Cohen & Cassell Pre-Analysis Plan

I. General Information

    A. <u>Title:</u> Reducing Non-Response for Vote Choice using Sensitive Survey Item Techniques

    B. <u>Researchers:</u>

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II. Introduction

    A. <u>Project summary/abstract</u>:

        1. Evidence from a survey experiment piloted in Nicaragua in 2017 reveals that reminding individuals of the confidentiality of their answers or treating vote choice as a sensitive item using audio technology significantly reduces non-response rates. In the pilot study in Nicaragua, compared to a control group, non-response declined by ten percentage points among participants who were reminded that their answers were anonymous, and non-response dropped further when anonymized audio treatments were employed. We extend this study to a representative sample of Mexico City (n=1,800) to determine if confidentiality reminders and/or the use of audio technology similarly decreases non-response in a more electorally open environment. We anticipate the study will have implications for introducing low-cost alternatives to standard vote choice questions that have the potential reduce non-response and improve response accuracy to a vital indicator of electoral behavior.

    B. <u>Aims, rationale, and background</u>:

        1. The proposed project seeks to improve upon a vote choice question experiment included in LAPOP's 2017 Nicaragua study which was designed to reduce persistent high non-response rates to the vote choice question in that country. In that project, respondents who indicated that they voted in the 2016 presidential election were randomly assigned to one of four conditions: (1) a standard vote choice question, (2) a standard vote choice question preceded by a verbal reminder of response anonymity, (3) an anonymized audio treatment with a privacy reminder and a male voice recording, and (4) an anonymized audio treatment with a privacy reminder and a female voice recording.

        The Nicaragua pilot suffered from two main limitations: first, the wording of the privacy reminder in the audio and reminder conditions was not identical and second, it was not possible to discern the influence of four

potential mechanisms for different responses across groups: 1) treatment novelty; 2) a lack of interviewer effects; 3) beliefs of improved privacy in the audio condition; and 4) contextual factors affecting response patterns. The protocol proposed in this memo fixes these issues by: 1) standardizing the reminder language across treatments; 2) employing audio recordings in all interviews (either in the vote choice question, or a different, non-sensitive item), thereby exposing all respondents to the "novel" technology; 3) asking a follow-up question at the end of the survey to gauge how engaging respondents found the audio treatment; and 4) including four variations of the audio treatment that vary an identically worded anonymity reminder and guarantee of confidentiality via blinded, numbered response options (similar to the Nicaragua item). We will also include a follow-up question to gauge how private respondents think their responses to the vote choice question were.

III. Study Design
    A. Intervention:
        1. *Treatment Conditions:* Respondents who confirm that they voted in the last presidential election on July 1, 2018 will be randomly assigned to one of the 6 conditions:[1]
           a) Control (the standard vote choice question is read to respondents by the enumerator as in standard surveys)
           b) Standard item + verbal confidentiality reminder read by the enumerator
           c) Standard item asked via audio (no reminders)
           d) Standard item asked via audio with an anonymity reminder
           e) Standard item asked via audio with a confidentiality reminder
           f) Standard item asked via audio with both an anonymity and confidentiality reminder

            Table 1: Summary of Treatment Conditions

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[1] English: Who did you vote for in the last presidential election of 2018? Spanish: ¿Por quién votó para Presidente en las últimas elecciones presidenciales de 2018? For additional details on the question wording and formatting, see the attached questionnaire.

	Control	Cond. 2	Cond. 3	Cond. 4	Cond. 5	Cond. 6
Confidentiality reminder		X		X		X
Anonymity Guarantee					X	X
Audio			X	X	X	X

2. *Secondary Treatment Conditions*: In order to test the engagement mechanism, all respondents in the survey will be assigned to one of 2 conditions for the following question:
   a) Question: Which of the following soccer players for the Mexican national team played the best in the World Cup in Russia?[2]
      (1) Giovanni Dos Santos
      (2) Javier (el "Chicharito") Hernández
      (3) Hirving Lozano
      (4) Héctor Herrera
      (5) Otro
   b) Condition 1: Respondents will receive this question out loud via enumerator (as a typical survey question). The assignment for this condition is as follows:
      (1) Among voters: Respondents who received the vote choice question by audio (conditions 3-6) will be assigned to condition 1 (non-audio). Additionally, respondents who opted out of the audio treatment for the vote choice question will receive condition 1. Respondents who opt out of the audio, will be re-assigned to condition 1.
      (2) Among non-voters: Respondents will be randomly assigned into condition 1 or condition 2, subject to the above exclusion re opting out.
   c) Condition 2: Respondents will receive this question via audio, in an equivalent format to the audio conditions of the vote choice question. The assignment for this condition is as follows.
      (1) Among voters: Respondents who received the vote choice question via enumerator (conditions 1-2) will be assigned to condition 2 (audio).

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[2] The translation is approximate and used for informational purposes only. All questions are given to respondents in Spanish. The translated item used on the questionnaire is: "¿Cuál de los siguientes jugadores de la selección nacional cree usted fue el mejor del equipo Mexicano en el mundial de Rusia?"

