

# Eliciting Truthful Responses to Sensitive Survey Questions Using List Experiments

Kosuke Imai

Harvard University

Panel on Methods to Measure Public Opinion and Incidence OF FGM  
Population Council  
May 26, 2022

# Application of List experiments: Hearts and Minds in Afghanistan (Blair, Imai & Lyall, 2014)

- How do we measure civilian attitudes in a conflict setting?
- Why are direct questions a bad idea?
  - 1 Threats to enumerators and respondents
  - 2 Nonresponse, social desirability bias
  - 3 Interviews are public
  - 4 Danger of selection bias in sampling locations (role of gatekeepers)
- Direct question in the ANQAR survey: 50% refusal rate

# Public Nature of Interviews



# List Experiments

- Script for the control group:

I'm going to read you a list with the names of different groups and individuals on it. After I read the entire list, I'd like you to tell me how many of these groups and individuals you broadly support, meaning that you generally agree with the goals and policies of the group or individual. Please don't tell me which ones you generally agree with; only tell me how many groups or individuals you broadly support.

Karzai Government; National Solidarity Program; Local Farmers

# List Experiments

- Script for the **treatment group**:

I'm going to read you a list with the names of different groups and individuals on it. After I read the entire list, I'd like you to tell me how many of these groups and individuals you broadly support, meaning that you generally agree with the goals and policies of the group or individual. Please don't tell me which ones you generally agree with; only tell me how many groups or individuals you broadly support.

Karzai Government; National Solidarity Program; Local Farmers; **ISAF**

# Assumptions of List Experiments and Their Violations

- Assumptions

- ① Randomization of the Treatment
- ② **No Design Effect:** The inclusion of the sensitive item does not affect answers to control items
- ③ **No Liars:** Answers about the sensitive item are truthful

- Violations

- **No Design Effect:** respondents may evaluate control items relative to sensitive item
- **No Liars:**
  - Ceiling effect: too many yeses for control items
  - Floor effect: too many noes for control items
- Advantages of list experiments: easy implementation
- Drawbacks of list experiments: assumptions, lower statistical power
- List experiments may not work well if the item is too sensitive

# Methodological Developments of List Experiments

- Beyond proportions: multivariate regression analysis
- Statistical test to detect design effects
- Statistical modeling with:
  - ceiling/floor effects
  - auxiliary information
  - measurement error
- Various modified designs

# Practical Suggestions for List Experiments

- Suggestions for analysis:
  - 1 Estimate proportions of types and test design effects
  - 2 Conduct multivariate regression analyses
  - 3 Investigate the robustness of findings to ceiling and floor effects
- Suggestions for design:
  - 1 Select control items to avoid skewed response distribution
  - 2 Avoid control items that are ambiguous and generate weak opinion
  - 3 Conduct a pilot study
  - 4 Consider alternative designs such as double list experiment
  - 5 Include a direct question and other indirect questions if possible
- Open-source software: R package **list**: Statistical Methods for the Item Count Technique and List Experiment



# Two Ways to Improve List Experiments

- ① Comparing and combining multiple measurements (Blair, Imai & Lyall 2014)
  - Agreement among multiple measurements  $\rightsquigarrow$  more credible
  - Combining multiple measurements  $\rightsquigarrow$  more powerful
  
- ② Using auxiliary information (Chou, Imai, & Rosenfeld 2020)
  - Sometimes aggregate truths are available
    - Turnout rates and voting outcomes
    - Administrative records, e.g., crime and incarceration
  - Use auxiliary information to improve individual-level inference

# References

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<http://imai.fas.harvard.edu/projects/sensitive.html>