

Introduction to Political Science Research Methods

POLS 209

Exercise

1. Find one person that you've never talked to before.
2. In three minutes, learn their name and some interesting things about them.
3. When you're done, come enter your first names/nicknames into the R script.
4. Tell us.

How many of you have
laptops? Chromebooks?

About the Course

www.carlislerainey.com

My Motivation

questions, not methods

Questions you care about

Quantities you care about

Relevant data

Tools you can use later

Topics

models

causation

prediction

regression

description

measurement

probability theory

hypothesis testing

Learn by doing.

1. You read.
2. You practice.
3. We work through difficulties together.

*A First Course in Quantitative
Social Science*, by Kosuke Imai

Assignment	Points
Writing Assignment 1	10 points
Writing Assignment 2	10 points
Midterm	15 points
Writing Assignment 3	15 points
Writing Assignment 4	15 points
Final	25 points
Pop Quizzes	10 points
Participation	up to 5 bonus points

Collaboration

On the writing assignments, do not, under any circumstance, copy another person's code.

late work

missed exams

late writing assignments

Questions and Claims

Political scientists ask all sorts
of **questions** about politics.

About Marriage Equality

- What percent of the public supports marriage equality?
- What explains the recent increase in support for marriage equality?
- Should gay and lesbian couples have the same right to marry as heterosexual couples?

About Income Inequality

- Is income inequality higher or lower in the U.S. than France?
- What are the consequences of income inequality?
- Should the government redistribute wealth?

Political scientists make all
sorts of **claims** about politics.

Claims are just answers to
questions.

About Marriage Equality

- 54% of the public supports marriage equality.
- Court decisions explain the recent increase in support for marriage equality.
- Gay and lesbian couples should have the same right to marry as heterosexual couples.

About Income Inequality

- Income inequality is higher in the U.S. than France.
- Income inequality causes a slower growth rate.
- The government should not redistribute wealth.

The best approach to
answering a question
depends on the type.

Three types of questions/claims

descriptive

causal (explanatory)

normative (evaluative)

Descriptive

What does the world look like?

Asks you to observe a fact.

Causal

Why does the world look the way it does?

Asks you to identify a cause or an effect.

Normative

What should the world look like?

Asks you to make a moral judgement.

About Marriage Equality

- What percent of the public supports marriage equality? **Descriptive**
- What explains the recent increase in support for marriage equality? **Causal**
- Should gay and lesbian couples have the same right to marry as heterosexual couples? **Normative**

About Income Inequality

- Is income inequality higher or lower in the U.S. than France? Descriptive
- What are the consequences of income inequality? Causal
- Should the government redistribute wealth? Normative

Normative Questions

The Way Most People Think About Politics

conservative or liberal?

Republican or Democrat?

Fox News or MSNBC?

Hannity or Maddow?

pro-life or pro-choice?

pro-equality or pro-family?

right or wrong?

good or evil?

Normative questions
are important.

Should the U.S. go to war
with Iran?

Should the President have the authority to declare U.S. citizens enemy combatants?

Should women have the
right to choose?

Should the government
redistribute wealth?

Answers rely on logic and reasoning.

We will not focus on this
type of question.

Descriptive Questions

How many chambers does
the Swedish legislature have?

What percent of voters voted
for Barack Obama in 2008?

How many political parties
are there in the U.K.?

What percent of countries today are democracies? How has this changed over time?

Answers rely on observation
and measurement.

Causal Questions

Why is income inequality so high in the U.S.? Why is it growing so fast at the moment?

What causes war between
two countries?

Why do some states become
democracies while others remain
authoritarian?

What is the effect of an
independent court of last resort?

What is the effect of an
independent court of last resort?

Three Types of Questions/Claims

descriptive

causal (explanatory)

normative (evaluative)

Exercise

- Consider the concept of war. Come up with two examples each of normative, descriptive, and causal questions about war. Posit an answer to these questions as a claim.

But we've got a
major
problem.

