket.10

Throughout the crisis, which lasted three months, the London Guardians continued their recalcitrance. The Board of Health repeatedly urged them to make house-to-house visitations, but they refused. The Board requested the obstinate Guardians to receive and cooperate with physicians and nurses and keep dispensaries and houses of relief open day and night, but these appeals fell on deaf ears. Finally, during the third week in August 1849, the situation in London became so grave that Board members undertook
house-to-house visitations themselves. To assist this work, the National Treasury authorized them to hire a medical inspector and four assistants. Thereafter, the Board issued orders which placed all vestries and inspectors at its disposal, and most of them complied. The task of sanitizing London at last began.11

Overcrowded burial grounds posed the greatest problem. Proposals to close the graveyards and to use disinfectants (quick lye) provoked a bitter debate between local magistrates and the Board, but by then the crisis had passed. On November 6, 1849, the Queen proclaimed a General Thanksgiving.12

In the wake of the plague, old and new problems surfaced. Criticism of Chadwick reappeared, but the arguments, which stemmed from his tenure as secretary of the Poor Law Commission, were old and jejune. In 1845, for example, an incident at the Andover Union Workhouse had caused Chadwick to complain about the commissioners' indifference. On October 27, 1845, paupers in the workhouse had accused its manager of serving them putrid bone marrow. The Commission subsequently brought charges against the master of the workhouse and an assistant commissioner which resulted in their dismissal and the request for a Parliamentary inspection of workhouses. Sir James Graham had moved that the issue be tabled until the conclusion of the important debate on the Corn Laws, but his motion failed. The
Anti-corn League used the scandal to embarrass the Whigs and harass the unpopular Poor Law Board. Chadwick's claim that the commissioners repeatedly had ignored reports of assistant commissioners and his own played into the hands of the Tories. Disraeli seized the opportunity to ask why the commissioners did not remove their secretary, "this monster in human shape, since they often accused him of being insubordinate?" The Board, however, chose to disregard both the question and Chadwick's criticism, since his dismissal would make him a martyr and evoke further attacks.

Chadwick also had aroused the enmity of London's municipal government by recommending that in 1847 and 1848 that control of the city's drainage systems be transferred to one central authority. Parliament had agreed, then came the plague. The Times scornfully observed that central administration, even under the watchful eyes of Chadwick, had not prevented cholera from invading London and killing 14,000 residents.

Finally, engineers and contractors complained that the Board forced them to bid on jobs without providing precise specifications and information about standards. This emerging group, having won support in the new industrial centers and shires, criticized the Board for its niggardly and inefficient ways.

The Board of Health, in sum, ran afoul of powerful vested interests and local authorities, both resentful of
central control. General ignorance and indifference also impeded its campaign for an effective public sanitation program.
NOTES

1Finer, Chadwick, p. 319; Wood, Nineteenth-Century Britain, p. 121.


5Ibid., pp. 137-138.

6Ibid., pp. 137-139.

7Ibid., App. B, PP p. 127; Finer, Chadwick, pp. 345-346.

8The Times, (London) 21 September, 1849.

9Ibid.

10Finer, Chadwick, p. 347.

11Ibid., p. 348.

12Ibid., p. 349, 351.

13The Times, 3 and 9 July, 1846; Finer, Chadwick, pp. 259-272; Jones, Chadwick and Public Health, p. 112; Parl. Debates CXIL (1847), 1057.

Despite criticism, Chadwick pushed his "London program" to combine the city's drainage, paving, street cleaning, water services into one department, subject to national control. He continued to recommend the cleaning and flushing of sewers, but mindful of his critics, he suggested local experiments to determine the best way to use (or dispose of) sewage and keep the environment clean.

