

# Experimental Methods in Political Science

# What is an experiment?

- An experiment occurs when human beings manipulate the world to understand causal relationships

# Types of Experiments

- Lab Experiment
- Natural Experiment
- Field Experiment
- Survey Experiment

# Designing an Experiment

- There are several stages to designing an experiment:
  - Define your research question and variables
  - Finding the relevant population
  - The units of the sample are randomized into groups
  - The treatment is applied to one group, leaving the other group alone
  - Outcomes are measured after the treatment has taken place

# Essential Steps

- Assessment of fit for a trial
- Recruitment of partners
- Decision on research site and sample
- Determination of treatments
- Specification of control condition
- Calculation of sample size
- Agreement on procedure for random allocation
- Collection of data

# Experiments on Elites

- “Vast potential for experiments in political institutions” (Grose 2014)
- How elite experiments work
- Survey experiments

# Threats to Elite Experiments

- Challenges with subject recruitment and retention
- Treatment not given
- Interference

# Assumptions

- Random Assignment
- Excludability
- Non-interference



# “Field” Experiments in other countries

- Assessment of Fit
- Recruitment of Partners
- The research site and sample
- The treatments
- The control group
- The sample size
- Randomization
- Data
- Ethics

# Threats to Experiments in other countries

- Loss of Subjects
- Failed Randomization
- Treatment not given or modified
- Interference
- Shocks
- Poor Data

# Writing a Proposal

- Carefully document your experiment's design, implementation, and results.
- Importance of writing
  - Research proposal

# Writing the Proposal

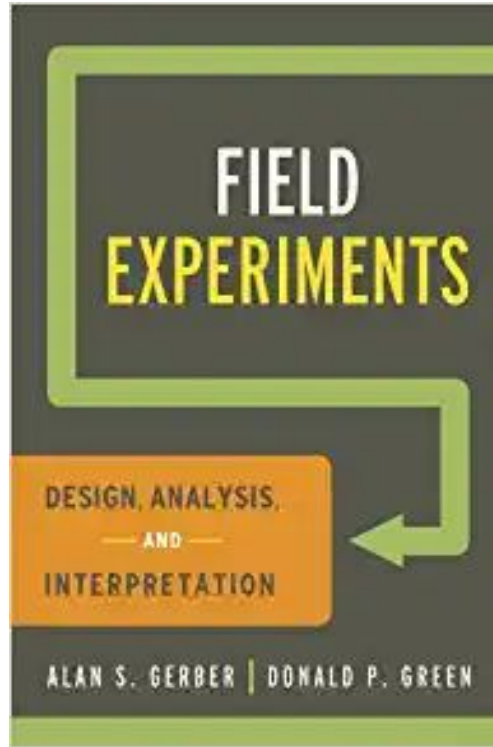
- Spell out the research hypotheses
- Describe the treatment in detail
- Describe the criteria by which subjects were included in the experiment
- Explain how subjects were randomly assigned to experimental groups
- Summarize the experimental design
- Describe the outcome measures
- Describe how you plan to analyze the data

# Compliance

- IRB
- EGAP

Questions?

# Supplemental reading



# Resources

EGAP power calculator

- [https://egap.shinyapps.io/Power\\_Calculator/](https://egap.shinyapps.io/Power_Calculator/)

