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The English Public Health Movement 1838-1842

by

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Parliament passed its first comprehensive public health act in 1848. Prior to that time Britain as well as other European countries had mostly just tolerated unsanitary conditions.

In English medieval towns people threw their garbage onto the narrow streets where animals—pigs, cattle, ducks—roamed. Houses were built with projections over the streets which blocked light and ventilation. There were few qualms about slaughtering animals on the streets. The common method of wastewater was by cesspools which in some cases were built underneath the houses and in most cases were cleaned out only once every several years by the "dust-collectors". Even in medieval times the churchyard graves were getting crowded and becoming a sanitation problem.¹

Governments attempts to deal with these problems were scattered and largely ineffective. London in 1282 provided that any swine on the streets were to "be killed and redeemed of him who shall kill them for fourpence each."² A little later there, tallowmelting was forbidden in Chepe, dead horses were not to be flayed in the City, and all slaughter houses were prohibited except beyond Stratford-le-Bow and Knightsbridge.³

³Ibid., p. 9.
During the Plantagenet period there were various regulations in towns for the disposal of refuse. Citizens were supposed to clean the pavement or street in front of their houses every Saint's Day. Edward III was concerned about the pollution of the rivers and decreed that no refuse should be thrown into the Thames or Fleet rivers. The first national sanitary act was passed by Parliament in 1388 and prohibited the pollution of rivers, ditches, and open spaces, the burning of coal, and the location of offensive trades inside city walls.

During the sixteenth century reaction to the Plague brought more regulations. 1518 marked the first attempts of notification and isolation of patients afflicted with the disease. Regulations on scavenging became more stringent. Registration of deaths also became a practice in this century.

The eighteenth century saw Jenner's discovery of vaccination and the foundation of five London hospitals whereas only two had existed previously.

In the early 1800's jurisdiction over aspects of existing public health regulations was divided. Some

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4 Delaede, Towards National Health, p. 47.
5 Ibid., p. 48.
7 Ibid., p. 12.
towns had 

Commissions of Sewers which built sewers to carry off storm water. These commissions had restricted powers and were often ineffective and corrupt.\(^8\) The courts leet had jurisdiction to hear cases concerning common law nuisances. The vestry was often the only drainage authority. In the 18th century 300 Improvement Commissions had been formed; some paved streets while others lighted streets or provided police services or built drains and sewers. Sometimes there was overlapping jurisdiction among these commissions resulting in hostile competition between them.\(^9\) In 1832 during the cholera epidemic an ad hoc health board took over the function of the courts leet in hearing nuisance cases; it had only a temporary life.

Sanitary conditions were not very much different in the early 1800's from what they had been for the past few centuries. Towns were plagued with insufficient and often impure water supplies, sewerage and drainage problems, poor housing, and overcrowded cemeteries. One survey showed that out of fifty large towns in 1843-1844, only six had what could be considered a good water supply. Thirteen had a supply neither particularly good nor bad, and thirty-one had extremely bad supplies. Only seven of the towns had a neither good nor bad drainage system while forty-two had extremely bad drainage.\(^{10}\)

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\(^9\)Ibid., p. 215.  
\(^{10}\)Ibid., p. 215.
Water supply for towns came mainly from rivers flowing nearby. Since the 1582 invention of Peter Morrice in raising water from the river, the practice of pumping water into the towns was begun. By the 1840's the upper and middle classes had water piped into their homes in the towns; the lower classes depended on outdoor fountains for their supply. Most often the water was supplied by private water companies who turned on the supply just three days a week for several hours. People collected this water and stored it in tanks or kettles. The water was unfiltered despite the invention of a sandfilter in 1829 by James Simpson and with the type of storage that was used, the water became stagnant--"too dirty to wash in, too tainted to drink." With the condition of the water supply, it was perhaps fortunate that the English were accustomed to drinking ale and other alcoholic beverages instead of water.

