

The impact and significance of John Snow and the Broad Street pump

In 1855, Snow presented his findings to a House of Commons committee. He showed the evidence that he had gathered, which proved that cholera was transmitted by dirty water. He recommended that the government start making massive improvements in the sewer systems of London. By doing this, Snow argued, another cholera outbreak could be avoided.

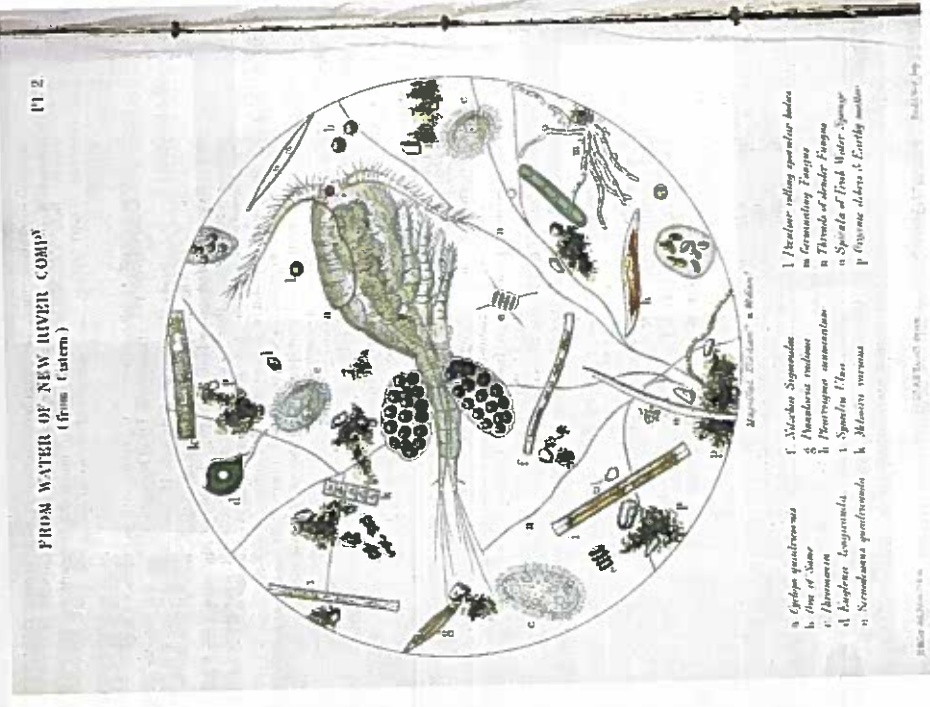
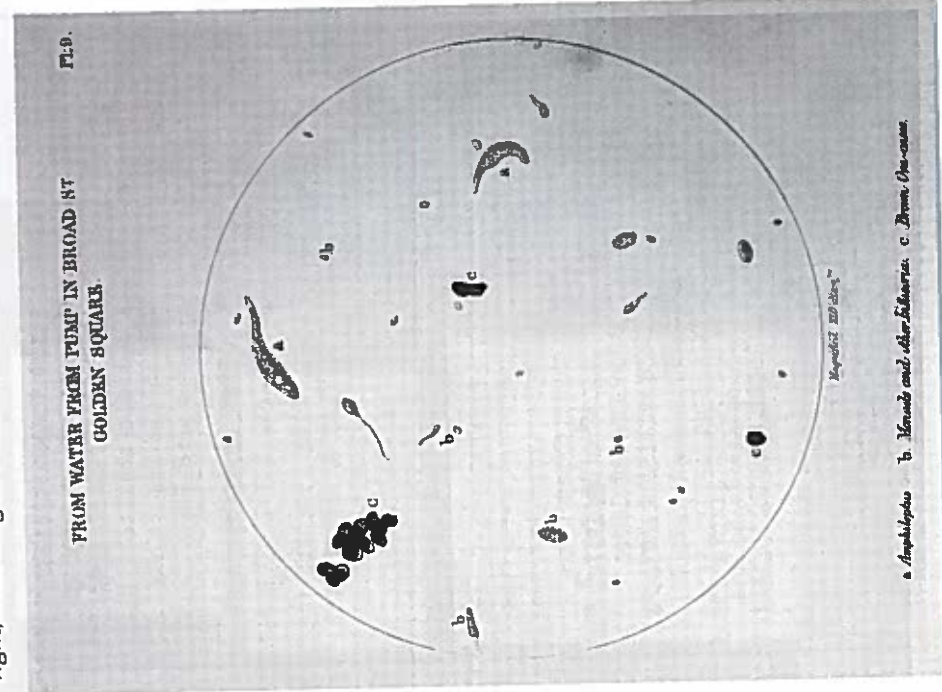
The government did eventually agree to invest in a new sewer system, which was planned by Joseph Bazalgette and completed in 1875. However, this was not just due to the work of John Snow. An unusually hot and dry summer in 1858 had caused 'The Great Stink'. The Thames was low and the stench of the exposed sewage

