London's 'Great Stink': The Sour Smell of Success
By Professor Martin Daunton

Cholera epidemics, the 'Great Stink' and miasmas combined to create a death rate higher than at any time since the Black Death forcing reformers to face up to the need for an urban planning policy for the first time.

Death in the city

The census of 1851 recorded half of the population of Britain as living in towns - the first society in human history to do so. Over the previous 70 years, the population of Britain had risen at an unprecedented rate, passing the levels reached in earlier period of growth when the population had been decimated by epidemics such as the Black Death in the early 14th century.

But was there any reason for optimism? The towns offered a better chance of work and higher wages than the countryside, where many families were trapped in dire poverty and seasonal employment. On the other hand, the countryside was healthier. A baby born in a large town with a population of more than 100,000 in the 1820s might expect to live to 35; in the 1830s, life expectancy was down to miserable 29. A comparison between a desperately unhealthy large town and a small market town shows the costs of migrating in search of work and prosperity. In 1851, a boy born in inner Liverpool had a life expectancy of only 26 years, compared with a boy born in the small market town of Okehampton who could expect to live to 57.

Large towns were therefore desperately unhealthy, with levels of death at a level not seen since the Black Death. New epidemics were stalking the cities: cholera and typhoid were carried by polluted water; typhus was spread by lice; and 'summer diarrhoea' was caused by swarms of flies feeding on horse manure and human waste. The problem was easy to identify and difficult to solve: too little was invested in the urban environment, in sewers, street paving and cleansing, and in pure water and decent housing.

Dirty Father Thames
(Punch, 1848)

Cities on the cheap
In the early 19th century, many towns were governed by municipal corporations, usually 'closed' or self-selecting bodies in the hands of one political faction, with little sense of civic responsibility. Many residents were reluctant to pay taxes to these unaccountable bodies, which therefore had difficulties in investing. Many expanding towns (such as Manchester) lacked even a corporation and relied on a motley collection of bodies. Not surprisingly, the response to urban growth was weak.

Parliament reformed municipal government in 1835, but this did little to help. Corporations were now elected, but the voters were narrow-minded, self-interested owners of small property. In 1855, Charles Dickens imagined an election campaign in the evocatively named town of Cess-cum-Poolton. The candidate rallied the voters:

Ratepayers, Cess-cum-Poolton! Rally around your vested interests. Health is enormously expensive. Be filthy and be fat. Cesspools and Constitutional Government! Gases and Glory! No insipid water!!

His satire was well directed, for many towns voted for cheap government, with low spending on drains or water supplies. Attempts by the central government to force laggards to act was soon denounced as a despotic interference in local liberties, an attack on 'constitutional government'. Thus the General Board of Health created by the Public Health Act of 1848 was soon abolished. Other means had to be found of encouraging local authorities and their electors to vote for spending on health and amenities, convincing them that being filthy did not make sense.

Civic pride - Leeds Town Hall, 1858 ©
(http://www.bbc.co.uk/history/about03.shtml#mepl)

Spending on cities

Matters started to change from about 1860. The conditions of the towns seemed intolerable and a source of danger: being filthy might lead to death for the rich as well as the poor. The power of small property owners was weakened when more people were granted the vote with the second reform act of 1867. Although the outcome varied between towns according to local circumstances, the result could be an alliance between newly enfranchised workers and larger industrialists who realised that higher public spending would make their cities healthier and more efficient. Improvements in the capital market also helped by making it easier for towns to borrow money on favourable terms. From about 1870, there was a massive increase in the level of investment in public health. The most striking example was in Birmingham, where Joseph Chamberlain became mayor, and embarked on a massive programme of spending. By
the end of the 19th century cities throughout Britain ceased to be built on the cheap, and by 1900 life in the great cities was just as healthy as in the countryside.

At some point, conditions long accepted with fatalistic resignation become intolerable, a problem in need of urgent action. The process of persuasion was crucial to investment in Victorian cities, to the realisation that conditions should not be accepted and money should be spent.

The sanitary reformers used the literary techniques of Victorian novelists to create a sense of crisis. Edwin Chadwick, the author of the report on the sanitary conditions of British towns, consulted Dickens over his descriptions of the sanitary conditions of the great towns - and Dickens's himself obtained graphic accounts of the vile conditions of reeking graveyards from his brother in law, a leading sanitary reformer. The imaginative force of their writings made people aware of the need for action.

The 'Great Stink'

The appearance of cholera from Asia in 1831 provided a more immediate incentive. The wealthy were not immune; indeed, they might be more vulnerable. Water closets were adopted by the more affluent households of London in the early nineteenth century, in place of privies and cess pits. As a result, sewers originally intended to take rain water into the Thames now carried raw sewage - which was then extracted by the water companies to be drunk by their customers. The Metropolitan Commission of Sewers had responsibility, without power to impose sufficient taxes to solve the problem.

The crisis came to a peak in the 'Great Stink' of London in 1858. Such was the overpowering smell from the Thames, that the curtains of the Commons were soaked in chloride of lime in a vain attempt to protect the sensitivities of MPs. It is no surprise that a bill was rushed through parliament and became law in 18 days, to provide more money to construct a massive new sewer scheme for London and to build the Embankment along the Thames in order to improve the flow of water and of traffic.

One of the greatest problems created by the rise of great cities, was: where should the population be housed? The early Victorians spent little and their children died young; later Victorians spent more and experienced longer life. This was not a triumph of medical cures, but of political action and public investment in engineering and preventive medicine.