Sewers in the 1840's were still mainly thought of as just drains to carry off storm water. Ordinary sewers were about five by three feet rectangular brick tunnels. Some waterclosets emptied into them and of course all sorts of sundry items could be found in the sewers--"broken china, cinders, oyster-shells, vegetable refuse, brushes, rags, ... even coffins and tombstones, a bedstead, and the beadle of the parish." However, the sewers were not constructed

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11Piner, Life and Times, p. 220.
to handle refuse; refuse would flow to low-lying areas of the sewers and rot. For example, in London there was no system of connections of the sewers; there was not even a complete map showing location and level of the sewer lines. Eight different Crown appointed Commissions of the Sewers operated in the metropolis rather inefficiently.\textsuperscript{13}

Many houses had cesspools underneath them. These were cleaned out as often as two or three times a year or up to once every two years.\textsuperscript{14} The charge for emptying cesspools averaged one pound and many people could not afford the service very often. In some of the new manufacturing towns the working classes were supplied with outdoor privies averaging one for every thirty buildings.\textsuperscript{15} In parts of Manchester there were 33 privies for 7,095 persons or a ratio of one for 215 persons. In the whole town of Sunderland there was one for every 76 persons.\textsuperscript{16}

The working classes lived in generally poor housing.

It was necessary that they live near their work in any dwelling that was available. Oftentimes there was much crowding in these tenement houses. Several families sometimes lived in one room. One report showed figures of the percentage of families with more than three persons to a bed.\textsuperscript{17}
The houses were often damp and cold. People even lived underground; in Liverpool a doctor estimated that 35,000 to 40,000 persons lived in 8,000 cellars.\(^1\) The houses often lacked ventilation; this has been blamed upon the window duties (38 George III, c. 40). The window tax was levied against home owners. A window with an opening a foot square cost 8s. 3d. per year.\(^2\) The tax was not abolished until 1851. In another act in 1835 people were allowed to open as many windows as they pleased if they paid the 1835 tax. This act was voided by lawyers who showed that no one had been duly assessed in 1835.\(^3\) Nonetheless, the Window Tax prevented builders from installing proper ventilation.

Cemeteries presented another problem to towns in the 1840's, a problem of too many bodies in too little space. The common practice of burial was interment in the churchyards. In London there was 203 acres of cemeteries. People were buried "layer upon layer" with each layer containing a population equivalent to 20,000 adults or 30,000 children. It was estimated that over a million bodies had been buried in those same spaces in one generation.\(^4\) In Russell Court, off Drury Lane, the ground had been raised several feet through constant burials.\(^5\)

\(^1\) Jones, Edwin Chadwick, p. 69.
\(^4\) Jephson, Sanitary Evolution, p. 36.
\(^5\) Ibid., p. 36.
Concern about these problems caused a public health movement to spring up. The impetus came mainly from Edwin Chadwick. Others instrumental in the movement were Dr. Southwood Smith, Dr. Neil Arnott, Dr. Phillips Kay (later Kay-Shuttleworth), medical personnel concerned with sanitation problems; and Lord Ashley, Lord Morpeth, Lord Lincoln, Lord Normandy, Bishop Bloomfield, and R.A. Slaney, Parliament members.

Chadwick was a lawyer by profession; he entered government civil service in 1832 when Nassau Senior, impressed by a magazine article written by Chadwick, invited him to help a royal commission with its inquiry into the Poor Laws. After the inquiry, Chadwick was made secretary to the Poor Law Commission. It was from this position that he conducted most of his public health inquiries.

Chadwick had a hardheaded, forceful personality and complete confidence in himself and his ideas. It was this persistent personality that made many dislike him; it was this same personality that spurred reforms.

One of the first pieces of legislation that he asked for and received without much trouble was a Registration Bill (6 & 7 William IV, c. 86). This law provided for registrars under the supervision of the Poor Law Unions to register births, marriages, and deaths. The registration of death was to include a diagnosis. Thus the first step of public health inquiry, the means to measure the problems, was effected.
The next step was the first expeditionary inquiry into public health sent out by the Poor Law Commission under the advice of Chadwick. The proposition being tested was that sickness due to improper sanitation conditions was a burden on the poor rates. Drs. Arnott, Kay, and Smith conducted the inquiry into certain areas of London with the help of Chadwick and presented their reports in 1838.

Impressed by these reports, Bishop Bloomfield carried a motion in Parliament that the Poor Law Commission make another report covering all of England. Chadwick carried out the investigations and made his Report on the Sanitary Condition of the Labouring Population. He made a supplementary report afterwards on interments.

