Designing Research

• Research Questions
• Theories and their Observable Implications
• Rival Hypotheses
• Measurement
Theories and their Observable Implications (1)

Once you have selected a research question, begin theorizing about possible answers that you can use to generate observable implications (a/k/a hypotheses or expectations).

- Theorizing: developing a reasonable and precise speculation about the answer to a research question.
- Observable implications: things we would expect to observe in the real world if our theory is right.
Theories and their Observable Implications (2)

- How do you move from theory to observable implications?
- What form do observable implications take?
Theories and their OIs (3):
Moving from Theory to OIs (a)

- Example 1
  - Preference Theory: Judges want the law to reflect their ideological preferences. And, because they lack an electoral connection, they are free to vote in accord with their ideological preferences.
  
  - Observable Implication: If my theory is correct, we should observe judges voting in accord with their ideological preferences, such that conservative judges cast conservative votes and liberals, liberal votes.

- Example 2
  - Whistle-blowing Theory: Judges want the law to reflect their ideological preferences. But, because they worry about being overturned (in which case the law won’t reflect their preferences), they won’t vote their preferences in the presence of a potential whistle blower.
  
  - Observable Implication: If my theory is correct, we should observe conservative judges casting conservative votes unless there’s a liberal (i.e., a potential whistle blower) on the panel.
Theories and their OIs (3): Moving from Theory to OIs (b)

<table>
<thead>
<tr>
<th>Liberal Policy</th>
<th>Conservative Policy</th>
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<tbody>
<tr>
<td><strong>Court</strong> (Most Preferred Position of the Median Member of the Court)</td>
<td><strong>Committees</strong> (Indifference Point of Committees between their most preferred position and that desired by Congress)</td>
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<tr>
<td><strong>Liberal Policy</strong></td>
<td><strong>Court Committee's Indifference Point</strong></td>
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| **Conservative Policy**
Theories and their Observable Implications

• How do you move from theory to observable implications?
• What form do observable implications take?
Theories and their OIs (4):
The Form of Observable Implications

(a)

- Example 1

  - Preference Theory: Judges want the law to reflect their ideological preferences. And, because they lack an electoral connection, they are free to vote in accord with their ideological preferences.

  - Observable Implication: If my theory is correct, we should observe judges voting in accord with their ideological preferences, such that conservative judges cast conservative votes and liberals, liberal votes.
Example 1’s Observable Implication: If my theory is correct, we should observe judges voting in accord with their ideological preferences, such that conservative judges cast conservative votes and liberals, liberal votes.

The Form of the Observable Implication: It is a claim about the relationship between (or among) variables that we can, at least in principle, observe.

- **Variables:** Characteristics that vary, such as ideology and votes.
- **Variable types:**
  - Dependent variables: what we are trying to explain (here, votes)
  - Independent variables: those that help account for what we are trying to explain (here, ideology).
Theories and their OIs (4):
The Form of Observable Implications

(c)

- If cities restrict the abortion right, the number of abortions will decrease.
- Women are more likely than men to favor environmental regulation.
- If a person is a strong political partisan, the likelihood that she will campaign for her party’s candidate will increase.
- Crime rates are higher in states with strict gun control laws than in states without strict gun control laws.
- The lower the education level, the higher the odds of smoking.
- In comparing voters, those whose economic situations have gotten better will be more likely to vote for the incumbent candidate than are voters whose economic situations have gotten worse.