PSC 202
SYRACUSE UNIVERSITY

INTRODUCTION TO POLITICAL ANALYSIS

EXPERIMENTS, PART 1

REST OF THE SEMESTER

- Monday (Dec 4): No in-person class
  - This video lecture instead
- Wednesday (Dec 6): Finishing up, review
  - Please send questions by evening of December 5
- Dec 11: Exam 3
- No exam during finals period

REST OF THE SEMESTER

- Friday: Problem set 9 due
- Final problem set due December 15
  - Counts 5% of your overall grade

LINEAR REGRESSION RECAP

Canvassing → Turnout

- Does canvassing people in campaigns increase turnout?
- How could we study that?

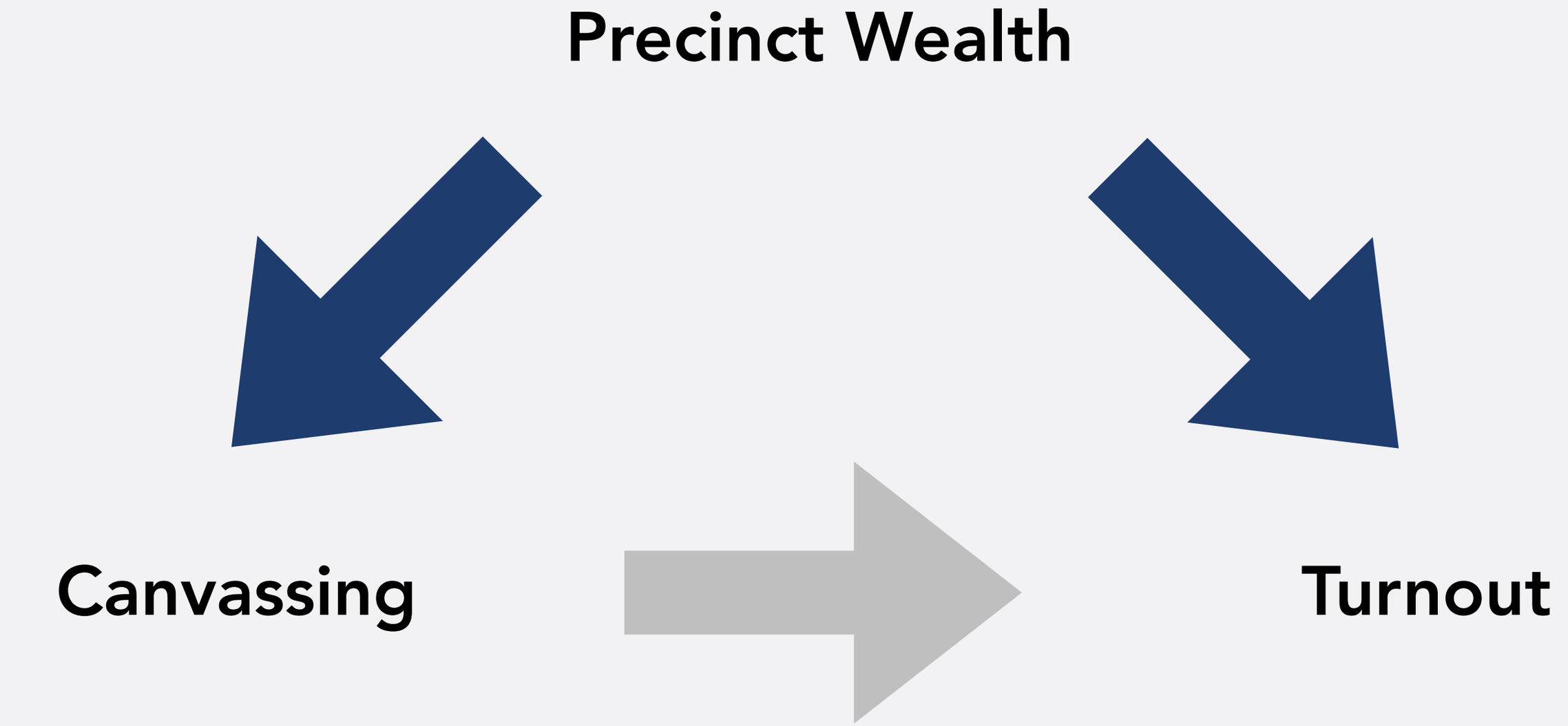
LINEAR REGRESSION RECAP

- Does canvassing people in campaigns increase turnout?
  - Collect data precinct-level data:
    - How high is turnout in different precincts? (%)
    - How much did the campaigns canvass in precincts? (total hours)

PROBLEM

- We do a linear regression
  - Turnout = a + b_1 * Canvassing Hours
- Suppose we find: Precincts in which campaigns canvassed more hours have higher turnout
- Is this evidence that canvassing *causes* higher turnout?