Meanwhile, the House of Commons had created a Select Committee on the Health of Towns under the direction of R. A. Slaney which reported in 1840. Lord Normandy in 1841 introduced a Boroughs Improvement Bill and Drainage of Buildings Bill into Parliament. The downfall of the Melbourne government to Peel brought the downfall of the Normandy Bill as well, though.

After publication of Chadwick's report, Peel's home secretary Sir James Graham in 1842 appointed a royal commission to further investigate the sanitation problem. Although Chadwick was not a member of the commission, he nominated some of the commissioners and guided the investigation and reports; the reports were published in 1844 and 1845.

Lord Lincoln introduced in 1845 a bill based on Chadwick's reports for consideration during Parliament's recess. He
reintroduced it in 1846 only for it to be delayed for consideration because of the Corn Law debates.

In 1846 the Select Committee on Private Bills under the direction of Joseph Hume reported on the necessity for setting up a procedure for approval of projects such as waterworks, drainage, paving, lighting, and burial by a government department instead of by private bills in Parliament. This report led to the adoption of the Preliminary Inquiries Act (9 & 10 Victoria, c. 106) which set up such a procedure under the Commissioner of Woods and Forests. In 1857 eight Clause Consolidation Acts were passed by Parliament granting powers and spelling out regulations on certain private and public bodies—the eight acts dealt with Markets and Fairs; Gasworks; Commissioners; Waterworks; Harbours, Docks, and Piers; Towns Improvement; Cemeteries; and Town Police.

In March 18, 1847, Lord Morpeth, Commissioner of the Woods and Forests, introduced a Health of Towns bill. Lord John Russell withdrew the bill July 6 after it was obvious that progress on it was too slow.

Meanwhile Chadwick was working on another inquiry—this one into the condition of London by a royal commission, the Metropolitan Sanitary Commission. One result of the inquiry was the formation of the Metropolitan Commission of Sewers which consolidated all the Commissions of Sewers in the Metropolis into one body, except for the one in the "City" (the one square mile area that was legally all of
In 1848 Morpeth reintroduced his 1847 public health bill which finally passed in about the same form in which it was introduced. Particulars of this bill will be discussed later in this paper.

All of the inquiries found that most of the problems were common to the areas surveyed and the reports likewise generally offered similar solutions to the problems. There were of course differences of opinion on details and on attitudes toward the problems.

Some viewed the health problem like Lord Ashley who felt pity for the poor and felt a religious compulsion to help them with their plight in providing a sanitary environment to prevent disease.

Chadwick saw the problem as an economic loss both because it added a burden to the poor rates by leaving more widows and orphans for the state to support and because every laborer who produced over his subsistence had a positive economic value which was lost by death. Chadwick also thought that a sewerage system could be turned into a profitable affair if methods of distributing sewage to farmers for fertilizer could be devised. Liebig's Chemistry of the Soil estimated that in one year one man's excrements would produce 16.41 pounds of nitrogen—enough to provide fertilizer to produce 800 pounds of wheat, rye, or oats. Chadwick in the 1840's experimented with various schemes of piping liquid manure to the countryside: one, a canal
boat squirting the manure onto the fields with a hose and jet, another, pipes under the earth to saturate the soil? Neither proved satisfactory. Moreover, the manufacture of superphosphate fertilizer and the importation of Peruvian guano was making the idea of liquid manure outmoded.23

By far the most common attitude toward the sanitation problems of the country was apathy. The poor were ignorant of even the fact that a problem existed—they had lived with it for so long. The religious poor stressed the importance of endurance which meant that they put up with their conditions without protest. The working class was generally more concerned about getting a voice in government at this time in history.24

The upper classes also generally displayed apathy. They accepted the economic fatalism of Smith, Malthus, and Ricardo that there was nothing one could do to improve the condition of the poor. A fear of centralization of government and of the working class in general prevented the upper classes from taking action until they were pressured to do so.25

Even one group of reformers, the Manchester school led by Richard Cobden and John Bright, resisted the public health movement. They might have wanted landholders to give up their control over tariffs but they also wanted freedom to operate their businesses and tenement buildings.

23 Finer, Life and Times, p. 300-301.
24 Jones, Edwin Chadwick, p. 54-55.
25 Ibid., p. 56.
without having to institute costly sanitation measures.

