Agenda for Today
- Readings: Where we’ve been & where we’re going
- Briefly review last class
- Discuss philosophy of science & research design

Readings: Where we’ve been & where we’re going
- Thus far you should have read:
  - Chapter from Moneyball (Lewis)
  - Chapter from Freakonomics
  - Bumper Sticker article
  - C&H, chapters 1&2
  - C&H, chapter 7
- For next class, read Sheldrake, “Dogs That Know When Their Owners are Coming Home” (on e-reserve).

Literature Review
- What have other people said about your topic?
- Could be:
  - Highlighting problems with earlier research
  - Highlighting what others have missed
  - The costs of voting (Haspel and Knotts)
- Make sure you properly cite other people!
- You should expect to have 5-10 different citations.

Operationalizing
- Think about what you want to measure in a perfect world.
- Think about the best way to measure it in the real world.
- Moving from the ideal to the real is operationalizing it

Example of an operational definition
- Concept: State legislative professionalism
- Operational definition #1: Salary + Number of days in office + Number of staff/member
- Operational definition #2: % of legislators with outside careers
  - Jerome Maddox, State Politics and Policy Quarterly, 2004
Reviewing Last Week
- Literature Review
- Operationalizing
- Statistical analysis

Another Example

The Research Question
- Do advertorials work?

Hypotheses (pgs. 551-552)
- An advertorial sets the agenda by making a specific issue more salient to the mass public.
- An advertorial positively affects people’s views of the organized interest that sponsors it.
- An advertorial is more likely to affect people with high levels of trust in the media than it is to affect people with low levels of trust in the media.

Operationalizing the concepts
- We measure attitude change as the difference between someone’s opinion before they were exposed to the advertorial (pretest) and their opinion after they were exposed (posttest).
- In other words:
  - $\text{Posttest score - Pretest score} = \text{attitude change}$
- How realistic is that?
Actually getting your data (pgs 553-556).
- The experiment.
- Students at WCU and UTK
- Pretest/Posttest
- What’s good about this approach and what’s bad about this approach?
  - Student sample (pgs. 554-555)?
  - Differences between the characteristics of the treatment and control groups.

Statistical Analysis
- Figure 1: pg. 558
- Tables 2-6 and associated discussion pgs. 560-562.

Drawing Conclusions (pgs. 563-565).
- Do the results support the theory?
  - Sort of: Advertorials increase the salience of the issue in question, and are most effective for those with high levels of trust in the media, but they do not improve the opinion of the company that runs them.
- Return to the big questions: who cares?
  - Companies spend lots of money on advertorials. Is their money well spent? Sort of. Practitioners who want to improve the opinion of their company had best look elsewhere.

A Few Other Points
- Computer applications
- Where to get data
- Still confused from before? Come see me.

How do you build a research question?
- A research question can ask:
  - How many?
  - How much?
  - How efficient?
  - How effective?
  - How adequate?
  - Why?

What is a model?
- A model includes selected elements (characteristics or events) and links them to each other
- Investigators use models to simplify reality by eliminating irrelevant details
Variables
- Observable characteristics that have more than one value
- Characteristics that vary

Measuring Variables
- Nominal - no order
- Ordinal - order, but not a consistent differences between values
- Interval - there is order to the values and there is also a consistent difference between each value

Brief exercise
- Gender
- Age
- Income
- Scale of “racism”
- Party ID
- % of the Vote
- Temperature

Answers
- Gender - Nominal
- Age - Interval
- Income - Interval
- Scale of “racism” - Ordinal
- Party ID - Nominal
- Percent of Vote - Interval
- Temperature - Interval

More Examples
- States in a nation (Georgia, North Carolina, South Carolina)
- Number of students in each state’s public education system
- Satisfaction level with each state’s public education system (very satisfied, satisfied, not satisfied)

Answers
- States - Nominal
- # of students - Interval
- Satisfaction Level - Ordinal
Hypothesis
- A statement that specifies or describes the relationship between two variables in such a way that the relationship can be tested empirically
- A hypothesis typically implies that a change in one variable is caused by a change in another variable

Dependent variable
- The characteristic that is being explained

Independent Variable
- Used to explain the variation in the characteristic or event that you are interested in
- Often you have more than one independent variable—this takes place when you are using multivariate statistics.

Example
- Umbrellas and Rain
  - What is the independent variable?
  - What is the dependent variable?

Homework
- Read *Dogs That Know When Their Owners are Coming Home*
- Read the handout and identify the independent and dependent variable, along with the research question.
- Optional Assignment: Complete the induction/deduction assignment and check your answers.

Answer the following questions
- What was the most important point of class today?
- What would you like to know more about?
- What was the muddiest point of class?