The Practice and Problems of Social Research

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Office Hours: M 11:30-12:30, W 10:30-12:30
SSB 447

Randall Munroe, xkcd.com
“Correlation doesn’t imply causation, but it does waggle its eyebrows suggestively and gesture furtively while mouthing ‘Look over there!’”

--Randall Munroe
An Outline for Today

• Correlation and Causation (a very brief intro)

• Independent and Dependent variables

• Social Research Questions

• Academic Publishing

• Literature Reviews
Housekeeping

- Homework due Tuesday
- I am offering extra credit for TIRP or JEP
- How are sections?
Why I am obsessed with causation

• Understanding causation allows us to change things

• Explanatory research vs. forecasting

• Correlation: when two variables have a tendency to vary together
  • Positive or negative correlation

• Hospital admittance is positively correlated with death.
• A lot of rich people have MBAs and a lot of rich people drive BMWs.
• In San Diego, attending a megachurch is positively correlated with PTSD.
Forecasting vs. Explanatory Research

- Correlation: The number of police patrols in a neighborhood is positively correlated with the crime rate in that neighborhood.

- Choosing a place to live vs. developing policy to lower the crime rate

- Correlation is sufficient for prediction.
  - But if we want to change something, we need to understand causation.
Probabilistic Causation vs. Necessary and Sufficient Conditions

• Probabilistic Causation: The presence/absence of X causes a change in the probability that Y will occur.

• Causation via a Necessary Condition: The absence of X causes Y never be observed.

• Causation via a Sufficient Condition: The presence of X causes Y to always be observed.

• Social science theory almost always deals in probabilistic causation.

• Our hypotheses are almost always “ceteris paribus”
  • all else equal
Example Hypotheses

• A. Democracies tend to win the wars they fight because, *ceteris paribus*, democracies fight alongside more allies.
• B. In Democracies, signing an agreement with the IMF increases foreign direct investment (FDI) inflows.
• C. Firms with larger social networks are more likely to resolve contract disputes informally.

Which of these hypotheses is not causal?

Which of these hypotheses is not explicitly probabilistic?

Do you think the author implies a sufficient condition?
  • A. Yes
  • B. No
Another Clicker Question

We observe a correlation between pairs of states that have signed free trade agreements (FTAs) and pairs of states that have high levels of bilateral trade. Now I observe that the U.S. has signed a free trade agreement with South Korea but not with Singapore. Assuming I know nothing else about these countries, what should I believe?

A. The U.S. is likely to trade more with South Korea than with Singapore

B. The U.S. is probably trading more with South Korea now than they were prior to signing the FTA

C. Signing an FTA with the US causes trade between South Korea and the U.S. to increase.

D. A & B

E. All of the above
Two most important terms in the class

• These terms apply to causal research
• That means explanatory research and evaluation research

• **Dependent variable:** The outcome you are trying to explain (Y)
  • Must be measurable
    • Measure should match concept
  • Dependent variable must vary!

• **Independent Variable:** The independent variable CAUSES the dependent variable. We refer to independent variables as “X”
  • If I change X, then Y will change
  • There is usually more than one independent variable!
Two most important terms in the class

- If you can come up with a good way to help your classmates remember this, e-mail me.
Bad Health → Poor School Attendance → Poverty Tomorrow

In the diagram:
- **Bad Health** is an independent variable.
- **Poor School Attendance** is an independent variable.
- **Poverty Tomorrow** is a dependent variable.
Bad Health

No Access to Doctors
Poor Nutrition

Poor School Attendance

Poverty Tomorrow

dependent variable and independent variable

independent variable

independent variable

dependent variable
Generating Good Research Topics

- Personal experience
- Other research (yours or someone else’s)
- Social Theory

What companies, governments, and NGOs want to know:
  - $$$ and Bling
  - Resources (money and cooperation) for the research itself
  - Relevance
From Topic to Question

• Feasibility
• Social Importance
• Scientific Relevance

• Big questions are often intractable
  • Big questions we can answer badly vs. small questions we can answer well.

• Economics vs. political science and sociology
From Topic to Question

• Find a WHY question. HOW questions are good, WHY questions are better.
  • WHY questions give you a dependent variable.

• Build an explanation. Now you have an independent variable.

• Try to reverse the causal order.
• Try to reverse the relationship that is implied.