

Can you commit to this survey? Examining whether committed web probing respondents provide responses of higher data quality

Jonathan Katz, Matt Virgile, Mandi Martinez, and Jessica Holzberg

Center for Behavioral Science Methods
U.S. Census Bureau

2021 AAPOR

Disclaimer: This presentation is released to inform interested parties of research and to encourage discussion. The views expressed are those of the authors and not those of the U.S. Census Bureau. The paper has been reviewed for disclosure avoidance and approved under CBDRB-FY21-CBSM002-013

Web probing

- Embeds traditional in-person cognitive interviewing techniques in web instrument
 - More common in the last decade
- Advantages
 - Standardized probes
 - Collect data from more people
 - Recruit from a more diverse population
- Disadvantages
 - Absence of a live interviewer
 - Risk of non-substantive/blank responses
- Is there anything researchers could embed in a web probing instrument to increase respondent motivation?

Adding a “Commitment Device”

- Cannell, Miller, and Oksenberg (1981) defined it as:
“Having the respondent make an overt agreement to work hard to provide complete and accurate information during the course of the interview”
- Commitment device research has been embedded recently in web surveys
 - Hibben, Felderer, and Conrad (2016); Conrad, Couper, Tourangeau, and Zhang (2017)

Research Question and Analyses

- Does embedding a “commitment device” prompt influence respondents to give responses of higher data quality, compared to respondents who are not administered the prompt?
- Examined select probing/debriefing questions for the following metrics

Metrics		Data Quality
Substantive open-ended responses	↑	↑
Time on screen	↑	↑
Length (in characters) for response	↑	↑
Respondents self-reporting they consulted records	↑	↑
Respondents self-reporting they gave estimates	↓	↑

Using a commitment device prompt in a web probing study

- Split ballot experiment on survey of mortgage and wildfire risk questions
- Commitment device prompt
 - Because of the importance of this survey, we are asking you to think carefully about each question and to be as precise and honest as possible with your answers. Are you willing to commit to doing this?
 - Yes, I agree
 - No, but I will proceed anyway
- Prompt administered at the beginning of the survey
- Prompt randomly assigned
- Commitment device (n = 75), no commitment device (n = 83)
 - All respondents who saw the commitment device said 'Yes, I agree'

Data Collection

- Data collected in August 2020
- Nonprobability panel through Qualtrics
- Respondents lived in the United States
- Respondents either:
 - Owned their housing units (Mortgage module)
 - Owned their housing units and located in a county susceptible to wildfires¹ (Wildfire module)
- 158 respondents (105 mortgage, 53 wildfire)

1 Select counties were in three metropolitan areas:
Birmingham, Alabama; San Francisco, California; and San
Antonio, Texas

Select probing questions analyzed from the Mortgage module

Survey Question	Probing Question
Is mortgage insurance or Private Mortgage Insurance (PMI) currently included in your payment?	What does Private Mortgage Insurance, or PMI, mean to you in this question? Please describe how “Principal, Interest, Taxes, Insurance” is similar to or different from Private Mortgage Insurance (PMI).
How much was borrowed for the mortgage or loan?	What does “borrowed” mean to you in this question?
How much was refinanced for the mortgage or loan?	What does “refinanced” mean to you in this question?

Select probing questions analyzed from the Wildfire Risk module

Survey Question	Probing Question
Do you have vegetation, such as shrubs, trees, or gardening mulch around your home?	What types of vegetation did you consider?
If there were a wildfire emergency where you live, how would you expect to be alerted FIRST? <ul style="list-style-type: none">• Sirens• Text or call on my cell phone• Call on my landline• Email• Visit or other in person contact from emergency official	What does “sirens” mean to you in this question? What other ways could you be alerted?

Debriefing questions asked at the end of the Mortgage module

Debriefing Question

Did you consult any records, such as mortgage or loan statements, to answer any questions?

- Yes
- No

Did you provide an estimate for any questions rather than the exact amount?

