Preregistration #1: Fernbach replication

August 19, 2024

Methods will generally follow those of a prior replication, Crawford and Ruscio (2021), except where otherwise noted.

1. Recruitment and data collection

Crawford and Ruscio (2021) recruited $n = 405$ participants, prior to making exclusions. Given our use of multiple attention checks, we will increase the sample size to $n = 600$. We will recruit participants on Mechanical Turk, restricting eligibility to USA workers and those with at least a 95% HIT approval rating.

2. Variables

In addition to Crawford and Ruscio (2021)'s existing attention check item, we will add two others. First, we will ask participants for their age at the beginning of the questionnaire and later ask for their birth year toward the end of the questionnaire. We will code whether these variables are consistent. Second, we will use the news screener item in Berinsky, Margolis, and Sances (2014), which is an instructional manipulation check (Figure 1).

As plausible common causes of attentiveness and the outcome variables, we will collect the following three new covariates regarding interest in politics: (1) self-reported interest in politics (5-point scale ranging from "far more than average" to "far less than average"); (2) frequency of reading or listening to the news (3-point scale); (3) whether the participant voted in the 2020 election.

3. Randomization

As in Crawford and Ruscio (2021), participants will be randomized between-subjects to either provide explanations of the political issues or to provide reasons for their stance. Each participant will provide ratings for two of six political issues. Thus, the long-format data will have four rows per participant (two issues × two time points).

4.   Statistical analysis

4.1.   Average treatment effects

We will analyze two outcomes: position extremity (the primary outcome) and self-reported understanding of the issues (a secondary outcome). As in Crawford and Ruscio (2021), we will analyze each outcome using a linear mixed-effects model with normally distributed errors and normal random intercepts by participant. The linear predictor will include fixed effects of condition (explanations vs. reasons), time point (before vs. after providing the explanation or reasons), and issue number (1 or 2); as well as all interaction terms among these variables. The coefficient of interest is the interaction term of condition with time point, which represents the difference between conditions in average within-subjects changes in extremity or understanding after providing either explanations or reasons. If a mixed model with these specifications does not converge, we will use a comparable GEE model instead, using a working exchangeable correlation structure.

As in the meat-consumption example, we will conduct analyses that cross the exclusion strategy for inattentive participants with whether covariates are adjusted in analysis. Adjusted analyses will adjust for age, sex, education, party, and the 3 variables about interest in politics. For the purposes of covariate adjustment, variables will be coarsened as follows:

1. Education will be recoded to have only 4 categories (high school or less, associate's or professional degree, master's or doctoral degree).

2. Self-reported in politics will be coded as continuous (1-7) and then standardized.

3. Self-reported interest in the news will be coded as continuous (1-3) and then standardized.

4. Voting in the 2020 election will be coded as binary (yes vs. all other answers).

We will additionally consider two different codings of the attentiveness variable: (1) treating only participants who pass all three attention checks as attentive (with indicator denoted R_{all}); and (2) treating participants who pass at least one attention check as attentive (denoted R_{one}). Thus, there are three exclusion strategies: no exclusions, excluding based on R_{all}, and excluding based on R_{one}.

4.2.   Associations of covariates with attentiveness and the primary outcome

Focusing on the more stringent attentiveness criterion, we will use the wide-format data to regress R_{all} on the demographic and political-interest covariates using logistic regression, as in the meat consumption example. We will also regress the primary outcome (political

extremity) on the the demographic and political-interest covariates using a linear mixed model with random intercepts by subject.

References

[1]   Jarret T Crawford and John Ruscio. "Asking people to explain complex policies does not increase political moderation: Three preregistered failures to closely replicate Fernbach, Rogers, Fox, and Sloman's (2013) findings." *Psychological Science* 32.4 (2021), pp. 611–621.

[2]   Adam J Berinsky, Michele F Margolis, and Michael W Sances. "Separating the shirkers from the workers? Making sure respondents pay attention on self-administered surveys." *American Journal of Political Science* 58.3 (2014), pp. 739–753.