Introduction to Sociology
Professor Adam Green
Professor Robert Brym

Lectures #20 & 21
Research Methods
27 Mar & 3 Apr 3
How Research Filters Perception

Values, Theories, Existing Research, Methods

REALITY
The Research Cycle

1. Figure out what matters to you
2. Formulate a testable theory (a tentative explanation of a phenomenon)
3. Review existing literature
4. Select method(s)
5. Collect data
6. Treat subjects ethically
7. Analyze data
8. Report results
Thomas Nagel (1986)

“THERE IS NO VIEW FROM NOWHERE”
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Research Ethics

1. **Respect your subjects’ right to safety.** Do your subjects no harm and, in particular, give them the right to decide whether and how they can be studied.

2. **Respect your subjects’ right to informed consent.** Tell subjects how the information they supply will be used and allow them to judge the degree of personal risk involved in supplying it.

3. **Respect your subjects’ right to privacy.** Allow subjects the right to decide whether and how the information they supply may be revealed to the public.

4. **Respect your subjects’ right to confidentiality.** Refrain from using information in a way that allows it to be traced to a particular subject.

5. **Do not falsify data.** Report findings as they are, not as you would like them to be.

6. **Do not plagiarize.** Explicitly identify, credit, and reference authors when making use of their written work in any form, including Web postings.
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Researchers engage in **participant observation** when they try to observe a social milieu from an outsider’s point of view and take part in the activities of their subjects (allowing them to understand the point of view of their subjects).

They must avoid influencing their subjects’ behaviour (**reactivity** or the **Hawthorne effect**).

Most participant-observation studies begin as **exploratory** research in which the researcher uses hunches as **hypotheses** (unverified but testable statements derived from theories).
SIDEWALK - Mitch Duneier

http://www.youtube.com/watch?v=Bv4civR8mSI

http://www.youtube.com/watch?v=J2KDgvwGFeQ
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Measurement

- **Variables** are concepts that can take more than one value.
- **Operationalization** involves establishing criteria for assigning values to variables.
- If a measurement procedure yields consistent results, we consider it **reliable**.
- If a measurement procedure measures what it is supposed to, we consider it **valid** (and it has **external validity** if it is consistent with what we know from previous research or allows us to make useful predictions).
- If research findings hold in many contexts, we consider them **generalizable**.
- **Causality** is the measurement of causes and their effects.
Validity, reliability, and generalizability may be explained by drawing an analogy between measuring a variable and firing at a bull’s-eye. In case 1, above, shots (measures) are far apart (not reliable) and far from the bull’s-eye (not valid). In case 2, shots are close to each other (reliable) but far from the bull’s-eye (not valid). In case 3, shots are close to the bull’s-eye (valid) and close to each other (reliable). In case 4, we use a second target. Our shots are again close to each other (reliable) and close to the bull’s-eye (valid). Because our measures were valid and reliable for both the first and second targets in cases 3 and 4, we conclude our results are generalizable.
Experiments

- **experiment** is a controlled artificial situation that allows researchers to isolate hypothesized causes and measure their effects precisely.
- **Randomization** involves assigning individuals to groups by chance processes.
- The **experimental group** will be exposed to the stimulus during an experiment.
- The **control group** will not be exposed to the stimulus during the experiment.
- The **dependent variable** is the effect in any cause-and-effect relationship.
- The **independent variable** is the presumed cause in any cause-and-effect relationship.
- Changing people’s behaviour by making them aware they are being studied is known as the **Hawthorne effect**.
- In a **field experiment**, researchers compare groups that are already quite similar and introduce the independent variable themselves.
- In a **natural experiment**, researchers compare groups that are already quite similar and observe what happens when the independent variable is introduced to one of the groups in the normal course of social life.
Sampling

- A **sample** is part of a group.
- A **population** is the entire group.
- A **voluntary response sample** is a group of people who chose themselves in response to a general appeal.
- A **representative sample** is a group of people chosen so their characteristics closely match those of the population of interest.
- A **convenience sample** consists of people who are easiest to reach.
- If respondents are chosen at random and an individual’s chance of being chosen is known and greater than zero, the respondents constitute a **probability sample**.
- A **sampling frame** is a list of all the people in the population of interest.
- A **randomizing method** is a way of ensuring every person in the sampling frame has a known, equal, and non-zero chance of being selected.
Because the sample measures fall within overlapping margins of error, we conclude that the measured difference in the popularity of the two parties is not statistically significant.
Sampling Error II

Here, the sample measures fall outside the margins of error, so we conclude that the measured difference in the popularity of the two parties is statistically significant.

Conservatives 48%

Liberals 55%

2.5% margin of error
Surveys

- A **mail questionnaire** is a form containing questions is mailed to the respondent and returned to the researcher through the mail system.
- The **response rate** is the number of people who answer the questionnaire divided by the number of people asked to do so, expressed as a percent.
- In a **face-to-face interview survey**, questions are presented to the respondent by the interviewer during a meeting.
- In a **telephone survey**, questions are presented to the respondent by the interviewer over the phone.
- A **closed-ended question** provides the respondent with a list of permitted answers.
- **Open-ended questions** allow respondents to answer questions in their own words.
Threats to Validity

- **Undercounting** occurs due to an imperfect sampling frame.
- **Nonresponse** occurs when respondents do not answer some or all questions.
- **Response bias** occurs when respondents do not answer questions completely accurately.
- To avoid **wording effects**, questions should be specific, simple and neutral, and they should focus on important, singular, current events.
Ratio of non-white to white and black to white income for men working full-time

<table>
<thead>
<tr>
<th></th>
<th>Ratio of non-white to white income</th>
<th>Ratio of black to white income</th>
</tr>
</thead>
<tbody>
<tr>
<td>All men</td>
<td>.80</td>
<td>.70</td>
</tr>
<tr>
<td>All men born in Canada</td>
<td>.90</td>
<td>.80</td>
</tr>
<tr>
<td>All men born in Canada with university education</td>
<td>1.00</td>
<td>.90</td>
</tr>
</tbody>
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