ELIMINATION OF ALTERNATIVE CAUSES

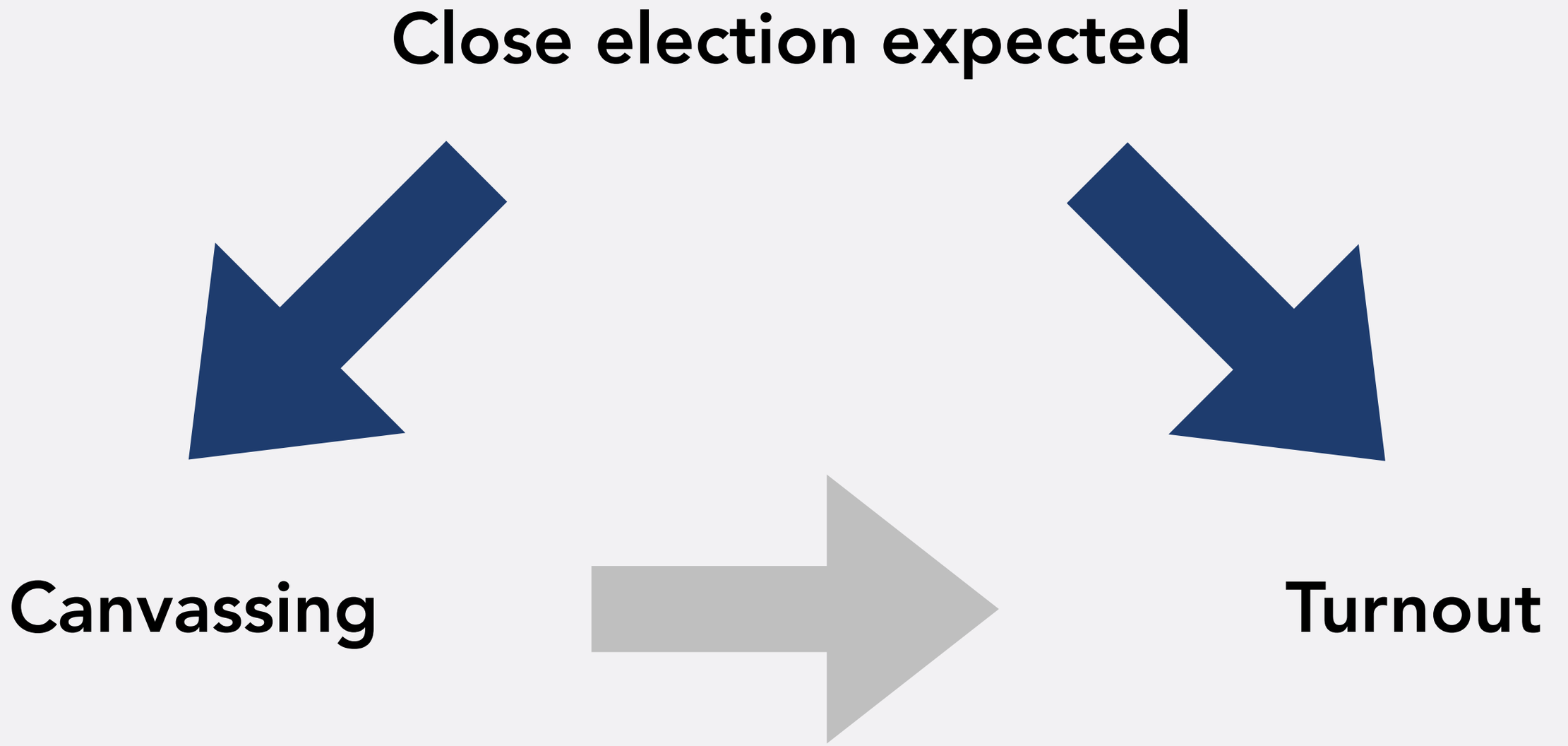


- Maybe campaigns canvass more in rich precincts, and wealthier people are more likely to turn out

ELIMINATION OF ALTERNATIVE CAUSES

- Turnout = a + b_1 * Canvassing Hours + b_2 * Precinct Wealth
- If b_1 is still positive and significant, is this evidence that canvassing *causes* higher turnout?

ELIMINATION OF ALTERNATIVE CAUSES



- Maybe campaigns canvass more when election expected to be close, and people turn out more when they expect nail-biter

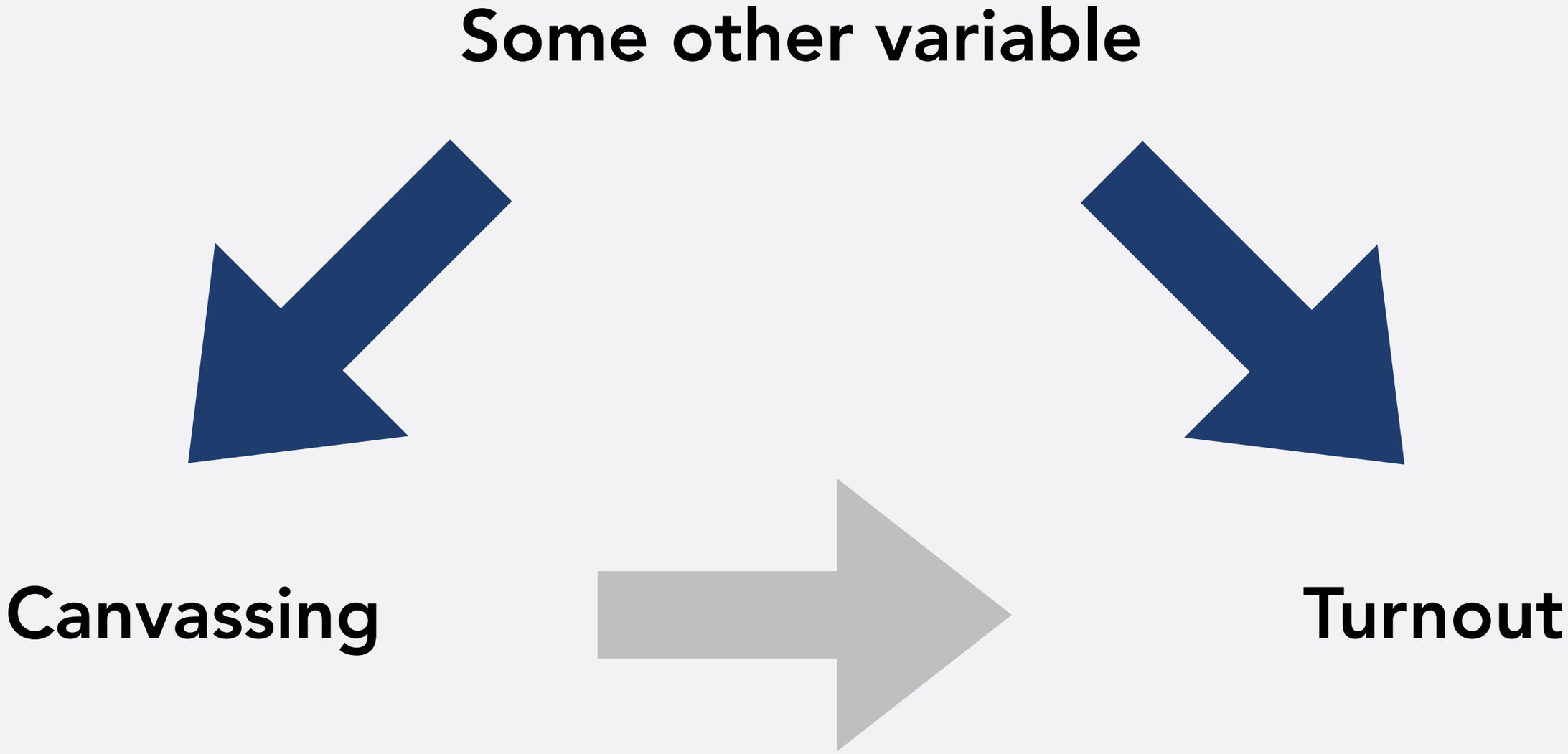
ELIMINATION OF ALTERNATIVE CAUSES

- Turnout = a + b_1 * Canvassing Hours + b_2 * Precinct Wealth + b_3 * Expected Closeness
- If b_1 is still positive and significant, is this evidence that canvassing *causes* higher turnout?

HURDLES TO CAUSALITY

- Is there a credible causal mechanism that connects X to Y?
- Can we rule out the possibility that Y could cause X?
- Is there covariation between X and Y?
- Have we controlled for all confounding variables (Z) that might make the association between X and Y spurious?

