

PSC 202

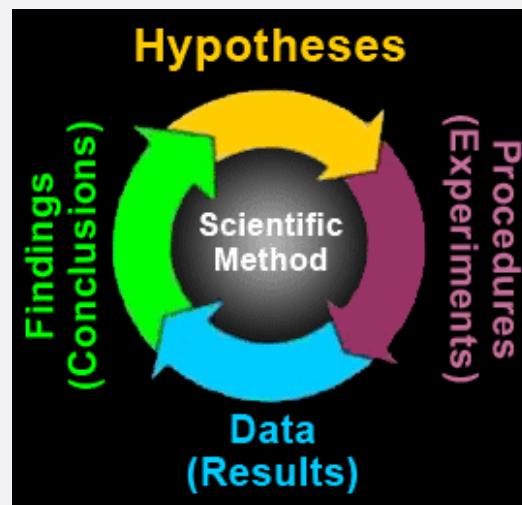
SYRACUSE UNIVERSITY

INTRODUCTION TO POLITICAL ANALYSIS

**CAUSALITY, QUANTITATIVE AND
QUALITATIVE ANALYSES**

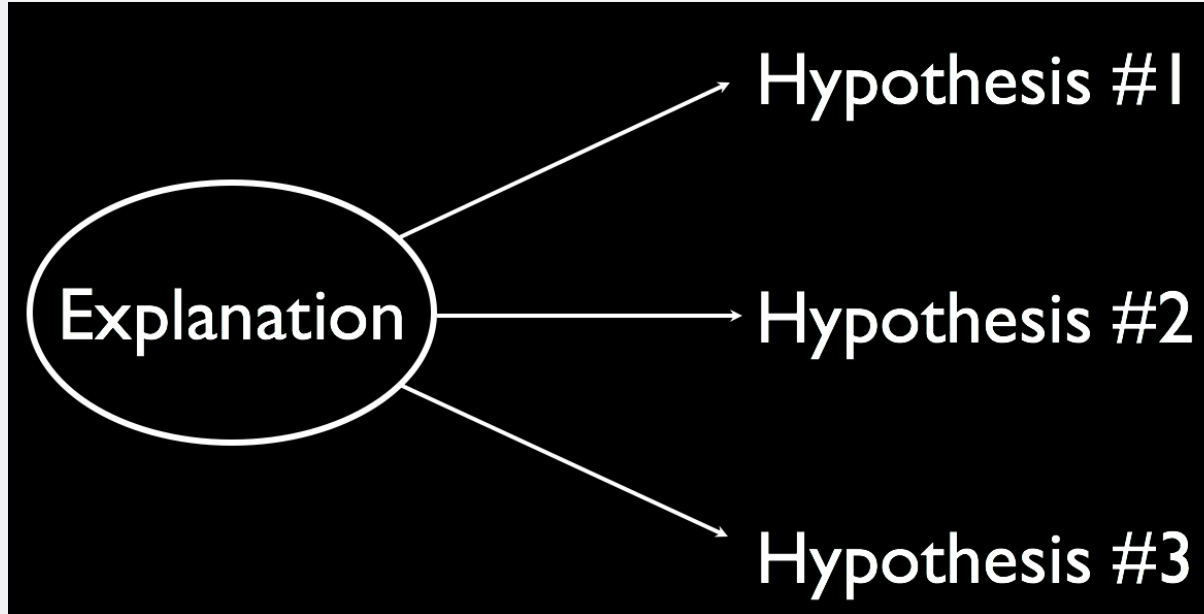
WHERE WE ARE

- Formulate research question
- Propose explanation/theory, hypotheses
- Data collection process
- Use data to evaluate hypotheses
- Reassess explanation



HYPOTHESES AND THEORY

- **Explanation/Theory:** (Simplified) description of how social reality works
- **Hypotheses:** Statements what, if the theory is true, we should observe in *our* data



GOOD HYPOTHESES

- **Involves two variables**
 - dependent and independent variable
- **Relationship between the variables is clearly specified and measurable**
- **Unit of analysis is clear**
- **Hypothesis is testable**
 - falsifiable

TEMPLATE

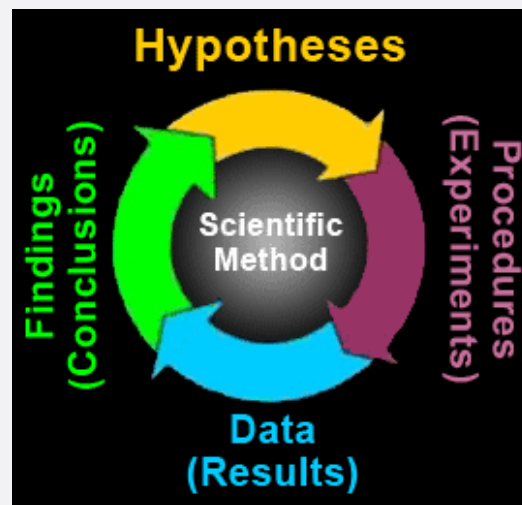
- In a comparison of [units of analysis], those having [one value of the independent variable] will be more likely to have [one value of the dependent variable] than will those having [a different value on the independent variable].

