Soc 60

Causation and Research Design
Meanings of Causation

- **Idiographic Causes**
- **Nomothetic Causes**
  - Counterfactual
- **Synthetic Causal Explanations**
Criteria for Causal Explanation

• John Stuart Mill’s 3 Main Criteria of Causation
  • Empirical Association
  • Appropriate Time Order
  • Non-Spuriousness (Excluding other Forms of Causation)

• 2 Additional Criteria of Causal Explanation
  • Causal Mechanisms
  • Specifying Context
Research Designs to Determine Causality

• **Nomothetic Research**
  – **Experiment**
  • --- 2 or more groups -- Treatment (experimental) and Control (comparison) Group
  • --- experimenter introduces variation in the indep var. and observe the dep. var
  • --- random assignment to screen out spuriousness (pre-existing conditions are the same in both groups

• **Non-Experimental Research**
  • Observational studies
  • Longitudinal design
    – Cross sectional design
  • Statistical control
Experiments vs. Non-experiments

• Advantages and Disadvantages
• Experiments
  • + controlling confounding factors
  • - lack of universality (generalization), lack of realism, unfeasability (ethical, financial, practical)
Idiographic Research Design

• Explanation in Field Research
  – Narrative, focusing on mechanisms,

• Event Structure Analysis
  – Outlining a sequence of events. Comparing it to other sequences.
Research Design to Determine Causal Time Order

- **Cross sectional design**
  - Independent variable is fixed at some time point previous to the dep var
    - Reliable retrospective account of past events
    - Measures based on records of earlier events
    - Government records, statistical records (e.g. about local conditions)
Childhood and Depression in Later Life

- Theory 1.
  Unloving parents create trauma in child, and that results in depression in later years.
- Theory 2.
  Depression distorts memory, and people in a depressive state are more likely to remember bad experiences from their childhood.
  - Lewisohn and Rosenbaum’s study
    - 2000 people for 3 years
- Group 1. Acute depressives
- Group 2. Remitted depressives (depressed earlier but now recovered)
- Group 3. Pre-depressives (soon to be depressed)
- Group 4. Non-depressive
- Theory 1. Bad memories: G1, G2, G3
- Theory 2. Bad memories G1 (perhaps G3)
Research Design to Determine Causal Time Order (cont.)

• **Longitudinal Design**
  – *Repeated Cross-Sectional Design*

• Trend studies
  – Same population but different samples over time

  – **Fixed-sample Panel Design**
    – Same population and same sample over time.

  – **Event-based (Cohort) Design**
    – Same cohort, but different samples (repeated cross sectional design on a limited population experiencing something together)
Worried About Money

Over the years, freshmen have become more likely to see college as a way to get a good job than as a way to explore life's meaning.
Grade Inflation

Whereas the greatest number of frosh once described themselves as C students, A is now the rule.
Highs and Lows on Pot

Support for legalization of marijuana has fluctuated over the years.
Keeping Up With Politics

Fewer students over the years say they keep up with politics.
Units of Analysis and Errors in Causal Reasoning

- Unit of Analysis and Unit of Observation
- Ecological Fallacy
- Reductionist Fallacy