

# intro

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this version: Friday 8<sup>th</sup> December, 2017    20:27

# outline

general overview, my approach and policies

next week

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## about myself

- ◇ I want to tell you what I am doing:
  - there are some topics i specialize in
  - and if there is any overlap between our research interests
  - i can be of much more help
  - so definitely let me know if you want to study any of those!
- ◇ <http://aok.mooo.com>

## 2 questions about yourself

- ◇ specific research interests? using any data yet?
- ◇ what do you expect from this class?
- ◇ (make a note if you see another person similar to you and work together!)

- ◇ it has everything incl slides (except grades: Sakai)
- ◇ I am updating course materials incl syllabus continuously
  - most changes are cosmetic; more dramatic ones include
  - reshuffling of material and some additions/deletions
- ◇ grading, midterm/presentation/paper dates won't change
- ◇ should be fairly fixed a week ahead
- ◇ print, if you like, on the day of the class,
  - the later the better, ideally just before the class
- ◇ let's go over the syllabus

## my dirty secret

- ◇ actually, i don't like math
- ◇ i never did, and I'll never will
- ◇ probably like most of you
- ◇ but i love statistics
  - (because it makes sense of the world; math doesn't)
- ◇ wheelan is the same, see book's intro

## statistical software

- ◇ if there is anything i love more than statistics,
  - it is statistical software
- ◇ these days, you cannot really do research without software
- ◇ but i do not want to force it
- ◇ hence i will offer labs that are encouraged, not required
- ◇ (and extra credit; otherwise have to make it up somewhere else—depth of thinking etc)
- ◇ will doddle you per lab times



## by the way

- ◇ this class is not only about statistics
  - eg also research design
- ◇ but mostly about statistics

## approach

- ◇ we'll keep the math to minimum
- ◇ only need to calculate basic descriptive statistics like
  - mean, median, mode, and standard deviation,
  - correlation and basic probability
- ◇ the math level is that of high school!
- ◇ we will focus on application, the fun part
- ◇ following wheelan, most of the class will be examples
- ◇ we'll focus on intuition and application

## approach

- ◇ applied, examples, hands-on
  - (less theory, math, computation)
- ◇ you are encouraged to collaborate (prep for class, ps, paper)
- ◇ free to choose data/topics as long as it is relevant
  - ie as long as there are any research methods
  - kill 2 birds with one stone:
  - ideally, bring your own data and analyze it,
  - or bring research done by others that interests you
  - don't worry, as long as you have any research interest
  - you'll find data and especially research about it
- ◇ we'll go over finding research and data sources
  - (mostly just google scholar and google!)

## before and after the midterm

- ◇ 1st half basics, and some math, go fast:
  - basics, data, theory, general
- ◇ 2nd half more application, focus on paper
  - after: more applied and specific topics
  - and more research oriented topics for the paper

## recommended/extra/bonus

- ◇ only slides and assigned readings
  - (mostly Wheelan and Trochim, and what i say in the class!)
  - are required and tested/graded
  - but it will be easier to follow if you do additional readings (and they are fun, too)
- ◇ many materials are marked extra/bonus/[\*]

# communication

- ◇ during the class interrupt me as often as necessary
- ◇ after the class email me if you have questions
  - i check email frequently
- ◇ i will tell you if you interrupt or email me too often
  - it almost never happens

## grading/extra credit

- ◇ i will be strict about grade scale:
  - you get the grade that your interval indicates (see grading table in the syllabus)
- ◇ but there is opportunity for extra credit, eg:
  - answer extra credit questions during the class
  - have an early presentation of your research
  - find typos/false statements in class materials
  - tell me about useful course materials: books, datasets, websites, etc

## statistics is everywhere (Wheelan, 2013, ch1)

- ◇ statistics is everywhere
- ◇ we use it all the time
- ◇ it makes sense of and simplifies world
  - but also, it does not give the full picture
  - and may be often misleading!
- ◇ eg grades: A, B, C, F; GPA, etc
  - some of the smartest people I know
  - are dropouts or get bad grades
  - largely because they cannot navigate the system (Tough, 2014)
- ◇ reverse is true as well: many educated are not so smart!



## consumers, not producers :(

- ◇ we won't use statistical software
- ◇ we'll try to understand research, not do it
  - still will do some rudimentary calculations and research
  - if you are interested in doing research professionally
  - sign up for our PhD program!
  - <http://dppa.camden.rutgers.edu/degrees/phd/>
- ◇ and come to bonus Python labs offered in this class
- ◇ if you plan to collect data, or use confidential data
  - like student scores, start early! it takes time to get it!!
  - and seek IRB: <https://orra.rutgers.edu/formsandtemplatesartsci>

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## TODO: copy this to al future classes!!!

- ◇ end every class discussing what we covered and quick look at next week
- ◇ end with a review Q&A,
- ◇ give some examples (essp in pub pol and pub adm) for concepts covered
- ◇ students will discuss concepts from the class
- ◇
- ◇ quick look at next class

# bibliography I

LEVITT, S. D. AND S. J. DUBNER (2010): Freakonomics, vol. 61, Sperling & Kupfer.

TOUGH, P. (2014): “Who Gets to Graduate?” New York Times.

WHEELAN, C. (2013): Naked statistics: stripping the dread from the data, WW Norton & Company.