Announcements

- Homework #1 will be posted later today or tomorrow.
- **It is due Tuesday, January 21\textsuperscript{st} by 5:00pm.**

- Homework and reading assignments will be posted to the class webpage on a regular basis.
- **Reminder: Sections start meeting next week in SSMS or Phelps. Pay close attention to the syllabus!**
Political Science 15

Lecture 2: Hypothesis Formation
Structure of a Hypothesis

- Of the form:

  $$A \rightarrow B$$

- “A causes B”

- A is the independent variable.

- B is the dependent variable.

- Specifies a causal mechanism.
Hypothesis Testing

- Specify a plausible causal relationship. (“A causes B” – B is the dependent variable, A is the independent variable.)

- The hypothesis needs to be falsifiable. That is, there needs to be a chance that our known facts will prove the hypothesis wrong. If not, we aren’t really learning anything.

- The hypothesis needs to be testable. That is, we need to be able to use empirical facts to determine if the hypothesis is likely to be false.
Hypothesis Formation

- Where do hypotheses/research questions come from?

- What makes for a good hypothesis?

- How do we create a good hypothesis?
Deduction versus Induction

- The deductive approach moves from the general to the specific. We start with a general theory, form a hypothesis, and test it.

- The inductive approach moves from the specific to the general. We observe some empirical regularity, form a theory about it, and then test hypotheses related to that theory.

- Most hypothesis come from an inductive approach.
One common inductive approach is to answer questions raised by previous research.

Literature reviews are easy with online paper archives such as JSTOR, others listed in J&R Ch. 3.

Papers scanned as PDF files, searchable with keywords.

Be sure you’re not “reinventing the wheel,” search for papers related to your hypothesis, discover gaps in the literature you can fill.
Political Science Journals

- American Political Science Review (APSR).
- American Journal of Political Science (AJPS).
- Journal of Politics (JOP).

These are the top 3 general journals in political science (covering all subfields).

There are other journals that specialize in specific subfields (AP, CP, IR, PT, methods).

Tip: Get the most recent papers from the top 3 on your topic, look at the references.
Picking hypotheses out of abstracts: Example 1

Can local governments shape their region’s long-run fortunes through their own policies, or is the autonomy of localities swamped by larger macroeconomic forces? Here we consider the relationship between California municipalities’ policy orientations toward residential development in the late 1990s and the subsequent incidence of foreclosures in 2008. Cities with stronger citizen or city council opposition to growth had lower foreclosure rates and smaller declines in home value, even after controlling for the rate of growth in the housing stock and other local economic, demographic, and geographic characteristics. Although the foreclosure crisis was driven by national and global forces, local development policies appeared to moderate the damage.
Things to Look For

- What are the dependent and independent variables?
- What is a likely causal mechanism?
- Could we state this relationship as a single sentence?
- Empirical questions: observations, unit of analysis, what data is required?
Picking hypotheses out of abstracts: Example 1

Can local governments shape their region’s long-run fortunes through their own policies, or is the autonomy of localities swamped by larger macroeconomic forces? Here we consider the relationship between California municipalities’ policy orientations toward residential development in the late 1990s and the subsequent incidence of foreclosures in 2008. Cities with stronger citizen or city council opposition to growth had lower foreclosure rates and smaller declines in home value, even after controlling for the rate of growth in the housing stock and other local economic, demographic, and geographic characteristics. Although the foreclosure crisis was driven by national and global forces, local development policies appeared to moderate the damage.

Slow Growth Policies ➔ Fewer Foreclosures
Forming good hypotheses: 
Our working example:

“Countries with IMF loans are more likely to experience political instability than countries without IMF loans.”

Does this meet the criteria of a good hypothesis?
Characteristics of a good hypothesis

- In declarative form
- Brief and direct
- About an expected relationship
- Guided by theory and/or past work
- Testable
- Empirical
- Plausible
- Falsifiable
- General without being ambiguous
Hypotheses should be general: A statement about how the world works, not about a specific case

Too Narrow:

- “The United States has more murders than other countries because so many people own guns.”

General:

- “Countries with more guns per capita will experience more murders per capita than countries with fewer guns.”
Hypotheses should be specific: The expected relationship is clearly stated

Too Ambiguous:

- “A country’s geographic location influences the type of political system it has.”

Specific:

- “The more borders a country shares with other countries, the more likely it is to be non-democratic.”
Steps to creating a good hypothesis:

- **Pose an interesting research question.**

- **Propose an explanation.** What are the dependent and independent variables? What is the causal mechanism?

- **State your explanation as a hypothesis.**

- **Define your concepts.** What do you mean by “democracy” or “educated”? Tell us exactly what we should see if your hypothesis is correct.
Defining concepts: Example #1

Poorly defined:

- “Rich countries tend to be democracies.”

Well defined:

- “As per capita GDP increases, the likelihood of a country having an effective political opposition increases.”
Defining concepts:
Example #2

Poorly defined:
- “Campaign contributions from interest groups lead to more corruption than contributions from citizens.”

Well defined:
- “The higher the proportion of campaign funds from interest groups, the more likely a politician will be indicted for ethical violations.”
Defining concepts: Example #3

Poorly defined:

- “Proportional representation systems are better at representing citizens than plurality systems.”

Well defined:

- “Citizens residing in countries with PR electoral systems will express greater satisfaction with democracy than citizens in plurality systems.”
Our first homework assignment will be posted on the class website by tomorrow. Three multiple part questions on causality and hypothesis formation. It is due Tuesday, January 21st (3rd week). It counts for 8% of your grade.