Tipos de experimentos de encuesta: diseños simples

Santiago López-Cariboni, Universidad de la República - dECON

Translating Hypotheses into Designs

From Theory to Design

- From theory, we derive testable hypotheses
 - Hypotheses are expectations about differences in outcomes across levels of a putatively causal variable
- ▶ Hypothesis must be testable by an SATE $(H_0 = 0)$
- Manipulations are developed to create variation in that causal variable

Example: News Framing

- ► Theory: Presentation of news affects opinion
- ► Hypotheses:
 - News emphasizing free speech increases support for a hate group rally
 - News emphasizing public safety decreases support for a hate group rally
- Manipulation:
 - Control group: no information
 - ► Free speech group: article emphasizing rights Public safety group: article emphasizing safety

Example: Partisan Identity

- ► Theory: Strength of partisan identity affects tendency to accept party position
- ► Hypotheses:
 - Strong partisans are more likely to accept their party's position on an issue
- Manipulation:
 - Control group: no manipulation
 - "Univalent" condition
 - "Ambivalent" condition

Univalent

These days, Democrats and Republicans differ from one another considerably. The two groups seem to be growing further and further apart, not only in terms of their opinions but also their lifestyles. Earlier in the survey, you said you tend to identify as a Democrat/Republican. Please take a few minutes to think about what you like about Democrats/Republicans compared to the Republicans/Democrats. Think of 2 to 3 things you especially like best about your party. Then think of 2 to 3 things you especially dislike about the other party. Now please write those thoughts in the space below.

Ambivalent

These days, Democrats and Republicans differ from one another considerably. The two groups seem to be growing further and further apart, not only in terms of their opinions but also their lifestyles. Earlier in the survey, you said you tend to identify as a Democrat/Republican. Please take a few minutes to think about what you like about Democrats/Republicans compared to the Republicans/Democrats. Think of 2 to 3 things you especially like best about the other party. Then think of 2 to 3 things you especially dislike about your party. Now please write those thoughts in the space below.

Treatments Test Hypotheses!

- Experimental "factors" are expressions of hypotheses as randomized groups
- What stimulus each group receives depends on hypotheses
- ► Three ways hypotheses lead to stimuli:
 - presence/absence
 - levels/doses
 - qualitative variations

Ex.: Presence/Absence

- ► Theory: Negative campaigning reduces support for the party described negatively.
- Hypothesis: Exposure to a negative advertisement criticizing a party reduces support for that party.
- Manipulation:
 - Control group receives no advertisement.
 - Treatment group watches a video containing a negative ad describing a party.

Ex.: Levels/doses

- ► Theory: Negative campaigning reduces support for the party described negatively.
- Hypothesis: Exposure to higher levels of negative advertising criticizing a party reduces support for that party.
- Manipulation:
 - Control group receives no advertisement.
 - Treatment group 1 watches a video containing 1 negative ad describing a party.
 - Treatment group 2 watches a video containing 2 negative ads describing a party.
 - ► Treatment group 3 watches a video containing 3 negative ads describing a party.
 - etc.

Ex.: Qualitative variation

- ► Theory: Negative campaigning reduces support for the party described negatively.
- Hypothesis: Exposure to a negative advertisement criticizing a party reduces support for that party, while a positive advertisement has no effect.
- Manipulation:
 - Control group receives no advertisement.
 - Negative treatment group watches a video containing a negative ad describing a party.
 - Positive treatment group watches a video containing a positive ad describing a party.

Assessing Quality

Activity!

- ▶ How do we know if an experiment is any good?
- Talk with a partner for about 3 minutes
- ► Try to develop some criteria that allow you to evaluate "what makes for a good experiment?"

Some possible criteria

- ► Significant results
- ► Face validity
- ► Coherent for respondents
- ► Non-obvious to respondents
- Simple
- ► Indirect/unobtrusive
- Validated by prior work
- ► Innovative/creative
- **.**..