ELIMINATION OF ALTERNATIVE CAUSES



- We can *never* be sure that we have controlled for all alternative causes

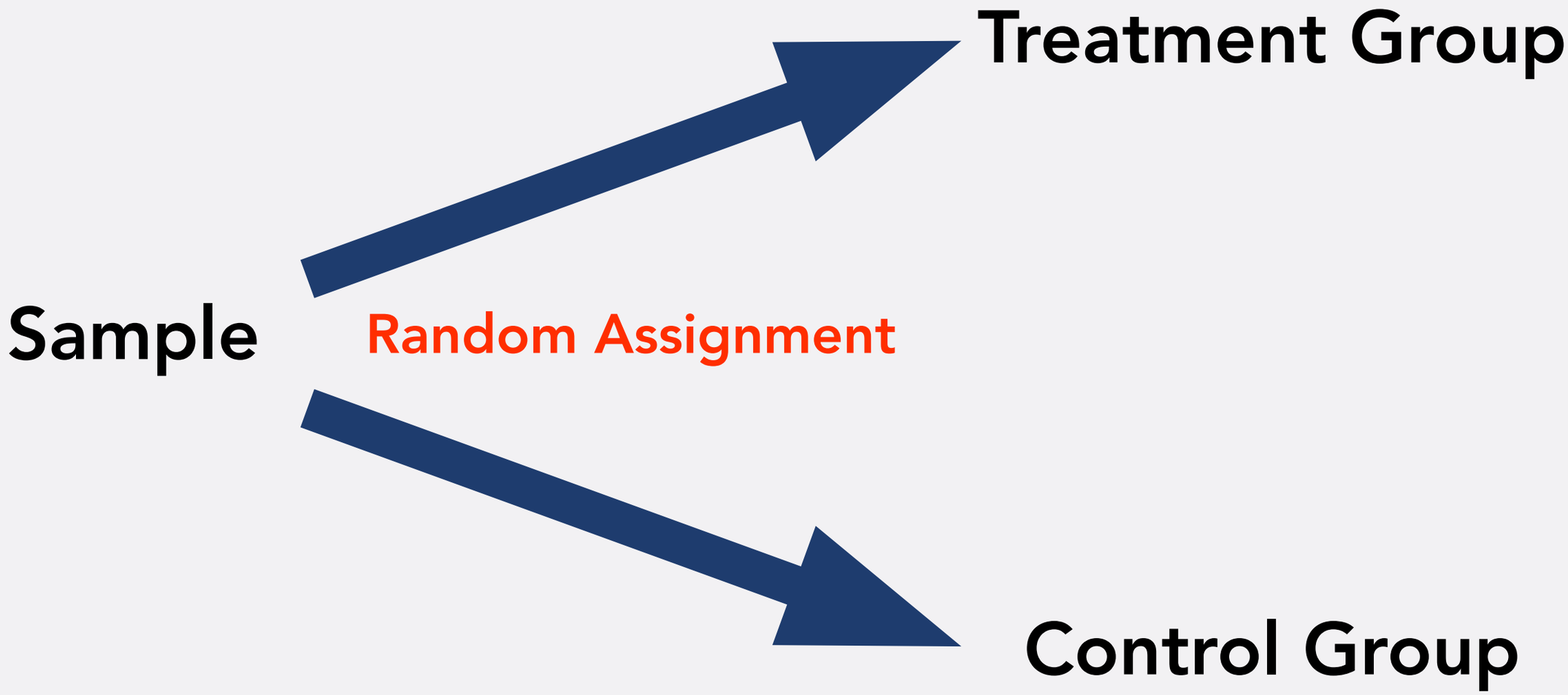
LINEAR REGRESSION RECAP

- *Observational* analysis
  - Takes data as we find it in the world
  - Regression tries to find the "data-generating process"
  - Does "our" X cause Y, controlling for potential alternative explanations?
  - Problem: We never know if we have controlled for *all* potential alternative explanations

A DIFFERENT APPROACH

- Observational approach: Researchers *observe* turnout and canvassing efforts, try to control for potential alternative explanations
- Experimental approach: Researchers *decide* how much canvassing happens in different precincts, see whether those with more canvassing have higher turnout

EXPERIMENTS



EXPERIMENTS

- A sample of precincts
- For each precinct, flip a coin
  - Heads: Canvassing happens
  - Tails: Canvassing does not happen
- Compare turnout between two groups

WHY DOES THIS WORK?

- Researcher *controls* canvassing, assigns precincts *randomly*
  - Average wealth about the same for treatment and control precincts
  - Expected closeness of election too
  - *All* characteristics should be about the same in the two groups, even those we can't think of
    - If sample is big enough and assignment is truly random

EXAMPLE

Getting Out the Vote in Local Elections: Results from Six Door-to-Door Canvassing Experiments

Donald P. Green
Alan S. Gerber
David W. Nickerson
Yale University

- Local elections in 2001
- 6 cities: Bridgeport, Columbus, Detroit, Minneapolis, Raleigh, St. Paul
- Collaboration with non-partisan GOTV organization

EXAMPLE

- Official voter lists
- Randomly assigned citizens to treatment and control group
  - Treatment: In-house visit by volunteers
  - Control: No visit
  - Random assignment at individual level
- Total: ~19,000 subjects

EXAMPLE

- Get data on whether people in sample voted or not (public information)
- Turnout in treatment group (canvassed) about 7 percentage points higher

ANOTHER EXAMPLE

The Effects of Canvassing, Telephone Calls, and Direct Mail on Voter Turnout: A Field Experiment

ALAN S. GERBER and DONALD P. GREEN *Yale University*

- Midterm elections in 1998
- New Haven, CT
- What is most effective: canvassing, phone calls, direct mail?