The most prevalent theory of disease in the 1870's was the niasma or "atmospheric" theory of disease. People thought their illnesses were caused by bad air; they thought corrupt air traveled into the lungs and thus proceeded to wreak its damage inside the human body. When applied to prevention of disease, this theory meant that a sanitary environment that got rid of the "smells" would mean a healthy environment. "The ultimate end of sewerage, drainage, and a supply of water adequate to the cleansing of sewers, drains, and streets, is to maintain the air... in a fit state for respiration..."26 By the late 1840's positive correlations between disease and bad water supply meant that the niasma theory was becoming obsolete. However, during the time of the inquiries the niasma theory gave impetus to the proposals for sanitation.

One proposal that the inquiry reports agreed on was the need for proper drainage and sewerage system. One of the most unhealthy areas was the Bethnal Green district in the Metropolis; Smith said that the houses there were always damp. A large part of the area was a swamp and covered with water in rainy weather.27 Drs. Arnott and Kay in their

26Finer, Life and Times, p. 299, referring to Dr. Southwood Smith in the Health of Towns Association Report on Lord Lincoln's Bill, 1846, p. 72-73.
1838 report also recommended that marshes be drained and open sewers prohibited.

Also proposed was the substitution of eggshaped glazed pipe, with relative small circumference and steep gradients, for the brick cavern type of sewer. There was some controversy over the exact proper size for the pipes—John Roe and Thomas Hawkesley, a surveyor and engineer respectively, prepared tables showing different figures—however, both agreed that the pipes should be smaller than the present conduits.²⁸

Another area of disagreement was in the disposal of sewage. For example, in London, John Phillips, engineer, proposed that an artificial river be constructed parallel to the Thames and the sewage be discharged into it by gravity. Henry Austin, engineer, disagreed; he thought the sewage should be pumped away to the farms.²⁹

Another proposal receiving common agreement was the need for building regulation. Arnott and Kay recommended that lodging houses be inspected and their rooms whitewashed every two years. They also recommended cleaning and whitewashing of houses where three or more families lived, the inspection of dilapidated houses, and the prohibition of persons living in deserted, unsafe houses.³⁰

²⁸Finer, Life and Times, p. 269.
²⁹Ibid., p. 367-368.
³⁰Hodgkinson, National Health Service, p. 626.
necessary. Chadwick proposed that filtered water be supplied constantly at high pressure. This service could be supplied, along with a sewerage system, to tenants for 5½d. per week, if improvements were made by loans of 30 year maturity. Even at that price, profits would still be made.31

Chadwick suggested that more "gardens" be established. Such parks and zoos would be a rival to working class pleasures that were "expensive, demoralizing, and injurious to health."32

Full time medical officers, Chadwick thought, should be appointed to districts to hunt out the physical causes of diseases in the homes of the poor.33 Chadwick, however, saw little use for doctors beyond that; the whole thrust of his energy was toward prevention of disease and he had little faith in the ability of medical personnel to cure disease.

As for cemeteries, Chadwick proposed that burials inside towns be prohibited and that the municipalities be empowered to make and control cemeteries on their outskirts. Also, registrations of deaths should include verifications of the fact and cause of death.34

Where most of the differences of opinion came were in the type of administrative body that should handle these reforms. Chadwick wanted the public health work to be handled by the civil service. He wanted to create a Privy Council committee with a standing counsel (himself) to oversee the sanitation

31 Finer, Life and Times, p. 227.
32 Jones, Edwin Chadwick, p. 79.
33 Lewis, Edwin Chadwick, p. 58.
34 Ibid., p. 73, 79.
work. Local boards of health should be created and filled with Crown appointees and delegates from local bodies in the geological area. The central board would have authority to approve engineering works and plans for borrowing money. It would also direct local inquiries and conduct judicial hearing of local parties after receiving the Inspector's report on the local situation. Chadwick liked the Privy Council committee idea because in Whig administrations, Lord Lansdowne took Presidency of the Council and because it would give him a shield so that he could proceed with his sanitation plans without interference, as Kay-Shuttleworth was doing on the Privy Council Committee on Education. Chadwick wanted to consolidate the functions of the health board too; drainage, sewerage, water supply, street cleaning, and paving should all fall under the jurisdiction of this board so that it could work efficiently.35

Lord Lincoln's 1845-1846 bill proposed that the work be carried out under the Home Secretary. The Home Secretary really did not have the time to devote to the job, though.

