Do Thank-You Calls Increase Charitable Giving? Expert Forecasts and Field Experimental Evidence

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Abstract

Expressions of gratitude are fundamental in modern societies. Nowhere is gratitude more important than in the charitable giving sector, where calling to thank donors is considered a key fundraising strategy. Yet the effectiveness of thank-you calls remains untested. We report on field experiments with public television stations and a national non-profit in which over half a million new donors were randomized to receive a thank-you call or not. Fundraising professionals predicted that calls would increase donor retention by about 80%. In stark contrast, we found a precisely estimated null effect of calls on donor retention. For academics, we provide a first field test of the role of gratitude in market behavior. For practitioners, we provide evidence that the costly practice of thank-you calls does not have nearly the expected impact on donor retention.

JEL classifications: D91, H41, C93.

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"The duties of gratitude are perhaps the most sacred of all those which the beneficent virtues prescribe to us." Adam Smith, 1790.

1 Introduction

Expressions of gratitude are fundamental in modern societies. In the *Theory of Moral Sentiments*, Adam Smith considered gratitude the most sacred virtue (Smith, 2012). Smith wrote of gratitude that "as soon as we can, we should make a return of equal, and if possible of superior, value" (page 169). Smith also admitted that the rules governing gratitude are vague - how and when is the most appropriate way to express gratitude? In this paper, we explore a related question - how does expressing gratitude affect economic behavior?

Nowhere does gratitude play a bigger economic role than in the non-profit sector, where calling and thanking donors is an essential activity presumed to be linked directly to the inflow of charitable dollars. In a survey we conducted of fundraising professionals in the United States, about 80% indicated that their organizations make thank-you calls at least some of the time, and 40% make thank-you calls often or always. Charities make thank-you calls due to firmly held beliefs that the calls will build a relationship with the donor and be reciprocated with future donations.

In this paper, we conduct field experiments to understand the impact of the widespread practice of thank-you calls on charitable giving. This is important for several reasons. First, the non-profit sector is large, generating nearly $300 billion in individual donations each year in the United States (Giving USA Foundation, 2016). Second, while a great deal of research has focused on solicitation techniques to attract new donations (Vesterlund, 2016), an understudied question is what causes donors to remain committed to the cause. The importance of studying donor retention is further underscored by the fact that new donor retention is typically less than 30% (Levis et al., 2016). Thank-you calls are one of the major activities charities undertake to improve

donor retention, yet they are costly and no research that we are aware of has directly tested their effects.[1]

To explain how donors might respond to a thank-you call, we use the theory of reciprocity, which posits that people reward kind acts with kind acts and punish unkind acts with spite (Rabin, 1993; Charness and Rabin, 2002; Falk and Fischbacher, 2006). In our context, the interaction between the charity and donor can be modeled as a sequential game in which the donor makes an initial donation, the charity responds with an expression of gratitude (i.e., the thank-you call), and the donor decides whether to reciprocate by making a second donation. The expression of gratitude increases the psychological utility of the donor, for example by reminding the donor of her initial gift and thereby providing additional 'warm glow' utility (see Andreoni et al. (2015), for a discussion of donation utility separated in time). Our study is designed to test reciprocity by measuring whether (and how much) donors give in the third stage of this interaction.

We partnered with 67 public television stations and a national non-profit in the U.S. and conducted field experiments in which new donors were randomized to receive a personal thank-you call or not. The experiments involved nearly 600,000 individual donors and 500,000 thank-you calls between 2011 and 2017. The thank-you calls followed standard protocols used in the industry for large national non-profits and reached about 75% of donors. The call script featured three components. First, the call was personalized: workers identified themselves, the donor, and the charity by name. Second, the caller thanked the donor for his or her gift and explained the impact of the gift (e.g., for the television stations, "Your support helps us keep quality programming on the air, and we simply couldn't do it without you"). Importantly, the thank-you call did not involve a request for another gift. Calls targeted new donors and were

[1] A paper that is related is a recent laboratory experiment by (Andreoni et al., 2015), which studied the impact of thank-you *notes* on pledge gifts. Their study found that a thank-you note from the experimenter following a pledge reduced the likelihood of reneging on a donation.

made 3-7 months after the initial donation.

We also used incentivized surveys to elicit the beliefs of experts and nonexperts about the impact of thank-you calls on donor retention. We did this for several reasons. First, we wanted to confirm using empirical evidence that fundraising experts indeed believe that calls increase retention. Second, we wanted to understand whether (and by how much) our results should move the priors of fundraisers. Finally, we wanted to understand whether the industry-specific knowledge of fundraisers make them better are predicting the impact of the calls than laypeople. In our surveys, respondents were presented with a description of the experiment and were given the retention rate - i.e., donation probability of the control group in the next year. They were asked to forecast the retention rate of the treatment groups, whereby their payment in the surveys depended partly on how close their response was to the actual retention rate of the treatment group in the experiment. This technique follows recent work that investigates the ability of experts to predict experimental results (e.g., DellaVigna and Pope, 2018a; 2018b).

Fundraising professionals and the general public predicted that thank-you calls would increase donation probability in the next year by about 80%. In stark contrast, we found that the calls had no impact on subsequent donation behavior in either experiment. In both the public television experiment and the national non-profit experiment, the retention rate was about 30% and did not vary between the call and no call groups. Given the large sample size, the 95% confidence intervals of these estimates are under 1% in each direction. This precisely estimated null effect of calls is also observed for donation amount conditional on donating and for donation behavior up to 5 years following the thank-you call.

Fundraising professionals were no better at predicting the effect of thank-you calls than the average American, and experience in the fundraising sector was not strongly associated with accuracy of predictions. Yet most fundraising professionals indicated

that they were very confident in their assessments. By comparison, DellaVigna and Pope (2018) found that academic experts were able to predict the results of experiments about effort, and the largest deviation in average accuracy was 12%. This raises the question: Why did fundraisers get this so wrong? One explanation is that most charities do not conduct field experiments. Instead, they rely on anecdotal evidence of the surprise some donors conveyed after receiving a thank-you call and evidence from surveys in which donors assert that a thank-you call would increase their propensity to give. However, what people say they will do in surveys is not always aligned with what they actually do. A second explanation is that the majority of our fundraising professional respondents make thank-you calls, and they do not want to believe that this practice is ineffective. This is supported in part by evidence from the fundraiser survey that overprediction is higher among respondents who conduct thank-you calls.

In a follow-up experiment, we explored the impact of an enhanced call script founded in additional behavioral theories. The script involved the following additional message at the end of the thank-you call: "Your feedback shapes our actions. Could you tell me about which of our programs you recently enjoyed?" After the donor responded, the caller recorded the response and added, "That's great, I'll pass this information along to the station." The goal of this new script was to increase feelings of identity as a member, connectedness to the station and potentially make the call more memorable. In the fall of 2016, we randomized all new public-television-station members to either the enhanced call script, the original thank-you call script or to a control group.

Fundraising professionals and the general public predicted that the new script would also increase the retention rate by about 80% relative to no call. However, we found that the enhanced thank-you call script, just like the original script, did not have a statistically significant effect on retention. About 30% of new donors made an additional gift within the next year in both the original and new-script call groups.

In the public television experiments, we also have data on whether the donor was

reached and whether the interaction with the donor was positive, neutral or negative. We found that those who were reached, and especially those who engaged positively with the caller, were significantly more likely to give in the year following the intervention than those who were not reached or those who responded negatively. This suggests that responses to thank-you calls could be used by non-profits to identify members who are most likely to give again.

Our first contribution is to test theory by using field experiments to evaluate whether expressions of gratitude are reciprocated by donors. Insofar as a thank-you call can be considered a 'gift' from the charity, the theory of reciprocity predicts that donors should be more likely to give (or to give more) when they get a call. We add to a rather limited literature documenting reciprocity in the field. In the only paper evaluating reciprocity in charitable giving in the field, Falk (2007) found that sending potential donors a small gift in the mail increased future donations. Such 'gift exchange' has also been documented in labor markets, where workers exert greater effort when they receive a surprise gift from their employer (Gneezy and List, 2006; Kube et al., 2012). As far as we are aware, related work has not explored whether expressions of gratitude affect economic behavior by inducing reciprocity, nor has it tested games with multiple stages in the field as we do here.[2] Our results do not support the prediction that expressions of gratitude will be reciprocated. Instead, our results are more in line with recent research that showed minimal effects of costless apologies on customer retention at Uber (Halperin et al., 2019). Thank-you calls are related to apologies in that these calls are a form of cheap talk, but are widely believed to matter.

Our second contribution is to showcase the ineffectiveness of a widely used technique in the non-profit sector. Our findings underscore the striking gap in knowledge in the fundraising sector regarding the use of these calls. In our survey, most fundraising

[2]Related work has also found strong evidence for reciprocity in the laboratory; for example, see Kessler (2013) for gift exchange and Charness and Rabin (2002) for testing social preference theories in the laboratory.

professionals are confident that the thank-you calls improve retention, and most also indicated that they conduct thank-you calls. These are costly mistakes, since thank-you calls as implemented in our study cost the charity about $1 per call. A large national non-profit like the one we partnered with could therefore easily be spending hundreds of thousands of dollars annually on thanking donors.

Finally, reproducibility of experimental data has become a concern in the social sciences (Camerer et al., 2016). We reproduced our results across two sectors of the non-profit industry, using slightly different protocols. We conducted the public television experiments with nearly 70 stations throughout the United States. Moreover, our large sample size allows us to identify the lack of treatment effect with a high degree of power.

In what follows, Section 2 provides the experimental design, Section 3 summarizes the results and Section 4 concludes.

2 Experimental Design and Procedures

2.1 Overview of Experiments

We partnered with 67 public television stations and one national non-profit in the United States. Between 2011 and 2016, new members of the public television stations and new donors of the non-profit who had a phone number on file and had not asked to be placed on a do-not-call list were randomized to one of two groups.[3] Those randomized to the treatment group received a personal thank-you call after their first gift. The remaining donors were randomized to the control group and did not receive a call. The script for the calls in each experiment is available in Appendix A.

While the organizations aimed at targeting only new donors, in practice some returning donors also entered the randomization (about 26,000 donors in the television experiment and 20 donors in the national non-profit experiment). These donors were

[3]Anyone who donates to a public television station is considered a member for the next year.

only identified later as returning donors once name changes/misspellings or address changes were accounted for. We drop the returning donors from the main analysis, but as shown in the appendix, the results are similar for returning donors.

Callers followed a simple script that involved three key characteristics. First, the call was personalized: callers identified themselves, the donor, and the charity by name. Second, callers thanked the donor for his or her gift and explained the impact of the gift. Importantly, the thank-you call did not involve a request for another gift. In the case that the donor was not reachable, a call was attempted two times and a voice message was left on the second attempt when possible. Below, we describe in more detail the three experiments that we report on in this study.

The public television and national non-profit experiments differed in several ways. One major difference was in the timing of the calls: while the national non-profit calls were made about 3-4 months after the first gift, the public television calls were made 5-7 months after the first gift. The callers and scripts also differed. Given the nature of the two different charities, we might expect differences in the motivations of the donors. Finally, certain fundraising drives in the public television station experiment offered gifts to new donors (e.g., a mug or a re-usable shopping bag with the name of the television station). The national non-profit did not provide donor gifts. In the analysis, we provide a robustness check that include whether or not the donor initially donated as part of a fundraising drive that offered gifts.

In the public television station experiments, we also augment our data with information about the gender, age, income and length at current residence for new donors. This data is available for about three-fourths of the sample.

2.2 Experiment 1: Public Television Experiment

The first public television experiment was conducted between summer 2011 and summer 2016 and involved about 500,000 new donors. After confirming availability of

phone numbers, 90% of new members were randomized to the treatment group and the remaining new members were randomized to the control group. The randomization of 90% of the sample to the treatment group was intentional, since the calls were projected to have an impact on donor retention and stations did not wish to forego potential revenue gains from the thank-you calls.

The procedure was as follows. Television stations submitted lists of new members to us every quarter. We randomized new members to treatment or control, and then submitted lists of members to be thanked to the organization making the calls. The call workers who eventually made the calls were based in the U.S. (and were mostly women). Use of call workers for thank-you calls is common in the non-profit sector.

The calls were made 5-7 months after the first donation. This delay is partly because television stations sometimes offer gifts to members conditional on minimum donation amounts. The calls were timed to occur after new donors received any gifts associated with their initial donation, and to occur a few months prior to the donors' renewal window. This delay also means that calls occur 1-3 months before the next solicitation, which increases the chance that the donor recalls the call.

The data collected about the call includes whether the call was successful, as well as whether the interaction with the member was positive, negative or neutral. For example, donor responses such as, "Your organization is the best – I just love what you do," was coded as a positive interaction. Responses such as, "Please don't ever call me again – you interrupted my dinner," was coded as a negative interaction. Responses such as, "thank you for calling" were coded as neutral engagement.

The main communications that television stations have with new members outside of the experimental manipulation are mail solicitations requesting membership renewals. Both the treatment and control groups continued to receive the same follow-up mail solicitations from their local station. Indeed, in the television station experiment, the stations were not aware of which individual donors had been selected into treatment

and which to control. Renewal letters were typically sent starting in the 8th month following the first gift and renewal notices were sent progressively less frequently by the 17th month following the first gift. A renewal letter typically asked for at least a $35 donation.

The subsequent donation behavior of all donors in this experiment was tracked through the first quarter of 2018.

2.3 Experiment 2: National Non-Profit Experiment

The national non-profit is an organization in the United States that provides health-related education and advocacy and supports health care providers. The national non-profit conducted its own experiment in the spring of 2013 and provided the data for us to analyze. The experiment involved about 60,000 new donors, with about half randomized to a treatment group that received a thank-you call and half randomized to a control group that did not receive a call. The script was similar to the script in the public television experiment. A key similarity was that it also did not involve a request for another gift.

Unlike in the public television station experiment, we did not receive data on the outcomes of the calls. Also, we only have data on subsequent donation behavior through February 2014.

2.4 Experiment 3: Public Television, New Script Test

In the fall of 2016, we decided to evaluate the impact of an enhanced thank-you call script. The new script included the following additional message: "Your feedback shapes our actions. Could you tell me about which of our programs you recently enjoyed?" After the donor responded, the caller recorded the response and added, "That's great, I'll pass this information along to the station." The goal of this new script was to increase feelings of identity as a member, connectedness to the station,

and potentially make the call more memorable. The information recorded was then passed on to the stations.