on the riverbanks heating up and steaming gently in the sun became terrible. This nudged the government into action and the work on the new sewers was begun in 1860.

Many people rejected Snow's work. Other scientists pointed out that cases would still occur among people who lived further away from the pump, even if they were drinking less of the water. The General Board of Health clung to the theory of miasma and rejected Snow's findings. Admitting that cholera was present in the water would mean having to take steps to provide clean water, which was going to be very costly – and, the Board argued, there was no scientific proof that it would work.

Source E

These two drawings accompanied the General Board of Health's report on the cholera epidemic, which was published in 1855. The Board had rejected Snow's theory that cholera was spread through water. Here, they attempt to prove their theory by offering two drawings of water magnified 200 times. On the left, a drawing of water taken from the Broad Street pump. On the right, a drawing of water from the New River Company, elsewhere in London.



Although Snow had plenty of practical evidence to show that cholera was spread in water, he had no scientific evidence to show what caused the disease. It would be another seven years before Pasteur published his Germ Theory – three years after Snow had died – and another 30 years before Koch finally isolated the bacterium that caused the disease.

Therefore, in the short term, Snow's work had an immediate impact on the residents of Soho Square, many of whom avoided cholera thanks to his removal of the pump handle. However, his impact outside of this area was very limited. It was not until much later that the importance of clean water was accepted.

Preventing cholera: the role of individuals and institutions

Role of the government	Role of the individual: John Snow
Encouraged local councils to clean up their cities and provide clean water.	Observed the pattern of cholera cases.
Listened to John Snow's evidence about cholera.	Designed an experiment to prove that cholera was caused by dirty water.
Arranged for a new sewer system to be built in London.	Prevented residents from drinking the water.
Eventually passed the 1875 Public Health Act to force other cities to clean up.	Presented his findings to the government.

THINKING HISTORICALLY Change and continuity (3b)

Significant to whom?

Historians are interested in different aspects of the past, and ask different questions. The interest of the historian is a very important factor in their decision about what is significant and what is not.

Historian's focus	Social historian	British historian	Scientific historian
Title of investigation	How did medical developments change living standards in Britain during the 19th century?	How did British scientists change our understanding of the causes of disease?	What role did science and technology play in the development of medicine?

Changes and events during the 19th century

In 1861, Pasteur identified that germs caused decay.	The British government passed laws to make cities cleaner and protect people's health.	In 1865, Lister developed a carbolic spray to make surgery safer.
In 1854, John Snow made a link between cholera and dirty water.	Better microscopes enabled scientists to see microbes and link them with diseases.	In 1797, Edward Jenner developed a vaccination against smallpox.
Robert Koch developed methods to allow bacteria to be grown and observed more easily.	The Enlightenment meant that people were more interested in looking for rational explanations for disease.	In 1870, John Tyndall theorised that dust particles carried germs that caused disease.

For each historian, make a diagram to show the relative significance of the changes and events that would interest them. Write the historian in the middle of the page and then add the events and changes that would interest them: the more significant, the closer to the historian.

- 1 Look at the change or event of most interest to the social historian. How important is it to the other historians?
- 2 Why would the work of Joseph Lister be of interest to the social historian and the scientific historian?
- 3 Would the British historian include the work of Pasteur or ignore it? Explain your answer.
- 4 How important is it for the reader to understand the interest and focus of the historian when reading their work?