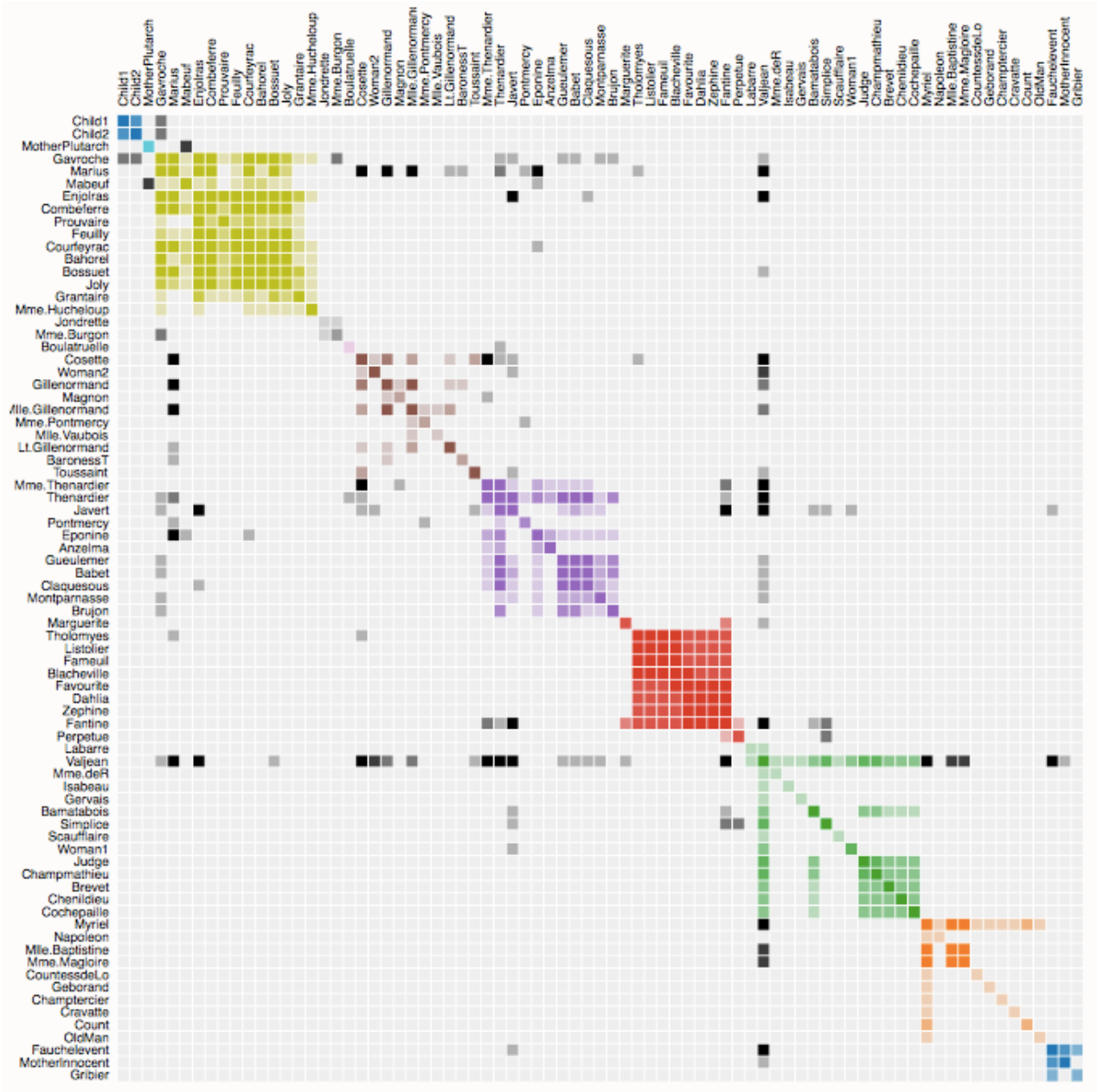
CSCI 0931: Introduction to Computation for the Humanities and Social Sciences

Jun Ki Lee

Spring 2016

Wait List

- Sent out emails to those who are first 20 on the list
- Need to attend first two lectures to get an override code
- As folks decline offers, we'll admit others
- After 2/9, we'll stop.



http://bost.ocks.org/mike/miserables/

Who am I?