To evaluate the new thank-you call script, all new members (about 25,000) of the television stations in the fourth quarter of 2016 were randomized to either the original script (45%), the new script (45%) or to a control group (10%). Their subsequent donation behavior was tracked through the first quarter of 2018.

2.5 Forecasting Surveys

To evaluate whether experts and nonexperts have accurate beliefs about the impact of thank-you calls, we also conducted incentivized surveys of fundraising professionals and a representative sample of the general public in the US. In these surveys, respondents were asked to forecast the outcome of our experiments. We surveyed fundraising professionals because we wanted to better understand how the fundraising sector views thank-you calls. Specifically, while we found many online blog articles and books that stressed the importance of thank-you calls, we did not find any literature covering the beliefs of the fundraising sector about the value of the calls for donor retention. We surveyed a representative sample of the general public because we wanted to understand the value of an expert forecast relative to a nonexpert.

For the survey of experts, we generated a list of 1,415 charities in the western United States (California, Arizona, Nevada, Oregon and Washington) using the Charity Navigator (CN) website.[4] We chose to focus in this geographic area because we ran the survey through the University of Southern California and thought that we would have better response rates from charities in our locality due to name recognition of the university. For each charity, we located the name, e-mail and phone number of the Director of Fundraising or someone in a similar position. We excluded charities with a CN Advisory notice of "moderate" or "severe," which indicates that the charity engages

[4]See www.charitynavigator.org.

in problematic practices. Between December 2018 and February 2019, we made 1,384 phone calls and sent emails to the contacts we identified and asked them to complete our survey. We told fundraising professionals that our survey was about fundraising practices and did not specifically mention thank-you calls in the recruitment scripts. We received 195 completed surveys.

For the survey of nonexperts, we fielded our questions using the Understanding America Study (UAS) housed at the University of Southern California. The UAS is a representative panel of Americans who participate in online surveys on a regular basis.[5] We included our questions in the end of year survey module of the UAS that was fielded in December 2018-January 2019. All 6,708 UAS respondents were recruited for this survey module by the UAS team using their usual procedure, and 5,605 completed the survey. Our questions appeared in random order alongside other unrelated questions.

In both surveys, respondents were presented with a description of the experiment, including details such as the type of charity (public television or non-profit), the dates of the experiment, the length of time between the initial gift and the calls, and the exposure to public television members to other potential gifts/premiums after their initial gift. Respondents were also told (1) the donation probability of the control group in the next year (i.e., retention) and (2) the donation amount, conditional on donating, of the control group in the next year. They were asked to forecast the donation probability and donation amount of the treatment groups. In the expert survey, respondents were asked to make these two predictions for each of the three experiments (presented in random order) for a total of six predictions. In the nonexpert survey, we randomly assigned each respondent to make these two predictions for one of the three experiments.

Importantly, the forecasts were incentivized. In each survey, we selected three respondents at random and paid them. All of the selected respondents received up to

[5]For more information, see https://uasdata.usc.edu/index.php survey module UAS 166.

$100 based on the accuracy of one of their guesses (randomly selected). This payment depended linearly on how close the guess was to the outcome. They received $100 if their guess was equal to the outcome, $99 if their guess was within 1% of the outcome, $90 if their guess was within 10% of the outcome, and so on. All nonexperts also received a $12 participation payment from the UAS for completing the entire survey. The three randomly selected experts received a $25 participation payment. Payments were made using an Amazon gift card in the expert survey, and using existing pre-paid credit cards in the non-expert survey.

The expert survey also included additional questions, including self-reported confidence in the accuracy of their guesses, the respondents' level of expertise and familiarity with fundraising, the scope of the respondents' organization, and questions about whether the organization conducts thank-you calls. Our recruitment scripts, summary of our efforts and survey screenshots are available in Appendix B.

3 Results

3.1 Experiment Treatment Effects

There are 494,116 participants in our analysis sample for Experiment 1, 57,632 participants in our analysis sample for Experiment 2, and 24,313 participants in our analysis sample for Experiment 3.[6] Table 1 provides a summary of the baseline data. As summarized there, the treatment and control groups did not differ significantly in the amount or number of gifts at baseline (i.e., giving behavior prior to the randomization) for either the public television station experiments or the national non-profit experiment (all t-test p-values>0.05).[7] They also did not differ significantly on demographic

[6]Figure A.1 in Appendix C provides information about data exclusions.

[7]While most new donors gave just one time, a small percentage gave multiple times prior to the date of randomization. Hence, baseline data on the gift amount and number of gifts is taken by summing the total amount and number of gifts in the year prior to the randomization date. This was done because some individuals made a second or third gift prior to receiving the thank-you call.

and socio-economic background in the public television station experiments where this data is available.[8]

The callers reached 75% of new members in Experiment 1, 70% of new donors in Experiment 2 and 62% of new donors in Experiment 3 (where "reached" is defined as the call going through to either a person or answering machine). One potential reason that some new donors were not reached is a declining use of landlines and inability to contact people on their cell phones in recent years.

Table 2 provides a summary of the overall effect of the calls, measured by the percent of new donors who donate again in the next year, the unconditional amount donated, the unconditional number of gifts made and the amount donated conditional on making any gift. We find that the calls had virtually no effect on subsequent giving, a surprising result considering the importance that the non-profit sector seems to place on such calls. As summarized in Table 2 in the public television experiment (Experiment 1, Panel A), 27.9% of new donors in the thank-you call group made an additional gift within a year, while 28.1% of new donors in the control group did so. The average gift amount, conditional on donating, was \$127.00 (SE=\$0.41) in the treatment group and \$126.46 (SE=\$1.05) in the control group. In the national non-profit experiment (Experiment 2, Panel B), 31.0% of donors in the thank-you call group made an additional gift within a year, while 30.9% of donors in the control group did so. The average gift amount, conditional on donating, was \$114.85 (SE=\$1.74) in the treatment group and \$116.01 (SE=\$1.91) in the control group.

Table 2 also includes a measure of retention, commonly used in the industry, which is calculated as the percentage of a gift retained in the year following the randomization date relative to the gift in the year prior to the randomization date. We also do not

[8]The only statistically significant comparison at the 5% level is absence of age/income data in Experiment 3 - while 24-25% of this data is missing in the call treatments and 26% is missing in the control group. Given that we make 14 comparisons in Experiment 3, it is not surprising that one comparison was found to be statistically significant. Moreover, this difference of 1-2 percentage points is small.

observe any differences in retention rates between the treatment and control groups. In the public television station experiment, retention was 32.68% in the treatment group and 32.91% in the control group (p-value=0.67). In the national non-profit experiment, retention was 46.41% in the treatment group and 46.24% in the control group (p-value=0.83).

Similar to the results in Experiments 1 and 2, in Experiment 3 the effects of the thank-you calls are not statistically significant at the conventional 5% level. This provides evidence that the new call script, which is motived by additional theories from behavioral economics, is not much better than the original call script at motivating donors to remain committed to the cause. As shown in Table 2 (Panel C), the percentage donating in the next year is 28.3% in with the new call script, 29.2% with the original call script and 27.0% in the control group. The average gift amounts conditional on donating are \$121.49 with the new call script, \$118.84 with the original call script and \$114.33 in the control group. An F-test comparing the donation behavior across the groups is statistically significant at the 10% level, but this differences become statistically insignificant once we use regressions to control for initial gift amounts or when we compare groups using the retention rate measure.

Table 3 provides Ordinary Least Squares (OLS) regressions where the outcome variables are the probability of donating again and the gift amount conditional on making a donation. The explanatory variables are the treatment indicator, baseline gift amount, baseline number of gifts and demographic and socio-economic controls, when available. The public television regressions also include station fixed effects. The coefficient on treatment indicator is always statistically insignificant, demonstrating again that our calls were not effective at increasing the probability of donating or the amount donated conditional on making a donation. The baseline gift amount is not associated with the probability of donating again (all coefficient estimates are 0, with p-values<0.01), but is positively associated with the amount donated conditional

on making a donation (coefficient estimates of 0.54-0.83, p-values<0.01). The baseline number of gifts is positively associated with making another gift (coefficient estimates of 0.11-0.13, p-values<0.01) but has different impacts across experiments on the donation amount conditional on donating (it is negatively associated with amount donated in Experiment 1 and positively associated with amount donated in Experiments 2-3). Being female, older than 65 and having a higher income is positively associated with the probability of making another donation.[9]

Whereas Table 3 reports on the intent to treat (ITT) estimates, in Table 4 we also report on treatment on treated (ToT) estimates by estimating the Local Average Treatment Effect (LATE) (Angrist and Imbens, 1994). The LATE relies on several assumptions – notably, that assignment to treatment was random, that assignment to treatment has a monotonic impact on receiving the calls, and that being selected for treatment affects outcomes through its effect on receiving a call – which we believe are satisfied in our experiment. The LATE parameter, *Reached*, is estimated through a two-stage least squares regression of giving behavior on being reached, using assignment to the call group as an instrumental variable for the first stage regression. Therefore, *Reached* takes the value of 1 if the caller was successful, and 0 otherwise. As shown in Table 4, the coefficients on *Reached* are also statistically insignificant.

In Experiment 1, we also have more detailed data on the probability of making another donation through time. Figure 1 normalizes the dates of the calls to 0 and plots the probability of donating by week up to 260 weeks (5 years). The treatment group overlays nearly perfectly with the control group, showing no differences in the pattern of giving. This runs contrary to the beliefs we informally elicited from our charity partners, who thought that the effects of thank-you calls may compound over time. Table A.2 in Appendix C comes to similar conclusions using formal t-tests for probability of giving each year up to 5 years after the initial calls were made.

[9]Table A.1 in Appendix C shows similar regressions where the outcome variables are the retention rate.

A concern for many experiments that fail to find treatment effects is that they may be under-powered due to insufficient sample size. Note that lack of power is not a concern here – the sample size in each experiment is enough to detect differences of at least 1/50th of a standard deviation with a power of 0.99. Practically speaking, 1/50th of a standard deviation on the unconditional gift amount is about $1.89 in the public television station experiment and $2.20 in the national non-profit experiment.

3.2 Forecasts

We find that both experts and nonexperts significantly overestimate the impact of thank-you calls. Recall that forecasters were given information about the donation behavior of the control group and asked to predict the donation behavior of the treatment group. Figure 2 provides a summary of expert forecasts, the nonexpert forecasts, and outcomes in the experiments for the proportion donating and average gift amounts of the treatment group. While actual retention in all experiments was around 28-31%, both groups predicted retention rates of 51-54%, with experts predicting similar retention rates as nonexperts. Our t-tests comparing the predicted retention rate to the actual retention rate for each of the three experiments result in p-values<0.01.

Both groups also predicted higher average gift amounts, conditional on donating. Experts predicted gift amounts conditional on donating of $155.00-$171.00 and nonexperts predicted gift amounts conditional on donating of $139.00 – $149.00. Both of these predictions are statistically significantly higher than the experimental outcomes of $114.85-$127.00, with p-values from t-tests of <0.01 in all cases.[10]

There is a great deal of heterogeneity in the predictions. Figure 3 provides histograms of the predictions for probability of donating for each experiment and fore-

[10]Similarly, the predicted median gift amounts differ substantially from the median gift amounts in the experiment. In Experiment 1, the median prediction is $153.00 for experts and $146.73 for nonexperts, while the actual median gift amount is $100.00. In Experiment 2, the median prediction is $140.00 for experts and $134.09 for nonexperts while the actual median gift is $59.00. In Experiment 3, the median prediction is $150.00 for experts and $135.00 for nonexperts while the actual median gift amount is $100.00.

casting group, and Figure 4 provides similar histograms for the predictions of donation amount conditional on donating. The dotted vertical lines in the figures represent a region 5% above and 5% below the actual donation behavior of the treatment group in the experiment. A small number of experts and a greater number of nonexperts accurately guessed that there is no treatment effect of the calls. Most of the mass is to the right of the actual result, suggesting a large degree of overprediction for both measures.

The proportion of accurate guesses is higher among nonexperts relative to experts. This could be either because experts (who often employ thank-you calls) are more optimistic than nonexperts, or because in the nonexpert survey we employed a slightly different interface in which instead of typing in a guess, respondents moved a slider that started at the default of the experimental outcome in the control group (see Appendix D for the screenshots of the two displays).

More experience with fundraising did not improve the accuracy of experts' guesses. Experts who said they had been working in the non-profit field for 0-5 years predicted a probability of donating in the treatment group of 49.1%, while experts who said they had been working in the non-profit field for 6 years or more predicted a probability of donating in the treatment group of 53.9%. A t-test comparing the predictions of these two groups in Experiment 1 yields a p-value of 0.20. Table A.3 in Appendix C provides the coefficient estimates from regressions that evaluate a variety of experience backgrounds on overprediction rates. Figures A.2-A.3 provide more information about the experience and background of the charity sample, showing that over 60% had 6 or more years of experience in the non-profit industry, that 70% came from organizations with over 1,000 individual donations per year (and 25% over 10,000 donations per year), and that they represented a range of sectors from the non-profit industry.

Having previously contributed to charity has a small and statistically significant effect on the guesses of nonexperts. Respondents in the UAS survey who answered

in a prior survey that they had contributed $500 or more to charity in the past year predicted a probability of donating in the treatment group of 52.4% and those who said they had not given charitable donations of $500 or more predicted a probability of donating of 50.7%. A t-test comparing the predictions of these two groups yields a p-value of 0.004, showing that overprediction is somewhat higher among respondents who are more familiar with donating to charity.

Despite the stark differences between expert forecasts and the experimental outcomes, most experts felt confident in their guesses. In a follow-up question, we asked experts to predict how many of their guesses were within 10% of the actual outcome; 74% thought they had correctly predicted 3 or more of the 6 experimental outcomes.

3.3 Heterogeneity Analysis

We now conduct an analysis of heterogenous treatment effects, focusing on the first experiment where we have the bulk of our data. The first source of heterogeneity that we consider is comparing new versus returning donors. Related work by Landry et al. (2006) suggests that new and returning donors differ in important ways. In particular, returning donors have demonstrated a higher valuation for the charity and should therefore contribute more than non-donors. The model in Landry et al. (2006) does not make predictions about whether returning donors should respond differently to thank-you calls than new donors. One paper that has considered this question is Kessler and Milkman (2016), who evaluate the impact of identity priming for new and returning donors and find that priming identity as a donor is more effective for regular donors. Hence, if the thank-you call primes identity, it might be more effective for returning donors than new donors. On the other hand, our charity partners believed that thank-you calls are particularly important for new donors, which is why our experiment was intended to target only new donors. Since stations were not always able to match donations to existing donors, we have an additional 19,467 returning donors who were

part of the experiment. Note that this analysis should be treated as exploratory, since this is a special group who were initially unable to be matched to their prior donations.