The Fundamental Problem of Causal Inference

We often use the word “cause.”

Smoking
causes
cancer.

Democracy

causes

peace.

Wealth
causes
democracy.

Education
causes
turnout.

But what does “cause” mean?

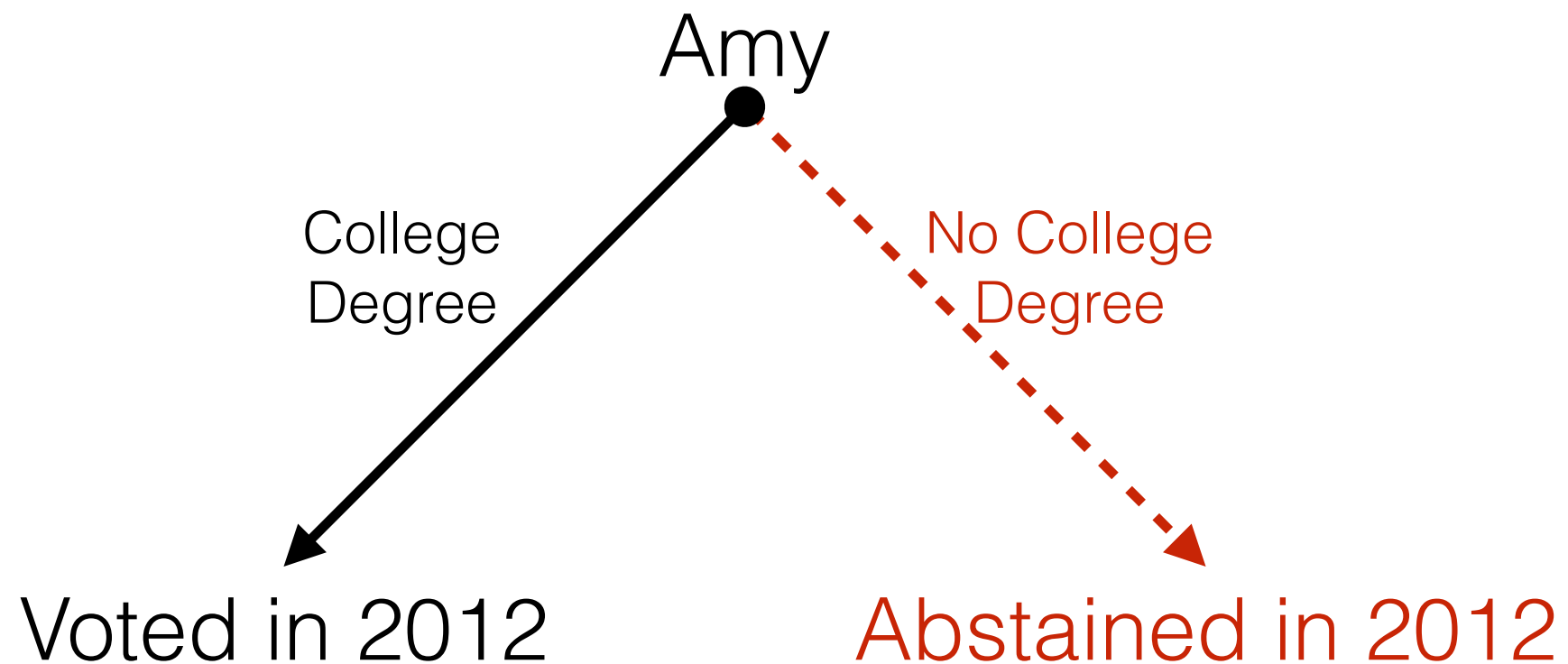
What does it mean for
something to “cause”
something else?

Causation relies on the notion
of a counterfactual.