Who are you?

About the Course

Everything you need will be on the website:

http://www.cs.brown.edu/courses/cs0931

- Read “About CSCI 0931” and “Missive/Syllabus”
- Fill out the Collaboration Policy – on paper

Four parts:

- Analyzing Voting Patterns using Spreadsheets
- Analyzing Texts using Python
- Spatial Display of Data and Social Me
- SQL

Homework due **almost every class**

Two Unit Projects, One Final Project

NO Exams
NO Textbook
Need Laptop

Here You'll Learn How To…

- Collect data relevant to problems in your field
- Investigate data computationally
- Formulate problems as *testable hypotheses*
- Design and execute computations that test your hypotheses
- Teach yourself more computational skills and how to communicate findings

You'll Have Help

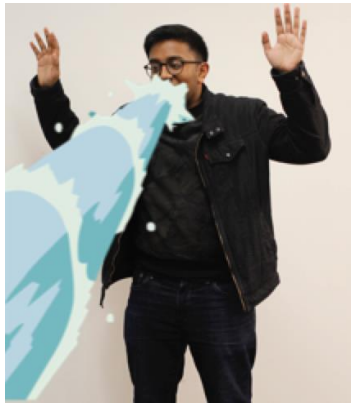
Instructor: Jun Ki Lee

(Call me just Jun)

You'll Have Even More Help

Head TA: Pran Chanthrakumar

TAs:
Emily Kasbohm
Linda Chang
Jerome Ramos



Seriously, a Whole Lot of Help :)

Faculty

Tom Doeppner

Steve Reiss

John “Spike” Hughes

Shriram Krishnamurthi

Expectations/Responsibilities

- We won't waste your time
- We'll treat you as adults: no coddling

- You'll keep up
- You'll read course materials on your own
- You'll participate
- You'll submit only your own work, according to the collaboration policy

Expectations

- Attend class.
  - If you don't attend all classes during the first two weeks, you may be *dropped from the course*
    - – lots of others want to take the course.
- Do the homework
  - If you miss one of the first three homeworks, you may be dropped from the course.
- Do *all* the homework.
  - If you don't hand in *every* assignment, you don't pass.
- 6-8 hours per week outside of class time

Grading

- Homework: 50%
- Unit Project #1: 10%
- Unit Project #2: 15%
- Final Project: 25%

1) You must do *all* of them to get credit
2) 90% or more: A / 75% or more: B / 50% or more: C
3) Borderline cases adjusted *up* depending on class engagement
4) Grading is performed by the TAs

Waitlist

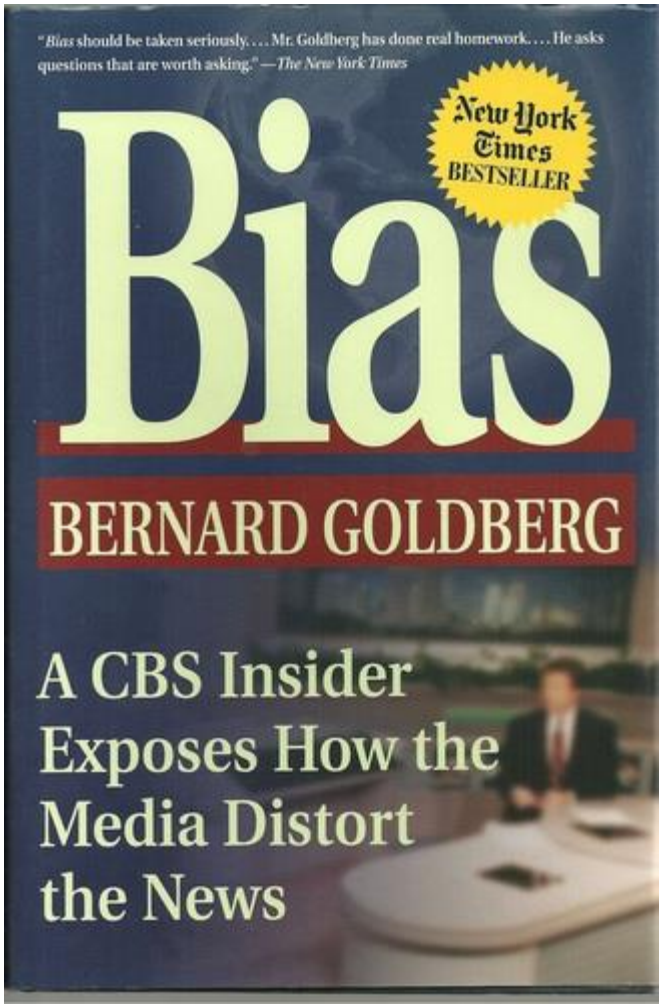
- This course is for Humanities and Social Science undergraduates
- This is the first year (2015-2016) it is offered for masters students too
- We are making new offers as first 20 students on the waitlist decide to leave
- You must be here in the first two classes to get an offer