We focus on these returning donors in Tables A.4-A.6 in Appendix C. Table A.4 shows that these returning donors are somewhat imbalanced by treatment - for example, returning donors in the control group give a higher baseline gift amount ($157.01, S.E.=$3.90) than returning donors in the treatment group ($142.53, S.E.=$1.54) (p-value<0.01). Returning donors in the control group also make a larger number of initial donations (1.45, S.E.=0.04) than returning donors in the treatment group (1.39, S.E.=0.01) (p-value<0.01). They are roughly similar on most other dimensions, yet this important imbalance in initial giving behavior is one reason to be cautious in interpreting the results. The results are presented in Tables A.5-Tables A.6 in Appendix C, and show that there are no statistically significant treatment effects of the calls. The coefficient estimate for the probability of donating is also similar to the coefficient estimate for new donors in Experiment 1.

Next, we consider heterogeneity by demographic and socio-economic characteristics and by initial donation amount. These analyses should again be considered exploratory. There are a number of reasons why demographic and socio-economic characteristics may matter for the impact of thank-you calls. With respect to age, we might expect older adults to be more influenced by thank-you calls since they are more likely to make and receive calls. Indeed, adults 65 and older are 5.5 percentage points more likely than younger donors to pick up the phone in our sample. With respect to gender, the calls may be more effective for women than for men, given a study by DellaVigna et al. (2013), which showed women are on the margin of giving. With respect to income, thank-you calls may work better for higher income donors since the marginal cost to making another donation is lower for this group, and hence the cost of reciprocating could also be lower. With respect to gift amount, we might expect larger treatment effects for small donors, as donors who give a small amount may be more surprised to

receive a thank-you call (since it is less typical for charities to thank small donors) and therefore they perceive this act as especially kind and reciprocate with another gift. Finally, given the work by Kessler and Milkman (2016), we might expect donors who have given more than one gift prior to the call to be more responsive to the thank-you call.

In Tables A.7 and A.8 in Appendix C, we present the results of OLS regressions with probability of giving and donation amount conditional on giving as the outcome variables that include these interactions: based on gender (Column 1), age (Column 2), income (Column 3), residence length (Column 4) and initial donation amount and number of donations (Columns 5-6). We find no evidence of meaningful heterogeneous treatment effects for most of these interactions. An exception is the baseline donation amount conditional on donating, which shows a significant positive correlation of 0.06 (p-value¡0.01). This suggests that individuals who initially give more are more affected by the thank-you calls. To explore this further, Figures A.4 and A.5 in Appendix C plot the marginal treatment effects by initial donation, but do not find any interesting trends.

Finally, we conduct a robustness test. As noted earlier, donors to the public television stations sometimes receive a pledge gift based on a minimum donation amount. It is possible that thank-you calls are crowded out by the more costly pledge gift. While we do not have robust data on when pledge gifts were offered, we do know that pledge gifts are very common in on-air fundraising times, and not common otherwise. Hence, Column 6 in Tables A.7 and A.8 in Appendix C includes a coefficient for whether the donor was acquired through a pledge drive and an interaction term for pledge drive and treatment status. The interaction term is 0.01 and statistically significant (p-value¡0.05) for probability of donating, suggesting that individuals who give via a pledge drive are actually slightly more likely to be affected by the thank-you call. This suggests that our lack of treatment effect is not driven out by the existence of the

pledge gift. This is not surprising, since we also did not see an impact of thank-you calls in the national non-profit experiment (Experiment 2) and this non-profit does not generally offer donor gifts.

3.4 Call Outcomes

Donor behavior is potentially informative for directing future solicitations (Jasper and Samek, 2014). In this section, we ask whether data on the outcome of the phone call is informative for assessing the likelihood of success of future solicitation requests. In the public television station experiment, data was also collected on the outcomes of the calls for the treatment group. Table 5 provides a summary of this data. The caller reached the donor in 74.8% of the calls in Experiment 1, 69.9% of the calls in Experiment 2 and 61.42-62.73% of the calls in Experiment 3. Among those who were reached, in Experiments 1 and 3 where this information was collected, 34.66-39.9% resulted in a left message, 21.8-29.1% resulted in a neutral engagement, 3.6-4.3% resulted in a positive engagement and 1.0-1.5% resulted in a negative engagement.

We find that in Experiment 1, members who were reachable gave significantly more ($36.81) than members who were not reachable ($33.63) in the year following the randomization (Mann-Whitney p-value<0.01). The results from the national non-profit look similar, whereby members who were reachable gave significantly more ($36.86) than members who were not reachable ($32.74) ($p$-value$<0.01$). In addition, reached members who had a positive engagement gave significantly more ($43.01) than members who had a neutral engagement ($37.08) or a negative engagement ($30.58) (both p-values<0.01). And members who had a negative engagement gave significantly less than members who had a neutral engagement or members who were not reached (both p-values<0.01).

In Table 6, we report regressions of predictors of future giving, focusing only on members who were in the call group in either Experiment 1 or Experiment 3. We see

that the commonly used predictors – like amount of previous gifts and total number of previous gifts, household income and age – are all positively correlated with future giving amounts. We also see that a neutral engagement or a left message is associated with a 1-2% increase in the probability of giving again, while a positive engagement is associated with a 4-6% increase in the probability of giving again. A negative engagement is associated with a negative but insignificant probability of giving again. By comparison, having an income of $35,999-$99,999 annually relative to the base income below $35,000 or being female are also associated with a 1% increase in future giving. These correlations are all on the extensive margin; i.e., there is no significant association of call outcomes on gift amount conditional on giving. Table A.9 in Appendix C replicates this analysis with retention rate as the outcome variable.

It is an open question whether the ability to reach the donor, or a positive engagement, caused the increase in subsequent donations. This is because the potential effect is confounded by selection effects. This means that the types of people who respond – and respond positively – may also be the types who plan to give more in the future. On the other hand, the types of people who do not respond – or respond negatively – may also be the types who do not plan to give as much in the future.

4 Discussion and Conclusion

To our knowledge, this is the first large-scale and most rigorous evaluation of the impact of thank-you calls on charitable giving. We conducted field experiments with nearly 70 public television stations and a large national non-profit, including nearly 600,000 individual donors and 500,000 thank-you calls. The thank-you calls followed standard protocols used in the industry for large national non-profits, including both the content of the call and the use of an external call center to place the calls. Despite the widespread use of the calls, and in stark contrast to the forecasts of fundraising professionals, we find no effect of the calls on subsequent giving behavior. Since the television

stations and the national non-profit constitute two very different sectors within the industry, and because the experiments differed somewhat in their implementation, we believe our results have high external validity for the large national non-profit industry.

Our experiments take social preference theory in a new direction by exploring the effect of expressing gratitude on generosity. The importance of expressing gratitude in modern societies is clear. It is reflected in the early writings of Adam Smith, in individual behavior in personal and business interactions, and in the weight that parents place on teaching gratitude to their children. Our experiment provides a test of the impact of expressing gratitude in the charitable domain. The charitable interaction with a thank-you call can be modeled as a repeated gift exchange: the donor gives an initial gift, the charity personally thanks the donor, and the donor reciprocates by giving an additional gift. If the donor gets utility from the thank-you call, then the additional donation should be larger with a call versus without a call. We do not find this to be the case. Further, while our experiment was not designed to test this, in an equilibrium with full information where the donor can backward-induct, the first donation should also be larger since the donor should expect a thank-you call.

This paper joins a limited literature on gift exchange in the field. In that sense, it is similar to Falk (2007), who conducted a field experiment evaluating the impact of sending postcard gifts to potential donors accompanying the solicitation request. Falk (2007) found that these gifts significantly increased the willingness of recipients to make a donation. Our paper differs from the above in that our "gift" is actually a thank-you call, which is thought to be important for building relationships with donors and for donor retention, but is not a tangible item. In this way, our paper is also related to Halperin et al. (2019), who study the effect of apologies on customer retention. Like Halperin et al. (2019), who found that costless apologies do not help with customer retention, we do not find our thank-you calls to have the impact that we would have

expected.[11]

From the point of view of the organizations' revenue maximization, thank-you calls should only be undertaken if the gain from making the calls is greater than the cost of doing so. The cost to an organization for a call is approximately $1. Given a null effect size of thank-you calls, from a profit-maximizing perspective, it should never be optimal for a charity to place a $1 call to any new donor. Of course, organizations may still wish to carry out the calls for other reasons, such as altruism toward the donor.

Given that these calls were able to reach 70-80% of donors, calls continue to be a good means of communication with donors. We also recorded the responses to the calls. We find that those who respond, and especially those who engage positively with the caller, give significantly more later than those who do not respond or those who engage negatively. We propose that information about call outcomes may be used by non-profits to segment donors and personalize future solicitations.

There are two potential directions for future research. The first is to evaluate the impact of expressing gratitude in other contexts to inform theory. Simple dictator games in the laboratory could be extended to allow the recipient to express gratitude and observe the behavior of the dictator. Expressing gratitude could also be studied in the field in other contexts. For example, a study of the marketplace like that of the sports-card market in List (2006) could be extended to include studying whether gratitude from the buyer in the second stage results in the seller offering the buyer a better deal in the third stage.

The second direction for future research is to manipulate aspects of the thank-you call in the charitable giving context. While we find that thank-you calls as commonly practiced by large national non-profits are not effective, alternative ways of operationalizing the calls may have different results. It may be that calls are ineffective

[11]This paper is also related to Bruttel et al. (2019) who use dictator games in the laboratory with free-text requests and find that messages including the word "thanks" increase the willingness to give, but only for female dictators.

as an additional means of saying thank you, but that calls would be effective in the absence of thank-you letters that are also standard in the industry. Another open question is whether the results would apply to small and medium-size non-profits, who tend to use senior staff, board members or volunteers to make calls. In our survey, 40% of fundraisers indicated that board members usually make their calls. Calls made by volunteers or board members could be more effective than calls made by paid workers. It is an open question whether calls made closer to the initial gift date would yield better results. On one hand, earlier calls may be more effective if such calls provide a more meaningful signal to the donor about the importance of his or her gift. On the other hand, earlier calls may not be effective if the donor has forgotten about the call once the organization reaches out with a renewal gift request. Finally, alternative call scripts could incorporate information about peers. Social information has been shown to matter in contexts ranging from charity (as in Frey and Meier (2004); Croson and Shang (2008); Shang and Croson (2009)) to job search (Coffman et al., 2017).

In summary, our paper represents a first step at understanding the impact of expressing gratitude on an economically meaningful transaction. The paper provides implications for social preference theory. The paper also provides a clear take-away for the non-profit industry: if the goal is donor retention, then thank-you calls, as currently practiced, do not have the expected impact.

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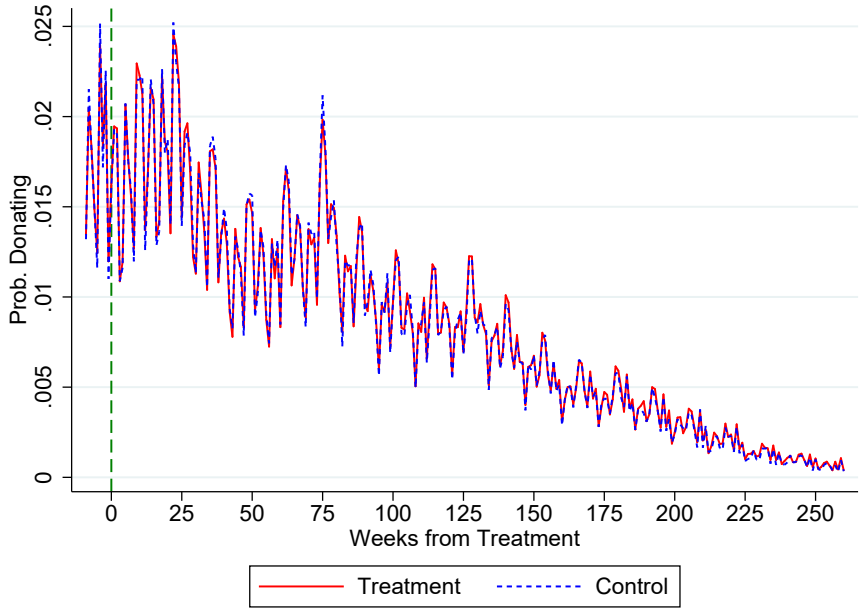
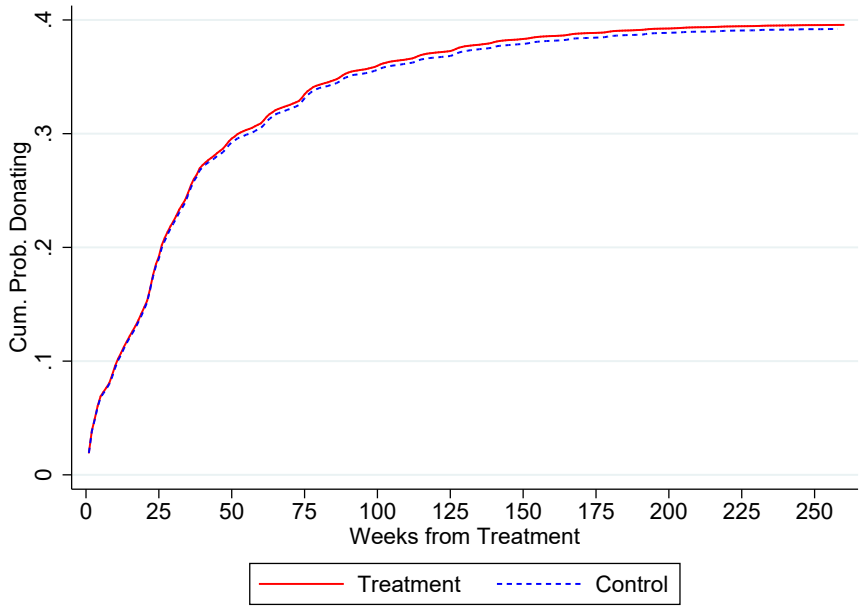
Figure 1: Donating Over Time in Experiment 1