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-Thomas J. Leeper (28 June 2018)

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- ▶ Before the study using *pilot testing* (or *pretesting*)
- During the study, using manipulation checks
- During the study, using placebos
- ▶ During the study, using *non-equivalent outcomes*

I. Outcomes Affected

- ► Follows a circular logic!
- ▶ Doesn't tell us anything if we hypothesize null effects

II. Pilot Testing

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- Assess whether a set of possible manipulations affect a measure of the *independent* variable
- Example:
 - ► Goal: Manipulate the "strength" of an argument
 - Write several arguments
 - Ask pilot test respondents to report how strong each one was

III. Manipulation Checks

- Manipulation checks are items added post-treatment, post-outcome that assess whether the *independent* variable was affected by treatment
- ▶ We typically talk about manipulations as directly setting the value of *X*, but in practice we are typically manipulating something *that we think* strongly modifies *X*

III. Manipulation Checks

- Manipulation checks are items added post-treatment, post-outcome that assess whether the *independent* variable was affected by treatment
- We typically talk about manipulations as directly setting the value of X, but in practice we are typically manipulating something that we think strongly modifies X
- Example: information manipulations aim to modify knowledge or beliefs, but are necessarily imperfect at doing so

Manipulation check example¹

- 1. Treatment 1: Supply Information
- 2. Manipulation check 1: measure beliefs
- 3. Treatment 2: Prime a set of considerations
- 4. Outcome: Measure opinion
- 5. Manipulation check 2: measure dimension salience

¹Leeper &Slothuus. n.d. "Can Citizens Be Framed?" Available from: http://thomasleeper.com/research.html.

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- Manipulation checks should be innocuous
 - Shouldn't modify independent variable
 - Shouldn't modify outcome variable
- Generally, measure post-outcome
- Measure both what you wanted to manipulate and what you didn't want to manipulate
 - ▶ Most treatments are compound!

IV. Placebos

► Include an experimental condition that *does not* manipulate the variable of interest (but might affect the outcome)

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Example:

- ► Study whether risk-related arguments about climate change increase support for a climate change policy
- ► Placebo condition: control article with risk-related arguments about non-environmental issue (e.g., terrorism)

V. Non-equivalent outcomes

► Measures an outcome that *should not* be affected by independent variable

V. Non-equivalent outcomes

- Measures an outcome that should not be affected by independent variable
- Example:
 - Assess effect of some treatment on attitudes toward group A
 - ► Focal outcome: attitudes toward group A
 - Non-equivalent outcome: attitudes toward group B

Aside: Demand Characteristics

- "Demand characteristics" are features of experiments that (unintentionally) imply the purpose of the study and thereby change respondents' behavior (to be consistent with theory)
- Implications:
 - Design experimental treatments that are non-obvious
 - Do not disclose the purpose of the study up front²

²But, consider the ethics of not doing so (more later)

Common Paradigms and Examples

Question Wording Designs

- ► Simplest paradigm for presence/absence or qualitative variation
- Manipulation operationalizes this by asking two different questions
- Outcome is the answer to the question
- Example: Schuldt et al. "'Global Warming' or 'Climate Change'? Whether the Planet is Warming Depends on Question Wording."

You may have heard about the idea that the world's temperature may have been **going up** over the past 100 years, a phenomenon sometimes called **global warming**. What is your personal opinion regarding whether or not this has been happening?

- Definitely has not been happening
- Probably has not been happening
- Unsure, but leaning toward it has not been happening
- Not sure either way
- ▶ Unsure, but leaning toward it has been happening
- Probably has been happening
- Definitely has been happening

You may have heard about the idea that the world's temperature may have been **changing** over the past 100 years, a phenomenon sometimes called **climate change**. What is your personal opinion regarding whether or not this has been happening?

- Definitely has not been happening
- Probably has not been happening
- ▶ Unsure, but leaning toward it has not been happening
- Not sure either way
- ▶ Unsure, but leaning toward it has been happening
- Probably has been happening
- Definitely has been happening

Another framing example³

Today, tests are being developed that make it possible to detect serious genetic defects **before a baby is born**. But so far, it is impossible either to treat or to correct most of them. If (you/your partner) were pregnant, would you want (her) to have a test to find out if the **baby** has any serious genetic defects? (Yes/No)

Suppose a test shows the **baby** has a serious genetic defect. Would you, yourself, want (your partner) to have an abortion if a test shows the **baby** has a serious genetic defect? (Yes/No)

³Singer & Couper.2014. "The Effect of Question Wording on Attitudes toward Prenatal Testing and Abortion." *Public Opinion Quarterly* 78(3): 751–760.

Another framing example³

Today, tests are being developed that make it possible to detect serious genetic defects in the fetus during pregnancy. But so far, it is impossible either to treat or to correct most of them. If (you/your partner) were pregnant, would you want (her) to have a test to find out if the fetus has any serious genetic defects? (Yes/No)

Suppose a test shows the **fetus** has a serious genetic defect. Would you, yourself, want (your partner) to have an abortion if a test shows the **fetus** has a serious genetic defect? (Yes/No)

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Another framing example⁴

Do you favor or oppose the death penalty for persons convicted of murder?