PAUSE FOR EXODUS

Liberal Media Bias

Bias: A CBS Insider Exposes How the Media Distort the News.

Bernard Goldberg, 2001.



Bias: A CBS Insider Exposes How the Media Distort the News.
Bernard Goldberg, 2001.

"In 1981 … I was named a national correspondent, which allowed me to cover bigger, more important stories anywhere in the country … It was in New York that for the first time I started noticing things that made me feel uneasy.

I noticed that we pointedly identified conservatives as conservatives, for example, but for some crazy reason we didn't bother to identify liberals as liberals … in the world of the Jenningses and Brokaws and Rathers, conservatives are out of the mainstream and need to be identified. Liberals, on the other hand, are the mainstream and don't need to be identified."

Somewhere in here is a testable hypothesis: *What is it?*

Claim: In the media, conservatives are labeled as "conservative" more often than liberals are labeled as "liberal."

What's liberal? Who is liberal? How do you know?

Conservatives

1. Dick Cheney (Former VP)
2. Rush Limbaugh (Talk radio)
3. Matt Drudge (*Drudge Report*)
4. Sarah Palin (Former AK Gov.)
5. Robert Gates (Former Defense Sec.)

Liberals

1. Barack Obama (President)
2. Hillary Clinton (Former Sec. of State)
3. Nancy Pelosi (Minority Leader of US House)
4. Bill Clinton (Former Pres.)
5. Rahm Emanuel (Chicago Mayor)

"The Most Influential US Conservatives & US Liberals." The Telegraph, Jan 2010

http://www.telegraph.co.uk/news/worldnews/northamerica/usa/6990965/The-most-influential-US-conservatives-20-1.html
http://www.telegraph.co.uk/news/worldnews/northamerica/usa/6991000/The-most-influential-US-liberals-20-1.html

Claim: In the media, conservatives are labeled as "conservative" more often than liberals are labeled as "liberal."

We need to figure out a way to test this hypothesis.

Define Problem

Find Data

snfblog.com

Let’s try it

How long would it take you to count for an entire newspaper?

20 Pages

8 columns/page

6 paragraphs/column

40 words/paragraph

= 38,400 words in a newspaper

If you read 250 words per minute, 38,400 /250 = 153.6 minutes

Word count of NYTimes front-page articles: **12,496** (45 double-spaced pages)