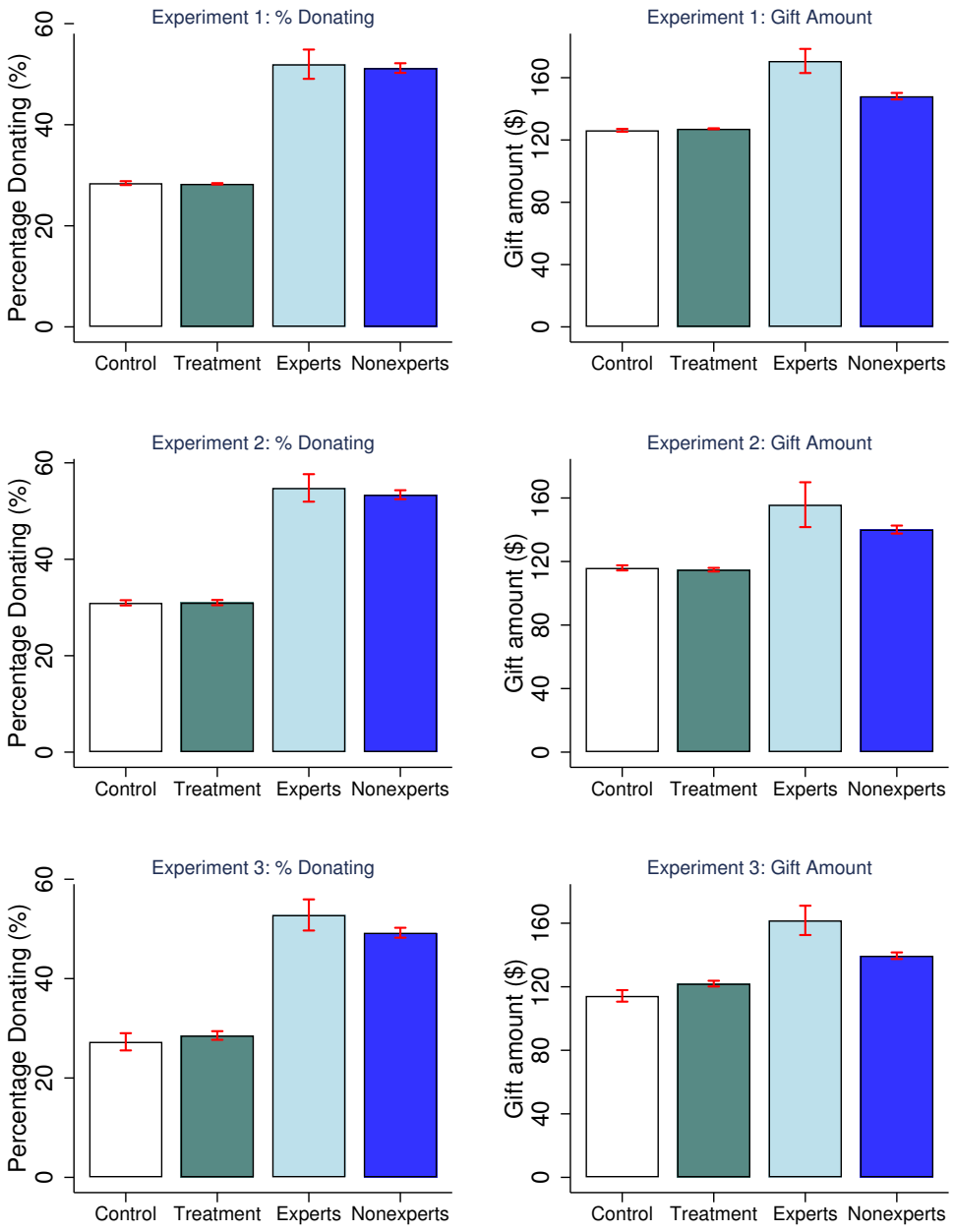
(a) Probability of donating by weeks from treatment



(b) Cumulative probability of donating by weeks from treatment

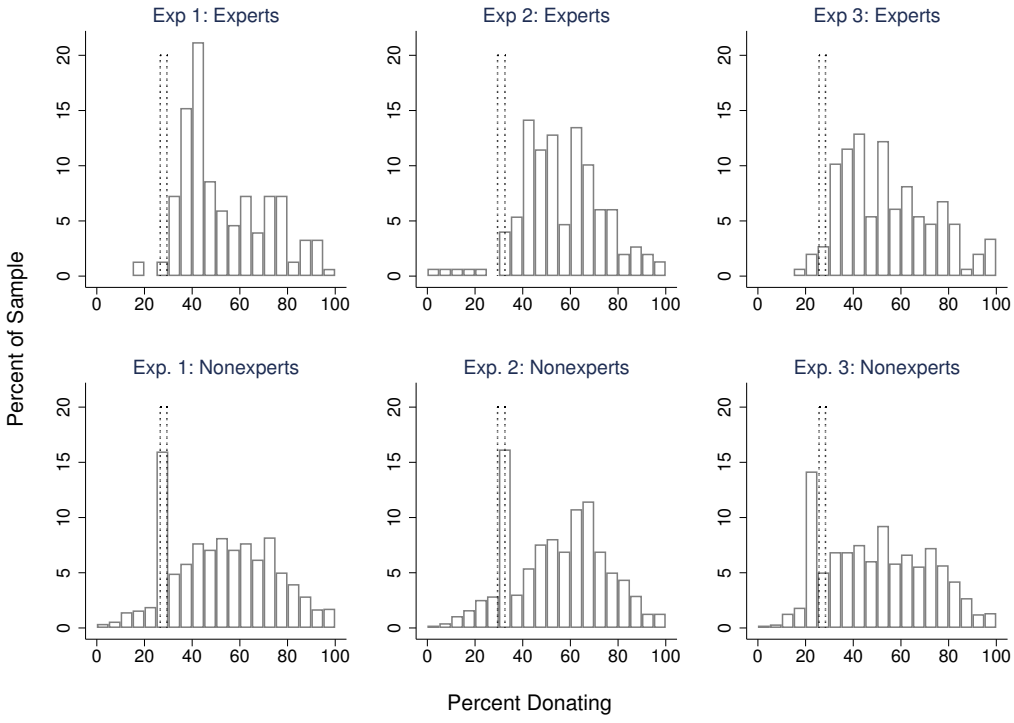
Note: The figures show probability of donating by weeks since the thank you call intervention for Experiment 1, where the date of the intervention is normalized to zero. Panel a shows probability of donating in a given week, calculated as proportion of sample donating in that week. Panel b shows cumulative probability of donating over time, calculated as the proportion of the sample who has donated by week X past the intervention.

Figure 2: Forecasts of Treatment Effects



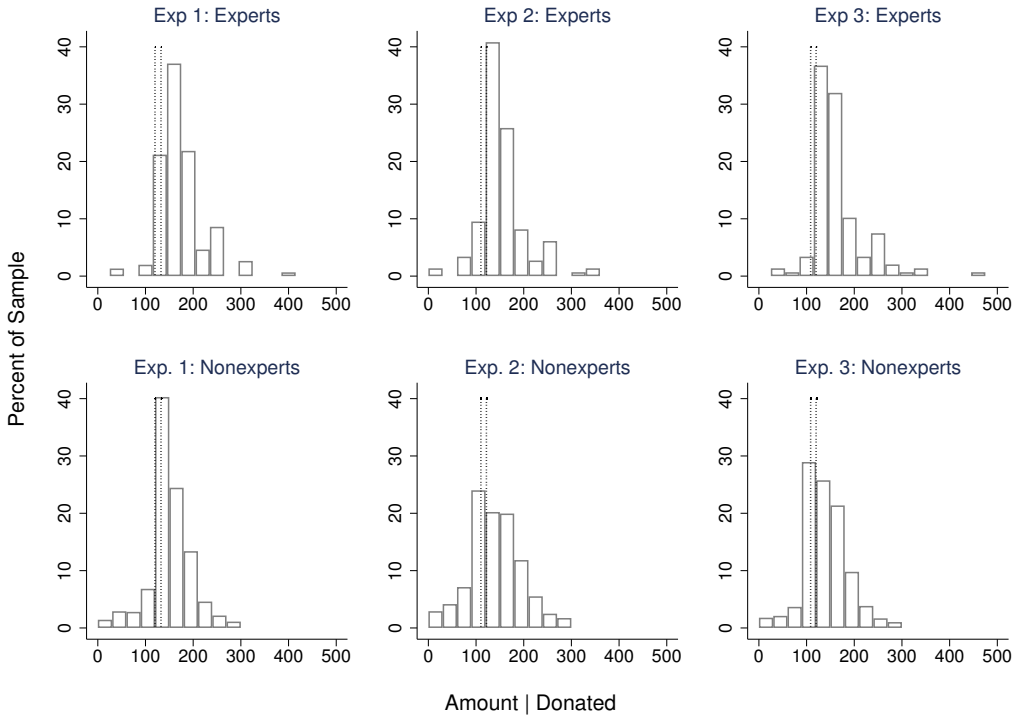
Note: This figure shows average forecasts of treatment effects for percentage donating and conditional giving amount by forecast group, alongside the experimental outcome. The error bars represent 95% confidence intervals.

Figure 3: Histograms of Forecasted Treatment Effects: Percent Donating



Note: This figure shows histograms of predicted percentage donating by experiment and forecasting group. The dotted lines represent the region 5% above and below the actual percentage donating for the treatment group.

Figure 4: Histograms of Forecasted Treatment Effects: Amount | Donated



Note: This figure shows histograms of predicted amount donated (conditional on donating) by experiment and forecasting group. The dotted lines represent the region 5% above and below the actual giving amount of the treatment group.

Table 1: Balance Table

(a) Experiment 1: Pubic Television Stations

	Treatment	Control	p-value
Baseline Gift Amount	149.93	150.09	0.59
	(0.15)	(0.46)	
Baseline Number of Gifts	1.41	1.41	0.12
	(0.00)	(0.01)	
%Female	58.48	58.90	0.07*
	(0.08)	(0.22)	
%18 to 44 years old	16.25	15.97	0.14
	(0.07)	(0.18)	
%45 to 64 years old	39.68	40.05	0.15
	(0.09)	(0.25)	
%65+ years old	44.07	43.98	0.75
	(0.09)	(0.25)	
%Income below $34,000	19.52	19.41	0.60
	(0.07)	(0.20)	
%Income $35,000-$99,999	46.45	46.67	0.40
	(0.09)	(0.25)	
%Income $100,000-$174,999	20.81	20.69	0.56
	(0.07)	(0.20)	
%Income $175,000+	13.21	13.23	0.93
	(0.06)	(0.17)	
%Residence length<5 years	46.02	45.94	0.75
	(0.09)	(0.25)	
%Residence length> 5 years	53.98	54.06	0.75
	(0.09)	(0.25)	
Gender missing	4.96	4.82	0.17
	(0.03)	(0.09)	
Age/Income missing	26.05	25.83	0.27
	(0.07)	(0.19)	
N	439,510	54,606	

(b) Experiment 2: National Non-Profit

	Treatment	Control	p-value
Baseline Gift Amount	69.56	70.42	0.86
	(0.58)	(0.81)	
Baseline Number of Gifts	1.37	1.37	0.79
	(0.01)	(0.01)	
N	28,784	28,848	

Table 1: Balance Table, cont.

(c) Experiment 3: Public Television, New Script

	New Script	Original Script	Control	p-value
Baseline Gift Amount	137.12	136.67	138.74	0.62
	(0.902)	(1.00)	(1.81)	
Baseline Number of Gifts	1.29	1.31	1.29	0.22
	(0.009)	(0.01)	(0.02)	
%Female	58.96	60.12	59.94	0.21
	(0.484)	(0.48)	(0.98)	
%18 to 44 years old	19.22	18.46	18.69	0.46
	(0.438)	(0.43)	(0.89)	
%45 to 64 years old	40.73	41.61	40.58	0.46
	(0.547)	(0.54)	(1.12)	
%65+ years old	40.05	39.93	40.73	0.81
	(0.545)	(0.54)	(1.12)	
%Income below $34,000	20.04	19.37	18.84	0.37
	(0.445)	(0.43)	(0.89)	
%Income $35,000-$99,999	46.19	47.76	47.70	0.11
	(0.555)	(0.55)	(1.14)	
%Income $100,000-$174,999	21.41	20.81	21.68	0.55
	(0.456)	(0.45)	(0.94)	
%Residence length<5 years	43.70	43.61	44.91	0.57
	(0.552)	(0.55)	(1.13)	
%Residence length> 5 years	56.30	56.39	55.09	0.57
	(0.552)	(0.55)	(1.13)	
Gender missing	4.03	4.09	4.29	0.83
	(0.190)	(0.19)	(0.39)	
Age/Income missing	0.25	0.24	0.26	0.02**
	(0.004)	(0.00)	(0.01)	
N	10,780	10,893	2,640	

Note: The Baseline Gift Amount and Baseline Number of Gifts are the total of giving (averaged across the group) in the year prior to the randomization date. For most donors, this includes only one initial gift; however, some donors gave repeatedly prior to receiving the thank-you call. P-values reported from Mann-Whitney t-tests for continuous data and Chi2 tests of proportions for binary data. P-values for Experiment 3 are from an F-test. Standard errors in parentheses.