For two months (July-August, 1848), the commission debated how to clean (or pave) the streets of London and purify its water supply (the Thames), but all agreed that municipal agencies could not be consolidated, due to the opposition vestrymen, who jealously defended their local preserve from any encroachment. The appointment of a new commission provoked an argument between Lord Morpeth and Chadwick over its membership. Morpeth wanted to keep all commissioners who wished to serve, and Chadwick demanded that malcontents be replaced. But astute politicians that both were, they agreed to a compromise: Chadwick must approve of all new members, but Morpeth's friend, the malcontent Frank Leslie, continued his tenure. Confident of forbearance, the reconstituted commission operated, as before,
through committees and subcommittees. As soon as the provisional system was established, Chadwick used it to disarm his opponents. His friends were appointed to the Works committee or subcommittees, but his opponents were put on the Finance committee, where little could be done without approval of the powerful Works committee. Thus, opposition, for the moment, was silenced.²

While cholera ravaged London (1849), the committee searched for ways to end the epidemic. The vestries, as usual, were obstructive and the Board of Health had no money to finance projects or even hire garbage collectors. The Times, of course, relentlessly attacked the commission, already weakened by internal dissent. One by one, its projects--Westminster drainage, the Trial Works, the Sewage experiments and flushing--were defeated by skepticism, indifference, and particularism. The great London experiment was dead, and The Times wrote its obituary.³

Chadwick fought a heroic battle to persuade the vestries of London to adopt a sense of public responsibility, but his efforts ironically evoked a three-cornered conflict. The commission defied the Board and challenged the vestries; the vestries denounced both the Board and the commission; and the Board strove to impose its authority over the vestries and the commission while angry (and often petty) debate ensued, hundreds of Londoners died. At issue were the drainage, water supply, and interments, a scheme which
Chadwick had conceived in 1843. The Bill produced no signs of danger when introduced into parliament. Sir James Graham, the Home Secretary, apparently did not understand the intent of the bill, "After one or more places of interments have been provided, burial grounds may be closed by order of council and this prohibition may be extended from time to time until interments are discontinued throughout the metropolis." The Home Secretary envisioned an extension of the Board's powers. The outraged vestries protested, but to no avail. Even the conservative Sir Robert Peel intervened on behalf of the Bill. On August 5, it became law, but the issue of pure water remained moot.

The Thames was an open sewer, yet it provided London with drinking water. Eight joint-stock companies owned the franchise for this service, but their performance was disgraceful. Only the wealthy areas of London were adequately served, and over 17,000 houses went without water. Their occupants used "poison wells," thick with scum and sewage. Of London's 270,000 houses, 70,000 received water through twenty or thirty stand-pipes which ran one hour per day, three days per week. Hardships were an habitual problem, for many pipes leaked, or the utility cut off service due to nonpayment of water rates. For thirty years, Londoners had tried in vain to correct this deplorable (and often fatal) situation, but now journalists like Franklin Delane
and Charles Morris of The Times, Tom Taylor of Punch, or Charles Dickens accepted the quest.6

On May 28, 1850, Board of Health recommended a revolutionary solution to the water problem, which The Times and public opinion supported. The joint-stock companies, of course, rose to defend their interests and by March 1851, with the assistance of the Treasury, it had stopped the offensive.

Capital possessed by interests and the monopoly possessed by the Board over interments revealed nothing short of a huge capital debt for the country. The Treasury emphasized that the Board had no funds to finance its plan to solve the problems of polluted water and shallow burials.7 The Times thought "the disappearance of cholera had much to do with the disappearance of the Board's popularity," but that was not the whole story. 'The Board of Health has not neglected its duties, but its opportunities, without recognizing its limited authority.'8 In London, all the Board's efforts ended in failure and contempt, but in rural areas, its sanitation program met with success.

Chadwick patiently responded to charges that the Board exercised arbitrary power and ignored the wishes of local rate (tax) payers. Some complained that one day an inspector would appear, and a few weeks later, they found themselves under so-called "elected" boards, when no one knew who they were nor even had heard of an election.9 But in
1852, when local complaints had subsided, the Board through harsh words antagonized civil engineers who summoned London and the surrounding countryside to join the battle against the encroachment of this new Areopagical agency. They appealed to Parliament and the press to repeal the Board's authority. Discontented cottage rate payers and slum owners, who thought the cost of sanitation was too high, joined the opposition to renewing the Board's term when it ended in 1854. To embarrass the Board this strange coalition published a reprint of The Times account of the St. Giles drainage problem, but under an altered title: "Metropolitan Experience of the Unsuccessful Results of the System of Pipe Drainage." Outraged by these tactics, the friends of sanitation circulated pro-Board petitions which received strong support in Brighton, Ryde, Bromyard, and Hertford. In response, the House of Commons decided not to apply the Act to any area where the majority opposed it. To meet the challenge of interests and obtain more money, the Board turned to Lord Palmerston, Home Secretary, the strongest man in the Cabinet. The public health camp, meanwhile, got assistance from an unwelcome ally: In August 1853, General Cholera again invaded Great Britain.10

