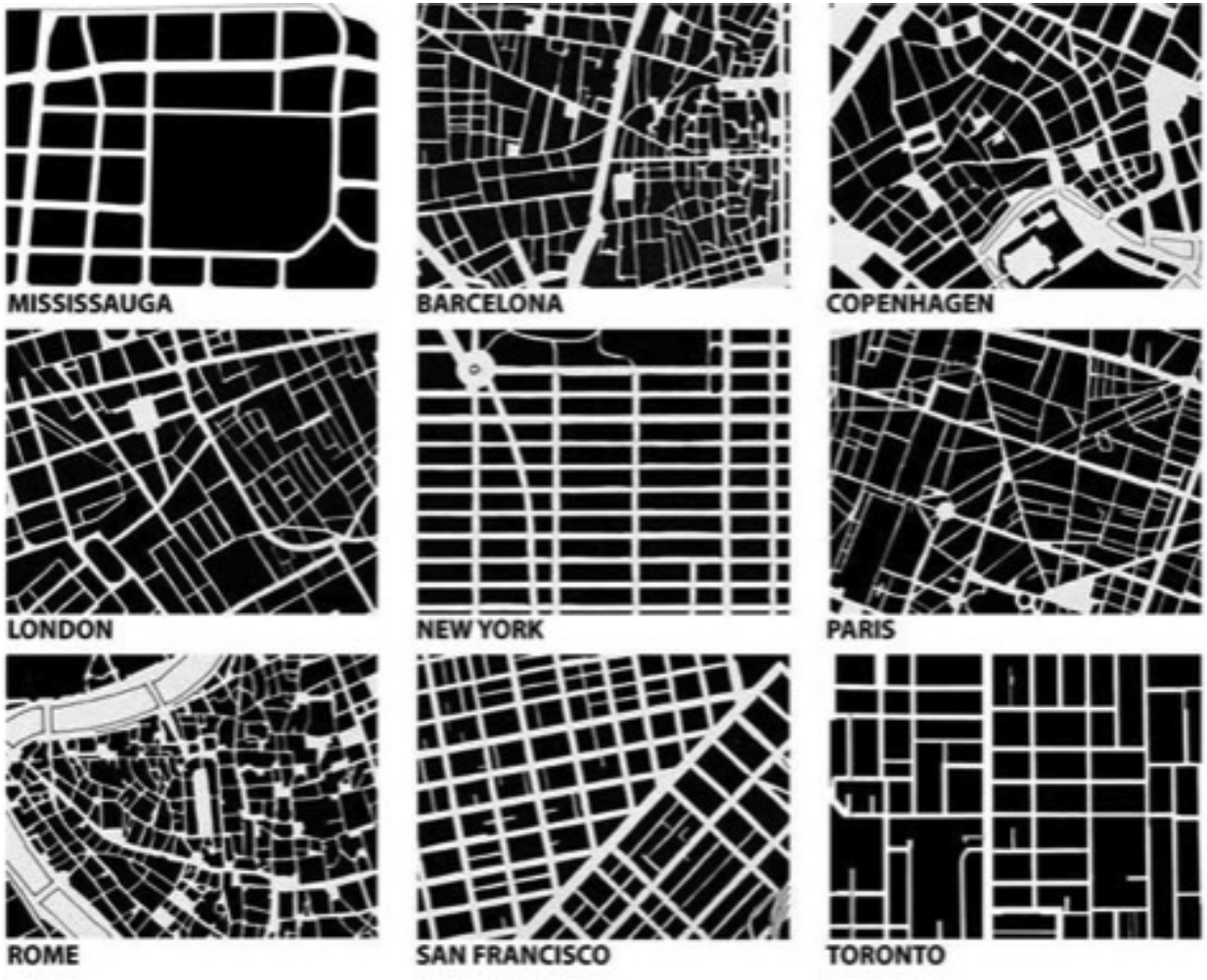
# INTRODUCTION

1. The topic
2. The course
3. Notes
4. Coursework

# Reality is predictable

# Reality is visualizable



# Reality is multidimensional


Bad Religion (317 plays)


David Bowie (220 plays)


Isis (202 plays)


Horace Andy (178 plays)


Army of the Pharaohs (177 plays)


Biosphere (168 plays)


Bibio (162 plays)


Antonio Vivaldi (143 plays)


Neil Young (125 plays)


