# Approximating experiments (02-06)

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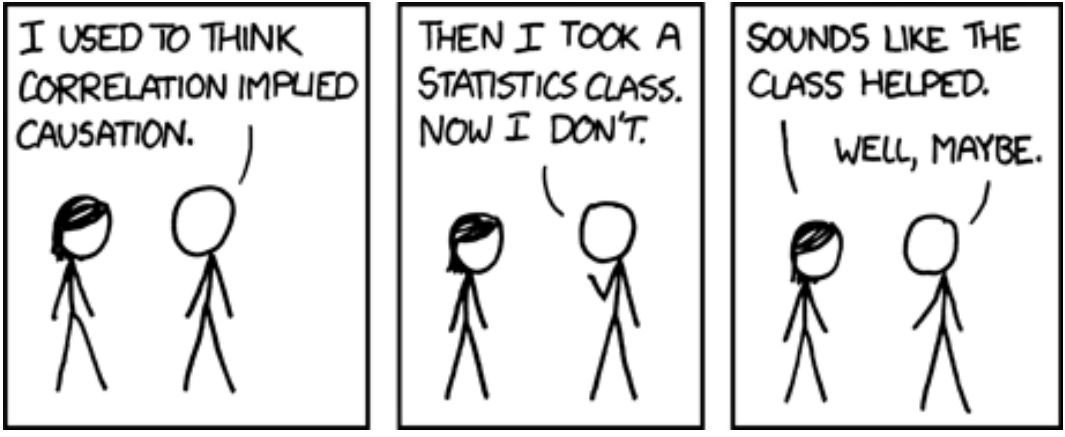
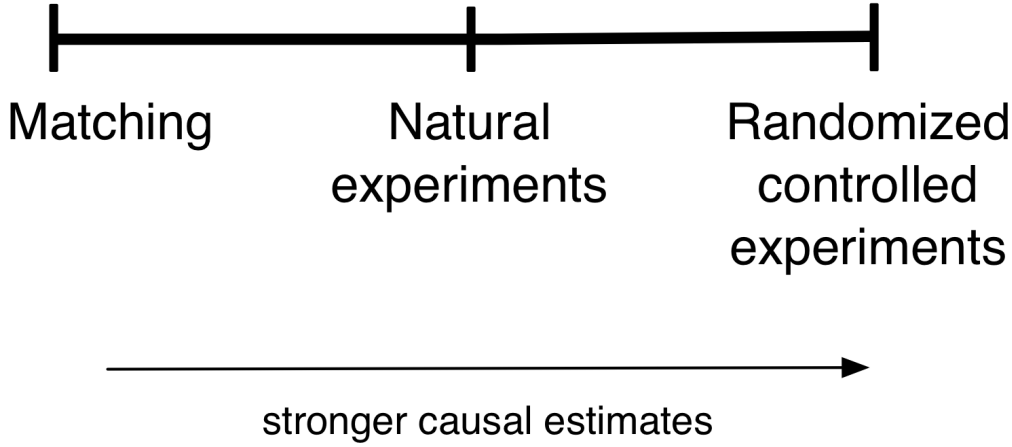
Soc 596: Computational Social Science




https://xkcd.com/552/




Natural experiments and matching are helped by big data environment

https://commons.wikimedia.org/wiki/File:1969_draft_lottery_photo.jpg

Always-on data source + random shock = natural experiment

# Peers at Work

*By* ALEXANDRE MAS AND ENRICO MORETTI*

Mas and Morietti (2009) "Peers at works", *American Economic Review*, http://dx.doi.org/10.1257/aer.99.1.112

Like Farber (2015)

- this paper brings a lot of ideas to the data
- interesting either way (free riding or positive spillovers)
- both not online (digital devices in the physical world)
- uses size for heterogeneity and mechanisms

| Substantive focus | Source of natural experiment | Always-on data source | Citation |
|---|---|---|---|
| Peer effects on productivity | scheduling process | checkout data | Mas and Moretti (2009) |
| Friendship formation | hurricanes | Facebook | Phan and Airoldi (2015) |
| Spread of emotions | rain | Facebook | Coviello et al. (2014) |
| Peer to peer economic transfers | earthquake | mobile money data | Blumenstock, Fafchamps, and Eagle (2011) |
| Personal consumption behavior | 2013 US government shutdown | personal finance data | Baker and Yannelis (2015) |
| Economic impact of recommender systems | various | browsing data at Amazon | Sharma, Hofman, and Watts (2015) |
| Effect of stress on unborn babies | 2006 Israel–Hezbollah war | Birth records | Torche and Shwed (2015) |
| Reading behavior on Wikipedia | Snowden revelations | Wikipedia logs | Penney (2016) |

Matching