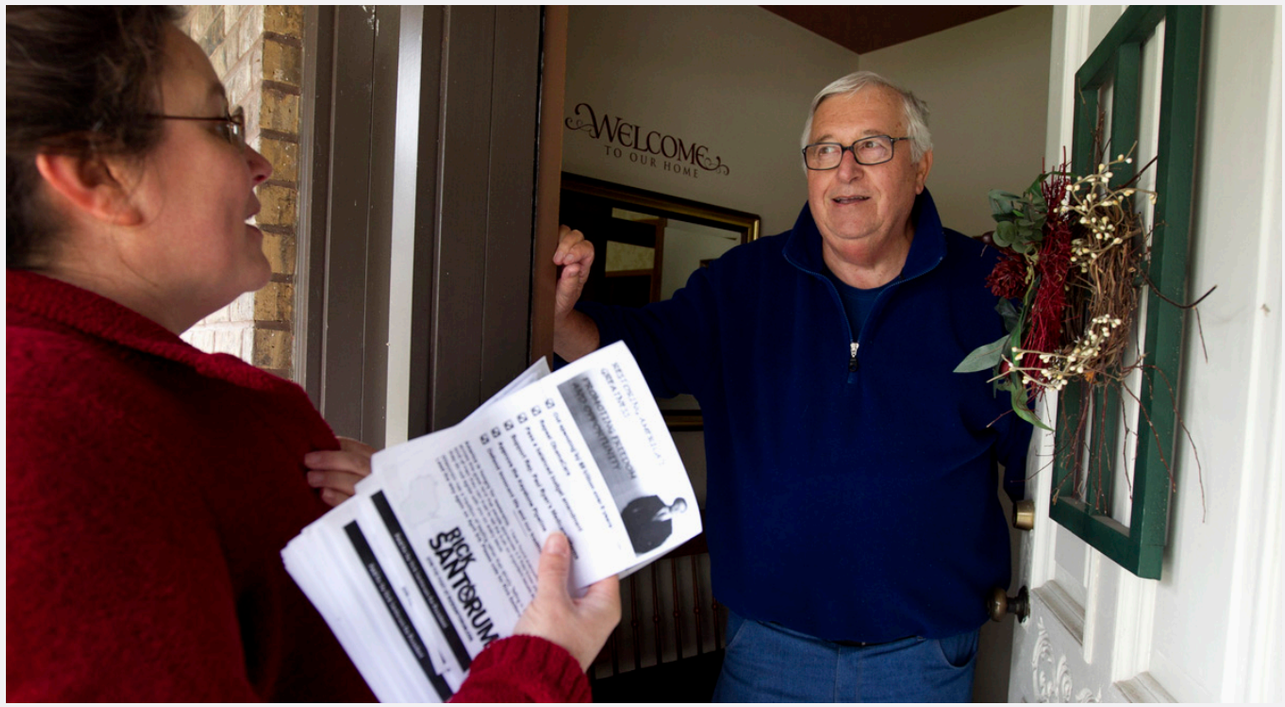
EXAMPLE

- Official voter lists
- Randomly assigned citizens to several treatment groups (and a control group)
  - Treatment 1: In-person visit by volunteers
  - Treatment 2: Phone call made
  - Treatment 3: Direct mail sent
  - Control: No mail/call/visit
  - Random assignment at individual level
- Total: ~30,000 subjects

EXAMPLE

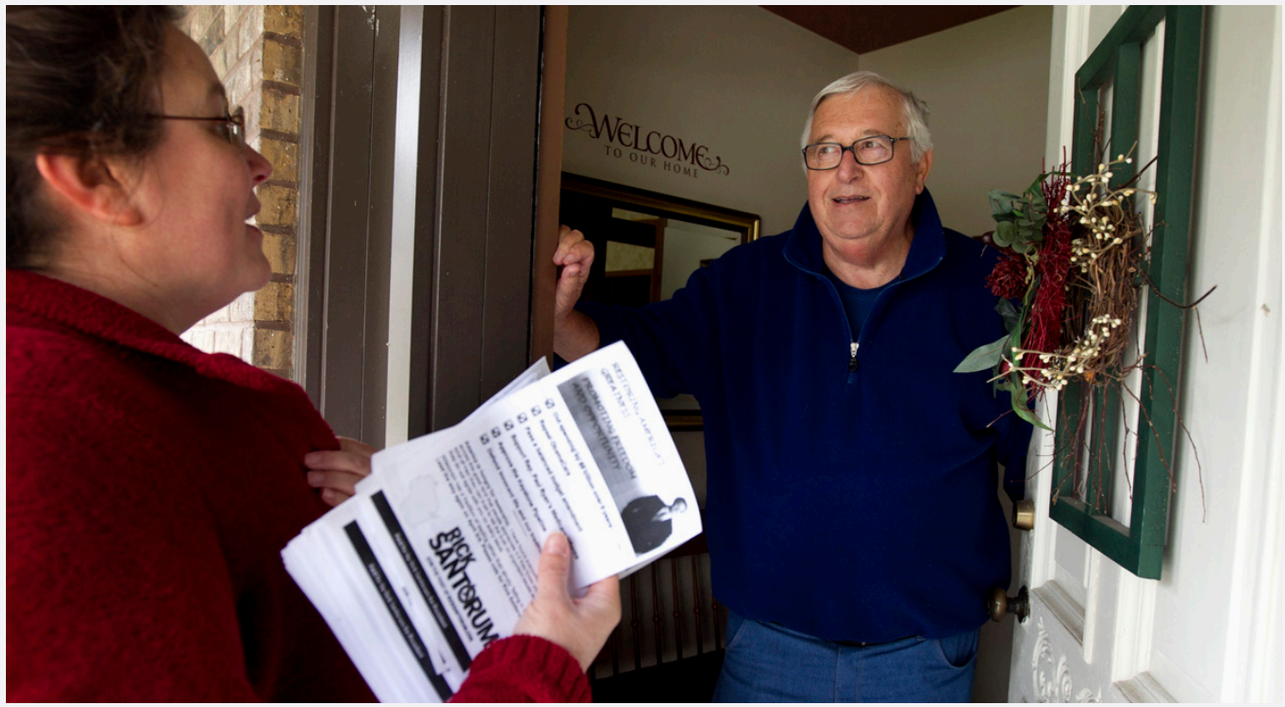
- Again get data on whether people in sample voted or not (public information)
- Effect of different contact methods on turnout:
  - in-person canvassing: 9.8%
  - each piece of mail: 0.6%
  - phone call: no effect

DOOR-TO-DOOR CANVASSING



- Many canvassing experiments have been done
  - Canvassing increases turnout
  - Effectiveness depends on election and voters
  - Canvassing works better close to election day
  - Who delivers the message matters
  - Canvassing has spillover effects

DOOR-TO-DOOR CANVASSING



- How effective is it?
  - Best estimate: 1 additional vote for each 14 contacts
  - Cost: $29 for each additional vote

BASIC STEPS

1. *Randomly* assign participants
2. *Manipulate* independent variable
   - Control group, treatment group
3. *Measure* dependent variable
4. *Analyze differences* in dependent variable between treatment and control groups
   - Because of random assignment, only independent variable can explain differences
   - All other variables are "balanced" between treatment and control group
   - Not necessary to control for potential confounding variables

INTERNAL VALIDITY

- Does the study isolate the effect of the independent variable on the dependent variable?
  - If yes: high validity
  - If no: low validity
- Experiments usually have *high* internal validity
  - Because of random assignment, other variables (Z) cannot explain differences between treatment and control groups

EXTERNAL VALIDITY

- Can we generalize the finding of the study to other settings?
  - If yes: high external validity
- Experiments often have *low* external validity
  - e.g. not clear if results would be similar if done in other cities or countries
  - If partisan canvassing, candidates may only agree to experiment in uncompetitive elections, not clear if results would be same for competitive elections

TYPES OF EXPERIMENTS

- What kinds of experiments are there?