http://ask.metafilter.com/18970/How-many-words-on-the-front-page

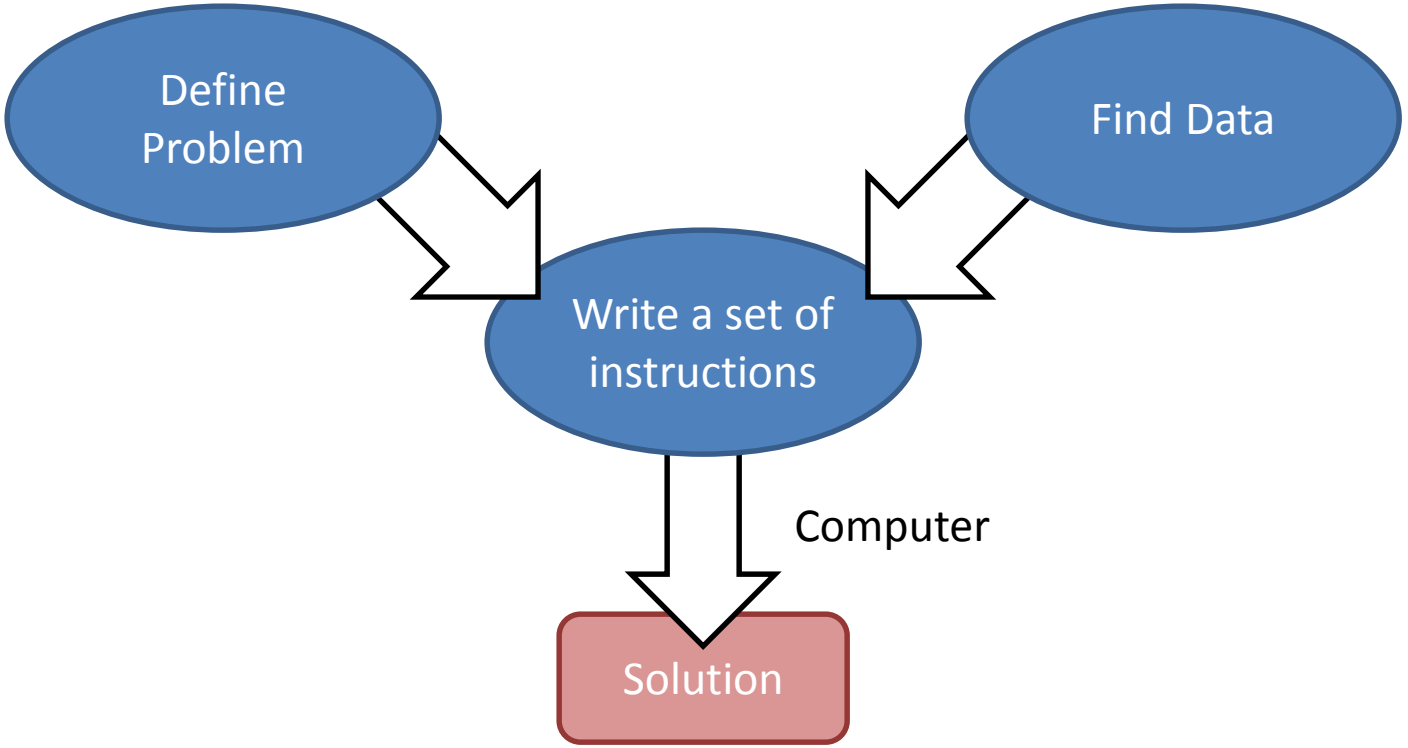
PAUSE

How long would it take a computer to do it?

A little less than 0.05 seconds.

Speedup: 200,000 x

Goal: use computers to answer these types of questions



What Nunberg Did

- Criterion:
  - Name is distant up to 7 words from label
- Source:
  - Major newspapers

Liberals were labeled more

Tonight's reading: "On the Bias." Geoffrey Nunberg, on NPR's *Fresh Air*

Things to think about:

- What decisions/assumptions did Nunberg make?
- How did he justify his assumptions?
- What are potential criticisms?