B. Hypotheses:
    1. *Non-response expectations*:
        a) H1: Non-response to the vote choice question will be lower in conditions that employ audio technology (conditions 3-6) compared to the control condition (1).
            (1) H1a: As an extension, we anticipate that non-response will be lower in condition 4 (the confidentiality reminder administered via audio) rather than condition 2 (where the confidentiality reminder is administered via enumerator) because of the use of novel audio technology (described in greater depth below).
        b) H2: Non-response to the vote choice question will be lower in conditions that employ either confidentiality reminders (2, 5, 6) and conditions that employ an anonymity guarantee (4, 6) compared to the control condition (1).
        c) H3: Among the treatments administered via audio (3-6), non-response to the vote choice question will be lowest in condition 6 (audio, with a confidentiality reminder and anonymity guarantee) and the highest in condition 3 (audio, with no reminders).
            (1) H3a: We do not have strong expectations about the differences between conditions 3 (confidentiality reminder) and 4 (anonymity guarantee); we weakly expect that condition 4 will reduce non-response to a greater extent than condition 3 since the treatment calls for the enumerator to show the respondent a blank screen to demonstrate that the enumerator will not know what the respondent's answer is (rather than simply verbally reminding them).[3]
        d) H4: Responses will most closely match official election outcomes in condition 6 (audio, with a confidentiality reminder and anonymity guarantee).
    2. *Mechanisms*: Note: The following are not necessarily rival hypotheses; however, we do not expect to find evidence of all three.
        a) H1M (Anonymity Mechanism): Beliefs about response anonymity for the vote question will be significantly higher in condition 6 (audio, with both a confidentiality reminder and an anonymity guarantee) and to a lesser extent condition 5 (audio, with only an

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[3] Our ability to test the differences between the audio conditions is limited by the amount of power required; we expect fairly small differences between these conditions, and due to the cell size of each treatment (which is anticipated to be <200), we likely will not be able to separate the relative effect sizes of these conditions in this sample.

anonymity guarantee) than [in order of the greatest expected difference to the least] the control (1), in conditions with just a reminder (2, 4), and in the condition with audio but no reminder or guarantee (3).

b) H2M (Novelty Mechanism): We expect that, on average, respondents will report that the audio treatment (either the vote choice question or the soccer question) was more engaging compared to the survey as a whole.

c) H3M (Novelty Mechanism): Engagement in the survey (measured by lower non-response and variation in responses) will increase at similar rates following audio treatments, regardless of the content of the audio.

d) H4M (Contextual Mechanism): In electoral districts where the margin of victory between first and second place candidates was very high, those in conditions with either an anonymity reminder (5, 6) will be more likely to report voting for someone other than the first-place candidate than those in conditions with a reminder (2, 4) and the control condition (1).

e) H5M (Contextual Mechanism): In electoral districts where the margin of victory between first and second place candidates was very high, those in the reminder conditions (2, 4) will be more likely to report voting for the first-place candidate than those in the control condition (1).

f) H6M (Anonymity + Contextual Mechanisms): In electoral districts where the margin of victory between first and second place candidates was very high, those in the reminder conditions (2, 4) will be less likely to believe their responses to the vote question are confidential than those in the control (1) and anonymity guarantee conditions (5, 6).

C. <u>Treatment effects and measurement</u>:

1. *Main variables of interest*:

a) Dependent variable:

(1) Non-response to the vote choice question (measured as don't know and refusal to answer)-- we will check our analyses with the non-response category alone, but because we can't control how enumerators code don't know versus non-response,[4] we plan to pool non-response and don't

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[4] For example, respondents may say "don't know" to hide a response from observers, including the enumerator.

know responses into a singular dependent variable--
Hypotheses 1-3a

        (2) Candidate selection (to be compared between the survey results and the official election results)--Hypothesis 4

    b) Independent variables:

        (1) Treatment conditions, balancing on observable characteristics if there are signs of imbalance

D. <u>Details of study</u>:

1. *Geographic region*:
   a) Latin America, specifically Nicaragua (pilot study) and Mexico City (main country of interest)

2. *Research population*:
   a) Individuals must be voting age (18 or older) to participate and non-institutionalized (that is, living in their home). Neighborhoods that are not penetrable to survey teams because of exceptionally high levels of crime are not included.

3. *Demographic information on target populations/subgroups*:
   a) Procedures for recruitment and consent
      (1) The survey firm interviewers approach the selected homes and ask individuals if they are willing to participate using a Study information Sheet.
      (2) Full consent is not required as this is an exempt study.
   b) Potential benefits and risks to subjects
      (1) Risks are expected to be minimal

4. *Sampling frame*:

5. *Inclusion/exclusion criteria*:
   a) All citizens 18 years and older who reside in Mexico City are eligible to participate in the study.

6. *Withdrawal criteria*:
   a) Respondents may terminate their participation in the survey at any time without consequence.

7. *Early termination criteria*:
   a) Respondents may terminate the survey interview at any time without consequence. Enumerators may terminate interviews if they feel physically threatened or participants are uncooperative or aggressive.

