Plan for Today

- Collect Assignments
- Briefly review last class
- Discuss experiments

Reviewing Last Class

- Experiments have two characteristics:
  - Systematic manipulation of the independent variable
  - Random assignment of participants to treatments or conditions

Types of experiments: Pretest-posttest control group experiment

<table>
<thead>
<tr>
<th>Groups</th>
<th>T1</th>
<th>T2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Measure DV</td>
<td>Stimulus</td>
</tr>
<tr>
<td>Control</td>
<td>Measure DV</td>
<td></td>
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### Posttest Only Control Group Experiment

<table>
<thead>
<tr>
<th>Groups</th>
<th>Posttest</th>
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<tbody>
<tr>
<td>Experimental</td>
<td>Stimulus</td>
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<tr>
<td>Control</td>
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### Solomon Four Design

<table>
<thead>
<tr>
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<th>T2</th>
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<tbody>
<tr>
<td>Experimental</td>
<td>Measure DV</td>
<td>Stimulus</td>
</tr>
<tr>
<td>Control</td>
<td>Measure DV</td>
<td>Measure DV again</td>
</tr>
<tr>
<td>Exp. w/ no pretest</td>
<td>Stimulus</td>
<td>Measure DV</td>
</tr>
<tr>
<td>Con. w/ no pretest</td>
<td></td>
<td>Measure DV</td>
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</tbody>
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### Comparison Group Quasi-Experiment

<table>
<thead>
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<tbody>
<tr>
<td>Experimental</td>
<td>Measure DV</td>
<td>Stimulus</td>
</tr>
<tr>
<td>Compare</td>
<td>Measure DV</td>
<td>Placebo</td>
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### Internal Validity

- The evidence that a specific independent variable such as a program or policy caused a change in the observed dependent variable.
- The likelihood that the causal pattern you identify is real.
Four threats to internal validity
- History
- Selection
- Testing
- Instrumentation

History
- Events other than the independent variable that could have affected the dependent variable

Selection
- The way that cases are selected for a study or program could affect the way they react to the program

Testing
- A situation in which the initial measure or test influences the subjects, which then affects the outcomes of the posttest
  - Surveyed about political knowledge and as a result, you pay more attention to politics
Instrumentation

- If the measuring instrument used to collect data changes between the beginning of a study and its conclusion, the results may not be valid.

Internal Validity

- How do experiments do on internal validity?

External Validity

- Whether the findings of the study can be generalized beyond the specific cases involved.

The knock on experiments

- They are great on internal validity, but the laboratory setting is “fake” so the threats to external validity are serious.
Why field experiments rule
- They are generally good on both measures
- It’s a great way to think about research design—it’s the “gold standard”
- Even if you cannot do an experiment, get as close to it as you can.

An experimenting society
- Things to think about:
  - Can billboard increase voter turnout?
  - Do “no littering” signs decrease littering?
    - How would you:
      - Randomize?
      - Manipulate the independent variable

What kind of control group?
- Do you even need to deal with them?
- Importance of placebo groups in medicine

Reviewing the Page Article
- What is the research question?
- Independent Variable(s)?
- Dependent Variable?
Did he meet the requirements of an experiment?
- Did he systematically manipulate the independent variable?
- Did he randomly assign participants to treatments or conditions?

Page Article
- What was good about the article?
- Were there any flaws in the study?

For Next Class
- Read pgs. 276-290 in C&H

Wrapping Up
- What was the most important point from today?
- What would you like to know more about?
- What was the muddiest thing from today?