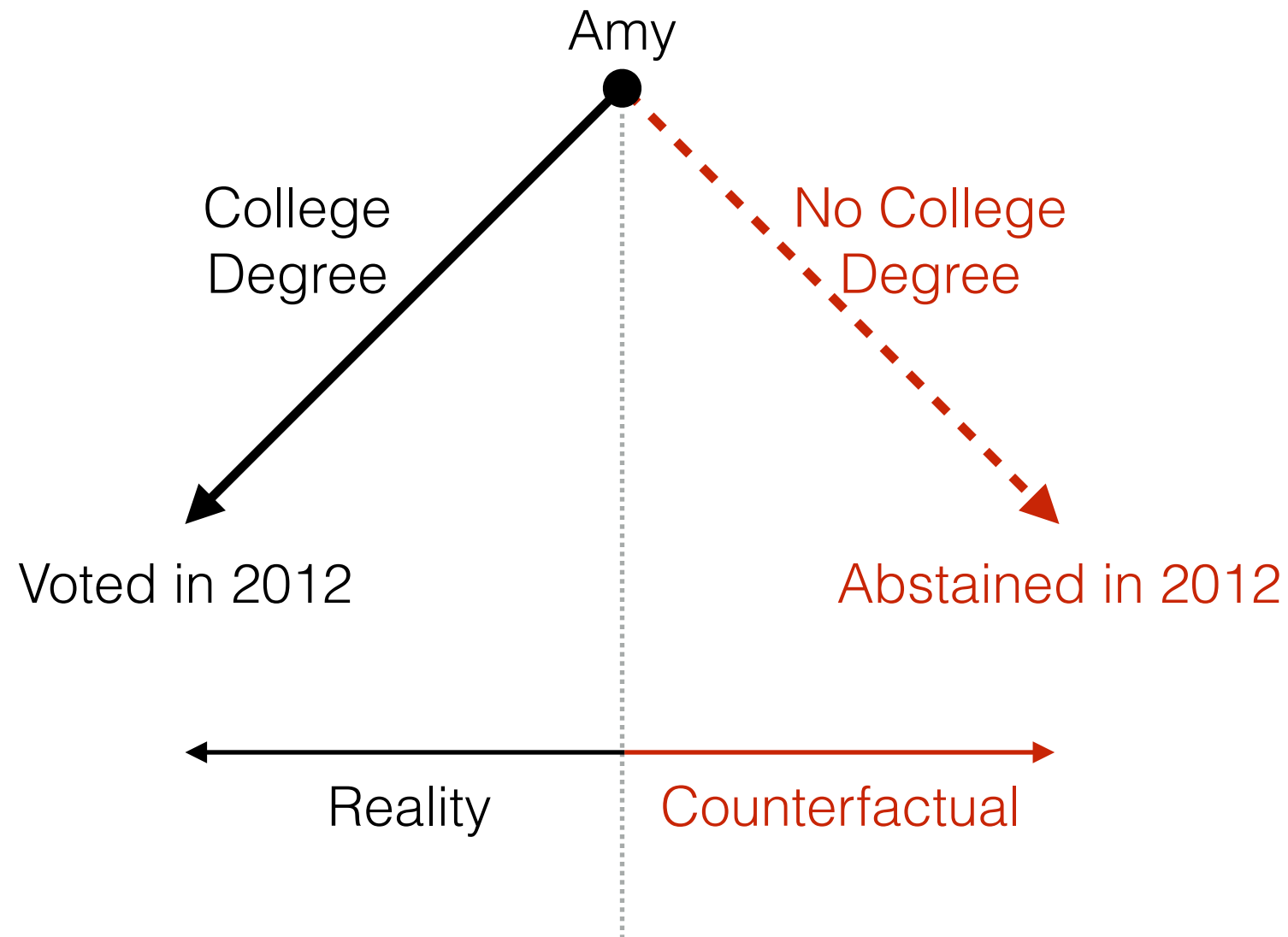
Counterfactual Analysis

- Suppose Amy has a college degree and voted in 2012.
- We want to know if the college degree caused Amy to vote.
- In order to answer, we simply need to consider the counterfactual world in which Amy did not receive a college degree.
- We might imagine rewinding time and simply removing Amy's opportunity to attend college (but nothing else), then letting time move forward to 2012 and observing whether Amy votes.
- If Amy does not vote in the counterfactual world, then we say that the college degree caused Amy to vote.
- If Amy does vote in the counterfactual world, then we say that the college degree did not cause Amy to vote.