FIELD EXPERIMENTS

AJPS AMERICAN JOURNAL of POLITICAL SCIENCE

Campaign Contributions Facilitate Access to Congressional Officials: A Randomized Field Experiment

Joshua L. Kalla University of California, Berkeley
David E. Broockman University of California, Berkeley

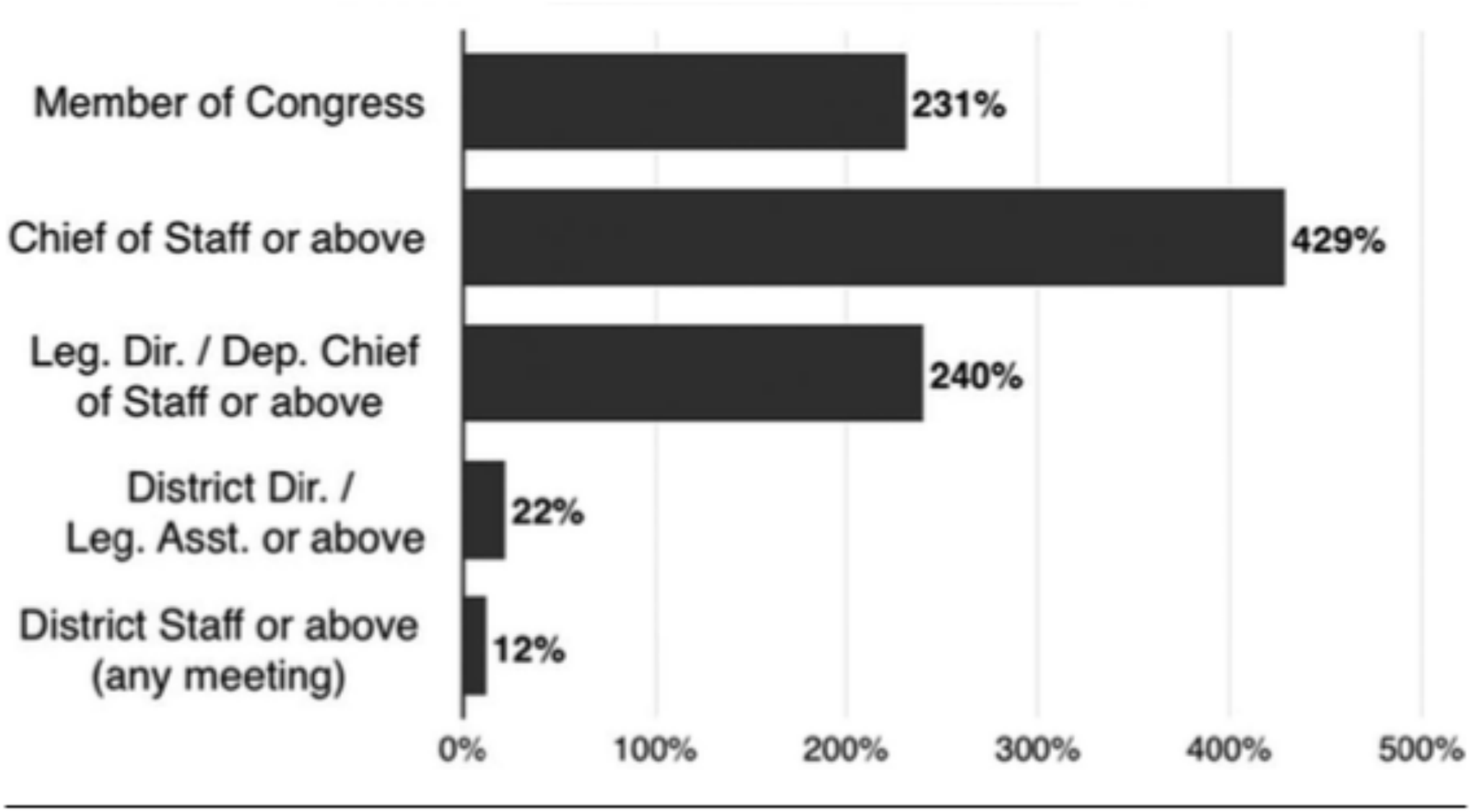
- What is the effect of campaign contributions on access to politicians?

FIELD EXPERIMENTS

- Organization tries to arrange meeting between its members and congressional officials
  - Per e-mail
- Experimental manipulation
  - Control group: “local constituents”
  - Treatment group: “local campaign donors”
- Outcome: Is a meeting granted, and who will it be with?

FIELD EXPERIMENTS

FIGURE 2 Percentage Increase in Access Revealed Donors Gained, at or above Each Level.



TYPES OF EXPERIMENTS

- Field Experiment
- Lab Experiment
- Survey Experiment

FIELD EXPERIMENTS

- Experiment in the real world
  - Some aspect of people's real-world experience is experimentally manipulated
  - Participants often not aware that they are subjects
- Canvassing and turnout is a field experiment

FIELD EXPERIMENTS

- All kinds of field experiments
  - Candidates randomize TV ad buys to see if they have an effect on voter preferences
  - Candidates randomize what they talk about on the campaign trail to see if it affects vote share
  - Aid organizations randomize who gets aid (and in what way) to see if it helps people
  - Military randomizes whether soldiers are in team with women or not to see how it affects performance and attitudes
- Among experiments, field experiments tend to have highest external validity

TYPES OF EXPERIMENTS

- Field Experiment
- Lab Experiment
- Survey Experiment

LAB EXPERIMENTS

- Experiment conducted in a laboratory
- Iyengar and Kinder (1987): Effect of media coverage on issue priorities
- Participants come into lab and watch news broadcast
  - Control: Actual newscast
  - Treatment: Doctored version, highlighting other topics

LAB EXPERIMENTS

- Post-test questionnaire: Participants rank issue importance of topics
- Which newscast they see has an effect on which issues people consider important

LAB EXPERIMENTS

- Internal and external validity?

LAB EXPERIMENTS

- High in internal validity
- Low in external validity
- Participants came to campus, knew that a professor would be watching them so probably paid more attention, etc.

TYPES OF EXPERIMENTS

- Lab Experiment
- Field Experiment
- Survey Experiment

MALFEASANCE

- Imagine that you live in a neighborhood similar to your own but in a different state. The member of Congress of that district is called James Davis. During his time in office, he has secured federal funding to improve the district's infrastructure, and he has put efforts into trying to attract companies into the district.
- Davis was also found to have violated ethics regulations by using his influential committee position to trade on insider information. He denies the allegations, but other politicians have called on him to resign. What do you think he should do?

MALFEASANCE

- He should definitely not resign
- He should probably not resign
- Not sure whether he should resign or not
- He should probably resign
- He should definitely resign

OUR SURVEY

- Imagine that you live in a neighborhood similar to your own but in a different state. The member of Congress of that district is called James Davis. During his time in office, he has secured federal funding to improve the district's infrastructure, and he has put efforts into trying to attract companies into the district.
- Davis was also found to have violated ethics regulations by using his influential committee position to trade on insider information. He denies the allegations, but other politicians have called on him to resign. What do you think he should do?