Table 2: Treatment Effects

(a) Experiment 1: Pubic Television Stations

	Treatment	Control	p-value
Percent Donating	27.97	28.06	0.64
Amount Donated	35.52	35.49	0.81
	(0.14)	(0.38)	
Number of Gifts	0.79	0.80	0.54
	(0.00)	(0.01)	
Amount | Donated	127.00	126.46	0.22
	(0.41)	(1.05)	
Retention rate	32.68	32.91	0.67
N	439,510	54,606	

(b) Experiment 2: National Non-Profit

	Treatment	Control	p-value
Percent Donating	31.02	30.97	0.90
Amount Donated	35.62	35.93	0.82
	(0.63)	(0.67)	
Number of Gifts	0.78	0.79	0.95
	(0.01)	(0.01)	
Amount | Donated	114.85	116.01	0.61
	(1.74)	(1.91)	
Retention rate	46.41	46.24	0.83
N	28,784	28,848	

(c) Experiment 3: Public Television, New Script

	New Script	Original Script	Control	p-value
Percent Donating	28.32	29.15	27.01	0.07*
Amount Donated	34.41	34.64	30.88	0.09*
	(0.80)	(0.76)	(1.47)	
Number of Gifts	0.92	0.98	0.90	0.09*
	(0.02)	(0.02)	(0.05)	
Amount | Donated	121.49	118.84	114.33	0.27
	(2.12)	(1.89)	(4.05)	
Retention rate	39.00	40.72	37.69	0.19
N	10,780	10,893	2,640	

Note: P-values reported from Mann-Whitney t-tests for continuous data and Chi2 tests of proportions for binary data. P-values for Experiment 3 are from an F-test. The retention rate is defined as current gift amount/previous gift amount. Standard errors are in parentheses.
* p<0.10, ** p<0.05, *** p<0.010

Table 3: Factors Associated with Giving in the next Year

	Donated			*Amount* | *Donated*		
	Experiment 1	Experiment 2	Experiment 3	Experiment 1	Experiment 2	Experiment 3
Call Treatment	0.00	0.00	0.01	0.60	-0.23	0.54
	(0.00)	(0.00)	(0.01)	(1.25)	(1.87)	(4.95)
New Call Script			0.00			3.01
			(0.01)			(3.01)
Baseline Gift Amount	-0.00***	0.00***	-0.00***	0.54***	0.83***	0.56***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.02)
Baseline Number of Gifts	0.13***	0.11***	0.18***	-1.26***	4.57***	4.27***
	(0.00)	(0.00)	(0.00)	(0.22)	(0.55)	(1.07)
Female	0.01***		0.01*	-3.58***		-7.36**
	(0.00)		(0.01)	(0.81)		(2.95)
45 to 64 years old	0.00		0.01	4.09***		2.96
	(0.00)		(0.01)	(1.21)		(4.14)
65+ years old	0.08***		0.08***	7.27***		7.86*
	(0.00)		(0.01)	(1.20)		(4.16)
Income $35,000-$99,999	0.01***		0.01	-1.42		-4.46
	(0.00)		(0.01)	(1.06)		(3.86)
Income $100,000-$174,999	0.03***		0.03***	4.57***		0.97
	(0.00)		(0.01)	(1.27)		(4.59)
Income $175,000+	0.04***		0.05***	11.67***		2.66
	(0.00)		(0.01)	(1.44)		(5.35)
Residence length>5 years	0.00**		-0.01	3.06***		-1.36
	(0.00)		(0.01)	(0.82)		(3.00)
Constant	0.13***	0.15***	0.08***	51.70***	30.90***	51.54***
	(0.00)	(0.00)	(0.02)	(2.05)	(1.69)	(7.70)
R2	0.13	0.08	0.16	0.16	0.48	0.16
N	344,652	57,632	17,614	99,860	17,862	5,173

Note: This table shows results from OLS regressions of donation outcomes on treatment for experiments 1-3 restricted to donors with full demographic information available. Columns 1-3 use probability of donating in the next year as the outcome. Columns 4-6 use gift amount conditional on making a donation as the outcome. Controls include baseline gift amount, number of gifts, age, gender, household income, residence length and fixed station-date effects in Experiments 1 and 3. Omitted categories include 18 to 44 year olds, income below $34,000, and residence 5 years or less. Standard errors are in parentheses.
* p<0.10, ** p<0.05, *** p<0.010

Table 4: Average Gift Amount on Treatment, LATE Estimates

	Donated			*Amount* | *Donated*		
	Experiment 1	Experiment 2	Experiment 3	Experiment 1	Experiment 2	Experiment 3
Reached	0.00	0.00	0.02	0.78	-0.32	0.84
	(0.00)	(0.01)	(0.02)	(1.64)	(2.58)	(7.77)
New Call Script			0.00			3.01
			(0.01)			(3.00)
Baseline Gift Amount	-0.00***	0.00***	-0.00***	0.54***	0.83***	0.56***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.02)
Baseline Number of Gifts	0.13***	0.11***	0.18***	-1.26***	4.57***	4.27***
	(0.00)	(0.00)	(0.00)	(0.22)	(0.55)	(1.07)
Female	0.01***		0.01*	-3.58***		-7.35**
	(0.00)		(0.01)	(0.81)		(2.95)
45 to 64 years old	0.00		0.01	4.09***		2.94
	(0.00)		(0.01)	(1.21)		(4.15)
65+ years old	0.08***		0.08***	7.26***		7.82*
	(0.00)		(0.01)	(1.20)		(4.18)
Income $35,000-$99,999	0.01***		0.01	-1.43		-4.46
	(0.00)		(0.01)	(1.06)		(3.86)
Income $100,000-$174,999	0.03***		0.03***	4.57***		0.98
	(0.00)		(0.01)	(1.27)		(4.59)
Income $175,000+	0.04***		0.05***	11.67***		2.68
	(0.00)		(0.01)	(1.44)		(5.36)
Residence length>5 years	0.00**		-0.00	3.06***		-1.34
	(0.00)		(0.01)	(0.82)		(3.00)
Constant	0.43	0.15***	0.36**	367.26***	30.90***	451.69***
	(0.32)	(0.00)	(0.14)	(123.68)	(1.69)	(51.47)
R2	0.18	0.08	0.20	0.18	0.48	0.19
N	344,652	57,632	17,614	99,860	17,862	5,173

Note: This table shows local average treatment (LATE) effects of thank-you calls on donation outcomes restricted to donors with full demographic information available. Reached signifies a successful call. Columns 1-3 use probability of donating in the next year as the outcome. Columns 4-6 use gift amount conditional on making a donation as the outcome. Controls include baseline gift amount, number of gifts, age, gender, household income, residence length and fixed station-date effects in Experiments 1 and 3. Omitted categories include 18 to 44 year olds, income below $34,000, and residence 5 years or less. Standard errors are in parentheses.
* p<0.10, ** p<0.05, *** p<0.010

Table 5: Call Outcomes

(a) Experiment 1: Pubic Television Stations

	Treatment
%Reached	74.81
	(0.07)
%Left Message	39.94
	(0.07)
%Positive Engagement	4.27
	(0.03)
%Neutral Engagement	29.06
	(0.07)
%Negative Engagement	1.54
	(0.02)

(b) Experiment 2: National Non-Profit

	Treatment
%Reached	69.96
	(0.27)

(c) Experiment 3: Public Television, New Script

	New Script	Original Script
%Reached	61.42	62.73
	(0.47)	(0.46)
%Left Message	34.66	35.22
	(0.46)	(0.46)
%Positive Engagement	3.79	3.60
	(0.18)	(0.18)
%Neutral Engagement	21.79	22.90
	(0.40)	(0.40)
%Negative Engagement	1.18	1.01
	(0.10)	(0.10)

Note: The table shows call outcomes by treatment, for participants in the call groups. 'Reached' is defined as calls that successfully went through where a 'thank you' was delivered to either a person or an answering machine. The percentages for different types of engagement therefore add up to the percentage reached. Standard errors in parentheses.

Table 6: Predictors of Future Giving

	Donated				*Amount* | *Donated*			
	Exp. 1	Exp. 1	Exp. 3	Exp. 3	Exp. 1	Exp. 1	Exp. 3	Exp. 3
Baseline Gift Amount	-0.00***	-0.00***	-0.00***	-0.00***	0.57***	0.55***	0.53***	0.53***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.02)	(0.02)
Baseline Number of Gifts	0.13***	0.13***	0.18***	0.18***	-1.77***	-1.32***	4.04***	4.22***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.20)	(0.24)	(0.95)	(1.14)
Left Message	0.02***	0.01***	0.02**	0.02**	0.32	0.79	1.36	3.42
	(0.00)	(0.00)	(0.01)	(0.01)	(0.96)	(1.09)	(3.10)	(3.63)
Positive Engagement	0.05***	0.04***	0.06***	0.06***	0.59	-0.28	0.91	-0.52
	(0.00)	(0.00)	(0.02)	(0.02)	(1.81)	(2.09)	(6.45)	(7.67)
Neutral Engagement	0.02***	0.01***	0.01*	0.01	-0.47	-0.99	2.08	1.47
	(0.00)	(0.00)	(0.01)	(0.01)	(1.02)	(1.17)	(3.48)	(4.15)
Negative Engagement	-0.01	-0.01	-0.01	-0.00	1.92	-3.33	16.57	20.07
	(0.01)	(0.01)	(0.03)	(0.03)	(3.29)	(3.74)	(13.33)	(15.17)
Female		0.01***		0.01*		-3.60***		-8.56***
		(0.00)		(0.01)		(0.86)		(3.15)
45 to 64 years old		-0.00		0.01		4.05***		4.23
		(0.00)		(0.01)		(1.29)		(4.42)
65+ years old		0.08***		0.08***		7.21***		8.08*
		(0.00)		(0.01)		(1.27)		(4.45)
Income $35,000-$99,999		0.01***		0.01		-1.02		-2.47
		(0.00)		(0.01)		(1.13)		(4.10)
Income $100,000-$174,999		0.03***		0.02**		4.75***		0.44
		(0.00)		(0.01)		(1.35)		(4.89)
Income $175,000+		0.04***		0.05***		12.09***		4.39
		(0.00)		(0.01)		(1.53)		(5.67)
Residence length>5 years		0.01***		-0.01		2.99***		-1.29
		(0.00)		(0.01)		(0.87)		(3.19)
Constant	0.15***	0.11***	0.12***	0.08***	56.54***	51.18***	54.22***	54.07***
	(0.00)	(0.00)	(0.01)	(0.02)	(0.98)	(1.98)	(3.40)	(7.10)
R2	0.13	0.13	0.16	0.16	0.18	0.16	0.16	0.14
N	439,510	306,383	21,673	15,752	122,923	88,734	6,228	4,647

Note: This table shows results from OLS regressions of donation outcomes on baseline gift amount, call outcomes and controls for experiments 1 and 3. Columns 1-4 use probability of donating in the next year as the outcome. Columns 5-8 use gift amount conditional on making a donation as the outcome. The second regression includes controls for age, gender, household income and residence length. All regressions control for fixed station-date effects. Omitted categories include 18 to 44 year olds, income below $34,000, and residence 5 years or less. Standard errors are in parentheses.
* p<0.10, ** p<0.05, *** p<0.010

Appendix A: Experiment Thank You Scripts

A.1 Public Television Stations

Good evening. Is this <**donor full name**>? Hi Mr. <**donor last name**>. This is **<caller full name>** on behalf of **<organization name>**. I am just calling to thank you for becoming a member of **<organization name>** this year? Your support helps us keep quality programming on the air, and we simply couldn't do it without you. If you have any questions regarding your membership, please feel free to call our Member Services at **<member services phone#>**. Would you like for me to repeat that number so you can write it down? Thank you again for your support and have a great evening! Goodbye.

DO NOT ASK FOR AN ADDITIONAL GIFT!

A.2 National Non-Profit

LIVE CALL SCRIPT

Hello, this is _____, calling on behalf of XXXXXXXXXXXXXX. **This call may be monitored or recorded for my quality.**

I'm calling you today, simply to say THANK YOU!! We're not calling for a contribution — we just wanted to take a moment to express our gratitude for your support and partnership. As you know, it's been a challenging few years on XXXXXXXXXX XXXXXXX. And while the fight is far from over, we know that with supporters like you by our side, together, we will all do whatever it takes to win.

On behalf of the millions of women, men and young people who will rely on XXXXX XXX XXXX XXXXXX XXXe this year, thank you.

Do you have any questions I can answer for you?

(Callers please pass along any questions or comments and/or provide the number XXXXXXXXXX to those who need to contact XXXXXXXXXX directly.)

Have a great day! ***OR*** Have a good evening!

ANSWERING MACHINE MESSAGE

Hello, this is _____, calling on behalf of XXXXXXXXXXXXXXXXXXXX.

We called you today, simply to say thank you for your commitment. It's been a challenging few years on XXXXXXXXXXXXXXX. And while the fight is far from over, we know that we can win with supporters like you by our side.

On behalf of the millions of women, men and young people who will rely on XXXXXX XXXXXXX XXXXXXXX this year, please accept our deepest gratitude for your support. If you have any questions or comments, please feel free to contact us at XXXXXXXX.

A.3 Public Television Stations, Script with Control and Treatment

Good evening. Is this [DONOR'S FULL NAME]?

Hi Mr./Mrs./Ms./etc. [DONOR'S LAST NAME]. This is [CALLER NAME], I'm with [STATION NAME].

Please be assured that we value your financial support and we're not calling for any additional donation at this time. Rather, to thank you for your past and continued support of [STATION NAME]. We're really grateful to have you as a member!

(brief pause)

Your support helps us remain vital to our community by keeping quality programming on the air, and we simply couldn't do it without you.

[START TREATMENT MESSAGE]

(brief pause) **At [STATION] your feedback shapes our actions.**

(brief pause) **Could you tell me about which of our programs you recently enjoyed?**

(if answered) **That's great, I'll pass this information along to the station. (record answer)**

(if didn't answer, continue) **Okay, no problem.**

[END TREATMENT MESSAGE]

Thank you so much for your support and have a great evening!

Note: The treatment script included the questions in bold between [START TREATMENT MESSAGE] and [END TREATMENT MESSAGE.] The Control script omitted these components.

Appendix B: Forecasting Survey Materials

B.1 Phone Script to Recruit Fundraisers

Hello, I'm a researcher calling from the University of Southern California. We are doing a study to learn about fundraising. We'd like to send a survey link to someone in your organization who would be familiar with your fundraising practices.

The survey is anonymous and takes about 10 minutes to complete. The survey will ask questions about whether your organization does various things – for example, personal thank-you calls to donors – and also ask your views about how effective you think different practices are. We'll also be offering a raffle with gift cards for people who complete the survey.

Is there someone at your organization that we can speak to about participating?

What do I need to do now?
All we need now is the contact information of someone who would be able to take this survey.

B.2 E-Mail Script to Recruit Fundraisers

Dear **<firstname lastname>,**

My name is **<name>,** and I am a researcher at the University of Southern California, and we are doing a study to learn about fundraising. We would highly appreciate it if someone in your organization who is familiar with your fundraising practices would take the survey linked below.

Please visit: choicelab.usc.edu

The survey is anonymous and takes about 10 minutes to complete. The survey will ask questions about whether your organization does various things – for example, personal thank-you calls to donors – and also ask your views about how effective you think different practices are. We'll also be offering a raffle with **$125 Amazon gift cards** for people who complete the survey.