Morpeth's 1847 and 1848 bills proposed that the central authority be a board with the Commissioner of Woods and Forests as president. It also provided for town councils in corporate towns and elected boards in noncorporate towns to supervise the local activities. It did not provide for boards based on geological drainage regions as Chadwick desired.

35Finer, Life and Times, pp. 302-305.
Even with a more democratic executive many Parliament members still thought it would be too autocratic. Many members had a fear of anything labelled "centralization".

The main areas of debate in Parliament on the 1847 and 1848 bills concerned the inclusion or exclusion of London from the bill and the charge of "centralization".

London and its metropolis was included in the original 1847 bill. Lord Lincoln advised Boreth to drop London from the present bill because he feared it would impede progress on the bill; the administration of London and surroundings was already in a confused state and the vested interests there was strong against the bill. The Metropolitan Sanitary Commission inquiry was just getting underway and a separate bill for London could be introduced after the Commission reports.

However, the exclusion of London stirred much protest. Much of the protest, though, was that if London was excluded, then their towns should be excluded too. Colonel Sibthorp, one of the main antagonists of the bill, wanted to know why filthy London was excluded and his town, Lincoln, "one of the cleanest and best-conducted towns in the United Kingdom" was included.36

Many felt the bill would introduce too much central authority and usurp the traditional self-governing system of government. One unusual protest to the bill was Mr.

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Newdocate's fear that it would introduce espionage.\footnote{37Hansard, Vol. 93, p. 730.}

The debates in 1848 were about the same in 1848. Supporters of the bill stressed the need that it would do in improving society and opponents such as Sibthorp and Dr. Grueber argued that it was unnecessary and that it would create harmful aftereffects.

The bill passed in 1848 on May 5. The law created a central board of three commissioners, one of which was paid. The board would conduct local inquiries after it received a petition of at least a tenth of the inhabitants of a borough or parish or if a place had an average number of deaths in the past seven years exceeding 23 to a 1,000 persons population. After the inquiries, local boards of health would be set up; if it were in a corporate town, the town council would be the board, and if it were in any other place, the board would be elected by the ratepayers. The local boards would have power to control sewers, drainage of houses, street cleaning, nuisances, slaughter-houses, offensive trades, lodging houses, repair and management of streets, public parks, water supply, mortuaries, and cemeteries. The central board would sanction local contracts and loans.

Although the law failed to live up to its promises and the central board even dissolved in 1854, some advances were made by it. It made local improvements, but moreover, it committed the government to the cause of sanitation and
responsibility for public health. A permanent public health department was instituted in 1875.

The impact of Chadwick was also important. He could be thought of as one of the first modern bureaucrats. His values of efficiency, economy, and persistence are all twentieth century standard values. Even his great reliance on statistics would be labeled part of the twentieth century mentality. As he strove in the 1840's to make government an agency for the improvement of society, he probably also helped shape the role of future government.
BIBLIOGRAPHY


An abridged version of Chadwick's famous 1842 report. It gives useful figures and details of conditions of sanitation and morality for several areas.


One chapter deals with the shaping of the modern state. Clark uses Chadwick as an example of the expert in dealing with the state.


Background information on sanitary regulations prior to the nineteenth century.


Very useful source. Finer gives almost step by step accounts of Chadwick's work in the public health movement and provides a good biography of Chadwick.


Information on the condition of London's sewers and detailed proposals for reconstruction of the sewer lines. Also details on the upcoming cholera epidemic.


General history of the period, including bills in Parliament on public health.


Deals with Lord Ashley's attitudes and place in the public health movement.


One chapter of the thick book deals with Chadwick and the sanitation investigations. It provides a good summary of the movement as well as interesting details.

Convenient summary of the provisions of the 1848 public health law.


Deals with London's sanitary problems from the 1830's to 1906 with emphasis on the latter half of the century. Jephson stresses the lack of coherent government for greater London as a great impediment to sanitation reform.


Covers the same scope and material of Finer's work. It seems like the same book. It seemed somewhat odd to me that both Finer and Lewis published their books on Chadwick in 1952.


Short, simplified version of the sanitation movement.


Brief history of sanitation regulations.


Young attributes the birth of the modern public welfare service to Chadwick.

**INSERT:**


Long and boring speeches by Parliament members on the public health bills. Speeches were repetitious and seemed like filibusters.