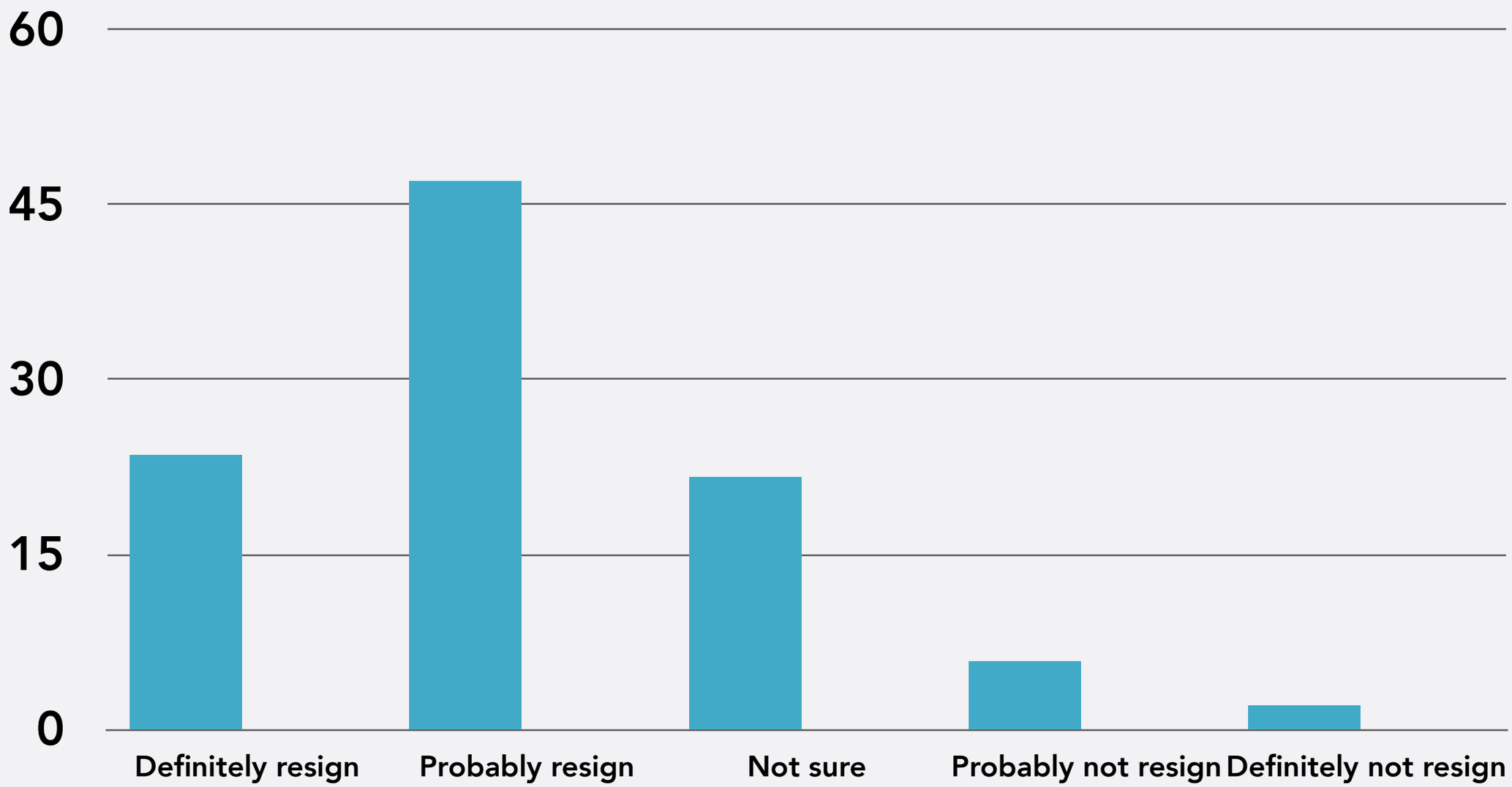
OUR SURVEY

- Imagine that you live in a neighborhood similar to your own but in a different state. The member of Congress of that district is called Mary Davis. During his time in office, she has secured federal funding to improve the district's infrastructure, and she has put efforts into trying to attract companies into the district.
- Davis was also found to have violated ethics regulations by using her influential committee position to trade on insider information. She denies the allegations, but other politicians have called on her to resign. What do you think she should do?

OUR SURVEY

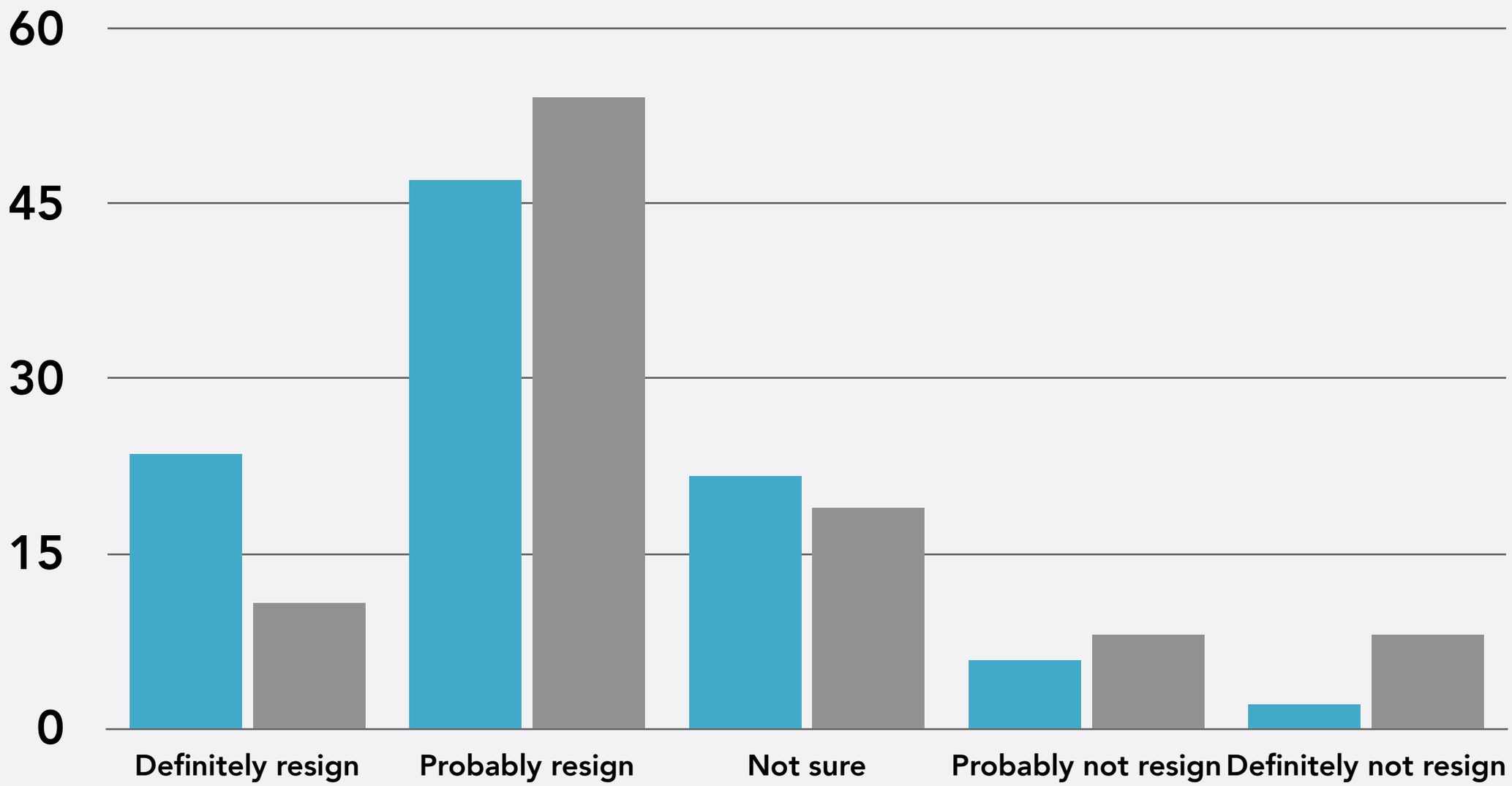
- All students were told about the same scenario
- Students randomly assigned into two groups
  - One group: Politician is male
  - Another group: Politicians is female