King Crimson (116 plays)


H.P. Lovecraft (116 plays)


Virgin Prunes (115 plays)


Motorama (109 plays)


Wax Tailor (104 plays)

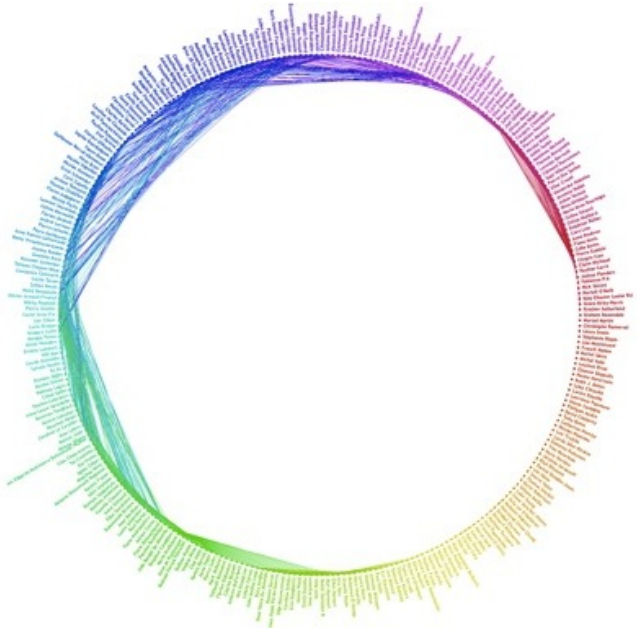

Lou Reed (103 plays)


Kate Bush (102 plays)


7L & Esoteric (102 plays)


Gonzales (100 plays)