 $^{^4}$ Bobo & Johnson.2004. "A Taste for Punishment: Black and White Americans' Views on the Death Penalty and the War on Drugs." Du Bois Review 1(1): 151–180.

Another framing example⁴

Blacks are about 12% of the U.S. population, but they were half of the homicide offenders last year. Do you favor or oppose the death penalty for persons convicted of murder?

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Another framing example⁵

Concealed handgun laws have recently received national attention. Some people have argued that law-abiding citizens have the right to protect themselves. What do you think about concealed handgun laws?

⁵Haider-Markel & Joslyn. 2001. "Gun Policy, Opinion, Tragedy, and Blame Attribution: The Conditional Influence of Issue Frames." *Journal of Politics* 63(2): 520–543.

Another framing example⁵

Concealed handgun laws have recently received national attention. Some people have argued that laws allowing citizens to carry concealed handguns threaten public safety because they would allow almost anyone to carry a gun almost anywhere, even onto school grounds. What do you think about concealed handgun laws?

⁵Haider-Markel & Joslyn. 2001. "Gun Policy, Opinion, Tragedy, and Blame Attribution: The Conditional Influence of Issue Frames." *Journal of Politics* 63(2): 520–543.

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- Example:
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 - Battery of 5 "life" questions
 - ► Measure support for legalized abortion
- ▶ If answers to manipulated questions matter, can measure rest post-outcome

- How close do you feel to your ethnic or racial group?
- Some people have said that taxes need to be raised to take care of pressing national needs. How willing would you be to have your taxes raised to improve education in public schools?

⁶Transue. 2007. "Identity Salience, Identity Acceptance, and Racial Policy Attitudes: American National Identity as a Uniting Force." *American Journal of Political Science* 51(1): 78–91.

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Ex.: Knowledge and Political Interest

- Do you happen to remember anything special that your U.S.
 Representative has done for your district or for the people in your district
 while he has been in Congress?
- 2. Is there any legislative bill that has come up in the House of Representatives, on which you remember how your congressman has voted in the last couple of years?
- 3. Now, some people seem to follow what's going on in government and public affairs most of the time, whether there's an election going on or not. Others aren't that interested. Would you say that you follow what's going on in government and public affairs most of the time, some of the time, only now and then, or hardly at all?

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An Instructional Manipulation⁷

For the next few questions, I am going to read out some statements, and for each one, please tell me if it is true or false. If you don't know, just say so and we will skip to the next one.

- 1. Britain's electoral system is based on proportional representation.
- 2. MPs from different parties are on parliamentary committees.
- 3. The Conservatives are opposed to the ratification of a constitution for the European Union.

⁷Sturgis, Allum & Smith. 2008. "An Experiment on the Measurement of Political Knowledge in Surveys." *Public Opinion Quarterly* 72(1): 90–102.

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For the next few questions, I am going to read out some statements, and for each one, please tell me if it is true or false. If you don't know, please just give me your best guess.

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An Instructional Manipulation⁸

In the next part of this study, you will be asked 14 questions about politics, public policy, and economics. Many people don't know the answers to these questions, but it is helpful for us if you answer, even if you're not sure what the correct answer is. We encourage you to take a guess on every question. At the end of this study, you will see a summary of how many questions you answered correctly.

⁸Prior & Lupia. 2008. "Money, Time, and Political Knowledge: Distinguishing Quick Recall and Political Learning Skills." *American journal of Political Science* 52(1): 169–183.

An Instructional Manipulation⁸

We will pay you for answering questions correctly. You will earn \$1 for every correct answer you give. So, if you answer 3 of the 14 questions correctly, you will earn \$3. If you answer 7 of the 14 questions correctly, you will earn \$7. The more questions you answer correctly, the more you will earn.

⁸Prior & Lupia. 2008. "Money, Time, and Political Knowledge: Distinguishing Quick Recall and Political Learning Skills." *American journal of Political Science* 52(1): 169–183.

Vignettes

- A "vignette" is a short text describing a situation
- ► Vignettes are probably the most common survey experimental paradigm, after question wording designs
- Take many forms and increasingly encompass non-textual stimuli
- Basically limited to web-based mode

A classic vignette⁹

Now think about a **(black/white)** woman in her early thirties. She is a high school **(graduate/drop out)** with a ten-year-old child, and she has been on welfare for the past year.