TEMPLATE

- In a comparison of **individuals**, those having **conservative parents** will be more likely to **be conservative** than will those having **liberal parents**.

RESEARCH PROCESS

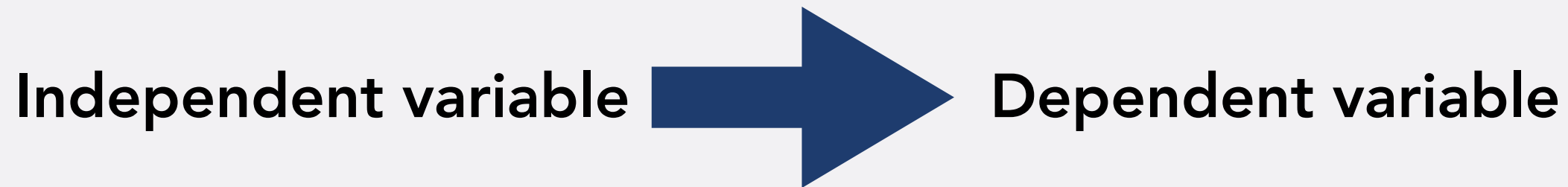
- Formulate research question
- Propose explanation/theory, hypotheses
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EVALUATING HYPOTHESES

- **How to establish a causal relationship with data?**

CAUSALITY

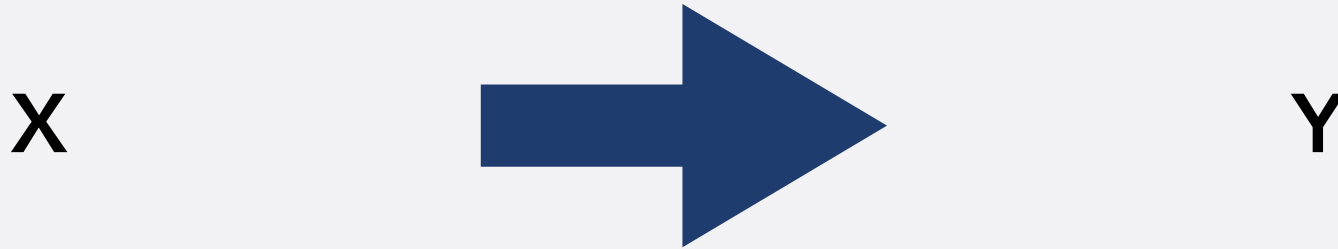


- Most of our theories: relationship between a single cause (independent variable) and a single effect (dependent variable)
 - "bivariate" relationship (2 variables)

CAUSALITY

- **But: World is more complicated than that**
 - **Almost never the case that *only* one independent variable causes variation in the dependent variable**
- **Theories are simplified descriptions how world works, but when we test them with data, we need to take the complexity of the real world into account**

HURDLES TO CAUSALITY



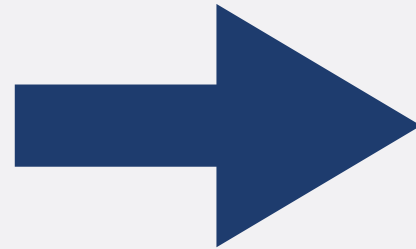
- **X=independent variable; Y=dependent variable**
- **Want to establish that X is a cause of Y**
- **Four hurdles along the route to establish causality**

HURDLE 1

- **Is there a credible causal mechanism that connects X to Y?**
 - Talked about this when looking at theory
 - Need a convincing process/mechanism that logically suggests why X might be a cause of Y

HURDLE 1

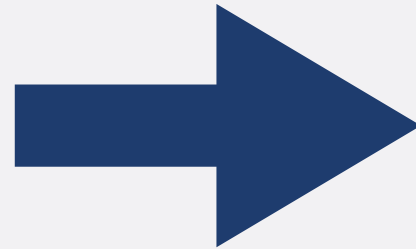
**Parents' liberal-
conservative
orientation**



Liberal-Conservative

HURDLE 1

Parents' liberal-
conservative
orientation



Liberal-Conservative

- **Example**
 - When raising children, parents transmit their values to their children (e.g. dinner table conversations, emphasis what is important and right or wrong, parents' political activism)

HURDLE 2

- Can we rule out the possibility that Y could cause X?
 - e.g. your theory is that smoking (X) causes depression (Y)
 - But: People who suffer from depression may be more likely to smoke

HURDLE 2

Parents' liberal-
conservative
orientation



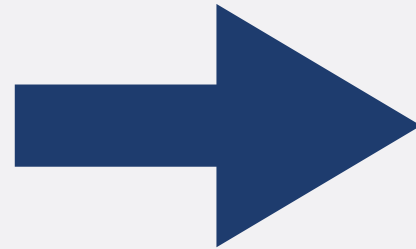
- Likely or not?