# Reality is relational



Friendship ties on Facebook

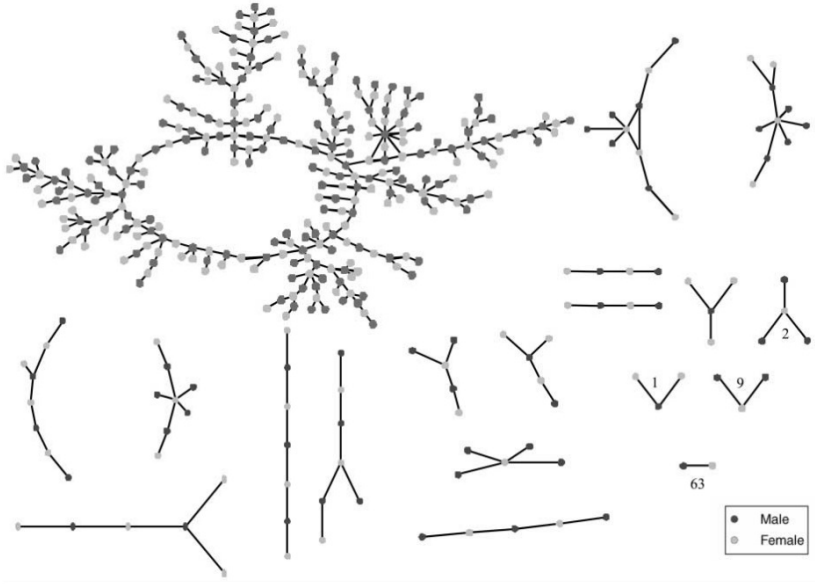



FIG. 2.—The direct relationship structure at Jefferson High

Sexual ties in high school

# Data stand as professional assets

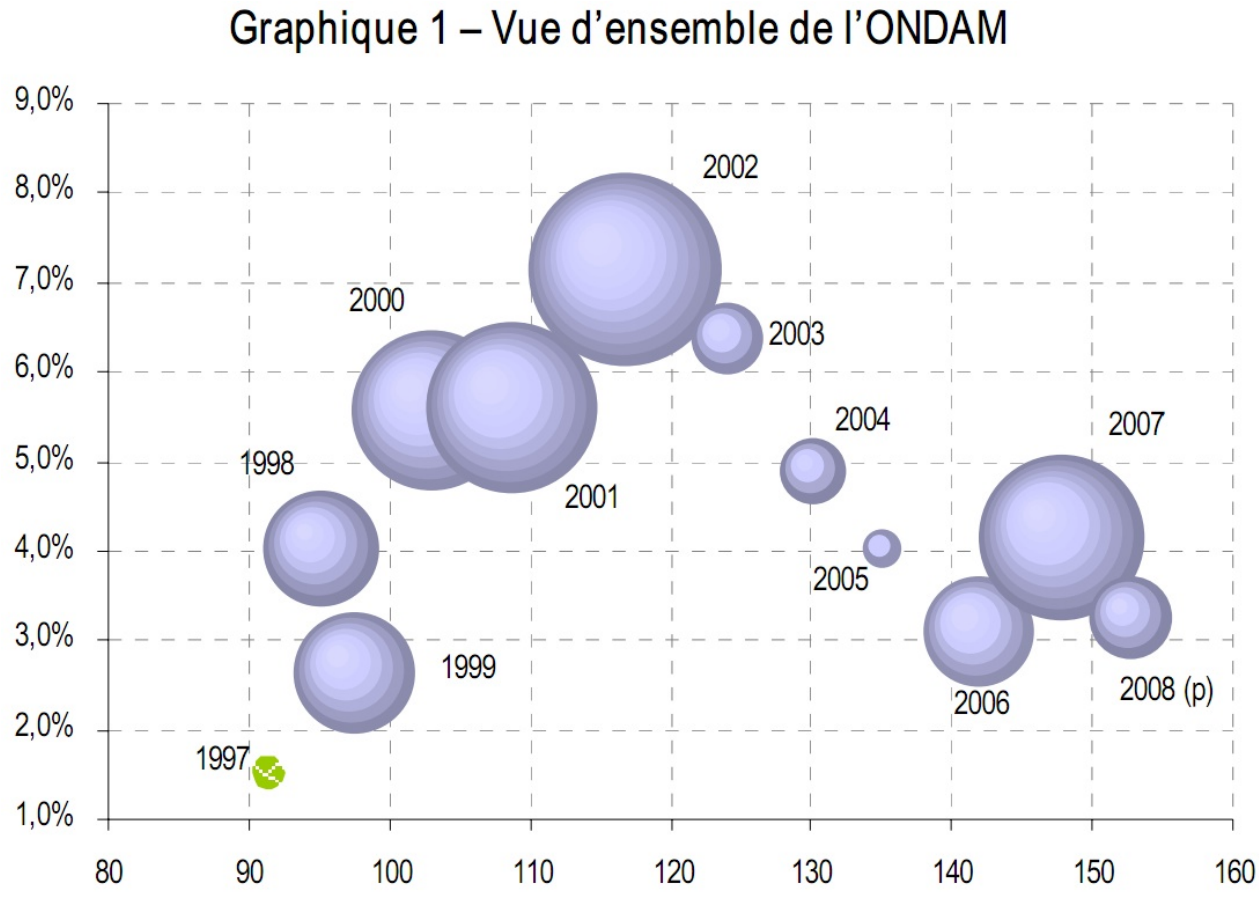
## OECD Health Data 2010: Statistics and Indicators

**AVAILABLE NOW - October 21st - Internet update for OECD Health Data 2010**

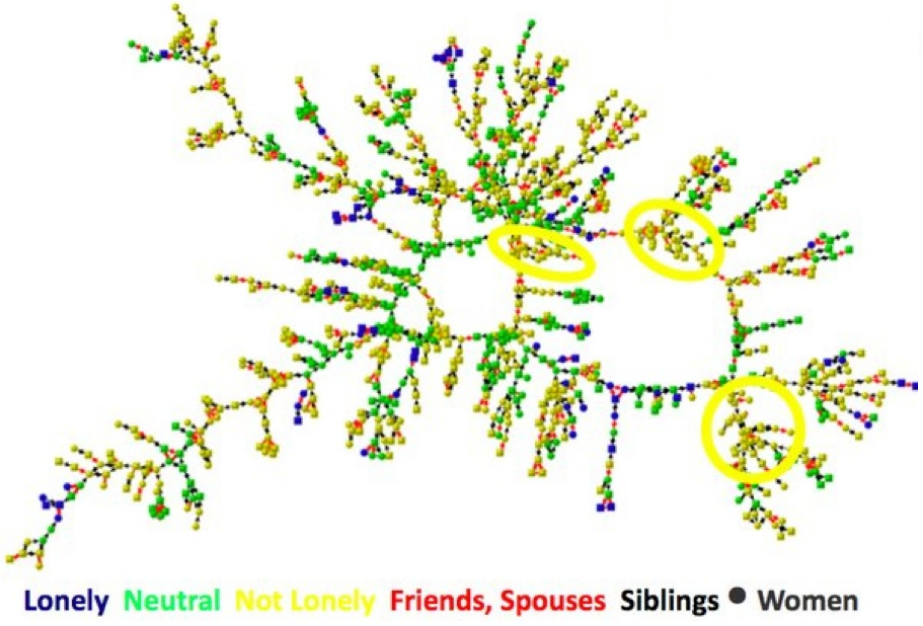
***OECD Health Data 2010***, released on 29 June 2010, offers the most comprehensive source of comparable statistics on health and health systems across OECD countries. It is an essential tool for health researchers and policy advisors in governments, the private sector and the academic community, to carry out comparative analyses and draw lessons from international comparisons of diverse health care systems.