- Yes
- No

Substantive responses (percentage correct)

Mortgage Module	Commitment Device	No Commitment Device
Meaning of Private Mortgage Insurance (PMI)	39 % (n = 31)	58 % (n = 33)
Difference between Principal, Interest, Taxes, Insurance and PMI	50 % (n = 26)	70 % (n = 20)
Meaning of “Borrowed” for mortgage or loan	73 % (n = 22)	76 % (n = 25)
Meaning of “Refinanced” for mortgage or loan	76 % (n = 17)	60 % (n = 15)
Wildfire Risk Module	Commitment Device	No Commitment Device
Other type of vegetation considered around the home	100 % (n = 10)	100 % (n = 9)
Meaning of sirens	80 % (n = 25)	100 % (n = 28)
Other ways to be alerted in a wildfire emergency	76 % (n = 25)	75 % (n = 28)

Average time on screen (in seconds)

Mortgage Module	Commitment Device	No Commitment Device
Meaning of PMI	39.6 (n = 29)	42.4 (n = 31)
Difference between Principal, Interest, Taxes, Insurance and PMI	53.5 (n = 24)	41.8 (n = 18)
Meaning of “Borrowed” for mortgage or loan	28.1 (n = 21)	24.9 (n = 23)
Meaning of “Refinanced for mortgage or loan	25.9 (n = 16)	28.1 (n = 14)

Wildfire Risk Module	Commitment Device	No Commitment Device
Other type of vegetation considered around the home	22.0 (n = 9)	8.8 (n = 8)
Meaning of sirens	26.3 (n = 24)	30.0 (n = 27)
Other ways to be alerted in a wildfire emergency	22.1 (n = 25)	20.3 (n = 27)

Average length of response (in characters)

Mortgage Module	Commitment Device	No Commitment Device
Meaning of PMI	70.4 (n = 31)	68.4 (n = 33)
Difference between Principal, Interest, Taxes, Insurance and PMI	124.6 (n = 26)	85.4 (n = 20)
Meaning of “Borrowed” for mortgage or loan	36.8 (n = 22)	32.7 (n = 25)
Meaning of “Refinanced for mortgage or loan	57.8 (n = 17)	56.4 (n = 15)
Wildfire Risk Module	Commitment Device	No Commitment Device
Other type of vegetation considered around the home	18.2 (n = 10)	7.2 (n = 9)
Meaning of sirens	25.7 (n = 25)	32.6 (n = 28)
Other ways to be alerted in a wildfire emergency	12.8 (n = 25)	14.2 (n = 28)

Debriefing questions

Probing Question	Commitment Device (n = 50)	No Commitment Device (n = 55)
Did you consult any records to answer questions?	26 % (n = 13)	13 % (n = 7)
Did you provide an estimate to answer questions rather than exact amount?	24 % (n = 12)	33 % (n = 18)

Discussion

- Commitment device did not seem to affect the
 - Average time on screen
 - Average length of response
- Some differences in the percentage of substantive responses provided between the two groups, but no clear pattern
- For debriefing questions,
 - More respondents who received a commitment device self-reported consulting records
 - Fewer respondents who received a commitment device self-reported providing an estimate
 - Differences, based on sample sizes, are very small

Limitations

- Commitment device was embedded in a non-probability panel
 - Respondents were getting paid and may be more motivated to complete the survey
- Small sample size so difficult to make any statistical comparisons
- Quotas for complete responses with Qualtrics

Future Research

- Next steps
 - Look at other open-ended probing questions
 - Examine satisficing
- Future research should also look at embedding a commitment device prompt in a larger scale web probing data collection survey
 - Can examine if there are any meaningful statistical differences
- Should measure the efficacy of a commitment device in other topic areas

Thank you!

jonathan.m.katz@census.gov

References

- Cannell, C.F., Miller, P.V., & Oksenberg L. (1981). Research on Interviewing Techniques. *Sociological Methodology*, 12, 389-437.
- Conrad, F.G., Couper, M.P., Tourangeau, R., & Zhang, C. (2017). Reducing speeding in web surveys by providing immediate feedback. *Survey Research Methods*, 11, 45-61.
- Hibben, K.C., Felderer, B., & Conrad, F. (2016). The effect of respondent commitment on response quality in an online survey. Paper presented the American Association for Public Opinion Research, Austin, TX.