HURDLE 3

- **Is there covariation between X and Y?**
 - **i.e. is more of X associated with more/less of Y?**

HURDLE 3

Parents' liberal-
conservative
orientation



Liberal-Conservative

- Looking at two variables, we should see that:
 - People whose parents are conservative have higher ideology scores (=are more conservative) than people whose parents are liberal ("bivariate relationship")
 - If we find that lib-cons score is same in both groups, our theory may have a problem...

HURDLE 4

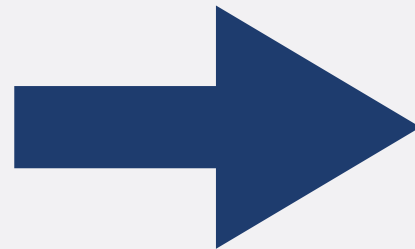
- Have we controlled for all confounding variables (Z) that might make the association between X and Y spurious?
 - World is complicated and Y usually has more than one cause
 - We need to make sure to take that into account

HURDLE 4

Political Situation
(e.g. Covid,
lockdown,
recession)



**Parents' liberal-
conservative
orientation**



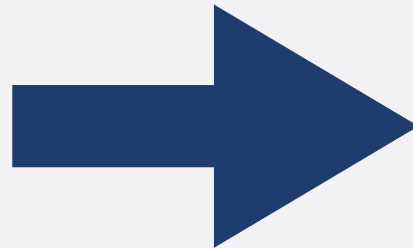
Liberal-Conservative

HURDLE 4

**Personality Traits (e.g.
openness to new experience)**



**STEM vs. Liberal
Arts education**



Liberal-Conservative

HURDLE 4

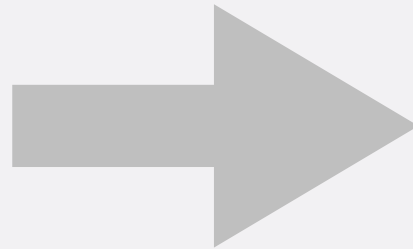
- Maybe personality traits cause *both* whether people attend STEM/Liberal Arts *and* liberal-conservative
 - People more open to new experiences might be more likely to prefer Liberal Arts education
 - People more open to new experiences might be more likely to have a liberal ideology

HURDLE 4

Personality Traits (e.g.
openness to new experience)



STEM vs. Liberal
Arts education



Liberal-Conservative

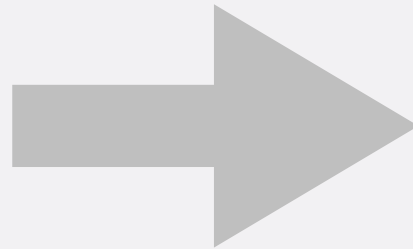
- Once we take the effect of personality traits into account, STEM vs. Liberal Arts education may not have an *independent* effect on liberal-conservative ideology anymore

HURDLE 4

Personality Traits (e.g.
openness to new experience)



STEM vs. Liberal
Arts education



Liberal-Conservative

- Bivariate relation between STEM vs. Liberal Arts education and liberal-conservative ideology was *spurious*

REST OF THIS SEMESTER

- How can we make sure that Y does not cause X ?
- How can we test whether X and Y covary?
- How can we test whether Z is a confounder and the relation between X and Y is not spurious?

OK, HOW DO WE DO THAT?

- **Social sciences: Mostly *observational* research**
 - Take data as we find it in the world
 - Try to test whether X causes Y

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?

TODAY AND WEDNESDAY

- Two major ways to address these 3 hurdles using *observational* research: small-n (qualitative) and large-n (quantitative)
 - What are these?

OUR EXAMPLE

- **The American Dream**

OUR EXAMPLE

The **American Dream** is a national **ethos** of the **United States**, the set of ideals (democracy, rights, liberty, opportunity and equality) in which freedom includes the opportunity for prosperity and success, as well as an upward **social mobility** for the family and children, achieved through hard work in a society with few barriers. In the definition of the American Dream by **James Truslow Adams** in 1931, "life should be better and richer and fuller for everyone, with opportunity for each according to ability or achievement" regardless of **social class** or circumstances of birth.^[1]

OUR EXAMPLE

- To what extent is the ethos of the “American Dream” an accurate description of reality today?
 - Specifically: “upward social mobility” and chance of achieving it

OUR EXAMPLE

- **Chance of rising in income distribution**
 - **“Intergenerational mobility”**
- **How much intergenerational mobility is there?**
- **What factors prevent people born into the bottom of the income distribution to rise up?**

LARGE-N (QUANTITATIVE)



Popular

Latest

The Atlantic

The Economist Who Would Fix the American Dream

No one has done more to dispel the myth of social mobility than Raj Chetty. But he has a plan to make equality of opportunity a reality.

- **Source: <https://www.youtube.com/watch?v=u2U9-Wq2ub0>**