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The man who put medicine on the map

Nicola Davis welcomes an exhibition of maps and images showing how diseases spread

Pestilence and death — Soho, 1854, was in the grip of a cholera outbreak. While the people died, officials debated the cause of the scourge. "Bad air" was commonly claimed to be the culprit, but some thought differently.

One naysayer was the surgeon John Snow, who believed that contamination of the water supply was the cause. And he famously underlined his view with a simple, dramatic gesture.

Having established that cases of the disease were concentrated around Broad Street, now Broadwick Street, Soho, he simply had the handle removed from the street's water pump. The outbreak of cholera receded, and Snow came to be recognised as the founding father of modern epidemiology and a pioneer of public health.

Now, to mark the bicentenary of his birth an exhibition, linked to a series of public lectures, has opened at the London School of Hygiene and Tropical Medicine, celebrating Snow's radical approach to investigating the spread of disease.

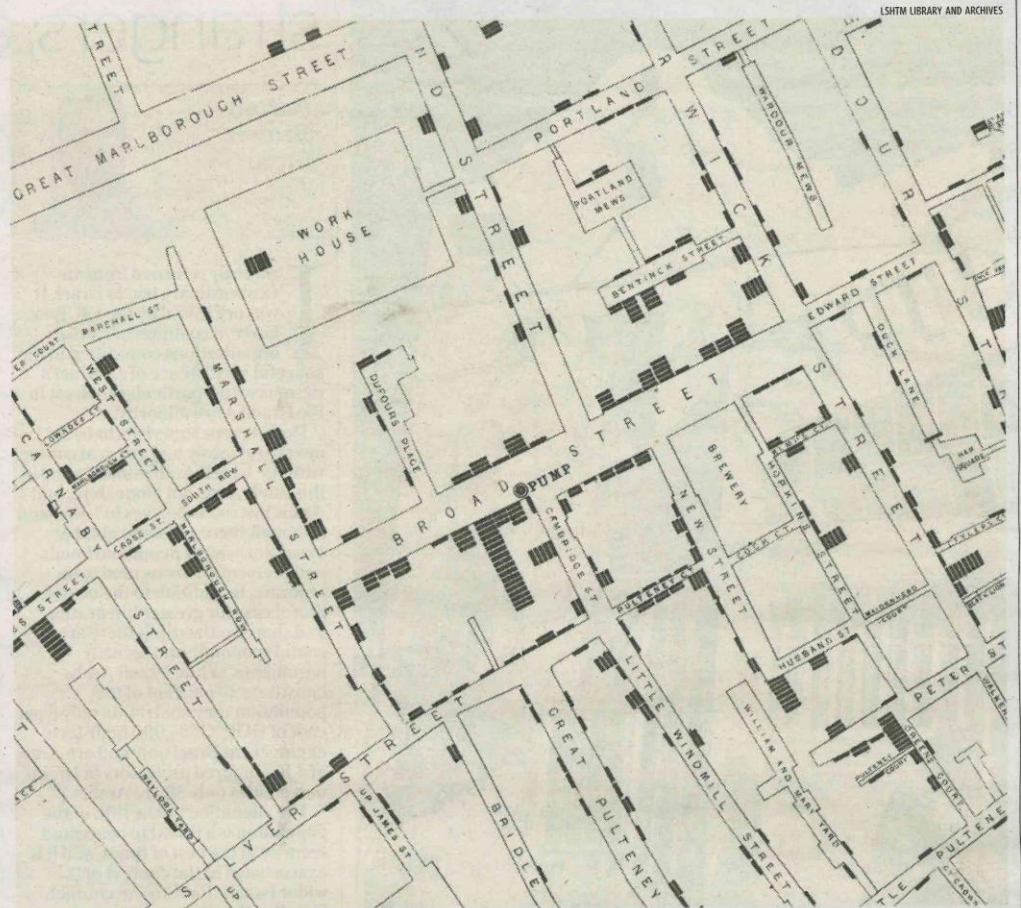
"He was the first person to really look at this connection between diseases and what else is going on physically," says Chris Grundy, lecturer in geographical information systems at the school.

Snow's methods were forensic, interviewing those who lived in the area, tracing their source of water and scrutinising the numbers of deaths per household. One of his pivotal contributions was his creation of maps of the afflicted area illustrating the toll of the disease and its epicentre.

The haunting simplicity of Snow's maps belies the trauma of the disease. Their crisp lines, the neat black bars by the houses, each representing a death, and the dotted line indicating a walking distance closer to the Broad Street pump than any other — it all seems almost clinical. But it was this orderly, analytical approach, based on logic, that was needed to face the crisis and to shift entrenched views. By the 1860s public health posters were being posted with bold, uncompromising messages warning of the dangers of contaminated water and advocating measures to deal with cholera.

In *Cartographies of Life and Death*, contemporary art is combined with historic documents to reflect the significance of Snow's work in tracking outbreaks to alleviate disease and distress.

Among the exhibits, Catherine



One of John Snow's illustrative maps of Soho, 1854: it shows the Broad Street pump in the centre. Each neat black bar stands for a death from cholera. The map shows graphically how the cases cluster around the area's water supply

Anyango's graphite-on-paper work, *The Tunnel*, created after visiting London's sewers, is darkly suggestive of the city's dependence on its water networks, while Pam Skelton's video installation *In The Event of Snow* traces a path through the stark monochrome streets of Snow's maps with black-and-white prewar photographs. It captures schools and houses that saw sickness but also — on a lighter note — the local brewery which remained untainted by the disease as its workers consumed the fruits of their labour rather than pump water.

The exhibition does not try to detach visitors from the scene of devastation. A walking tour through the streets of Soho, facilitated by a website optimised for mobile phones with accompanying text and audio, brings into sharp relief the contrast between modern sanitation and the downright hazardous pro-

visions of the Victorian water supply.

The legacy of Snow's methods, and the cartography it has spawned, is also celebrated in the exhibition. A map of Italy tracking malaria outbreaks in the military during the Second World War hangs near another of what is now the Democratic Republic of Congo from 1907, where African sleeping sickness is depicted in ominous red twisting along the course of the rivers.

"Whole areas were being decimated," says Grundy. The shock and terror such maps induced shook officials into taking action, albeit to protect their financial concerns — "Sleeping sickness was moving along these rivers to areas of British gold mining interest," Grundy points out.

Maps can help to investigate the origin of an epidemic as well as to provide a powerful illustration of its extent, and they are commonly used in

epidemiological studies today. "We have risk mapping and outbreak investigation where we are using the geography to try and look at associations, or trying to find out what particularly caused an outbreak," says Grundy.

But the focus of the exhibition never strays far from Snow's role in creating a dynamic approach to understanding the spread of disease, and his insistence on the absolute necessity for clean water.

It's a feature highlighted by the "pop-up" water bar, and accompanying talks, that take place today at a fitting location in Broadwick Street: the Memorial Broad Street pump, its handle poignantly absent.

Cartographies of Life & Death — John Snow and Disease Mapping, London School of Hygiene & Tropical Medicine, Keppel Street, London, until April 17