Sensitive Questions & Survey Mode

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How do you evaluate your Passport Check experience?

Picture Credit: Samantha Chiu (JPSM) ; Zach Warren (Asia Foundation)
Generating Original Data

**Measurement**
- Construct
- Measurement
- Response
- Edited Response

**Representation**
- Target Population
- Sampling Frame
- Sample
- Respondents
- Adjustments

Survey Statistic

Groves et al. (2011)
Generating Original Data: Reality

Groves et al. (2011)

Measurement

Rapidly changing research questions
Response Error: Sensitive Topics, Cognitive Burden
No cloud, poor connectivity, black outs, translation

Construct → Measurement → Response → Edited Response

Survey Statistic

Representation

Target Population → Sampling Frame → Sample → Respondents → Adjustments

Hard-to-reach, unidentifiable populations, migrants
No census; no administrative records
Safety & access – no contact
Non-response/adjustment error

Cognitive process in answering questions

Comprehension – Retrieval – Judgement
Reporting/Response Selection
Sub-optimal responses (satisficing)

Measurement

Cognitive process in answering questions
- Comprehension – Retrieval – Estimation/Judgement
- Reporting/Response Selection
- Sub-optimal responses (statisificing)

Bob may misunderstand question
Comprehension of the question
Event(s) may not be recorded (“encoded”) in Bob’s memory
Retrieval of Information
Bob may forget relevant events
Judgement & Estimation
Bob may intentionally misreport. Social desirability.
Bob may take shortcuts: satisficing.
Reporting an answer
Bob may intentionally misreport. Social desirability.
Bob may take shortcuts: satisficing.
Reporting an answer


Questions about sensitive behaviors

Private Information
- Income
- Identifiers (e.g., social security number)

Illegal Behavior
- Drug Use
- Criminal offending
- Sexual abuse

Socially stigmatizing behavior

Question is threatening to ask, regardless of respondent’s answer.
E.g., Income
Respondents will refuse to answer

Question is threatening to answer.
E.g., Drug use
Respondent may give the wrong answer. Depends on what the actual behavior is.

Tourangeau & Yan (2007)
Mixture of Issues

CAN THE INFORMATION BE USED IN A LEGAL WAY?

IS THE INFORMATION PERSONAL?

DOES THE INFORMATION RELATE TO THE IMAGE OF THE RESPONDENT?

Mode

As one approach
Mode: What we know (and don’t)

Mode effects on social desirability
- SD bias stronger in interviewer administered surveys
- Assessment usually without record data
- Little knowledge about relative effects between self-administered modes

Effects on desirable and undesirable items
- Underreporting for undesirable behavior, overreporting for desirable
- Studies mostly done for undesirable behavior
- No knowledge for relative effects of desirable and undesirable behavior

Kreuter, Presser, Tourangeau -- POQ, 2008

Sample of alumni
- Graduating classes 1989 - 2002
- Sample drawn from administrative records
- Academic record data available

Items asked
- Failing grades, academic probation, dropping a class
- Honorable mention, GPA
- Donations/Donation’04; Amount donated ‘04
- Alumni association

Mode of administration
Initial contact by phone with random assignment to
- Web
- CATI
- IVR

<table>
<thead>
<tr>
<th>Total</th>
<th>Total</th>
<th>%</th>
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<tbody>
<tr>
<td>Alumni eligible (number dialled)</td>
<td>7567</td>
<td>100.0</td>
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<tr>
<td>Screener completion</td>
<td>1501</td>
<td>19.8</td>
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<tr>
<td>Initially assigned</td>
<td>1501</td>
<td>100.0</td>
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<tr>
<td>Started main questionnaire</td>
<td>1094</td>
<td>72.9</td>
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<tr>
<td>Number of completers</td>
<td>1003</td>
<td>66.8</td>
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<tr>
<td>Response rate</td>
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<td>13.2</td>
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Study basics

<table>
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<tr>
<th></th>
<th>CATI</th>
<th>WEB</th>
<th>IVR</th>
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<tbody>
<tr>
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<td>363</td>
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<tr>
<td>% complete</td>
<td>31.9</td>
<td>36.2</td>
<td>31.9</td>
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<tr>
<td>RR1</td>
<td>18.8</td>
<td>11.3</td>
<td>12.1</td>
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</table>

Kreuter, Presser, Tourangeau -- POQ, 2008

Error rates conditional on being in undesirable state

[Graph showing error rates conditional on being in undesirable state]

Kreuter, Presser, Tourangeau -- POQ, 2008
Questions sensitivity by mode

Sensitivity by mode and true score

Kreuter, Presser, Tourangeau -- POQ, 2008
More Modern Modes

Smart Phones --- Schober et al. 2019

Texting interviews (vs. voice) improved both participation rates and measurement (more disclosure of sensitive behavior); More disclosure in automated vs. human interviews
Native smartphone sensors

- **Proximity**
  - NFC
  - Bluetooth
- **Location**
  - Wi-Fi
  - GPS
  - Cellular network
- **Fingerprint sensor**
- **Thermometer**
- **Air humidity sensor**
- **Heart rate sensor**
- **Proximity sensor**
- **Microphone**
- **Light sensor**
- **Camera**
- **Ambience**
- **Barometer**
- **Accelerometer**
- **Pedometer**
- **Compass**
- **Gyroscope**
- **Physical activity**
Privacy Concerns (Keusch et al. 2019)

- higher privacy concerns correlate with lower willingness to participate

Consent by Data Type (IAB-SMART Study, Kreuter et al. 2019)
Summary

When asking sensitive questions, mode of data collection matters.

Choice of mode should - not by increased rates alone - examine total survey error

Alternative modes can help. If privacy is taken into account.

References


Kreuter, Frauke; Haas, Georg Christoph; Keusch, Florian; Bähr, Sebastian; Trappmann, Mark (2019): Collecting survey and smartphone sensor data with an app: opportunities and challenges around privacy and informed consent. In: Social science computer review, online first, 17 S.