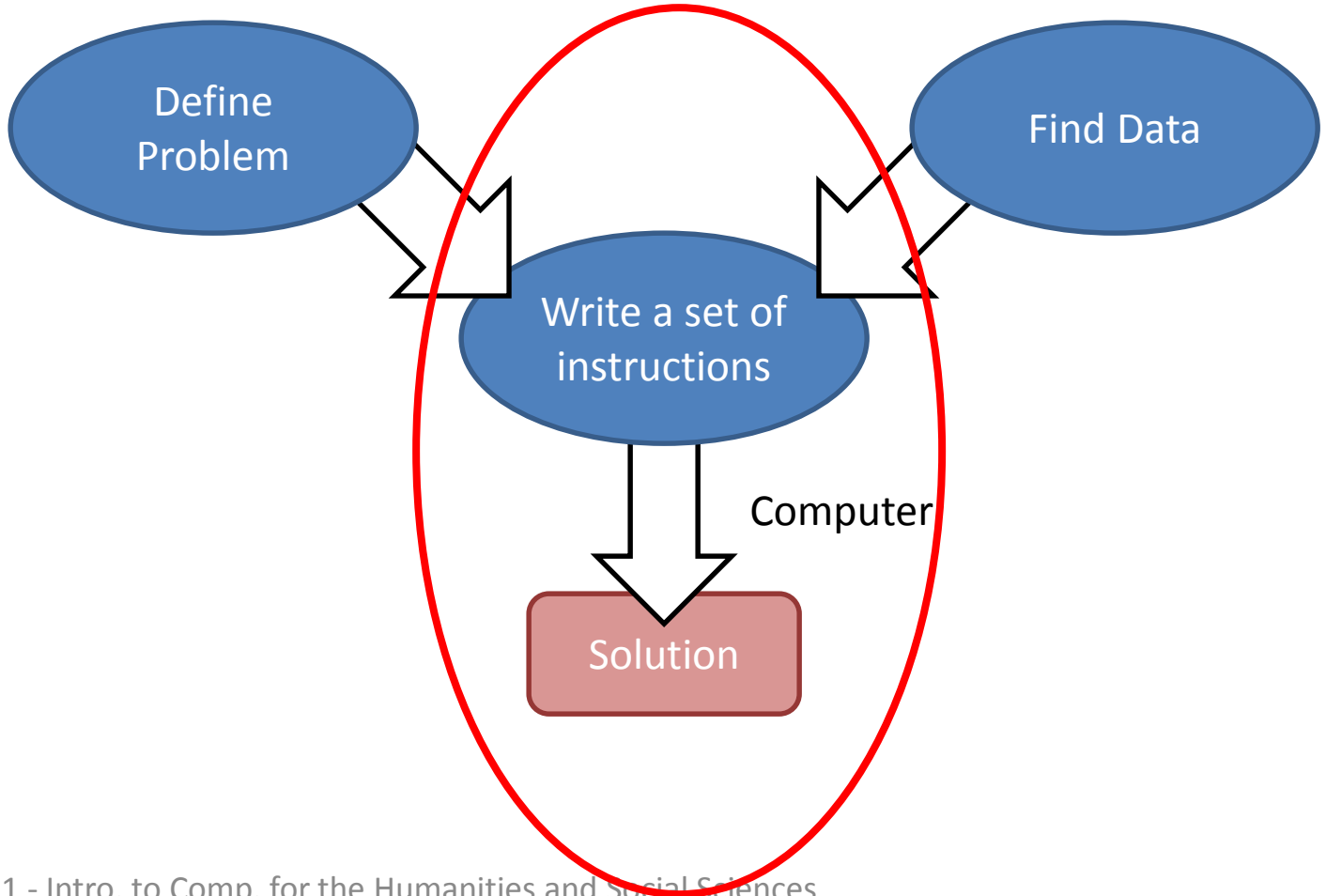
How Computation Enabled It

- When it came time to search for other labels ("Pinko", "left-wing", ...) it was a matter of minutes
- Searching different newspapers: minutes
- Searching European papers: minutes
- Searching different liberals or conservatives: minutes

What computation enabled

- Careful analysis
- Verification of robustness
- ***Easy Repeatability and Comparison***
  - Seismic shift in political debate
  - Far greater risk for any person making a claim!
  - There's now no excuse for *not* doing it this way

Final result: Both “solution” and “instructions”!



Odds & Ends

- Backup everything.
  - Data integrity is *your* responsibility
- Do all homework and projects on any Windows or Mac laptop.
- Be here! Take a break from email/Facebook
- Keep interesting questions and data sources in mind throughout the semester – you might use them in projects!

Wrapping Up

Due next class:

- Print and sign the Collaboration Policy
- Do HW 0-1 (includes reading/understanding the collaboration policy, and Nunberg's "On the Bias")
- Do HW 1-1 (an intro to spreadsheets)

Fin