Dillman’s
Tailored Design Method

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Goals for this Lecture

• Discuss the types of errors that can contribute to total survey error
  – Understand where each of the errors can occur in the process of survey and sample design

• Learn about why people respond to surveys and how to encourage response
  – Based on Dillman’s “Tailored Design Method”

• Discuss what aspects of a survey can be tailored to a given situation
## Reducing Total Survey Error

<table>
<thead>
<tr>
<th>Source of Error</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coverage</td>
<td>‘...from the failure to give any chance of sample selection to some persons in the population’.</td>
</tr>
<tr>
<td>Sampling</td>
<td>‘...from heterogeneity on the survey measure among persons in the population’.</td>
</tr>
<tr>
<td>Nonresponse</td>
<td>‘...from the failure to collect data on all persons in the sample’.</td>
</tr>
<tr>
<td>Measurement</td>
<td>‘...from inaccuracies in responses recorded on the survey instruments. These arise from: (a) effects of interviewers on the respondents' answers to survey questions; (b) error due to respondents, from the inability to answer questions, lack of requisite effort to obtain the correct answer, or other psychological factors; (c) error due to the weakness in the wording of survey questionnaires; and, (d) error due to effects of the mode of data collection, the use of face to face or telephone communications’.</td>
</tr>
</tbody>
</table>

✔ Figure 2.1 of Dillman et al. (2009) has nice examples of surveys that failed as a result of committing each of the above errors
Reducing Total Survey Error

- Coverage and sampling errors are reduced with good sample design
- Measurement errors are reduced with good question and instrument design
- Nonresponse errors are reduced with good question, instrument, and fielding design and execution
  - Focus of the Tailored Design Method

✓ Let’s look at the first two bullets first…
Surveys from a Design Perspective

This side is about what is being measured

Measurement

Construct

Measurement

Response

Edited Response

Survey Statistic

Representation

Target Population

Sampling Frame

Sample

Respondents

Postsurvey Adjustments

Figure 2.2 Survey lifecycle from a design perspective.

This side is about who is being measured

Measurement Example (NCVS)

- **Construct**: How many incidents of crime were there in the past year in the US?
- **Measurement**: “During the last year, did you call the police to report something that happened to you that you thought was a crime?”
- **Response**: Person thinks back over the past year to come up with a response
- **Edited Response**: Subsequent questions are asked to qualify whether the calls were related to a crime
  - Using this information, combined with the answer to the first measurement question, number of crimes (as defined in the survey) that happened to this respondent calculated
Construct Example (NCVS)

- **Target Population**: Individuals aged 12 and over, not on active military service, who reside in noninstitutionalized settings
- **Frame Population**: US households enumerated through counties, blocks, listed addresses, listed members of each (selected) household
- **Sample**: About 42,000 households – 76,000 individuals
- **Respondents**: Each person aged 12 or older reports for self
- **Postsurvey Adjustments**: Missing data estimated (“imputed”), nonresponse adjustments, etc.
Where the Errors Come In

This side is about individual measurements

This side is about aggregate measurements

Minimizing Nonresponse: Why People Respond to Surveys

• Leverage-Saliency theory
  – Survey must be salient to the respondents
  – Respondents must be motivated to respond
    • Different people are motivated by different aspects of the survey

• Social Exchange theory
  – Participation motivated by the return on their actions (not necessarily monetary)
    • Could be directly to themselves or to some larger population/society
Applying Social Exchange to Survey Design

• Three key questions:
  – How can the perceived rewards for responding be increased?
  – How can the perceived costs for responding be reduced?
  – How can trust be established so that people believe the rewards will outweigh the costs of responding?
Increasing Benefits of Participation

• Provide information about the survey
• Ask for help or advice
• Make the questionnaire interesting
• Show positive regard and say thank you
• Give tangible rewards
• Support group values
• Provide social validation
• Inform people that opportunities to respond are limited
Decreasing Costs of Participation

• Make the questionnaire short and easy to complete
• Minimize requests for personal or sensitive information
• Make it convenient to respond
• Avoid subordinating language
• Emphasize similarity to other requests to which the person has already responded
Ways of Establishing Trust

• Obtain sponsorship by legitimate authority
• Provide token of appreciation in advance
• Make the task appear important
• Ensure confidentiality and security of information
  – Also give the appearance of complete competence so people believe they can trust you with their data
Developing a Survey Design Tailored for the Situation

• Each survey situation unique
  – Objective(s) and topic(s)
  – Respondents
  – Sponsor(s) and researcher(s)

• What works well in one situation may or may not work well in another

• However, there are proven principles and general strategies
  – Must tailor them to each specific situation
Survey Features That Can Be Tailored to the Situation

• Questionnaire
  – Mode, topics, length, layout and organization, etc.

• Individual questions
  – Topics, type (open, closed, etc), wording, design and layout, etc.

• Additional Materials

• Contact style
  – Mode, number, timing, wording, personalization, etc.

• Incentive
  – Type, amount, timing

• Sample
  – Type and size of sample
Tailored Design Method Overview

• Customize surveys for each situation
  – Based on knowledge of topic, types of respondents, budget and other constraints
  – Motivates various types of people to respond
    • Establishes trust, maximizes perceived benefits while minimizing costs
• Seeks to address overall survey error
  – Particular focus on minimizing non-response
  – But deliberately considers all sources of error
What We Have Covered

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