The epidemic of 1853-54 was three times more deadly than that of 1848-49. Newcastle, a city which had shown contempt for the Public Health Act, now paid dearly for its folly. The lurid details spoke for themselves; twenty
small towns heard the message and quickly placed themselves under the protection of the Public Health Act. Over 12,895 people died in areas outside London, but his great metropolis, from the Act's provisions, suffered more than 40,412 deaths. From this holocaust, came the pathological evidence which impelled a revolution in the kingdom's health standards.

In 1849, John Snow, had written a pamphlet, "On the Mode of Communication of Cholera," largely ignored at the time. In it he tried to prove that cholera resulted from a 'poison produced by a diseased body and passed on by water, polluted by sewage.' Snow's research revealed that within a two-week period over 600 people who lived near Broad and Cambridge Street had died of cholera. In every case, they had drunk water from the Broad Street pump. This significant data, however, required correlative support. To find it, Snow consulted London's vital statistics and learned that during the same two-week period, one woman from the upper-class district of Highgate, also had died of cholera. Was there a connection? Servants revealed that their mistress always had insisted that they fetch her water from the Broad Street pump. Armed with this information, Snow returned to the pump and removed the handle, thereby preventing further water from being taken. Almost immediately, the cholera epidemic in this area had subsided.
The evidence and revelations of Snow, however, failed to save the Public Health Board. Its opponents were too numerous and powerful. *The Times*, which previously had applauded Chadwick's plans for interments, planned water, and house drainage, now chortled:

When he falls at last a sanitary martyr to a choked two inch pipe drain and is carried by policemen in one of Shillsbeers patents to an extramural cemetery he will want no monument. A thousand costly but now useless union workhouses will attest his humanity and prescience. Let a few words inscribed...inform rate payers and paupers to whom they are indebted for the pleasure of building and occupying them.14

On 12 August 1854, the Commons killed the old Public Health Act by a margin of only nine votes, 74 to 65, but replaced it that same day with a new bill, offered by Sir William Molesworth, created a Board of Works which consisted of three chief ministers of state, a paid president, eligible to sit in the House of Commons, and paid engineers, who were forbidden to engage in private practice. The new board, subject to annual renewal, began its work during the height of the cholera epidemic, but could not stem the tide. Sir Benjamin Hall, its president, advised local Boards to take precautions, but made it clear that enforcement of the amended act was their responsibility. The coroner's inquest again would be the government's only recourse, if a local board failed to comply. Continued attacks on Chadwick's health measures culminated in the *Metropolis Management Act of 1855*, a victory for the vestry
movement, which created a new Board of Works for nation and replaced Chadwick's friends with his enemies. In 1857, the duties of the paid president were transferred to the Vice-President of the Privy Council's Education Committee and the Home Office. Later, the medical officer of the Board was reassigned to the Home Office.

In the winter of 1854-55, the Crimean War focused attention once more on public health issues. Sanitary conditions in army camps and hospitals constituted a national scandal. Sick and wounded were treated in a manner "worthy only of the savages of Dahomey." Chadwick urged Palmerston, who succeeded Aberdeen as Prime Minister in January 1855, to save these soldiers from hoary military and medical traditions. But nothing ensued until Shaftesbury intervened and secured the Crimean Sanitary Commission. Florence Nightengale, sent out in an official capacity, employed in the hospitals some of Chadwick's sanitary proposals. In this war, battle wounds accounted for only one-sixth of the fatalities; disease, for the rest. On May 21, 1855, an order in council created a commission to examine civil servants for fraud and inefficiency. The end of the war, however, checkmated this well-intentioned reforms, and public interest waned.