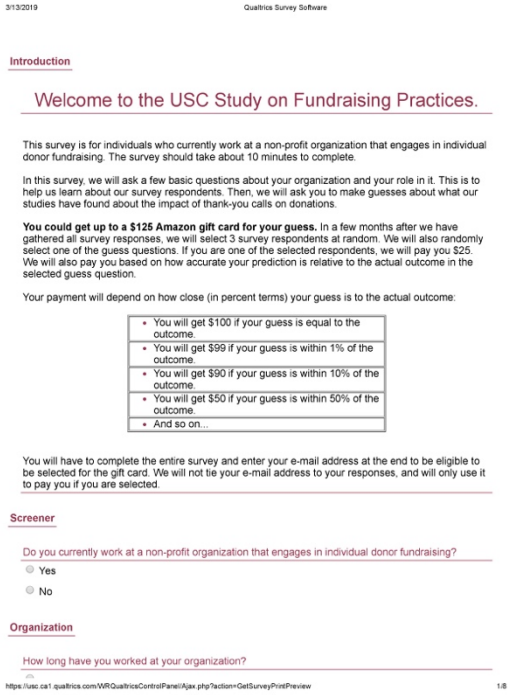
Please feel free to contact me for any additional information you may require.

Regards,
<name>

B.3 Summary of Fundraiser Recruitment Efforts

Outcome	First Call	Second Call	Total
No Answer	117 8.45%	15 12.40%	132 8.77%
Voicemail Left	686 49.57%	41 33.88%	727 48.31%
Spoken w/Rep	568 41.04%	61 50.41%	629 41.79%
Called, Not Reached	13 0.94%	4 3.31%	17 1.13%
TOTALS	1384	121	1505

B4. Fundraiser Survey



3/13/2019 Qualtrics Survey Software

Introduction

Welcome to the USC Study on Fundraising Practices.

This survey is for individuals who currently work at a non-profit organization that engages in individual donor fundraising. The survey should take about 10 minutes to complete.

In this survey, we will ask a few basic questions about your organization and your role in it. This is to help us learn about our survey respondents. Then, we will ask you to make guesses about what our studies have found about the impact of thank-you calls on donations.

You could get up to a $125 Amazon gift card for your guess. In a few months after we have gathered all survey responses, we will select 3 survey respondents at random. We will also randomly select one of the guess questions. If you are one of the selected respondents, we will pay you $25. We will also pay you based on how accurate your prediction is relative to the actual outcome in the selected guess question.

Your payment will depend on how close (in percent terms) your guess is to the actual outcome:

- You will get $100 if your guess is equal to the outcome.
- You will get $99 if your guess is within 1% of the outcome.
- You will get $90 if your guess is within 10% of the outcome.
- You will get $50 if your guess is within 50% of the outcome.
- And so on...

You will have to complete the entire survey and enter your e-mail address at the end to be eligible to be selected for the gift card. We will not tie your e-mail address to your responses, and will only use it to pay you if you are selected.

Screener

Do you currently work at a non-profit organization that engages in individual donor fundraising?

- Yes
- No

Organization

How long have you worked at your organization?

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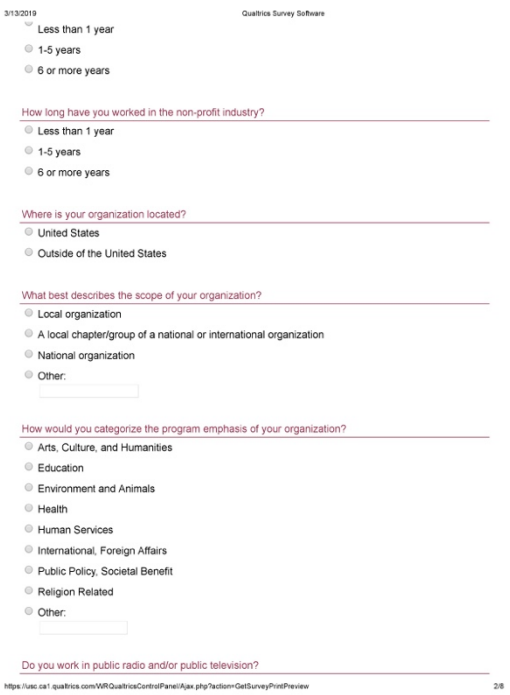

3/13/2019 Qualtrics Survey Software

- Less than 1 year
- 1-5 years
- 6 or more years

How long have you worked in the non-profit industry?

- Less than 1 year
- 1-5 years
- 6 or more years

Where is your organization located?

- United States
- Outside of the United States

What best describes the scope of your organization?

- Local organization
- A local chapter/group of a national or international organization
- National organization
- Other:

How would you categorize the program emphasis of your organization?

- Arts, Culture, and Humanities
- Education
- Environment and Animals
- Health
- Human Services
- International, Foreign Affairs
- Public Policy, Societal Benefit
- Religion Related
- Other:

Do you work in public radio and/or public television?

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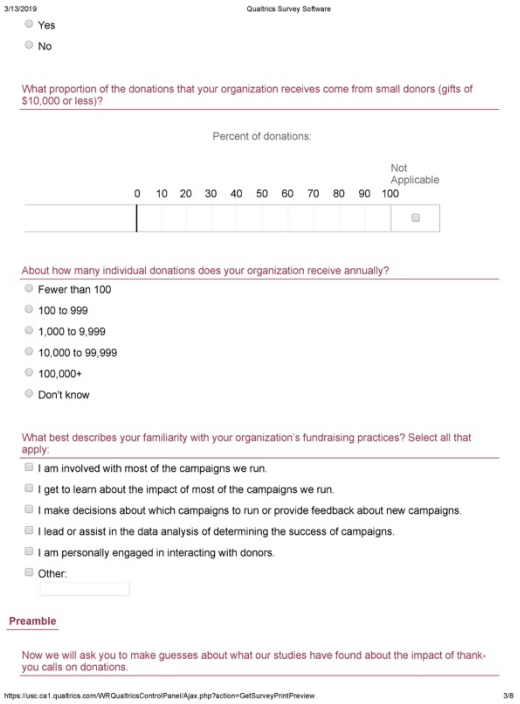


3/13/2019 Qualtrics Survey Software

- Yes
- No

What proportion of the donations that your organization receives come from small donors (gifts of $10,000 or less)?

Percent of donations:

0 10 20 30 40 50 60 70 80 90 100 Not Applicable

About how many individual donations does your organization receive annually?

- Fewer than 100
- 100 to 999
- 1,000 to 9,999
- 10,000 to 99,999
- 100,000+
- Don't know

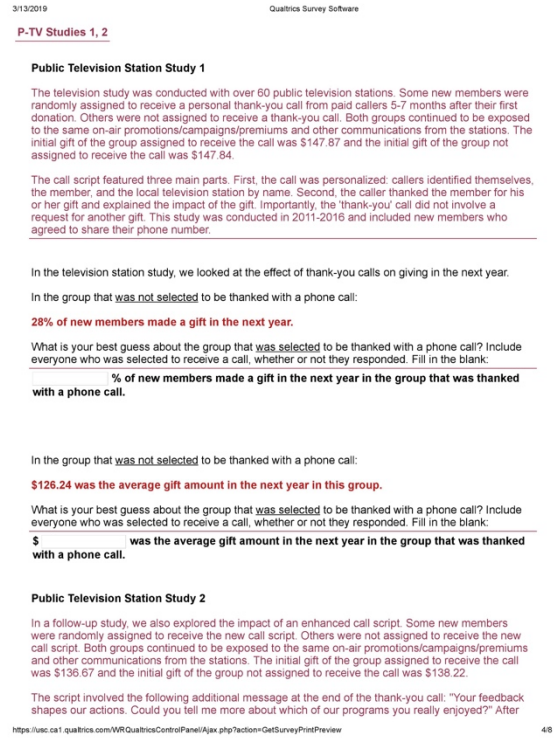
What best describes your familiarity with your organization's fundraising practices? Select all that apply:

- I am involved with most of the campaigns we run.
- I get to learn about the impact of most of the campaigns we run.
- I make decisions about which campaigns to run or provide feedback about new campaigns.
- I lead or assist in the data analysis of determining the success of campaigns.
- I am personally engaged in interacting with donors.
- Other:

Preamble

Now we will ask you to make guesses about what our studies have found about the impact of thank-you calls on donations.

https://usc.ca1.qualtrics.com/WRQualtricsControlPanel/Ajax.php?action=GetSurveyPrintPreview 3/8



3/13/2019 Qualtrics Survey Software

P-TV Studies 1, 2

Public Television Station Study 1

The television study was conducted with over 60 public television stations. Some new members were randomly assigned to receive a personal thank-you call from paid callers 5-7 months after their first donation. Others were not assigned to receive a thank-you call. Both groups continued to be exposed to the same on-air promotions/campaigns/premiums and other communications from the stations. The initial gift of the group assigned to receive the call was $147.87 and the initial gift of the group not assigned to receive the call was $147.84.

The call script featured three main parts. First, the call was personalized: callers identified themselves, the member, and the local television station by name. Second, the caller thanked the member for his or her gift and explained the impact of the gift. Importantly, the 'thank-you' call did not involve a request for another gift. This study was conducted in 2011-2016 and included new members who agreed to share their phone number.

In the television station study, we looked at the effect of thank-you calls on giving in the next year.

In the group that was not selected to be thanked with a phone call:

28% of new members made a gift in the next year.

What is your best guess about the group that was selected to be thanked with a phone call? Include everyone who was selected to receive a call, whether or not they responded. Fill in the blank:

% of new members made a gift in the next year in the group that was thanked with a phone call.

In the group that was not selected to be thanked with a phone call:

$126.24 was the average gift amount in the next year in this group.

What is your best guess about the group that was selected to be thanked with a phone call? Include everyone who was selected to receive a call, whether or not they responded. Fill in the blank:

$ was the average gift amount in the next year in the group that was thanked with a phone call.

Public Television Station Study 2

In a follow-up study, we also explored the impact of an enhanced call script. Some new members were randomly assigned to receive the new call script. Others were not assigned to receive the new call script. Both groups continued to be exposed to the same on-air promotions/campaigns/premiums and other communications from the stations. The initial gift of the group assigned to receive the call was $136.67 and the initial gift of the group not assigned to receive the call was $138.22.

The script involved the following additional message at the end of the thank-you call: "Your feedback shapes our actions. Could you tell me more about which of our programs you really enjoyed?" After

https://usc.ca1.qualtrics.com/WRQualtricsControlPanel/Ajax.php?action=GetSurveyPrintPreview 4/8

the donor responded, the caller recorded the response and added, "That's great, I'll pass this information along to the station." This study was conducted in 2017.

In the television station study, we looked at the effect of thank-you calls on giving in the next year.

In the group that was not selected to be thanked with a phone call:

27% of new members made a gift in the next year.

What is your best guess about the group that was selected to be thanked with a phone call with the extra message asking for feedback about which television program they most enjoyed? Include everyone who was selected to receive a call, whether or not they actually responded. Fill in the blank:

_____ **% of new members made a gift in the next year in the group that was thanked with a phone call.**

In the group that was not selected to be thanked with a phone call:

$114.27 was the average gift amount in the next year in this group.

What is your best guess about the group that was selected to be thanked with a phone call with the extra message asking for feedback about which television program they most enjoyed? Include everyone who was selected to receive a call, whether or not they actually responded. Fill in the blank:

$ _____ **was the average gift amount in the next year in the group that was thanked with a phone call.**

NPO Study

National Non-Profit Study

This study was conducted with a national non-profit that supports health care providers and provides health-related education and advocacy. New donors were randomly assigned to receive a personal thank-you call from paid callers 1-10 months after their last donation. Others were not assigned to receive a thank-you call. Both groups continued to be exposed to regular communications from the non-profit. The initial gift of the group assigned to receive the call was $69.56 and the initial gift of the group not assigned to receive a call was $70.42.

The call script featured three main parts. First, the call was personalized: callers identified themselves, the donor, and the national non-profit by name. Second, the caller thanked the donor for his or her gift and explained the impact of the gift. Importantly, the 'thank-you' call did not involve a request for another gift. This study was conducted in 2013 and included new donors who agreed to share their phone number.

In the study with a national non-profit, we looked at the effect of thank-you calls on giving in the next year.

In the group that was not selected to be thanked with a phone call:

31% of new members made a gift in the next year.

What is your best guess about the group that was selected to be thanked with a phone call? Include everyone who was selected to receive a call, whether or not they actually responded to the call. Fill in the blank:

_____ **% of new members made a gift in the next year in the group that was thanked with a phone call.**

In the group that was not selected to be thanked with a phone call:

$116.01 was the average gift amount in the next year in this group.

What is your best guess about the group that was selected to be thanked with a phone call? Include everyone who was selected to receive a call, whether or not they responded. Fill in the blank:

$ _____ **was the average gift amount in the next year in the group that was thanked with a phone call.**

Confidence Question

Of the 6 guesses that you made, what is your best guess as to how many are within 10% of the actual donor response?

0	1	2	3	4	5	6
○	○	○	○	○	○	○

Prevalence of thank-you calls

Now we will ask you about your own organization's practices regarding thank-you calls.

Does your organization conduct thank-you calls?

- Always
- Often
- Sometimes
- Rarely
- Never
- Don't know

Who does your organization usually target for thank-you calls?

- Only large donors
- Only new donors
- Only returning donors
- All donors
- Don't know
- Other:

About how soon after a gift does your organization usually initiate a thank-you call?

- Within the same month
- About 2-4 months after the donation
- About 5-7 months after the donation
- 8 months or more after the donation
- Don't know

Who usually places thank-you calls? Check all that apply.

- ☐ Board members of the organization
- ☐ Staff of the organization
- ☐ Volunteers of the organization
- ☐ Outside firm (i.e., call center)

Does your organization engage in other activities to thank donors, which do not involve an "ask"? Check all that apply.

- ☐ Mailed thank-you
- ☐ E-mailed thank-you
- ☐ Thank-you gifts
- ☐ Other:

There appears to be a widespread belief that thank-you calls are important. What do you think is the principal benefit of making thank-you calls?

Do you have any other comments?

In order to enter you in the contest for the $125 Amazon gift card, please provide us with your email address. Note that you can only participate once. We will not link your email to your responses, and will only use your email to send you your gift card if you are selected. If you prefer not to enter the contest and don't want to provide your email, just continue without answering.

Email:

Would you like to be notified of research results? We expect results to be available sometime in 2019.