8. *Expected timeline*:
   a) Fieldwork begins on November 7, 2018 and is expected to be completed by early January 2019. We anticipate the data will be available by late January 2018.

b) Note: the fieldwork will occur 4-6 months after the election occurred (July 1, 2018). The president-elect, Andres Manuel Lopez Obrador, will assume office on December 1, 2018, in the middle of fieldwork.

E. Data collection methods and procedures:
1. *Description of data collection method*
    a) Survey data will be collected by Data OPM, a leading survey firm in Mexico. Its CEO, Dr. Pablo Paras, has a PhD in Political Science. Individuals will be asked to participate in the study, given basic information on the fact that this is a survey and its approximate length, and then will be asked the questions, and then thanked. Individuals can refuse to answer questions at any time. We have included relevant portions of the Spanish language protocol here. Respondents will be informed that the complete survey is expected to last about 45 minutes, that the purpose is to learn about the country, that portions will be recorded for quality control, that the survey is anonymous, that there are no direct benefits for participation, and that the respondent can select to not answer or terminate the study at any time. The survey will be conducted using computer-assisted personal interviewing (CAPI), with interviewers reading the survey content off of firm-supplied phones or tablets in the field. For the set of questions that are the focus of this study, the questions will be delivered via headphones supplied by the survey team. Complete GPS coordinates and audio snippets are used only for quality control and removed from the survey dataset itself.[5]
    b) The survey follows a standard probabilistic approach to sample from the entire population of non-institutionalized, voting age adults who are residents or nationals of the country.
2. *Description of any other data sources used (e.g. admin data) and source of data*
    a) We will gather precinct level electoral data from records made publicly available by Mexico's electoral management body, the INE. We will merge these contextual data with the individual-level data, using partial GPS coordinates gathered as meta-data to match electoral districts and interview locations.

F. Randomization procedure:

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[5] This description is taken (with slight modifications for the specific study) from the IRB application submitted by PI Liz Zechmeister, IRB approval #

1. *Detailed description of the mechanism for randomizing, including how the process will be safeguarded from tampering*
    a) Randomization will occur as follows: individuals who indicate that they voted in the presidential election on July 1, 2018 will be randomly assigned to 1 of the 6 treatments by the survey software (Survey to Go; the randomization is programmed to occur immediately prior to the question). If individuals who are assigned to an audio condition (3-6) choose to opt out of the audio treatment, or if their headphones do not work, they will be re-randomly assigned to one of the two non-audio conditions (conditions 1 and 2).
G. Power calculations:
    1. Total nonresponse by group in Nicaragua (baseline for effect sizes in MX):
        a) control: 17.95%[6]
        b) Verbal confidentiality reminder: 9.65%
        c) audio (male voice): 4.02%
    2. Assuming similar effect sizes and comparing the reminder to the male condition, find the sample size/ power/ alpha below:
        a) Control vs. Reminder:
            (1) If the effects sizes are consistent with findings from Nicaragua, we anticipate being able to detect a 5 percentage point decrease with 212 respondents per group, with $p < .1$.
                (a) We will only have 180 respondents per group, so we will accept as significant a difference with $p < .15$
                (b) We will also run one-tailed significance tests; we have sufficient power to detect a similarly sized effect at $p < .08$
        b) Control vs. Audio:
            (1) Given a 10-12 percentage point decrease as in Nicaragua, we expect to detect this effect with only 78 per group with $p < .05$
                (a) We expect to have ~180 observations in each condition, so we should be able to detect a significant effect with $p < .01$
        c) Audio vs. Reminder:
            (1) Based on the pretest in Nicaragua, we expect to see a decrease of nonresponse of ~5 percentage points.

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[6] Since non-response rates are higher in Mexico than Nicaragua, we anticipate a ~10% drop.

               (a) With 180 per group, we should be able to detect a significant effect with $p < .2$

               (b) We expect to detect the effect with a one-tailed test with $p < .1$

      3. Estimated N per condition: [1800*.6 (turnout estimate)]/6 conditions=180 per condition

IV. Pre-Specified Analytical Decisions

    A. <u>Type of model and justification for its use (if applicable)</u>:

      1. We will use a series of econometric tests for each hypothesis. Assuming balance on observables (e.g., demographics, partisanship, interest), we will run T-tests for H1-H4 and H1M-H3M. If there are any imbalances, we will run regression analyses that control for unbalanced covariates.

    B. <u>Any indices used, mathematical formulae, explanation and rationale</u>:

      1. Depending on the extent to which treatments 3-6 differ and the effect sizes between them, we may pool these conditions for greater statistical power.

      2. No other indices are expected to be used at this time.

V. Expected Issues

    A. <u>Details of procedures in place to address issues e.g., how will non-compliance be monitored and accounted for?</u>

      1. Field team members and LAPOP staff will listen to portions of all interviews, including the experimental item, to assure that protocols are being followed. Enumerators who consistently do not follow protocols will be removed from the project, and interviews that are determined to be of unacceptably poor quality on the basis of these audio and other checks will be cancelled and replaced.