The Public Health Act of 1848 had provided sanitary codes for England and Wales, but not London. Diseases, which even then could have been prevented, annually sent
tens of thousands of Londoners to an early death. The city's commerce and industry attracted far more people than its economy could absorb, thereby creating impacted slums.18

The Metropolis Management Act 1855 abolished about 300 local boards in London. For the first time, a metropolis emerged which contained legally defined components and boundaries. Parliament simultaneously passed a stronger version of the Nuisance Removal Act, which also imposed a sanitary code on London.19

The Metropolitan Board of Works, which superceded the sewer commissioners, became the agency responsible for solving London's health problems. It could order local officials to widen and pave streets, fill in cesspools, remove offal, and clean drains, but it could not compel them to do anything. Serious omissions in the law, however, undermined its effectiveness. No medical officers or local health inspectors, moreover, served on the Board. The consequences, of course, were disastrous. As population density and crime increased, businessmen moved to the west, and their vacated premises became tenements for the poor. New construction blocked the sun, filth polluted the air, and efficient sewerage created stinking swamps. The inhabitants lived no better than barnyard animals. Personal cleanliness was unknown and unattainable by pilgrims. In the absence of a public utility to remove garbage, heaps of
waste sometimes rose to fourteen feet. These conditions, of course, did not result from the indifference of Parliament, but from the neglect of local government, owners, and ignorance.20

During the 1860's, London’s Board of Works built a system of sewerage adequate for a city of 3,500,000 people. Completed in 1865, the network consisted of eighty-two miles of intersecting pipes which conveyed sewage to a dump several miles outside London. But how could the city secure pure water? No one knew the answer.21

On October 5, 1867, Lord Derby called attention to the housing problem; in the parish of St. Bartholomew in Cripplegate, 5,000 people lived in only 500 homes. Not ten families, he affirmed, occupied a house to themselves, though most homes were small, consisting of only three rooms.22

Railway construction exacerbated the problem by destroying thousands of homes between 1850 and 1870. In north Southwark, Clerkenwell, St. Lukes (Finsbury), Shoreditch, Bethal Green, and White Chapel, 23,000 people were displaced. The demolition of houses in the neighborhood of Field Lane forced 12,000 persons to seek housing in surrounding tenements. Lord Granville, in 1867, as a remedy, suggested the creation of cheap trains to carry artisans from healthy dwellings in the suburbs to their work, but this perceptive recommendation, which would
benefit many, could not help those whose employers required to live close to the factory. Many workers who migrated in the 1870's, indeed, returned to their homes, because the expense of travel to and from their jobs was too high. True, rents were cheaper in the suburbs, but job opportunities for women were lacking, and food was expensive. Most workers could not even afford to eat in a coffee shop.23

In 1867, Parliament debated new ways to stop the spread of disease caused by unsanitary conditions, and on January 1, 1868, passed a vaccination law which required Poor Law authorities (i.e. Boards of Guardians), to appoint vaccinators and stations.24

Also in 1867, provisions for hospitals were addressed. For a long time only special hospitals such as London Fever hospital and the London Smallpox Hospital provided care against infectious diseases and these hospitals were maintained by private charities. Services rendered from these institutions were minimal, but they provided the only care for the poorer classes. Charities became a vital link toward containment of disease for where neither state nor local authorities provided facilities, charities were too glad to step in.25

In 1867, Parliament also enacted new factory and workhouse legislation which provided better provisions for regulating the hours during which children, young persons, and women were permitted to labor in any manufacturing proc-
The Workshop Regulation Act (October 1867) afforded protection to workers in smaller establishments. These acts improved sanitation and prohibited entailing which utilized women and small children in difficult manual tasks. Dr. George Simon, a member of the Privy Council, argued in 1868 that the government...

... in the interest of health the state has not only...limited the freedom of persons and property...it has interfered between parent and child...it has intervened between employer and employee...it shows beyond question that the Legislature regards the health of the people as an interest not less national than personal, and has intended to guard it with all practical securities against trespasses, casualties, neglects and frauds.