RESULTS



- Blue: Male candidate
- Gray: Female candidate

RESULTS



- Blue: Male candidate
- Gray: Female candidate

ISSUES WITH EXPERIMENTS

- May lack external validity
- Ethics issues
- Cannot study many things we are interested in experimentally

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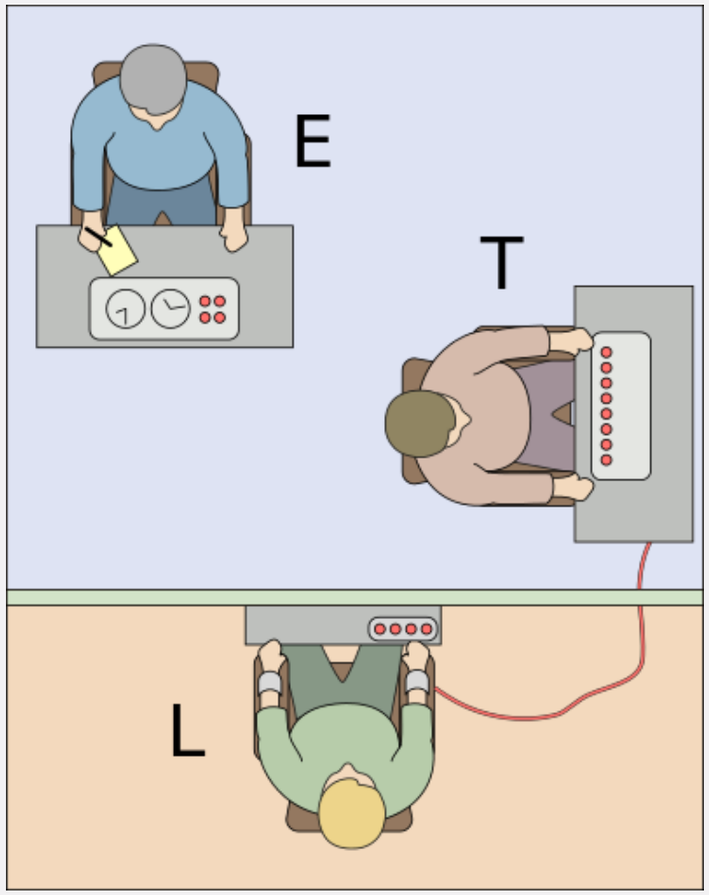
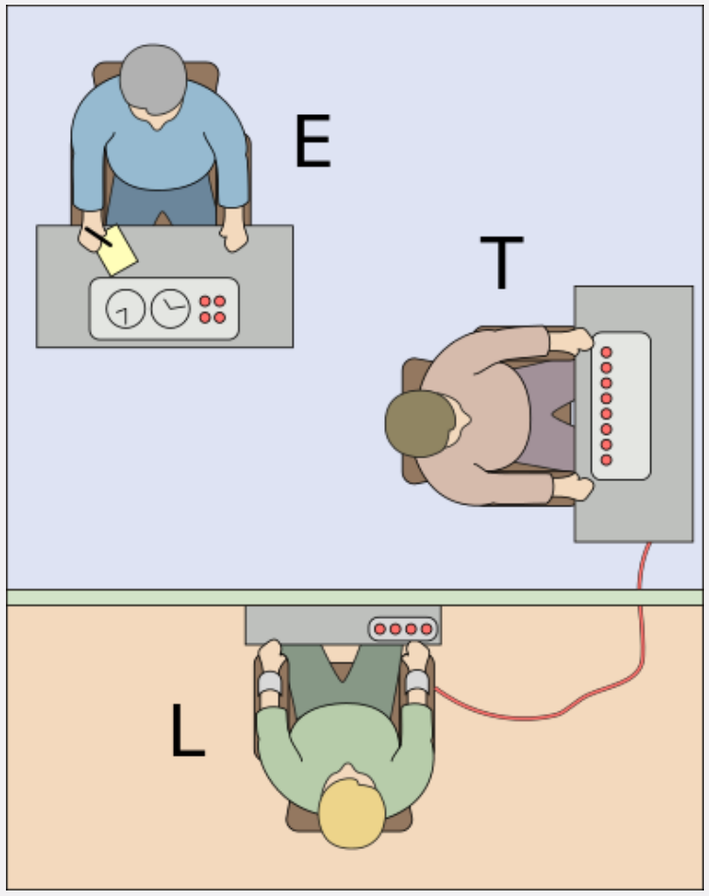
ETHICS: MILGRAM EXPERIMENT