- What is OECD Health Data 2010

# Data stand as policy expertise

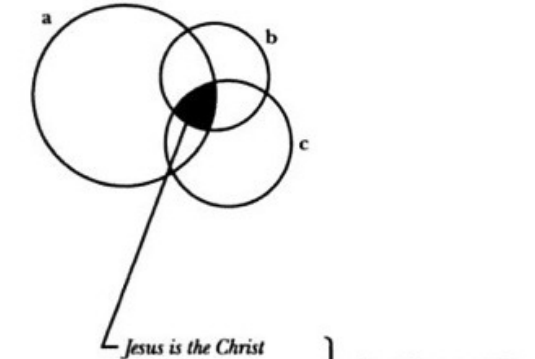


# Interpretation is key to all analysis




Loneliness in social networks

FIGURE 1




Sets of Christian beliefs

# Interpretation is difficult

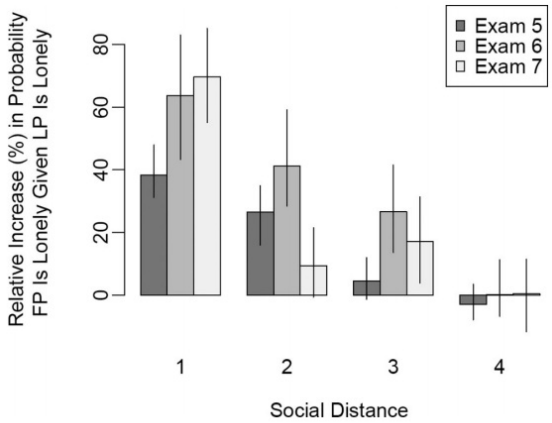
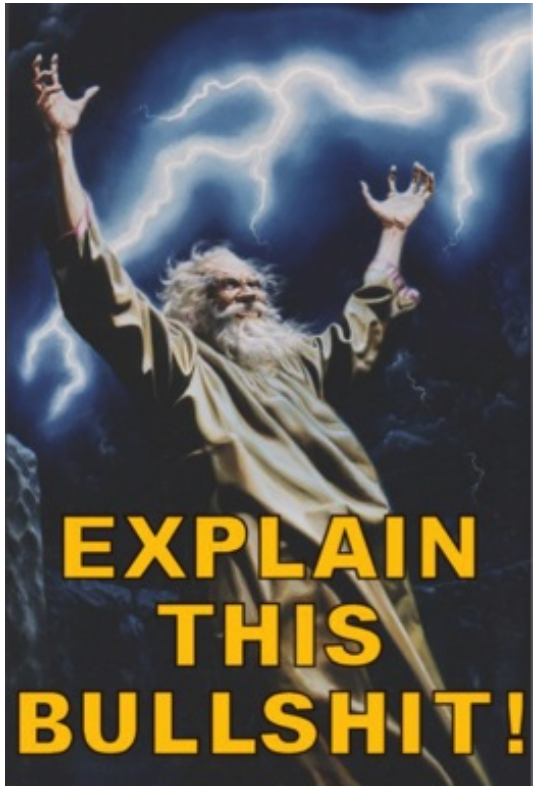