But, in clandestine violation of the law, local contractors throughout the realm continued to remodel homes into offices, work shops, and warehouses. Their former occupants had three options: to live in the workhouse, become outlaws, or emigrate.

The policy of "shovelling out the poor" produced the Torrens Act of 1868, which increased the power of local authorities by permitting them to demolish unsanitary property and rehouse the displaced, without compensation. The act perforce created more problems than it solved. Most vestries came to realize that demolition of one house would only overcrowd another; nonetheless, local administration became so complex and confused that it did not (and could not) carry out its many responsibilities.
servants and local citizens alike were baffled and frustrated. As early as April 1867, the Social Science Association had urged the government establish uniformity in sanitary laws and to compel to enforce them. The British Medical Association now joined this organization in demanding codification, simplification, and strict enforcement of public health laws. Their lobbying resulted in the appointment in 1868 of the Royal Sanitary Commission. Its report, presented in 1871 in the form of a draft statute, led directly to the Local Government Act 1871 and the Public Health Act of 1872, which reorganized the structure of national and local public health administration. The indictment permissive legislation described by the British Medical Association and the Social Science Association was endorsed by the prestigious Royal College of Physicians. Not to be outdone by The Whigs (Liberals) in the area of social reform, Disraeli, in a famous speech ("Sanitas Sanitatum, Ommia Sanitas" 1874), pledged that the Tories would improve the housing of workers and fulfill the promises made by Chadwick a generation earlier. Elected Prime Minister in 1874, Disraeli, true to his work, sponsored notable legislation to improve social conditions. The Artisans' Dwelling Act of 1875, the brainchild of Richard Cross, his Home Secretary, enabled vestries to deal with the horrors of jerry-built housing and festering rubbish-heaps which existed in slum areas. A more impor-
tant reform, however, was that mandated by the Public Health Act of 1875, which preserved "what was good in the spirit of local initiative and independence, while compelling all to come up to a minimum standard insisted on by the State."
NOTES

1 Finer, Chadwick, pp. 355-356; Parl. Debates XC (1848), 1178.

2 Ibid., pp. 358-360, 361, and 365; The Times (London) 1 October 1849.

3 Finer, Chadwick, pp. 381-396.

4 Parl. Debates, CX (1850), 357.

5 Finer, Chadwick, pp. 390-396.

6 Ibid., pp. 391-392, 394; Parl. Debates, XC (1848), 1158.

7 Ibid., p. 396.

8 The Times, (London) 21 June 1852.

9 Finer, Chadwick, p. 431.

10 Ibid., pp. 453-454, 460; Parl. Debates CXXI (1851), 459.


13 Ibid., p. 7.

14 The Times, (London) 1 August 1854.


16 Finer, Chadwick, p. 485.

18 Wohl, The Eternal Slum, p. 79.
19 Ibid., pp. 47, 79, and 293.
22 Derby in Lords, 1862, Parl. Debates, CLXI, 1061.
27 Wohl, Endangered Lives, p. 158.
30 Wohl, The Eternal Slum, pp. 95-96 and 160.
31 Trevelyan, British History, p. 280.
CHAPTER IV

THE PUBLIC HEALTH ACT OF 1875 AND ITS LEGACY

The legislative evolution of public health paralleled growth of social democracy and the gradual acceptance by the State of responsibility for redressing the grievances of citizens sorely vexed by problems they did not create nor understand. The central government's involvement with public health grew with awareness that epidemics somehow stemmed from public filth. Sanitary reformers also stressed the need to codify existing laws to reduce the legislative hodgepodge that had evolved over the past two decades into a clear and enforceable system. The Social Science Association produced three outstanding works on public health: A. P. Stewart's *On the Result of Permissive Legislation*, E. Jenkins, *Legal Aspects of Sanitary Reform*, and H. W. Rumsey, *On State Medicine in Great Britain and Ireland*. Their findings did not result in a separate Ministry of Health, but they did help to unify public health administration by combining into one body the local boards of the Poor Law Board, the Local Government Art Office, the Registrar-General, and Simon's Privy Council Staff. The consolidation of these programs paved the way for the passage of the Public Health Act of 1875.1
Simon and the Sanitary commission, believing codification of public health laws would establish environmental hygiene, produced a new code, consisting of 343 sections and five schedules, designed to secure wholesome and sufficient water supplies, the prevention of pollution, removal of sewage and other nuisances, regulation of streets, highways, public buildings, and private dwellings, inspection of food, suppression of disease, sanitary burials, and regulation of markets. Enforcement of the law, however, brought frustration and bewilderment to its architects, especially Simon.²

