Statistics with Spa  ows II

Many models, matrices, and magic

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Observational data

- Non-experimental

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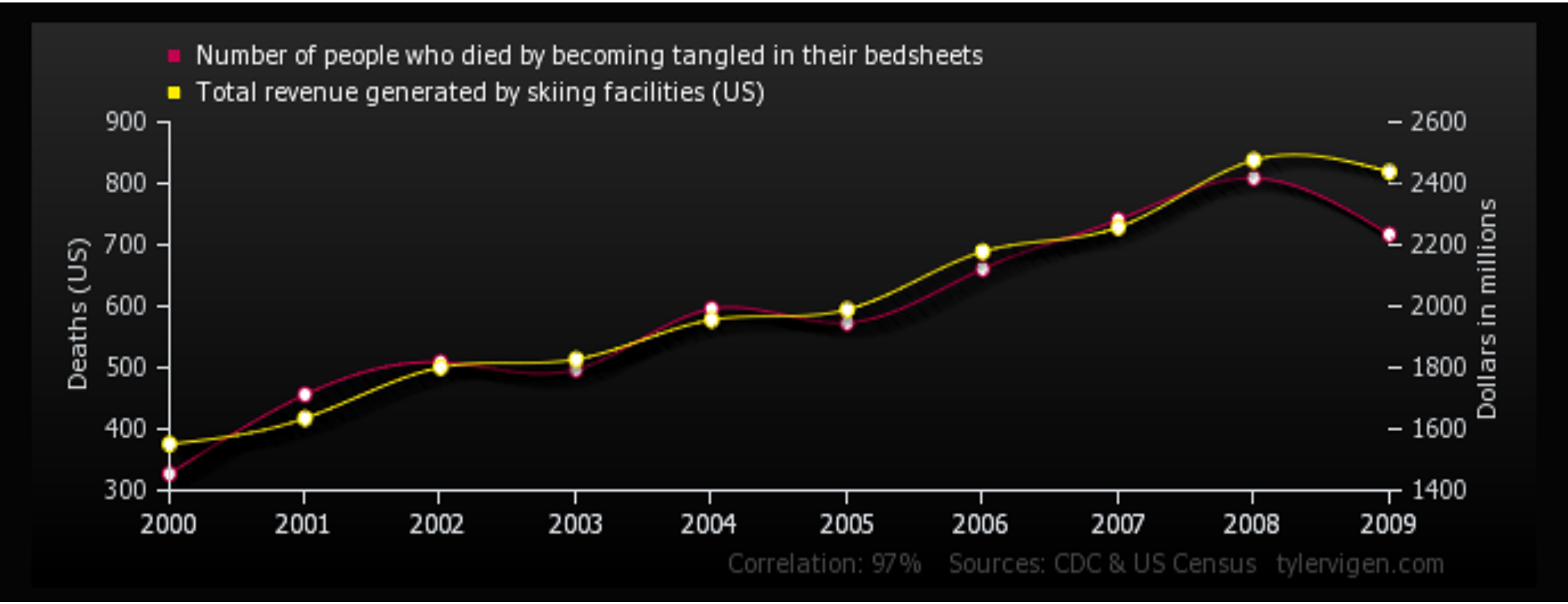
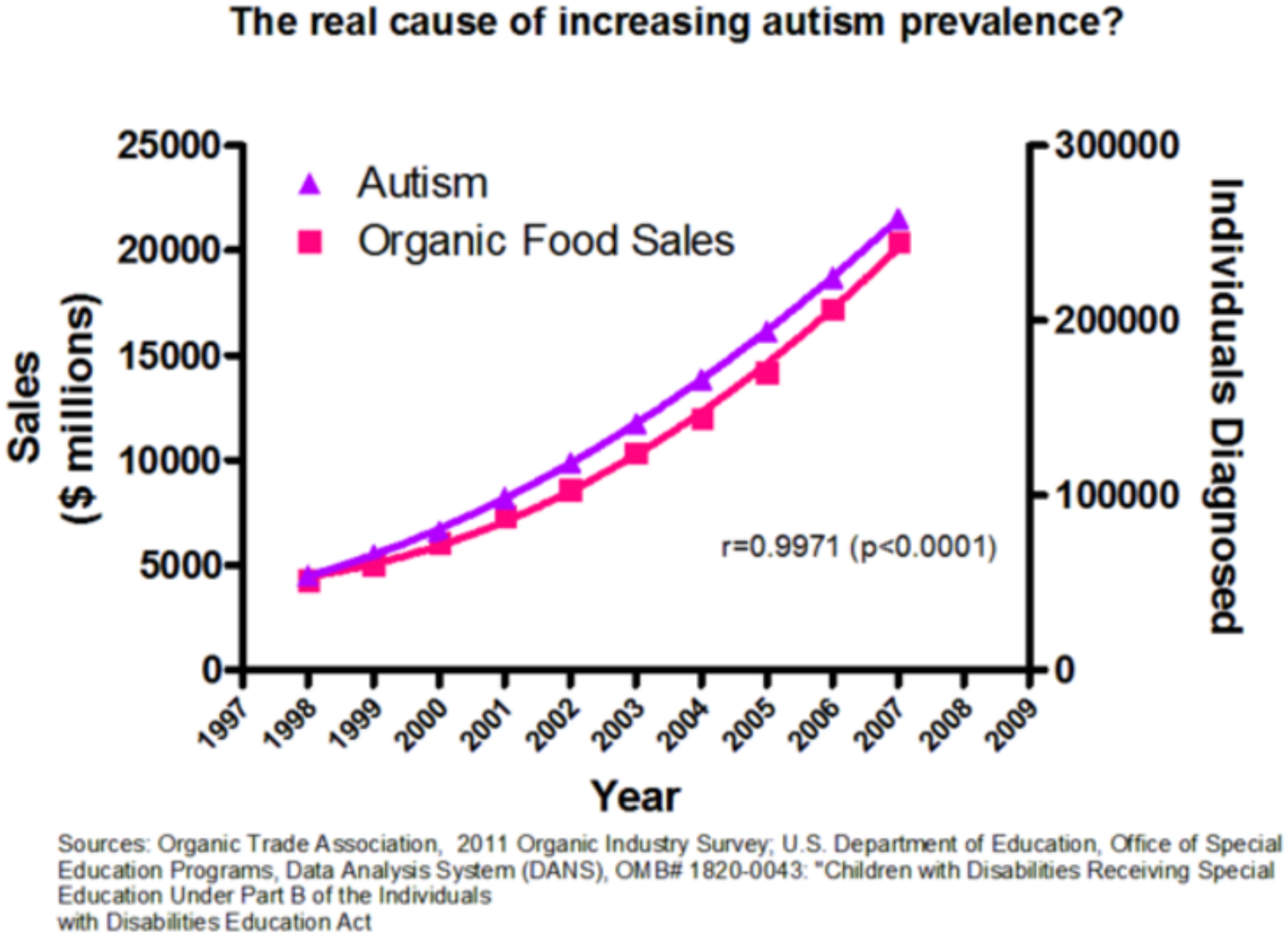
- Non-experimental
- Ecology, Evolution and Conservation
- Always correlative
- Can never “prove” anything because we do not have an control and treatment group