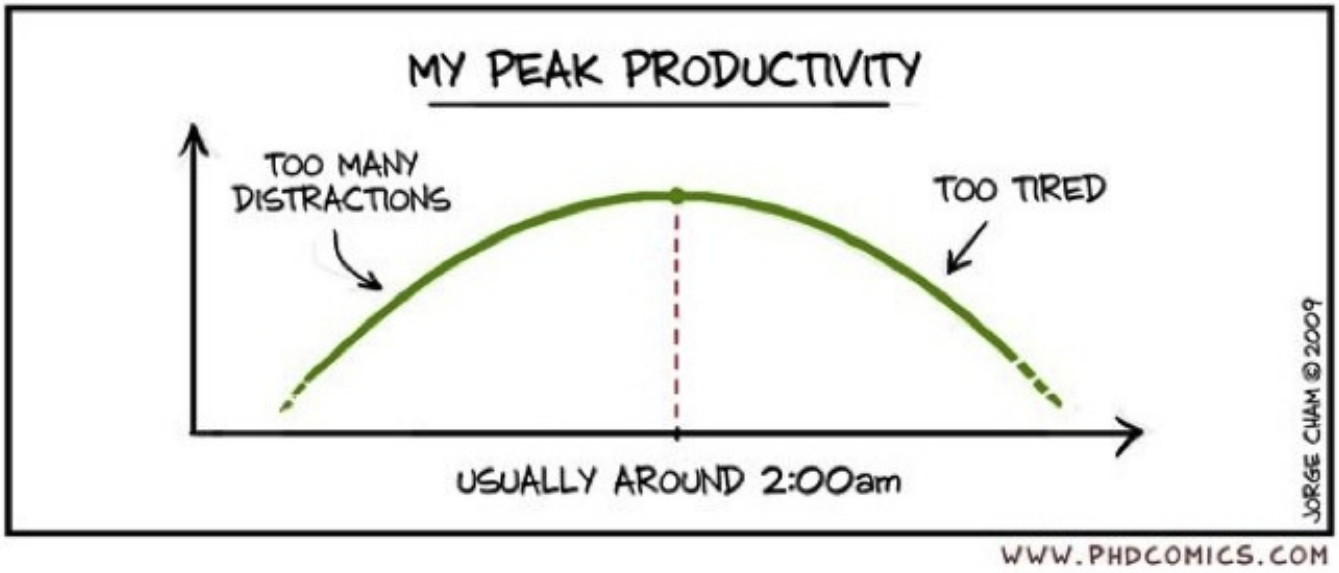

*Figure 2.* Social distance and loneliness in the Framingham Social Network. This figure shows for each exam the percentage increase in the likelihood a given focal participant (FP) is lonely if a friend or family member at a certain social distance is lonely (where lonely is defined as feeling lonely more than once a week). The relationship is strongest between individuals who are directly connected, but it remains significantly greater than zero at social distances up to three degrees of separation, meaning that a person's loneliness is associated with the loneliness of people up to three degrees removed from them in the network. Values are derived by comparing the conditional probability of being lonely in the observed network with an identical network (with topology and incidence of loneliness preserved) in which the same number of lonely participants are randomly distributed. Linked participant (LP) social distance refers to closest social distance between the LP and FP (LP = Distance 1, LP's LP = Distance 2, etc.). Error bars show 95% confidence intervals.

With explanation




Without explanation

# Interpretation is what this course is eventually about




## Questions

- What is the **measurement** method for each axis?
- What is the **probability** of 2am being the cutoff point?
- What is the **shape** of the time/productivity relationship?

# Bias and measurement

## Observational data

- Survey design
- Sampling strategy
- Question wording

## Official statistics

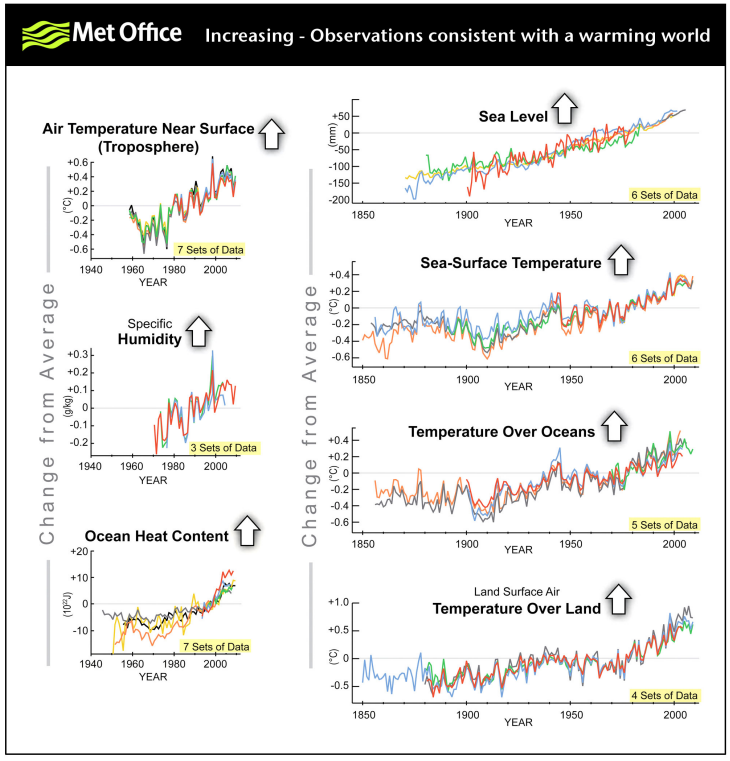
- Unreliable aggregates
- Low statistical capacity
- Ecological fallacies