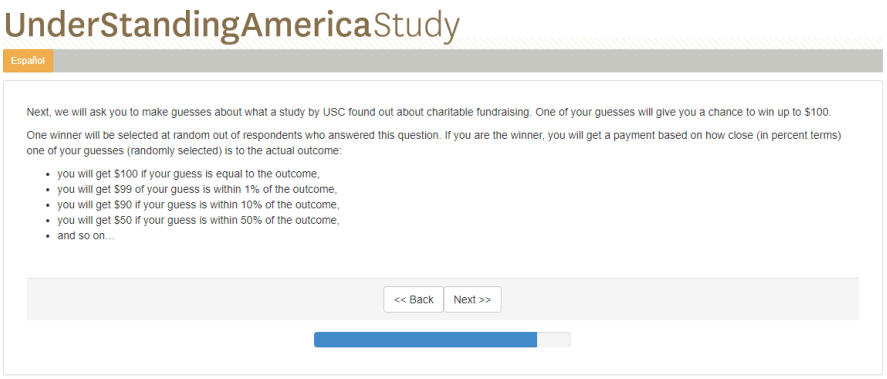
- Yes
- No

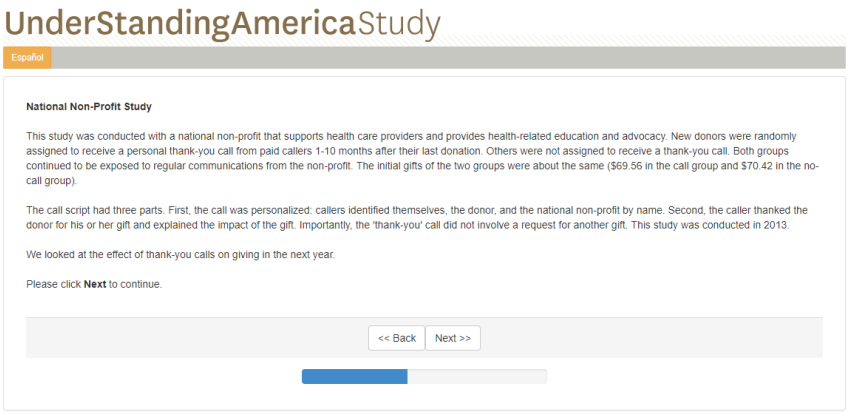
Please provide an email address where we can send you the research results.

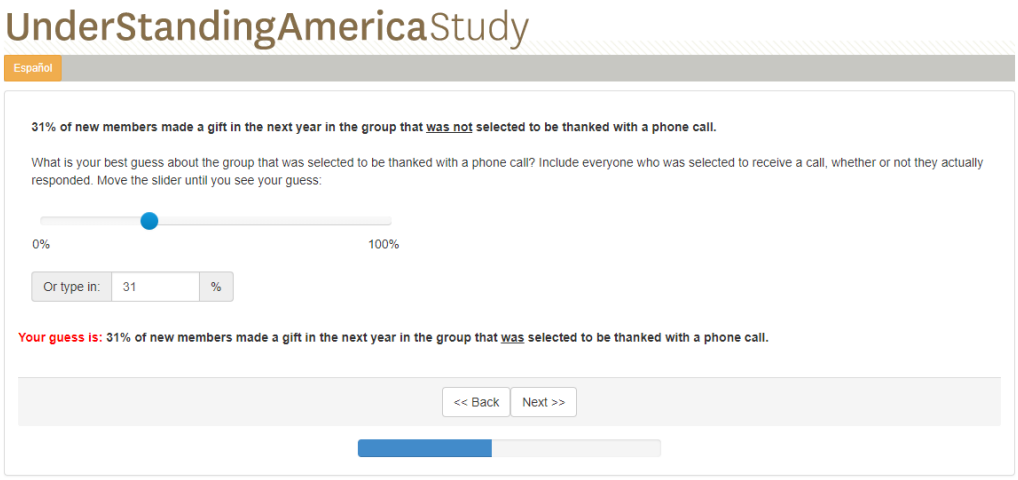
Email:

For any additional information or to get help with this survey, please contact us at 213-821-9855 or at uscchoicelab@gmail.com.

B5. Nonexpert Survey







UnderStandingAmericaStudy

Español

$116.01 was the average gift amount in the next year in the group that was not selected to be thanked with a phone call.

What is your best guess about the group that was selected to be thanked with a phone call? Include everyone who was selected to receive a call, whether or not they responded. Move the slider until you see your guess:

$0 $300

Or type in: $ 116.01

Your guess is: $116.01 was the average gift amount in the next year in the group that was selected to be thanked with a phone call.

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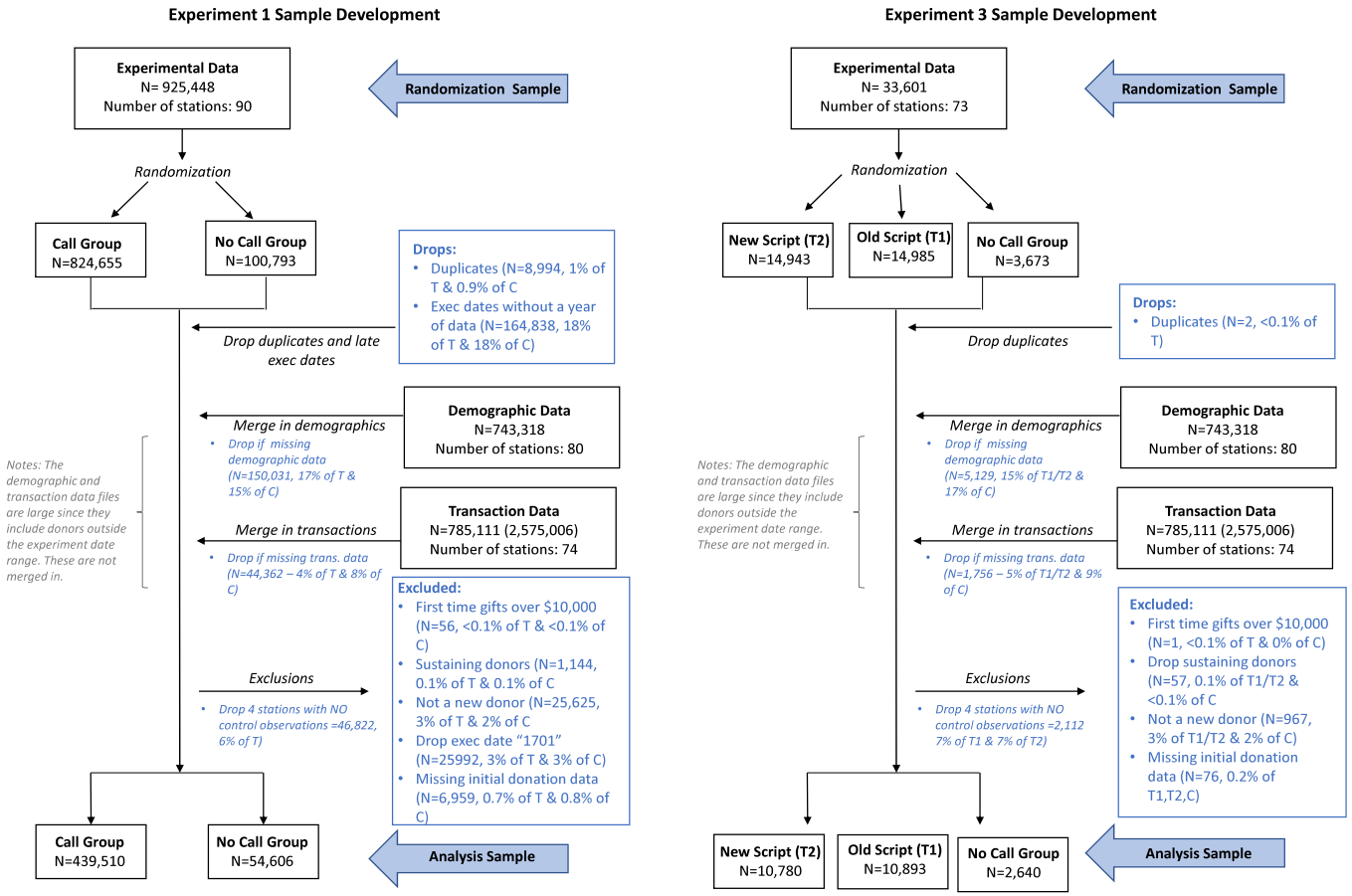
Appendix C: Tables & Figures

Figure A.1: Flow Diagram: Experiments 1 and 3



(a) Experiment 1 (b) Experiment 3

Note: Experiment 2 did not require merging demographic and transaction data. In Experiment 2, 28,802 individuals were randomized to the Call Group, and 28,853 were randomized to the No Call Group. We exclude big donors (N=12, <0.1% of treatment and control) and returning donors (N=11, <0.1% of treatment and control) to reach an analysis sample of 28,784 in the Call Group and 28,848 in the No Call Group.

Figure A.2: Experience of Charity Sample

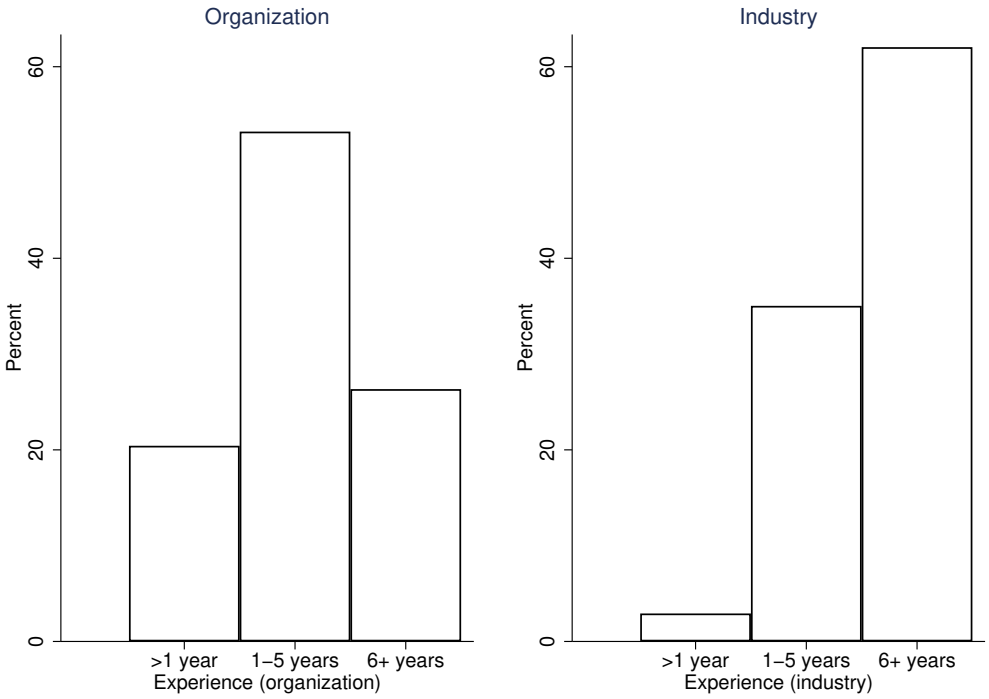


Figure A.3: Characteristics of Charity Sample

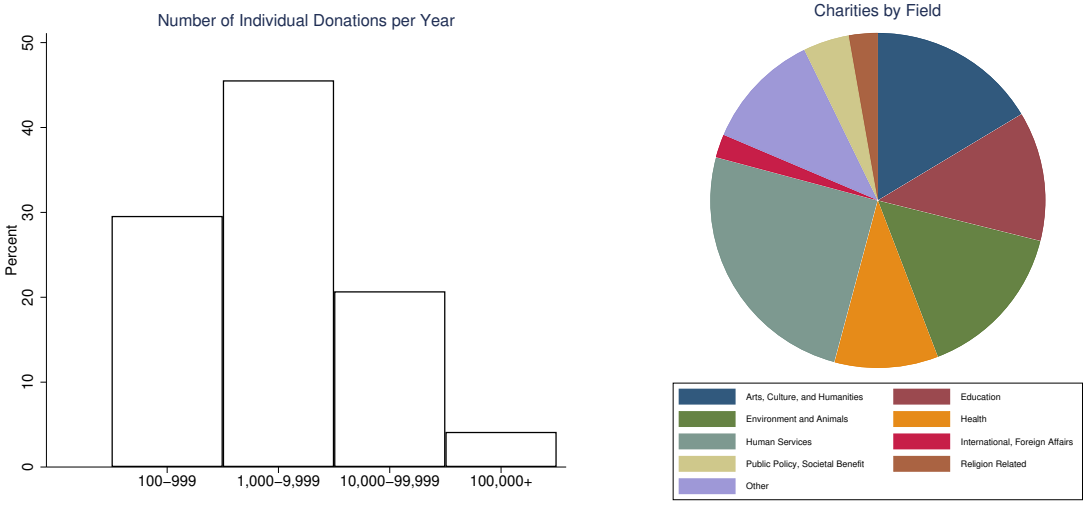


Figure A.4: Marginal Treatment Effects by Initial Donation (prob. donating)

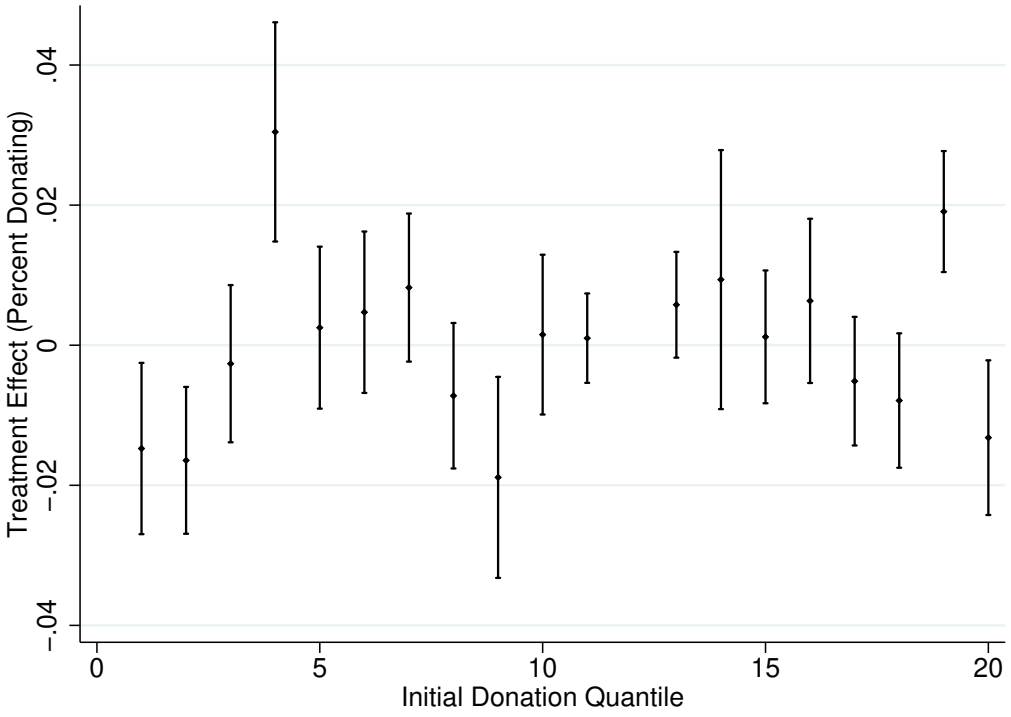


Figure A.5: Marginal Treatment Effects by Initial Donation (gift amount)