Personal rivalries and lack of adequate funds plagued Simon's work. The Local Government Board's medical department, responsible for overseeing about 1500 health authorities, was expected to operate with a staff of only ten men. Given an impossible task, national inspectors annually visited only three per cent of all sanitary districts during the first decade of the medical department's history, but it, the Privy Council, could and did use the threat of inspection to prod local authorities into action. Between 1871 and 1880, according to G. Scater-Booth, President of the Local Government Board, an inspection or the threat of one, usually was sufficient to galvanize vestries into the required action, thus making a compulsory order unnecessary. And where undertaken, inspections, of course, did bind local and central agencies more closely together.³
The most efficient weapon used by the Board, however, were low-cost government loans. Communities wishing to construct some sanitary work submitted plans to the Board for approval and applied for a loan. By 1871, total expenditures had reached the unprecedented level of over £84,000,000. True, the promise of a loan did not do much to inspire lazy authorities, but the offer did encourage improvements throughout the realm. Thus the Board promoted public health through setting minimum standards, offering advice, and serving as a clearing-house for accumulated engineering and sanitary information.  

Convinced that administrative duties and epidemiological work were inseparable, Simon urged his teams at the Privy Council and the Local Government Board to place sanitary law and administration on a scientific basis. The result was these men began a series of investigations of diet, industrial diseases, overcrowding, communicable diseases (tuberculosis, cholera, diphtheria, bronchitis, etc.), hospital hygiene, and a host of other public health problems. Their findings and especially the discoveries of Louis Pasteur in France gained general acceptance of the germ theory and thus established the relationship between public cleanliness, pure water, adequate sewerage systems, and proper ventilation in homes and factories to good health. Their work, of course, led to further reforms in public health, but the existence of good laws and dedicated
boards notwithstanding, it fell to the Medical Officers of Health (MOH) to establish and maintain public health.5

Commissions of course, could lay sewers, provide pure water, pave streets, and remove filth without the help of the MOH, but preventive measures also included pure food and vaccinations; moreover, notification of diseases, clean air, the banning of offensive trades, all depended on qualified medical officers. The Royal Sanitary Commission and the Social Science Association urged the recruitment of more, but in 1872, there were only about fifty qualified MOH's in the country. The Public Health Act of 1875 required medical officers to be qualified doctors, medical schools, unfortunately, did not require students to take courses in preventive medicine and sanitary science. The complex and demanding duties assigned by law, moreover, soon demonstrated the need for specialized training. In 1875, the first English program in Public Health was established at Cambridge University, and other institutions following suit. By 1888, nearly 400 doctors received Diplomas of Public Health. But with the rigorous requirements of medical school behind him many difficulties still faced the new MOH. In trying to have insanitary property repaired he often found to his embarrassment that the slum lord was a member of the local sanitary board or vestry, or a situation which threatened his tenure. But experience and the
challenge of adversity in time developed in the young MOH the intuition known as savoir-faire.6

By the late nineteenth century, local government had accepted the need for public sanitation. Within its ranks were religious men and women who were convinced that cleanliness, though next to godliness, could postpone their Day of Judgment. Others equated poverty with physical and moral uncleanness. Merchants, manufacturers, and retailers could see that public health was good for business, production, and economic growth. In London, the Fabians, the Social Democratic Federation, and the London Trade Council called for better public health in their manifestoes or drafted offices. By the close of Queen Victoria's reign (1901), a remarkable renaissance had occurred in the nation's health. Epidemics and the mortality rate had declined and the quality of life had improved. For much of this achievement, the MOH deserves credit.7 As Dr. John Sykes, in 1894, observed with perception and wit:

The medical officer of health, in addition to being well grounded in physics, chemistry, biology, and skilled in medicine in all its branches..., is expected to know physiology, meteorology, and climatology, of statistics, mensuration, and plans, together with a certain knowledge of engineering, architecture, building and plumbing, a little more of the law, local government, sanitary jurisprudence, by-laws, regulations, procedures, and evidence....8

Slum areas, of course, had existed since the 16th century, and the Industrial Revolution had compounded their
social evils, but not until the 19th century did physicians and biologists see filth as a cause of disease, though they did not know how, until the discovery of germs (bacteria).
NOTES

1 Wohl, Endangered Lives, pp. 142 and 160; Fraser, The Victorian City, pp. 40 and 43.


7 Ibid., pp. 202-204; Wohl, The Eternal Slum, pp. 323-325.


CHAPTER V

A RETROSPECT

As the Victorian era drew to a close, there was much that public health officials and social reformers could point with pride. Pure food and water, garbage removal, clean streets, better working conditions, better personal hygiene, and diet constitute their monuments. These achievements and the growing science of epidemiology and immunology created better national health. To redress the social evils spawned by the Industrial Revolution and justified by laissez-faire economists, Parliament, once it had become aware of the horrors of slum life, enacted legislation which established social democracy in Britain. With the end of the wartime boom in 1815, the economy collapsed and a great depression afflicted the land and increased the ranks of the poor. Society was torn by internal dissention and disorder. Increasing poor rates (taxes) impelled the government to create a Royal Commission of Inquiry into the Poor Law. Its report in 1834 gave impetus to the careers of Nassau Senior and Edwin Chadwick, both advocates of laissez-faire. Shocked by the evidence of widespread poverty, Parliament passed the new Poor Law of 1834, which established a centralized administration.
As the population of Great Britain doubled between 1801 and 1851, and frequent epidemics increased the wretchedness of the poor, the London government sought ways to reduce the cost of poor relief. In 1838, Chadwick suggested that the expense of poor relief could be reduced by taking preventive action against disease. The following year the House of Lords responded by launching an inquiry into the sanitary conditions of the laboring class. The Poor Law Commissioners, glad to be rid of Chadwick, their difficult and embarrassing secretary, granted him a leave of absence to undertake the survey, which appeared in 1842. The published report shattered public complacency toward unsanitary conditions, thereby evoking a long and acrimonious campaign which culminated in the weak and permissive Public Health Act of 1848. Mindful that many Englishmen resented a strong central government and feared its encroachment on local autonomy, Dr. John Simon, 1875, quietly sponsored acts to improve the works and sewerage systems of specific areas. He sought to persuade where Chadwick had bullied; at times, he drifted with the current, where Chadwick, had tried to swim upstream, only to be swept away. Simon's persistence as the first medical officer gradually made progress. Clearly, the numerous local agencies acting in the field of public health--Poor Law Guardians, town councils, local Boards of Health, Water and Sewer Commissioners, Highway Surveyors, Improvement
Commissioners, select vestries, and many others produced a maze which resulted in administrative duplication, confusion, in efficiency. These bodies, moreover, acted under a wide range of statutes, which often overlapped.

Between 1848 and 1865, Parliament passed several ineffective acts to remove local nuisances, improve the water supply and dispose of sewage and prevent disease. Simon's suggestions were more often ignored than accepted, but in 1866, the poorly drafted Sanitation Act touched off a campaign for reform. A coalition of politicians and social reformers persuaded Parliament in 1871 to pass the Local Government Board Act which consolidated the functions of the Local Government Office, the Medical Department of the Privy Council, and Poor Law Board. Thus a ministry was created to supervise most of the activities of local government. The Public Health Act of 1875 finally consolidated or codified dozens of laws and regulations. Due to the clarity of its language and its definitiveness, it remained unchanged until 1936.

