Quasi-Experimental Designs (aka Non-Random Designs)

Nonrandomized Designs

- Many situations where random assignment to conditions cannot be accomplished
  - Gender, intelligence, SES
- The groups are nonequivalent before the experiment begins
- Nearly impossible to make causal inferences

Examples of nonrandom design

- Incidence of disease
- Market survey research (moms!)
- Attitude research and opinion polling
To be or not to be…repeated

- Panel Designs
  - Follow the same group across many measurement periods…longitudinal
  - Can examine change over time for the same group of people
- Cross-sectional designs
  - One slice in time…examine a group at one time period only
  - Cheap but not nearly as informative

Quasi-Experimental Design

- A study where at least one IV is manipulated but participants are not randomly assigned to all conditions
  - Gender by drug treatment on mood

Static-Group Comparison Design

- The dashed line indicates a lack of random assignment
- Selection is a serious threat to internal validity
- Temporal precedence is often hard to establish
Pretest-Posttest Nonequivalent control group design

- Can help evaluate the extent to which selection is a threat to validity
- Temporal precedence is clear

Interrupted Time Series Design

- Extension of the pretest-posttest design
- A stronger argument can be made to eliminate maturation, testing and history effects
- Can also run with multiple groups with and without the treatment

Matching

- Many researchers attempt to match the groups to deal with the lack of random assignment
  - Doesn’t control for the fact that individuals may differ within groups (e.g., gender, age, race)
  - …and also the group environments may differ (e.g., playgrounds, departments in an organization)