# Bias and manipulation

- Media coverage
- Political spin
- Policy implications

Add to that:

- scientific fraud,
- data ethics,
- doubt-mongering,
- publishing bias, …



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doi:10.1017/S0140525X0999152X

# The weirdest people in the world?

"The findings suggest that members of Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies, including young children, are among the least representative populations one could find for generalizing about humans."

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# Course essentials

## Core learning objectives

1. Data management
2. Statistical estimation
3. Regression modelling

## Core teaching blocks

- Statistical theory …readings
- Statistical computing …coding
- Tons of social science …research

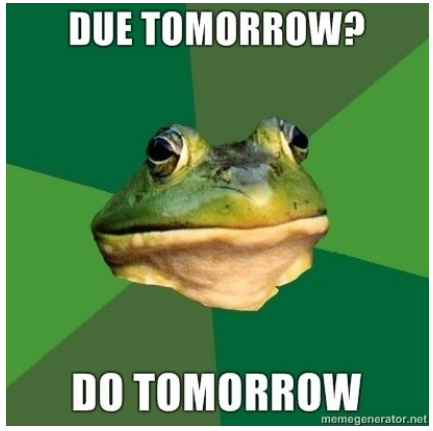
# Course mechanics

## Requirements

- Attendance
- Homework
- No plagiarism

## Grading

- Code and paper
- Draft, revised, final
- Project management




This won't work.

# Course homework

## Readings

- Urdan … essential textbook
- Feinstein and Thomas … details on modelling
- Stata Guide … practical walkthrough

## Coursework

- Replicate the weekly do-files
- Code your own data analysis
- Write an empirical research paper

# Course logistics

**Elect a student representative!**

No estimation without representation. One (wo)man, one vote.

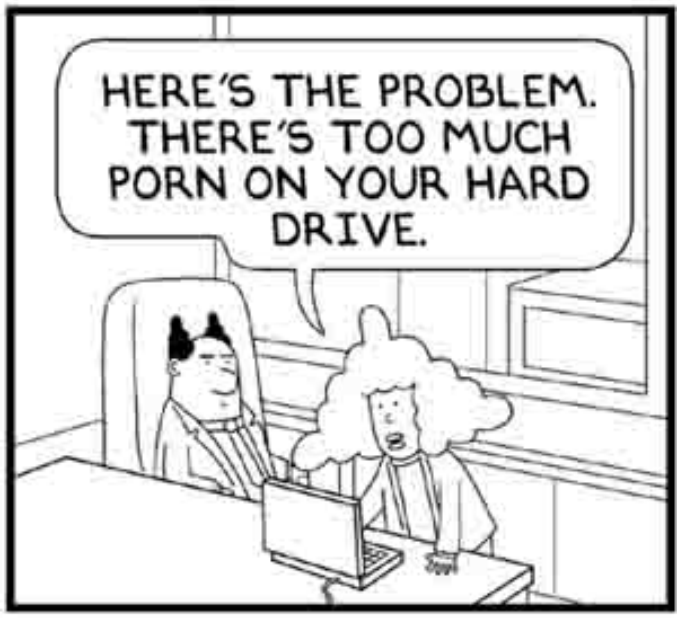
**Any questions so far?**

Do not worry about deadlines, they will be discussed in class.

# A note on computers

Despite what the general computing industry tells you, computers are more than

- Music players
- Facebook terminals
- Porn stashes




**Important**

This course requires that you learn how to work with a computer. Program or be programmed.