[Image: Back to back housing in Staithes, Yorkshire, late 19th century](http://www.bbc.co.uk/history/about03.shtml#mepl)
Slums and suburbs - packing in the people

In the first half of the 19th century, the answer was all-too-often by subdividing existing property and cramming more accommodation into backyards. Cities became more densely packed, creating dead-ends and foul alleys, and damp cellars offered miserable accommodation. In Liverpool, about a quarter of the population lived in courts in the early 1840s, and perhaps ten per cent lived in cellars. The borough engineer painted a lurid picture of the conditions in the early 1860s, explaining how courts had no through ventilation, and normally contained 'the privy or ashpit common to all the wretched dwellings, with its liquid filth oozing through their walls, and its pestiferous gases flowing into the windows'. Conditions within the houses were no better. In 1854, the commissioners appointed to enquire into the cholera outbreak in Newcastle-upon-Tyne found that about 50 per cent of families had only a single room. Most houses did not have an independent water supply or privy, and what was shared was often the responsibility of no one. The low life expectancy of babies born into such conditions is easily explained.

Miasmas and morals

These conditions caused considerable alarm to the more affluent members of society - and not simply from a charitable concern for the social conditions of the poor. The warren of streets posed a threat to public order, allowing criminals to escape observation in the 'rookeries' described by Charles Dickens in Oliver Twist. The streets should be opened up to observation by the police and sanitary inspectors. The lack of through ventilation, the putrefaction and stench described in Liverpool, was also a threat to public health - of the rich as well as the poor. Until the general acceptance of the germ theory of disease in the later nineteenth century, fevers and epidemics were explained by 'miasmas', exhalations from decaying matter which poisoned the air. Hence the alarm of the Great Stink. What was needed was through ventilation, the provision of parks to act as 'lungs' for the cities, and a general process of cleansing.

The need for observation and ventilation meant opening up the city, improving the process of circulation much as an individual's health depended on the circulation of blood and oxygen. One answer was to demolish slums, by driving railways to the new stations or building new roads to allow the passage of traffic. Hence the decision to build Shaftesbury Avenue in London's West End, cutting through some of the worse slums of Soho. Little was done for the wretchedly poor people who lost their housing, and simply huddled together in the next block of housing. Some charities built new model housing on the cleared land - most famously the Peabody Trust in London - to little avail. The new housing was often grim, forbidding barrack blocks, and rents were too high for many of the people who were displaced from the slums. At the end of the 19th century, some local authorities did start to build council housing which offered a new solution to the problem of housing the poor.
Bye-law housing

Despite these continuing problems of poor housing, conditions did improve from the 1870s with the construction of new, healthier housing. The Public Health Act of 1875 required local authorities to implement building regulations or bye-laws, which insisted that each house should be self-contained with its own sanitation and water. This change in the design of housing complemented the public investment in sewers and water supply. At the same time, the income of most working class people started to rise at an unprecedented rate. In 1873, the price of food started to drop with the ready availability of cheap imports from across the Atlantic - and much of the drop in the cost of feeding a family was taken in higher spending on housing. In the last quarter of the 19th century, huge numbers of new bye-law houses were built in English cities: long rows of terraced housing, in grids of streets, easily cleaned and inspected. In Scotland, most residents of the great cities lived in high-rise tenements, but even so the amenities improved and the level of over-crowding fell. The result was a great improvement in urban health. These bye-law houses and tenements were themselves attacked by the end of the century for their monotony, and reformers argued for a more imaginative form of 'garden suburb' - an architectural style which came to dominate the new suburban council houses of the 1920s and 1930s.

Nuisances and pollution

Any society experiencing industrial growth must strike a balance between creating jobs and degrading the environment. Was it better to be filthy and waged, or clean and poor? Victorian Yorkshire might boast that 'where there is muck there is brass'. But should industrialists be allowed to create as much muck as they wished, or should they be forced to hand over some of their brass in order to clear up the environment. Did the workers in their factories, or the residents in the adjacent streets, lose more in ill-health than they made in higher wages? Is there much consolation in earning a high wage - only to die early from a respiratory disease caused by pollution of the air?

These issues were most pressing in towns such as St Helens, Swansea or Sheffield producing chemicals and metals, where the 'noxious vapours' killed plants and animals and undermined the health of residents. The Government took action with the Alkali Act of 1874 which required manufacturers to use the 'best practicable means' of controlling these vapours. However, a Royal Commission concluded in 1878 that measures were only practicable if they did not involve 'ruinous expenditure'. The courts were clear that they should not penalise industrialists for causing nuisances with their fumes, for the result would simply be to destroy
the industry of many towns. The problem was not simply these heavy industries. As the standard of living rose, so more people burned more coal in their hearths. A prosperous economy with factories and houses pumping smoke into the air contributed to a high death rate from respiratory diseases, especially of the elderly. The paradox of economic growth experienced during this period was that in many ways it created as many problems as it did solutions.


**Going further**

**Reading**

Many of the novels of Charles Dickens give a sense of pollution and congestion: see *Bleak House* for London and *Hard Times* for his account of Coketown, loosely based on Preston. Other 'social condition' novels include Benjamin Disraeli, *Sybil or the Two Nations* with its fear that social relationships would break down in the great cities into a war between rich and poor, or Mrs Gaskell's *North and South*. Friedrich Engels was a northern industrialist, as well as working with Marx: his account of *The Condition of the Working Class in England* provides a harrowing picture of Manchester. One of the most important official enquiries was undertaken by Edwin Chadwick, in his *Report on the Sanitary Condition of the Labouring Population of Great Britain*, 1842 (reprinted and edited by M.W. Flinn, Edinburgh University Press, 1965).