

# wrapping up

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## outline

conclusion (p.240-254 Wheelan, 2013)

## reg ps comments

- some confuse IV and DV!
- big mistake
- remember that DV is usually in the header of the table
- and IVs are rows: if you talk about IV that is not in one of the rows with its coef, it doesn't make sense
- and note the dummies and omitted/baseline/ref cat—always the omitted one
- standardized or 'beta' coefficient—can compare magnitude across apples and oranges; and interpretation is one std dev increase in  $x$  leads to  $\beta$  std dev change in  $Y$
- ideally don't forget about substantive/practical significance in addition to statistical significance

## outline

conclusion (p.240-254 Wheelan, 2013)

## data, data everywhere

- eg goog timeline <https://support.google.com/maps/answer/6258979>
- again see: [www.economist.com/node/15557443](http://www.economist.com/node/15557443)
- Wheelan (2013) discusses uses of data, eg:
  - Target predicts better pregnancy of your daughter
    - she buys unscented lotions, vitamins, etc [p252-3]
  - one study analyzed closeness of faces of same gender on facebook and predicted well whether a person is gay
  - pub adm application: geolocated tweets in same loction about potholes, or food making you sick

## so what?

- use data! (do stats)
- or read about using it (lit rev)
- AND ALWAYS think about it! (critique research)
- this is \*important\* for final project in this class
- and use stat software (Python, etc): a job skill!

## remember stats is positive, not normative

- it says what it is
- not what it should be
- for the latter we need something like philosophy or religion
- [https://en.wikipedia.org/wiki/Positive\\_statement](https://en.wikipedia.org/wiki/Positive_statement)
- dog fighting used to be socially acceptable, not anymore
  - same thing may happen to football (p242-244)
- similarly, research can help evaluate damage from say  
cigars v cigarettes
  - but cannot tell us what to do about it

## be skeptical

- eg correlation  $\neq$  causation
  - MMR vaccine, autism (p245,246)
- also: measurement
  - many ways to measure the same thing
  - no measure is perfect
  - all measures oversimplify
- eg: teacher ratings, school ratings (p246-249)



## use probability

- eg remember about probabilities tips: never do gambling, lotteries; dont buy insurance if you can afford the loss

## do experiments!

- again, experiment is the gold standard
  - (superb internal validity, but usually poor external)
- eg: force Indian teachers to show up by recording them
  - randomly assign cameras (p250)

# the end!

- let's keep in touch
- keep me posted about your research endeavours!
- email me, stop by

MOHR, L. B. (1995): Impact Analysis for Program Evaluation, Sage, Beverly Hills CA, second edition ed.

SHADISH, W. R., T. D. COOK, AND D. T. CAMPBELL (2002): Experimental and quasi-experimental designs for generalized causal inference, Wadsworth Cengage learning.

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