

# A Spatial Turn in Health Research?

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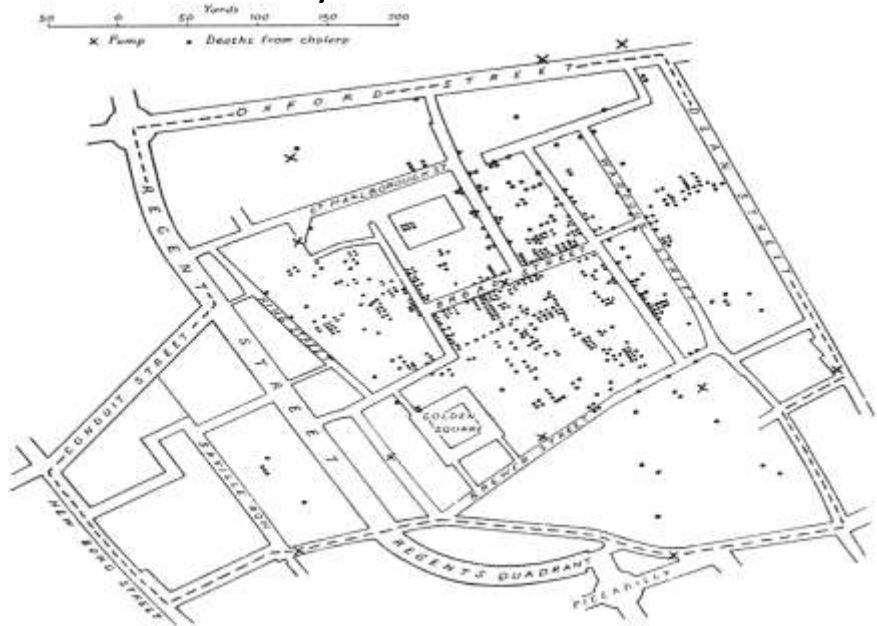
# A “spatial turn”

- Using space (and time) to frame research
  - *where* matters in understanding how and why
  - it matters where you live
- In health research
  - D.R. Richardson, N.D. Volkow, M.-P. Kwan, R.M. Kaplan, M.F. Goodchild, and R.T. Croyle (2013) Spatial turn in health research. *Science* 339(6): 1390 - 1392. DOI: 10.1126/science.1232257

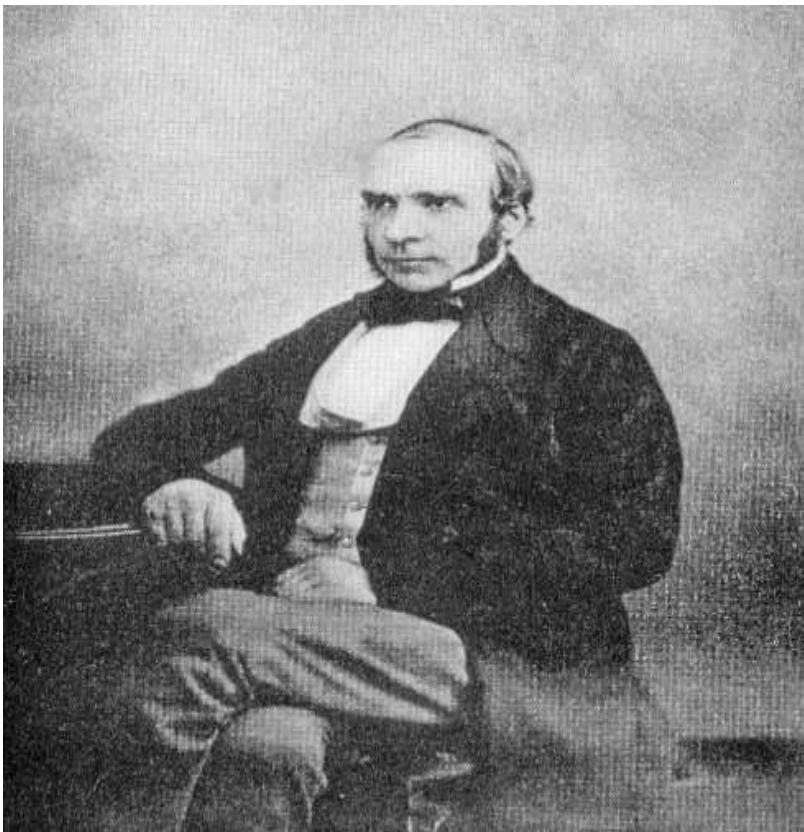
# Major topics

- Epidemiology
  - mapping the distribution of disease
  - using space (and time?) to shed light on the causal mechanisms
- Health services assessment
  - mapping the availability and cost of health services and human responses
  - designing improved health-service networks
- Spatially based interventions
  - planning health investments based on location

Snow, J. (1949) *Snow on Cholera*.  
Oxford University Press.



Johnson, S. (2006) *The Ghost Map*.  
Riverhead



# What is disrupting this world?

- Space or place?
- Big GeoData
- Telling stories
- Rethinking education

# How do *people* think?

- Not in terms of latitude, longitude, polygons, precise distances and directions
  - not as GIS does
  - GIS is difficult to learn because it requires a change of thinking
- Places
  - often vaguely defined, without precise boundaries
  - often context-dependent, with rich associations
  - with imprecise distances, directions
  - places identified by name

# Big GeoData

- Volume, high density of observers
- Velocity
  - near real time enabling rapid response
- Variety
  - data quality problems

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## Story Map apps to suit your needs

Esri provides an array of apps that enable you to create place-based stories.

This Story Map Series features examples of Esri's storytelling apps.



<http://arcg.is/1UpRGla>

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# Rethinking education

- What should GIS users know?
  - and today that means everyone
- How best to train and educate?
  - child of ten or concert pianist

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# Critical spatial thinking

- What goes on in the mind of the experienced GIS user
  - compare what goes on in the mind while using a hammer
- Appreciates what the GIS database does *not* capture
  - and how the results of a GIS analysis must be tempered and adapted to the real world
- Understands the strengths and also the weaknesses of GIS

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