- How likely is it that she will have more children in order to get a bigger welfare check? (1 = Very likely, ..., 7 = Not at all likely)
- ► How likely do you think it is that she will really try hard to find a job in the next year? (1 = Very likely, ..., 7 = Not at all likely)

⁹Gilens, M. 1996. "'Race coding' andwhite opposition to welfare. *American Political Science Review* 90(3): 593–604.

Newer vignette¹⁰

Imagine that you were living in a village in another district in Uttar Pradesh and that you were voting for candidates in (village/state/national) election. Here are the two candidates who are running against each other: The first candidate is named (caste name) and is running as the (BJP/SP/BSP) party candidate. (Corrupt/criminality allegation). His opponent is named (caste name) and is running as the (BJP/SP/BSP) party candidate. (Opposite corrupt/criminality allegation). From this information, please indicate which candidate you would vote for in the (village/state/national) election.

¹⁰Banerjee et al. 2012. "ArePoor Voters Indifferent to Whether Elected Leaders are Criminal or Corrupt? A Vignette Experiment in Rural India." Working paper.

Longer vignette example¹¹

¹¹Merolla and Zechmeister. 2013. "Evaluating Political Leaders in Times of Terror and Economic Threat: The Conditioning Influence of Politician Partisanship." *Journal of Politics* 75(3): 599–712.

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- Devices
 - Browser-specificity
 - ► Device sizes (e.g., mobile)

Non-textual Manipulations

- Images can work well
- Standalone or embedded in a text or question

¹²"Cueing Patriotism, Prejudice, and Partisanship in the Age of Obama: Experimental Tests of U.S. Flag Imagery Effects in Presidential Elections." *Political Psychology*: in press.

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 - Subliminal primes possible, depending on software
 - Lots of recent examples of facial manipulation

¹²"Cueing Patriotism, Prejudice, and Partisanship in the Age of Obama: Experimental Tests of U.S. Flag Imagery Effects in Presidential Elections." *Political Psychology*: in press.

$\mathsf{Example}^{13}$

¹³lyengar et al. 2010. "Do Explicit Racial CuesInfluence Candidate Preference? The Case of Skin Complexion in the 2008 Campaign." Working paper.

$\mathsf{Example}^{14}$

¹⁴Laustsen & Petersen. 2016. "WinningFaces vary by Ideology." *Political Communication* 33(2): 188–211.

${\sf Example}^{15}$

¹⁵Bailenson et al. 2006. "Transformed Facial Similarity as a Political Cue: A Preliminary Investigation." *Political Psychology* 27(3): 373–385.

Audio & Video manipulations

▶ Problematic for same reasons as long texts

¹⁶Vavreck. 2007 "The Exaggerated Effects of Advertising on Turnout: The Dangers of Self-Reports." *Quarterly Journal of Political Science* 2: 325–343.

¹⁷Mutz. 2007. "Effects of 'In-Your-Face' Television Discourse on Perceptions of a Legitimate Opposition." *American Political Science Review* 101(4): 621–635.

Audio & Video manipulations

- Problematic for same reasons as long texts
- Best practices
 - Keep it short
 - Have the video play automatically
 - Disallow survey progression
 - Control and validate

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- Examples
 - ► Television Advertisements¹⁶
 - News Programs¹⁷

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- Can be problematic:
 - ▶ Time-intensive
 - Invites drop-off
 - Compliance problems

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These days, Democrats and Republicans differ from one another considerably. The two groups seem to be growing further and further apart, not only in terms of their opinions but also their lifestyles. Earlier in the survey, you said you tend to identify as a Democrat/Republican. Please take a few minutes to think about what you like about Democrats/Republicans compared to the Republicans/Democrats. Think of 2 to 3 things you especially like best about your party. Then think of 2 to 3 things you especially dislike about the other party. Now please write those thoughts in the space below.

Ambivalent

These days, Democrats and Republicans differ from one another considerably. The two groups seem to be growing further and further apart, not only in terms of their opinions but also their lifestyles. Earlier in the survey, you said you tend to identify as a Democrat/ Republican. Please take a few minutes to think about what you like about Democrats/ Republicans compared to the Republicans/ Democrats. Think of 2 to 3 things you especially like best about the other party. Then think of 2 to 3 things you especially dislike about your party. Now please write those thoughts in the space below.

