A *classic* example of Spatial Analysis: John Snow's Cholera Map

Maurizio Gibin, 17th March 2010, Birkbeck, University of London

Aim: introduce the value of spatial analysis.

Objective: identify John Snow's Cholera Map.

Instructions: follow me on paper or on the screen. Use this handout for future reference.

Background

John Snow (1813–1858), an English epidemiologist, in 1849 published a small pamphlet "On the Mode of Communication of Cholera" where he proposed that the "Cholera Poison" reproduced in the human body and was spread through the contamination of food or water.

Innovation

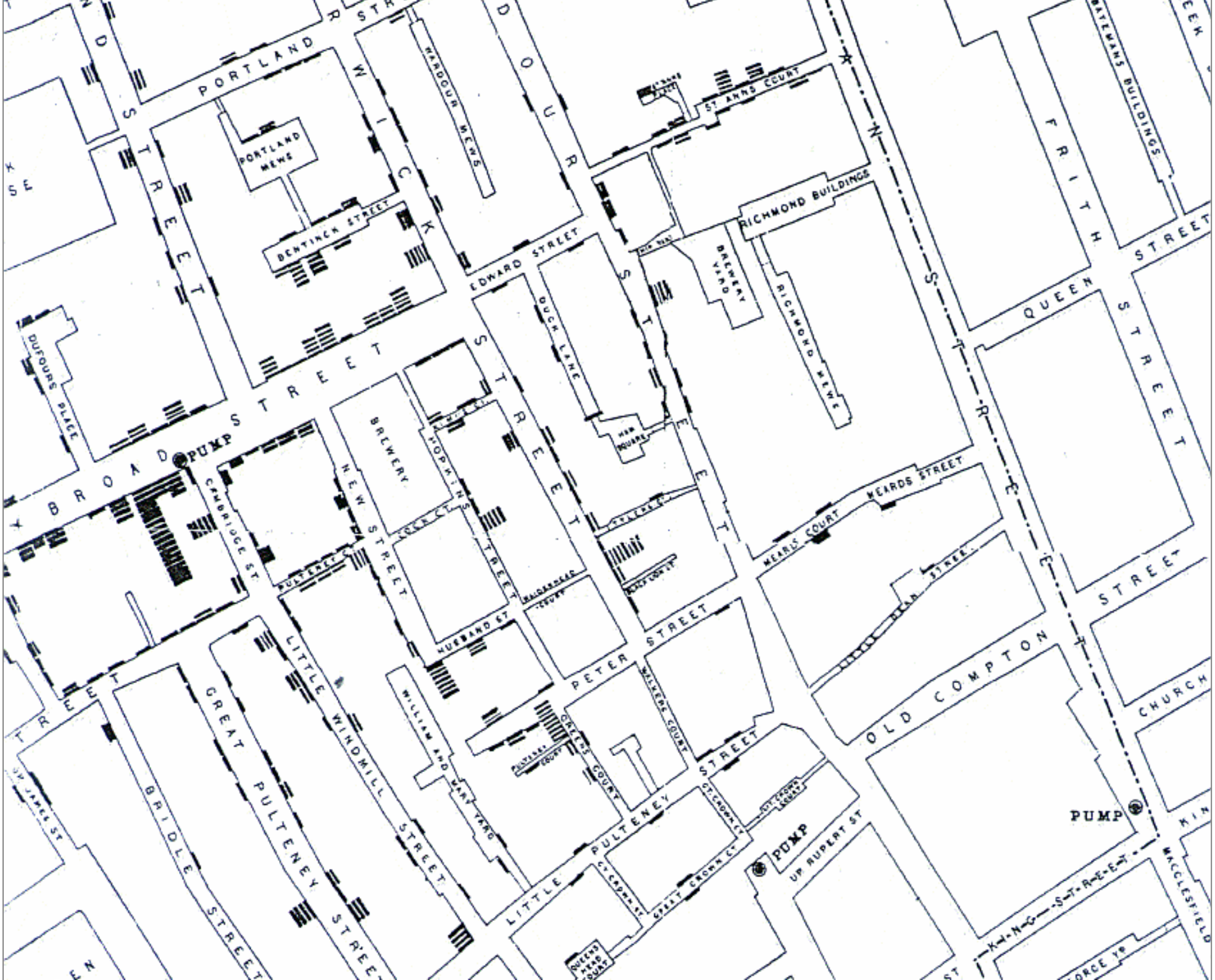
It wasn't until 1854 that Cholera struck England once again, that Snow was able to legitimate his argument that Cholera was spread through contaminated food or water. Snow, in investigating the epidemic, began plotting the location of deaths related to Cholera (see illustration). At the time, London was supplied its water by two water companies. One of these companies pulled its water out of the Thames River upstream of the main city while the second pulled its water from the river downstream from the city. A higher concentration of Cholera was found in the region of town supplied by the water company that drew its water form the downstream location. Water from this source could have been contaminated by the city's sewage.

Value

Through mapping the locations of deaths related to Cholera, Snow was able to pinpoint one of the major sources of causation of the disease and support his argument relating to the spread of Cholera. Snow's classic study offers one of the most convincing arguments of the value of understanding and resolving a social problem through the use of spatial analysis.

References

Snow on Cholera, New York: The Commonwealth Fund: Oxford University Press, 1936.
On the Mode of Communication of Cholera, 8 volumes, London, 1849; 2nd ed. 1855.


PORTLAND STREET
PORTLAND MEWS
BENTINCK STREET
HARDOUR MEWS
EDWARD STREET
ST ANNS COURT
DUFOURS PLACE
BROAD STREET
PUMP
BREWERY
HOPKINS STREET
DUCK LANE
HOP SQUARE
BREWERY YARD
RICHMOND BUILDINGS
RICHMOND MEWS
NEW STREET
CAMBRIDGE ST
PULTENEY
HUSBAND ST
WARDROBE COURT
LITTLE WINDMILL STREET
GREAT PULTENEY STREET
BRIDLE STREET
WILLIAM AND MARY YARD
PETER STREET
WALKERS COURT
LITTLE PULTENEY STREET
GREAT CROWN CT
QUEENS HEAD COURT
UP RUPERT ST
MEARDS COURT
MEARDS STREET
OLD COMPTON STREET
QUEEN STREET
FRITH STREET
BATEMANS BUILDINGS
CHURCH
MACCLESFIELD