But one problem—poverty—defied solution. After several attempts to find one, Simon and other social reformers accepted the Biblical declaration that "the poor will always be with you" and addressed the problems of disease and the high mortality rate. Most public health reformers, aware of the underlying causes of poverty, resorted to preventive medicine to improve the environment of the poor.
Awareness of poverty and its relationship to the nation's health at least served as a warning against complacency and a challenge to future generations to do better.
APPENDIX

DRAMATIS PERSONAE

Lord Althorp (John Charles Spencer) 1782-1845; Whig M. P. for Northamshire; Chancellor of the Exchequer in Grey Ministry 1831-1834.

Dr. Neil Arnott 1788-1874; physician and natural philosopher; early advocate for sanitary reform; early founder of the University of London, 1836; author of *Survey of Human Progress*, 1861.

Lord Ashley (Anthony Ashley Cooper) 1801-1885; Tory M. P. for Dorset and Bath.

Jeremy Bentham 1748-1832; utilitarian philosopher; author of *An Introduction to the Principles of Morals and Legislation*.

Charles James Blomfield 1786-1857; Bishop of London, 1828-1856; Member of Poor Law board, 1836.

Henry Peter Brougham 1st Baron 1778-1868; Whig M. P. for Camelford, 1810-1812; M. P. Winchelsea, 1815; Lord Chancellor in Grey's reform ministry, 1830-1834.

Sir Edwin Chadwick 1800-1890; investigator on reform of the Poor Law (1832); Secretary of Poor Law Commission 1834-46; Commissioner of Board of Health, 1848-54; Author of *Report...on an Enquiry into the Sanitary*
Condition of the Labouring Population of Great Britain, 1842.

John Morgan Cobbett
1800-1877; Liberal M. P. for Oldham.

John Fielden
1784-1849; Factory Owner; Liberal M. P. for Oldham.

Lord Granville
(George Leueson Gower, 2nd Earl) 1815-1891; Whig M. P. for Lechfield, 1841; Foreign secretary for durations of Lord Palmerston's administration, 1851; Chancellor of the University of London, 1856-1891.

Sir George Grey
1799-1882; Liberal M. P. for Devonport; Home Secretary in Russell Ministry, 1846-1852.

Thomas Robert Malthus
1766-1834; Economist and demographer; author of An Essay on the Principle of Population as it Affects the Future Improvement of Society; Principles of Political Economy Considered with a View to their Practical Applications.

Lord Morpeth
(George Howard; sixth Earl of Carlisle) 1773-1848); M. P. from Morpeth 1795-1806; M. P. from East Riding, 1824-1847; Chief Minister of Woods and Forests, 1827.

Richard Oastler
1789-1861; Factory reformer from Leeds.

Lord Palmerston
(Henry George Temple) 1784-1865; Liberal M. P. for Teverton; Home secretary in Aberdeen Ministry, 1852-1853.
Sir Robert Peel 1788-1850; Conservative M. P. for Tamworth; Prime Minister, 1841-1846.

David Ricardo 1772-1823; English economist, Author of Principles of Political Economy and Taxation; M. P. for Port Arlington.

Lord John Russell 1792-1878; Liberal M. P. for London; Prime Minister, 1846-1852.

Nassau Senior 1790-1864; Political economist; Professor of political economy at Oxford.

Sir John Simon 1816-1904; Sanitary Reformer; First medical officer of Health to City of London, 1848-1855; First medical officer to central government, 1858-71; established scientific research for sanitation practices.

Adam Smith 1723-1790; Author of Wealth of Nations; Originator of laissez-faire philosophy of economics.

Dr. J. Shuttleworth - Kay (Sir James Phillips) 1804-1877; founder of English system of popular education; Secretary to the Board of Health, Manchester, 1832; author of The Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture in Manchester, 1832.

John Snow 1813-1858; Anaesthetist; found cholera communicated by water supply; introduced ether into English surgery;
Charles Richard Summer

1790-1874; Bishop of Winchester.

John Walter III

1818-1894; Manager of The Times, 1847; M. P. from Nottingham, 1847-1865 and from Berkshire, 1868-1885.

the author of On the Mode of Communication of Cholera, 1849.
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