Examples


Number of people who died by becoming tangled in their bedsheets
Total revenue generated by skiing facilities (US)
Deaths (US)
900
800
700
600
500
400
300
Dollars in millions
2600
2400
2200
2000
1800
1600
1400
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Correlation: 97%
Sources: CDC & US Census
tylervigen.com

Examples



Sources: Organic Trade Association, 2011 Organic Industry Survey; U.S. Department of Education, Office of Special Education Programs, Data Analysis System (DANS), OMB# 1820-0043: "Children with Disabilities Receiving Special Education Under Part B of the Individuals with Disabilities Education Act

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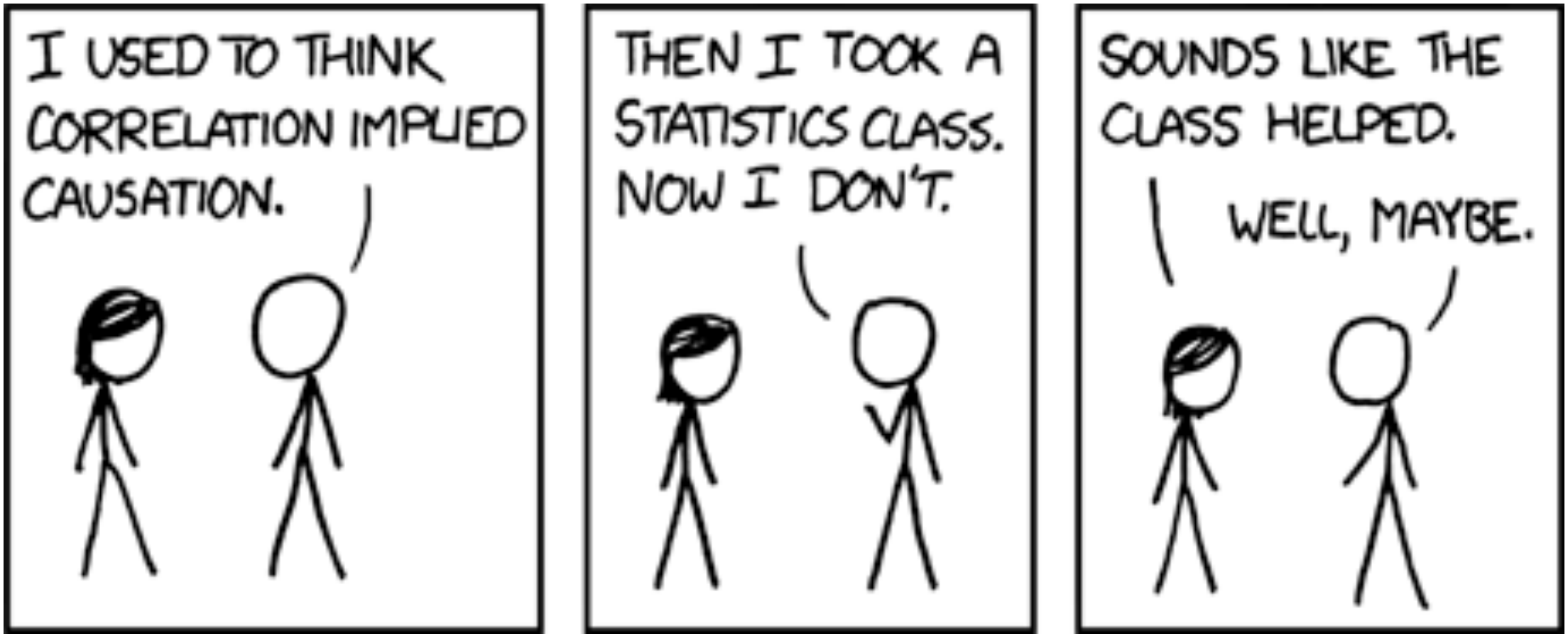
- Watch your wording carefully!


I USED TO THINK CORRELATION IMPLIED CAUSATION.
THEN I TOOK A STATISTICS CLASS. NOW I DON'T.
SOUNDS LIKE THE CLASS HELPED.
WELL, MAYBE.