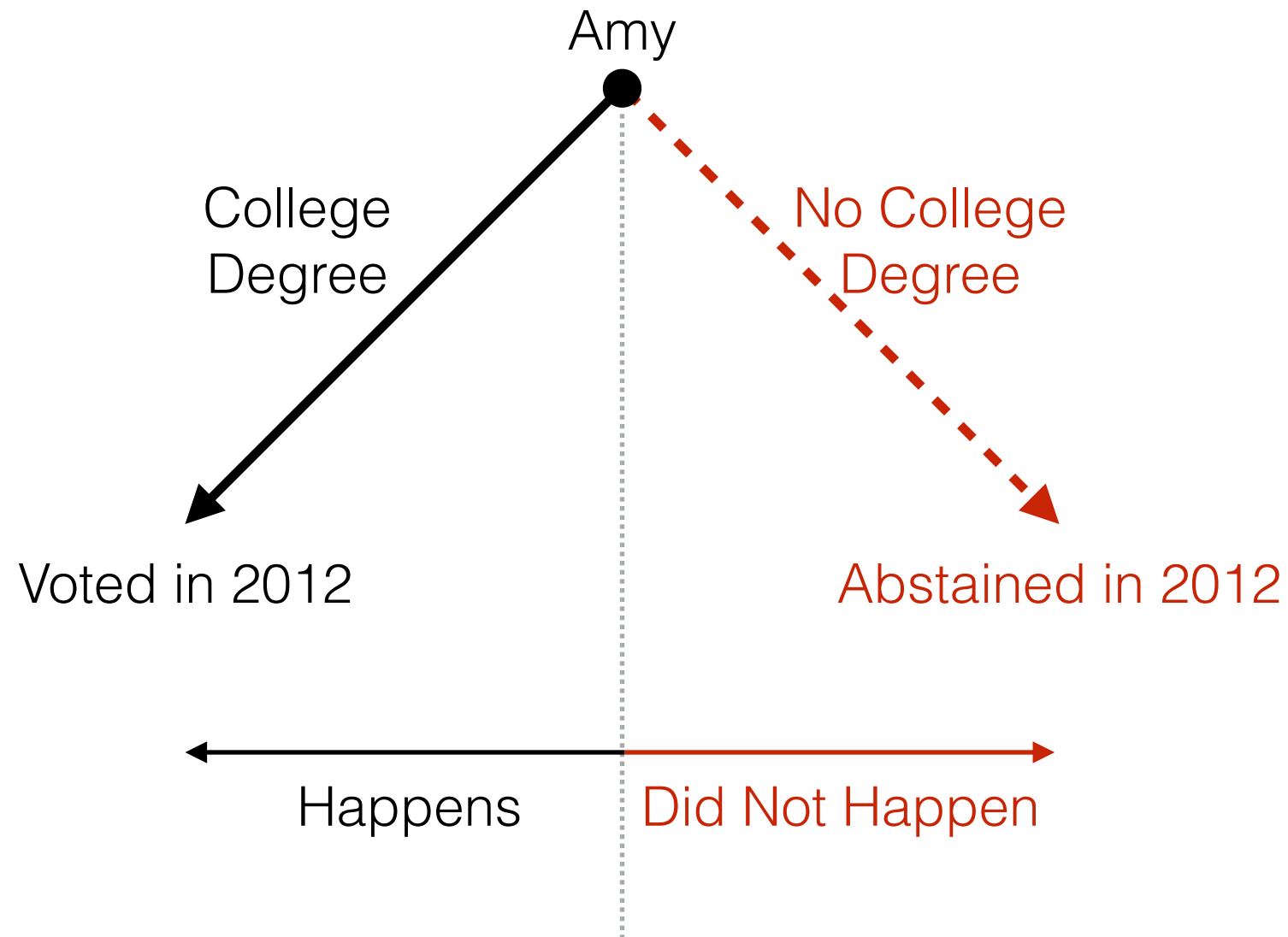
Counterfactual Analysis



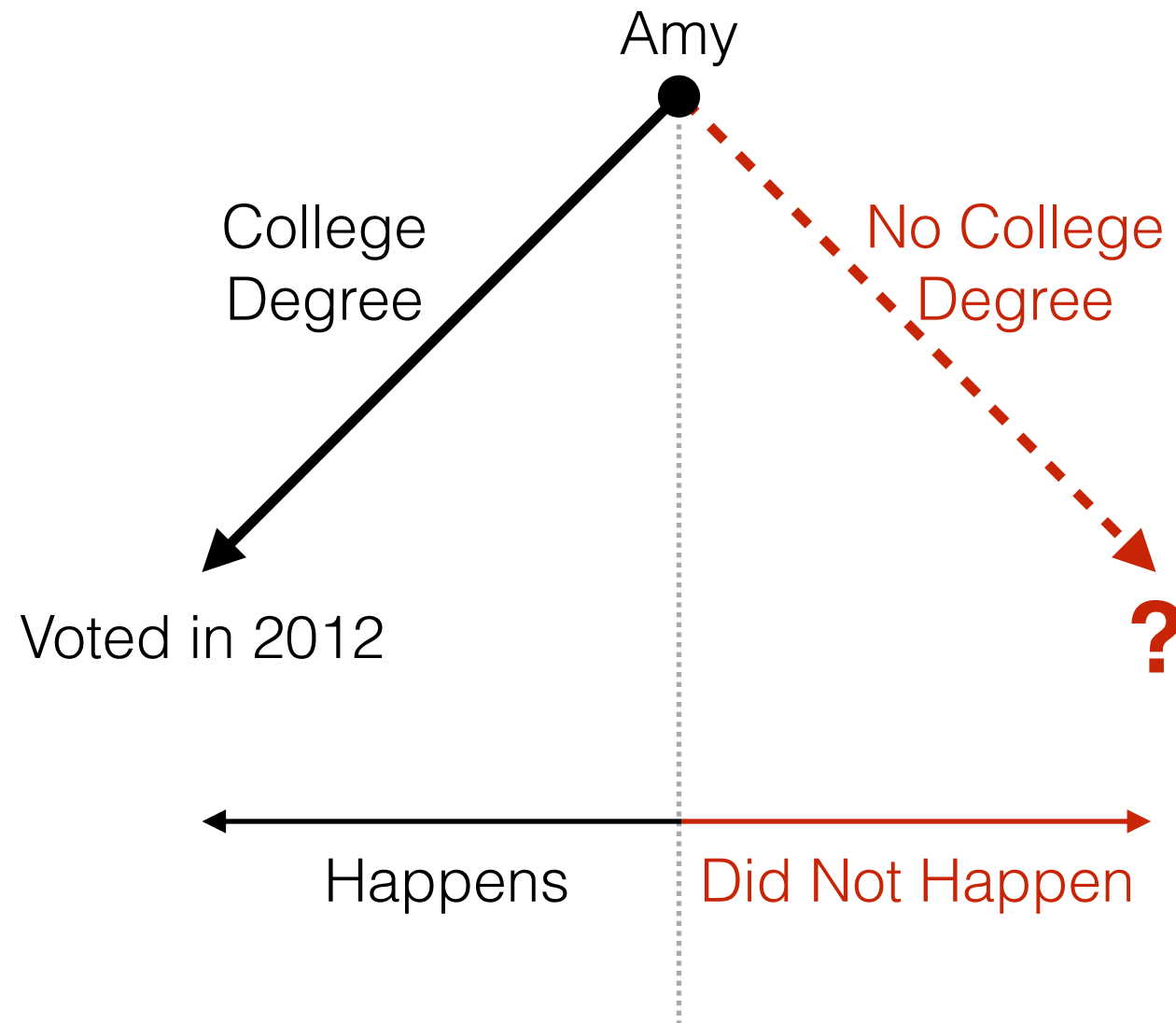
Counterfactual Analysis



Counterfactual Analysis

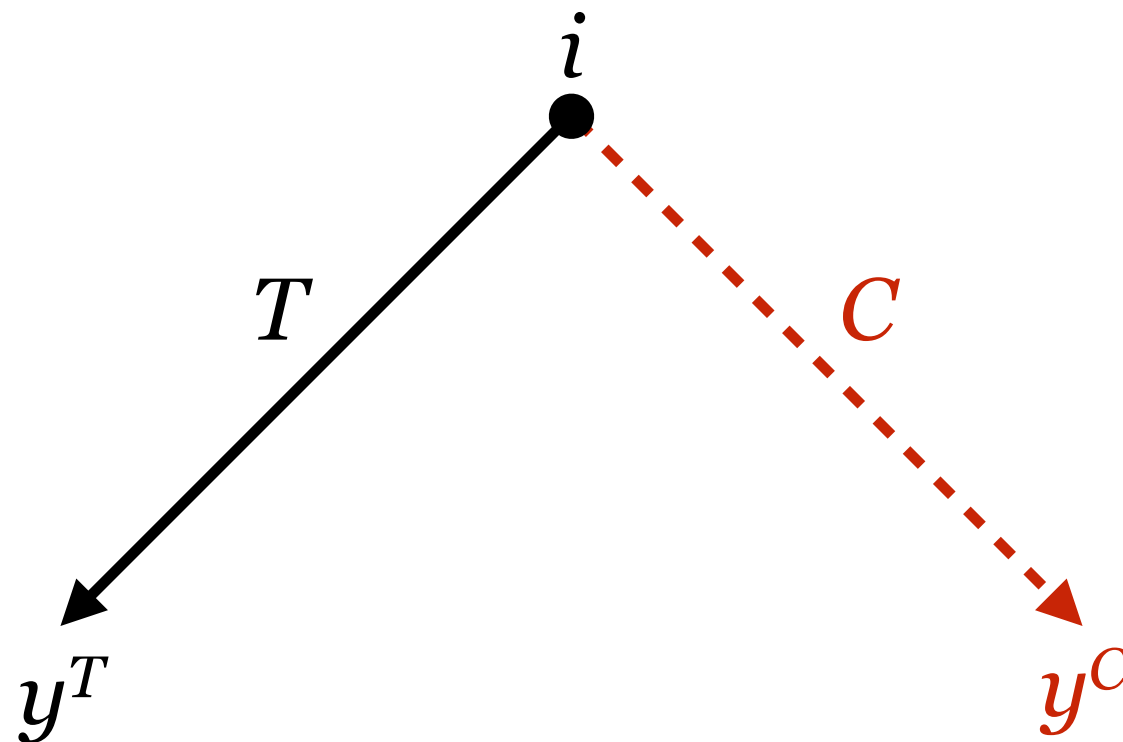


Counterfactual Analysis



We cannot observe whether Amy's education caused her to vote, because we cannot observe the counterfactual.

Counterfactual Analysis



Effect of T is $y^T - y^C$.

If $y^T - y^C = 0$ or $y^T = y^C$, then T does
not cause y . T has no effect.

If $y^T - y^C \neq 0$ or $y^T \neq y^C$, then T does
cause y . T has an effect.

The fundamental problem of causal inference.

- We cannot observe the causes of an outcome.
- We cannot observe the effects of (potential) causes.

Answers rely on
observation, measurement,
clever design, and models.

We can think of models
as an elaboration of a
causal claim.

Before Next Class

- Realize that we have no class on Thursday.
- Do practice problems on questions.
- Reach Lave and March, chs. 1-3 (eCampus)
- Do practice problems on models.