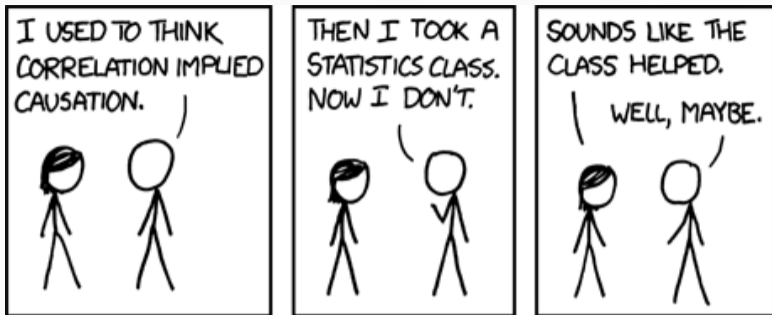
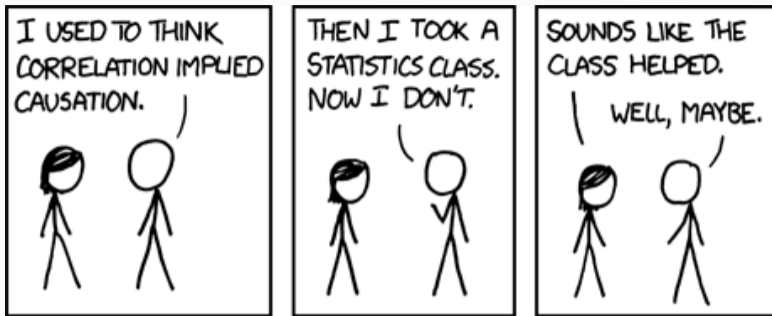


Introduction

Mauricio Romero



<https://m.xkcd.com/552/>



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Disclaimer: This class draws heavily on material from Scott Cunningham's mixtape, Nick Huntington-Klein's classes, Angrist and Pischke "Mostly Harmless Econometrics" and "Mastering Metrics", Stock and Watson's "Introduction to Econometrics", and other places.

Cause and effect

- We are interested in the relationship between “treatment” and some outcome
 - Treatment: Some drug; Outcome: health status
 - Treatment: Attending school; Outcome: wages
 - Treatment: Waking-up early; Outcome: learning
 - Treatment: Drinking alcohol; Outcome: child development
 - Treatment: Legalizing weed; Outcome: violence

How? Using Data

- More than understanding *statistics and probability*, we need to understand **data: what it means, and how to use it**
- Google, Facebook, Rappi, Amazon, and many others, have lots of data on you (and everybody)
- Ability to understand data is becoming **VERY** valuable

This course

- Learning how to use the statistical programming language R
- Learning how to understand the data we see in the world
- Learning how to figure out what data actually tells us
- Learning about **causal inference** — the economist's comparative advantage!

- 3 exams (25% each)
- 4-5 problem sets (25% total)
- Grade is max of $\frac{PS+Exam1+Exam2+Exam3}{4}$ and $\frac{Exam1+Exam2+Exam3}{3}$
- There is no final exam

We'll be using R

- Install R <http://www.r-project.org>
- Install RStudio <http://www.rstudio.com>

Website has all sorts of useful resources: <https://tinyurl.com/2z5mk276>