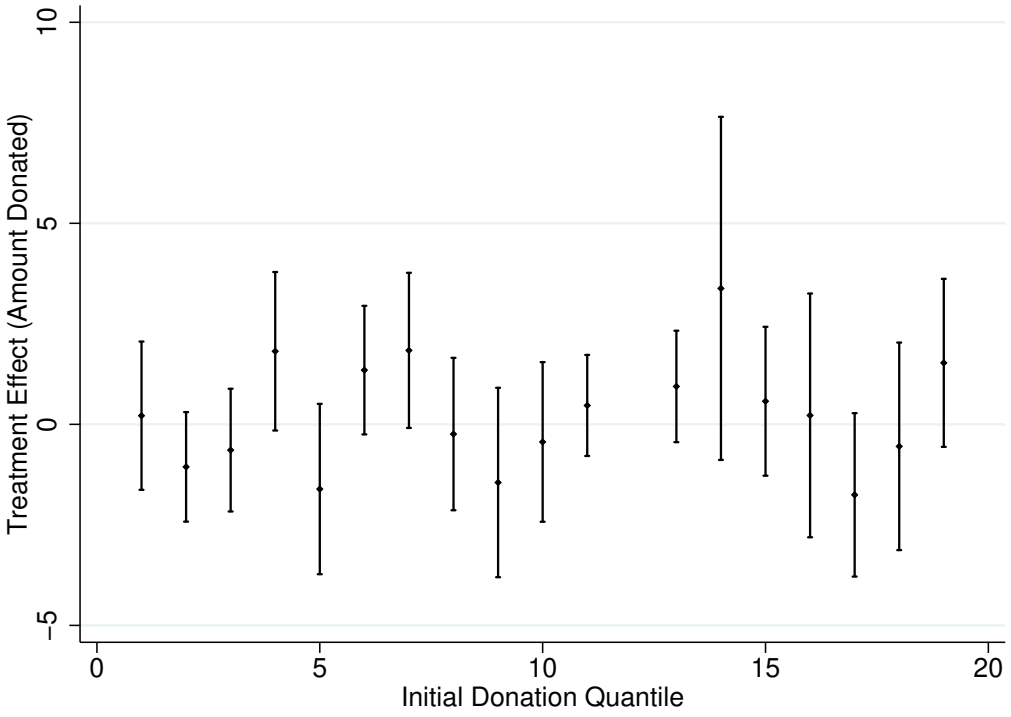


Table A.1: Retention Rate on Treatment

	Experiment 1	Experiment 2	Experiment 3
Call Treatment	0.00	0.00	0.01
	(0.00)	(0.01)	(0.02)
New Call Script			0.01
			(0.01)
Baseline Gift Amount	-0.00***	-0.00	-0.00***
	(0.00)	(0.00)	(0.00)
Baseline Number of Gifts	0.13***	0.12***	0.33***
	(0.00)	(0.00)	(0.01)
Female	0.00*		-0.00
	(0.00)		(0.01)
45 to 64 years old	0.01***		0.02
	(0.00)		(0.02)
65+ years old	0.11***		0.10***
	(0.00)		(0.02)
Income $35,000-$99,999	0.01**		0.02
	(0.00)		(0.02)
Income $100,000-$174,999	0.03***		0.07***
	(0.00)		(0.02)
Income $175,000+	0.06***		0.07***
	(0.01)		(0.02)
Residence length>5 years	0.01***		-0.01
	(0.00)		(0.01)
Constant	0.27***	0.30***	0.10***
	(0.01)	(0.01)	(0.03)
R2	0.06	0.01	0.15
N	344,652	57,632	17,614

Note: This table shows results from OlS regressions of retention rate by treatment. Controls include age, gender, household income and residence length. Omitted categories include 18 to 44 year olds, income below $34,000, and residence 5 years or less. Regressions control for fixed station-date effects in Experiments 1 and 3. Standard errors are in parentheses.
* p<0.10, ** p<0.05, *** p<0.010

Table A.2: Treatment Effects in Future Years (Experiment 1)

(a) 2 Years Following Randomization

	Treatment	Control	p-value
Percent Donating	19.38	19.43	0.79
	(0.06)	(0.17)	
Amount | Donated	130.49	131.76	0.10*
	(0.58)	(1.57)	
N	348,005	43,068	

(b) 3 Years Following Randomization

	Treatment	Control	p-value
Percent Donating	11.45	11.41	0.78
	(0.05)	(0.14)	
Amount | Donated	130.22	129.49	0.48
	(0.75)	(1.92)	
N	225,226	27,679	

(c) 4 Years Following Randomization

	Treatment	Control	p-value
Percent Donating	5.60	5.60	1.00
	(0.03)	(0.10)	
Amount | Donated	127.63	126.82	0.79
	(1.07)	(2.80)	
N	111,369	13,356	

(d) 5 Years Following Randomization

	Treatment	Control	p-value
Percent Donating	1.75	1.65	0.10
	(0.02)	(0.05)	
Amount | Donated	112.10	103.91	0.38
	(2.36)	(3.89)	
N	7,691	903	

Note: P-values reported from Mann-Whitney t-tests for amount conditional on donating data and Chi2 tests of proportions for percent donating. Standard errors in parentheses.
* p<0.10, ** p<0.05, *** p<0.010

Table A.3: Average Overprediction by Experience and Charity Size

	Overprediction ($ per donation)	Overprediction (% donated)
Experience 5+ years (org.)	9.48	-1.13
	(9.17)	(3.04)
Experience 5+ years (industry)	6.81	6.51*
	(9.72)	(3.46)
10k+ donations/year	-10.32	-4.39
	(9.46)	(3.17)
Does Calls	16.11	6.11*
	(10.37)	(3.29)
N	157	157

Note: This table shows the coefficients on 8 individual OLS regressions of average overprediction (measured as distance from actual amount or percentage, averaged across the three experiments) on different fundraiser and charity characteristics. We only include subjects that made predictions for all three experiments. Standard errors are in parentheses.
*p<0.10 **p<0.05 ***p<0.01

Table A.4: Balance Table: Returning Donors Only

	Experiment 1		
	Treatment	Control	p-value
Baseline Gift Amount	142.53	157.01	0.00***
	(1.54)	(3.90)	
Baseline Number of Gifts	1.39	1.45	0.00***
	(0.01)	(0.04)	
%Female	56.46	56.79	0.80
	(0.38)	(1.28)	
%18 to 44 years old	13.06	12.85	0.84
	(0.29)	(0.96)	
%45 to 64 years old	37.74	40.22	0.09*
	(0.41)	(1.41)	
%65+ years old	49.20	46.93	0.13
	(0.43)	(1.44)	
%Income below $34,000	15.57	12.52	0.00***
	(0.31)	(0.95)	
%Income $35,000-$99,999	40.71	42.95	0.13
	(0.42)	(1.43)	
%Income $100,000-$174,999	24.62	24.05	0.66
	(0.37)	(1.23)	
%Income $175,000+	19.11	20.48	0.25
	(0.33)	(1.16)	
%Residence length<5 years	59.02	57.96	0.48
	(0.42)	(1.42)	
%Residence length> 5 years	40.98	42.04	0.48
	(0.42)	(1.42)	
Gender missing	3.56	4.43	0.08*
	(0.14)	(0.52)	
Age/Income missing	21.90	23.62	0.11
	(0.31)	(1.07)	
N	17,878	1,589	

Note: The Baseline Gift Amount and Baseline Number of Gifts are the total of giving (averaged across the group) in the year prior to the randomization date. P-values reported from Mann-Whitney t-tests for continuous data and Chi2 tests of proportions for binary data. Standard errors in parentheses.

Table A.5: Treatment Effects: Returning Donors Only

	Experiment 1		
	Treatment	Control	p-value
Percent Donating	42.56	41.60	0.46
Amount Donated	69.43	71.10	0.62
	(1.47)	(6.11)	
Number of Gifts	1.08	1.07	0.30
	(0.02)	(0.07)	
Amount | Donated	163.13	170.92	0.50
	(3.14)	(13.80)	
Retention rate	54.54	50.51	0.00***
N	17,878	1,589	

Note: P-values reported from Mann-Whitney t-tests for continuous data and Chi2 tests of proportions for binary data. The retention rate is defined as current gift amount/previous gift amount. Standard errors in parentheses.

Table A.6: Factors Associated with Giving in the next Year: Returning Donors Only

	Experiment 1	
	Donated	Amount | Donated
Call Treatment	0.01	-15.87
	(0.01)	(10.88)
Baseline Gift Amount	0.00***	0.49***
	(0.00)	(0.01)
Baseline Number of Gifts	0.08***	-0.53
	(0.00)	(1.41)
Female	0.00	-4.03
	(0.01)	(5.82)
45 to 64 years old	-0.02*	-12.13
	(0.01)	(9.59)
65+ years old	0.07***	-4.05
	(0.01)	(9.18)
Income $35,000-$99,999	0.01	-3.79
	(0.01)	(8.57)
Income $100,000-$174,999	0.01	15.01
	(0.01)	(9.59)
Income $175,000+	0.02	28.90***
	(0.01)	(10.11)
Residence length>5 years	-0.01*	0.90
	(0.01)	(5.97)
Constant	0.27***	95.45***
	(0.02)	(16.26)
R2	0.09	0.21
N	14,601	6,411

Note: This table shows results from OLS regressions of donation outcomes on treatment for experiment 1. Columns 1-3 use probability of donating in the next year as the outcome. Columns 4-6 use gift amount conditional on making a donation as the outcome. Controls include baseline gift amount, number of gifts, age, gender, household income, residence length and fixed station-date effects. Omitted categories include 18 to 44 year olds, income below $34,000, and residence 5 years or less. Standard errors are in parentheses.
* p<0.10, ** p<0.05, *** p<0.010

Table A.7: Heterogeneity Analysis: Proportion Donating in Experiment 1

	Donated						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treatment*Female	0.00						
	(0.00)						
Treatment*45-64 years old		-0.00					
		(0.01)					
Treatment*65+ years old		0.00					
		(0.01)					
Treatment*$35k-99k			0.00				
			(0.01)				
Treatment*$100k-175k+			0.00				
			(0.01)				
Treatment*$175k+			-0.00				
			(0.01)				
Treatment*Residence length 5+ years				0.01**			
				(0.00)			
Treatment*Baseline Donation					-0.00**		
					(0.00)		
Treatment*Baseline Gifts						0.00	
						(0.00)	
Treatment*Pledge Drive							0.01**
							(0.00)
R2	0.00	0.01	0.00	0.00	0.01	0.12	0.02
N	461,759	359,339	359,339	359,339	494,116	494,116	494,116

Note: This table shows interaction coefficients from OLS regressions of probability donated on various demographic and socioeconomic variables interacted with treatment for experiment 1. Regressions control for treatment, the relevant interacted variable and station-date fixed effects. Standard errors are in parentheses.
* p<0.10, ** p<0.05, *** p<0.010

Table A.8: Heterogeneity Analysis: Conditional Gift Amount in Experiment 1

	Amount | Donated						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treatment*Female	3.59						
	(2.49)						
Treatment*45-64 years old		0.59					
		(4.05)					
Treatment*65+ years old		-0.19					
		(3.87)					
Treatment*$35k-99k			3.09				
			(3.50)				
Treatment*$100k-175k+			1.29				
			(4.14)				
Treatment*$175k+			4.30				
			(4.63)				
Treatment*Residence length 5+ years				-0.31			
				(2.66)			
Treatment*Baseline Donation					0.06***		
					(0.01)		
Treatment*Baseline Gifts						-0.39	
						(0.56)	
Treatment*Pledge Drive							1.78
							(2.48)
R2	0.00	0.00	0.00	0.00	0.18	0.00	0.00
N	130,115	104,258	104,258	104,258	138,248	138,248	138,248

Note: This table shows interaction coefficients from OLS regressions of gift amount conditional on donating on various demographic and socioeconomic variables interacted with treatment for experiment 1. Regressions control for treatment, the relevant interacted variable and station-date fixed effects. Standard errors are in parentheses.
* p<0.10, ** p<0.05, *** p<0.010

Table A.9: Retention on Call Outcomes

	Experiment 1	Experiment 1	Experiment 3	Experiment 3
Baseline Gift Amount	-0.00***	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Baseline Number of Gifts	0.13***	0.13***	0.33***	0.33***
	(0.00)	(0.00)	(0.01)	(0.01)
Left Message	0.02***	0.02***	0.03**	0.03*
	(0.00)	(0.00)	(0.01)	(0.02)
Positive Engagement	0.05***	0.04***	0.09***	0.11***
	(0.01)	(0.01)	(0.03)	(0.04)
Neutral Engagement	0.02***	0.01***	0.02	0.00
	(0.00)	(0.00)	(0.01)	(0.02)
Negative Engagement	0.00	-0.01	0.08	0.13**
	(0.01)	(0.01)	(0.05)	(0.07)
Female		0.00		0.00
		(0.00)		(0.01)
45 to 64 years old		0.01***		0.02
		(0.00)		(0.02)
65+ years old		0.11***		0.10***
		(0.00)		(0.02)
Income $35,000-$99,999		0.01***		0.02
		(0.00)		(0.02)
Income $100,000-$174,999		0.03***		0.06***
		(0.00)		(0.02)
Income $175,000+		0.06***		0.07***
		(0.01)		(0.03)
Residence length>5 years		0.01***		-0.01
		(0.00)		(0.01)
Constant	0.31***	0.26***	0.16***	0.10***
	(0.00)	(0.01)	(0.01)	(0.03)
R2	0.06	0.06	0.16	0.15
N	439,510	306,383	21,673	15,752

Note: This table shows results from OlS regressions of retention on call outcomes and controls. Omitted categories include 18 to 44 year olds, income below $34,000, and residence 5 years or less. The second regression controls for age, gender, household income, residence length. All regressions control for fixed station-date effects. Standard errors are in parentheses.
* p<0.10, ** p<0.05, *** p<0.010