# A note on software

We will be using Stata throughout the semester.

Software details:
`http://www.stata.com/`


## Requirements

To operate Stata efficiently, you need

- to use a fairly recent computer with a bit of disk space
- to understand how files are organized on your hard drive
- to type and 'run' commands that follow a specific syntax

# A note on slides

The course slides are absolutely insufficient to complete the course requirements. You really need to read the handbook chapters.

There is no way out of it.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# A note on emails

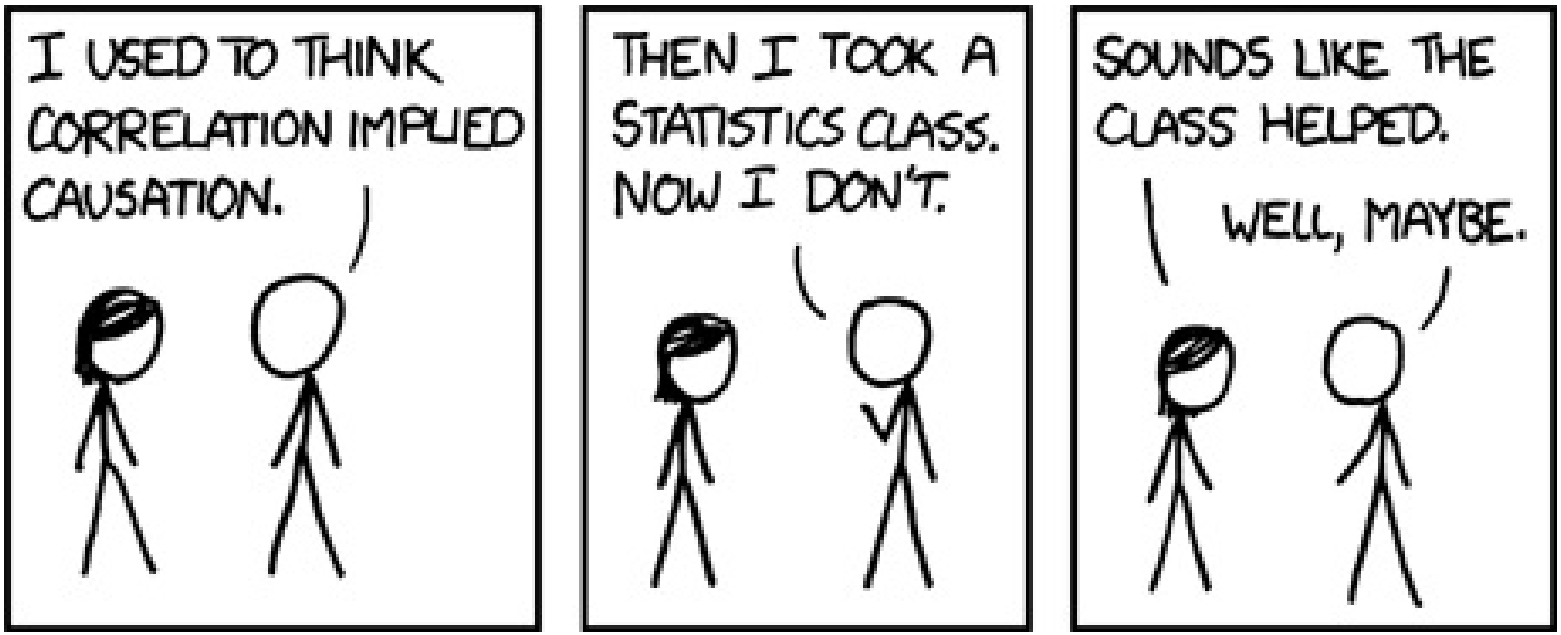
## Rules

1. Start your email subject line with the "**SRQM:**" prefix.
2. Describe the content of the email in the subject line.
3. Attach your code and results to your question(s).

## Google

- Open a **Google Mail** account to use **Google Documents**
- You can use either Google Mail or your Sciences Po email
- You can redirect your Sciences Po email to Google

# Welcome on board!



# Coursework

## Code

```
* Get the do-file.
srqm fetch week1.do
* Open the do-file.
doedit code/week1
```

## Replication

- Read the do-file and execute its commands.
- Practice searching and describing variables.
- Start thinking about which dataset to analyse.