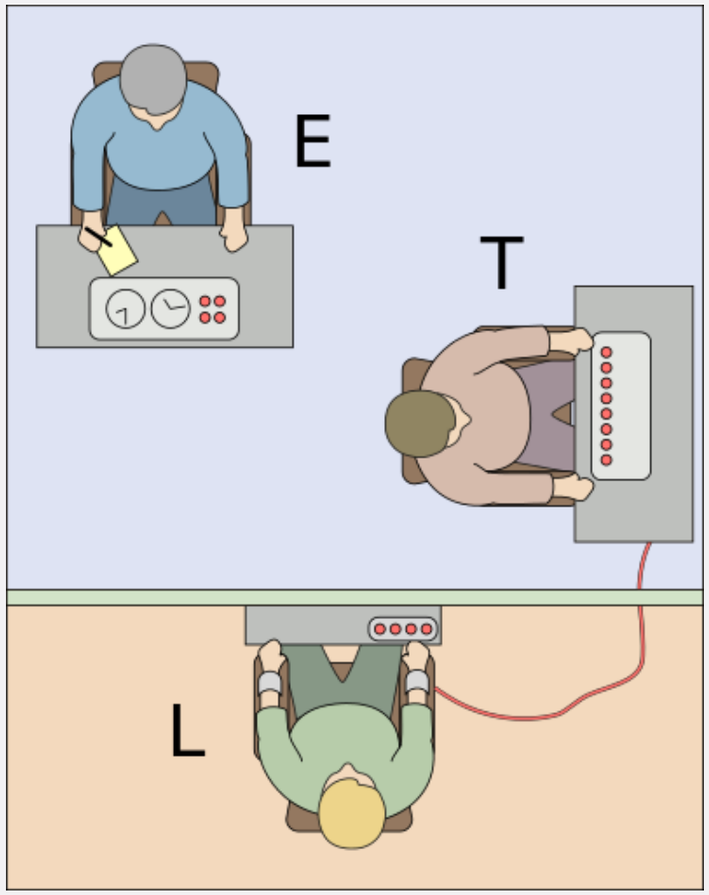


ETHICS: MILGRAM EXPERIMENT



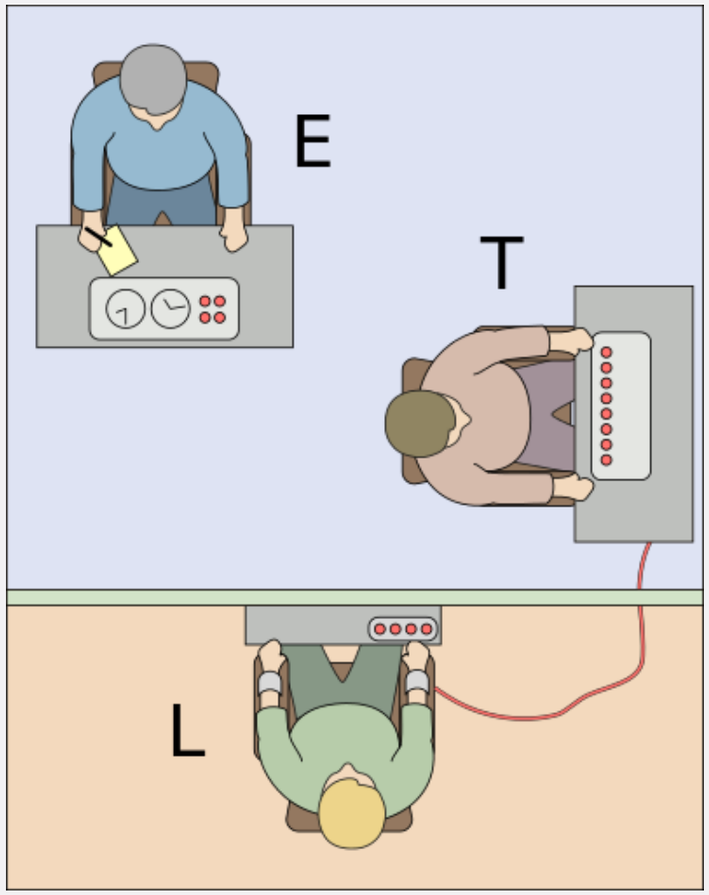
- Experiment in 1961, Yale University
- “Banality of evil”
- Do people execute orders, even if they are clearly harming other people?

ETHICS: MILGRAM EXPERIMENT



- **Ethical issues?**

ETHICS: MILGRAM EXPERIMENT



- Ethical issues?
  - Deception, potential harm to subjects (emotional stress, inflicted insight)

ETHICS: MONTANA ELECTION

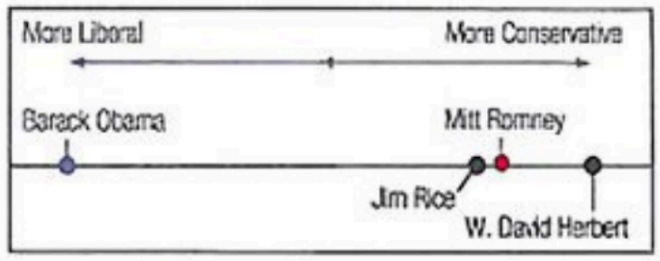
Campaign experiment found to be in violation of Montana law

VOTERS GUIDE

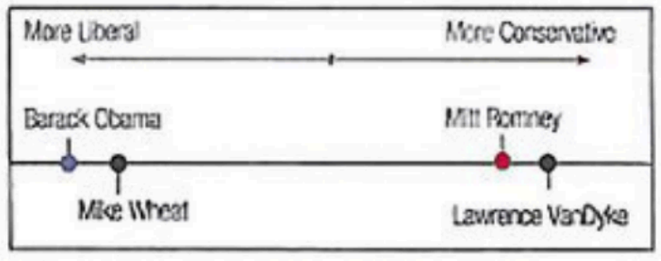
2014 Montana General Election Voter Information Guide

Election Date: November 4, 2014

Nonpartisan Supreme Court Justice #1 Race



Nonpartisan Supreme Court Justice #2 Race



For more information on how these figures were created, please see http://data.stanford.edu/time. Please note that this guide is non-partisan and does not endorse any candidate or party. This guide was created as part of a joint research project at Stanford and Dartmouth.

Paid for by researchers at Stanford University and Dartmouth College, 616 Serra Street, Stanford, CA 94305

Take this to the polls!

ETHICS: MONTANA ELECTION

- Randomly selected voters received flyer
  - Looks official (state seal)
- *Non-partisan* supreme court race
  - Flyer informs voters about how liberal/conservative candidates are
  - One candidate is revealed to be as liberal as Obama (in Montana!)
- 100,000 flyers distributed
  - Less than 350,000 voters turned out
  - Danger than experiment could have swung election

ISSUES WITH EXPERIMENTS

- May lack external validity
- Ethics issues
- Cannot study many things we are interested in experimentally

KEY ATTRIBUTES

- Key attribute of experiments
  - Control over independent variable (randomly assigned)
- Impossible for many issues we are interested in
  - war, revolution, corruption, democracy/autocracy

SUMMARY

- *Observational*: Controlling for alternative explanations in linear regression
  - Cannot be sure we accounted for all alternative explanations (low internal validity)
  - But: more generalizable (high external validity)
- *Experimental*: Random treatment/control assignment
  - excludes alternative explanations (high internal validity)
  - But: Often low external validity
  - Impossible for many topics