



“Feel the Warmth” glow: A field experiment on manipulating the act of giving[☆]



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ABSTRACT

We conducted a field experiment with a charitable group to investigate whether giving the donor an option to write a personalized holiday card to the recipient influences giving behavior. Over 1500 households were approached in a door-to-door campaign and randomized to either a treatment group, in which donors were presented with the option to write their own card for the recipient, or a control group, in which donors were not given the option to write their own card for the recipient. We predict that treatment should increase contributions through making the gift more meaningful, but may also decrease contributions by increasing the transaction and social costs of donating. We find evidence in favor of the negative effects of costs from treatment, and no evidence of increased giving. We also observe that our treatment crowds out small donors (donors giving \$5 or less).

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1. Introduction

Charitable giving has continued to increase in economic importance, with \$298.42 billion – over 2% of U.S. GDP – contributed to charity in 2011 alone.¹ At the same time, approximately 15–35% of total contributions are spent by charities on fundraising and administration, mailings, door-to-door campaigns, phone-a-thons, and the like.² While billions are spent on fundraising activities annually, more research is needed to determine the underlying motivation behind giving to charitable causes, and the kinds of fundraising approaches that would be most fruitful for charities to pursue.

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¹ As reported by giving USA in its 57th annual report, and re-printed in the popular press – see, for example, The Non-Profit Times, “2011 Giving Estimated at 298.42B – 06-19-2012” <http://www.thenonprofittimes.com/article/detail/2011-giving-estimated-at-298-42b-4693> and Reuters, “U.S. Charitable Giving Approaches \$300 Billion in 2011,” June 19, 2012, <http://www.reuters.com/article/2012/06/19/us-usa-charity-idUSBRE85105T20120619>.

² As reported by the Center on Nonprofits and Philanthropy, Urban Institute, Center on Philanthropy, Indiana University. Nonprofit Overhead Cost Project: facts and perspectives.

The related literature has used laboratory and field experiments to explore the underlying motivation to give and to investigate ways that fundraisers can increase giving (Vesterlund, 2006; Andreoni et al., 2008). The past 25 years have seen the emergence of two major theories that are considered key motivators in the decision to give: pure altruism and warm glow. While purely altruistic individuals receive utility solely from increasing the welfare of others, individuals motivated by 'warm glow' receive utility from the act of giving itself (Andreoni, 1989, 1990; Korenok et al., 2013). Recent work has also identified the importance of social pressure or shame in the motivation to give (Andreoni et al., 2012; DellaVigna et al., 2012; Samek and Sheremeta, 2014).

We contribute to this area of research through a natural field experiment, which aims to investigate an approach that charities use in practice: allowing the donor to write a letter to the recipient of their donation. We believe this approach may increase the meaningfulness of giving, thereby increasing the utility derived from giving and increasing the success of the solicitation. This approach lends itself well to 'sponsor a child' type charities. For example, charities such as WorldVision or Compassion allow the donor to sponsor a child in a developing country and also to write letters to him/her. Both pure altruism (i.e., child benefits from a letter of encouragement) and warm glow (i.e., donor benefits from an increased sense of meaning associated with the act of giving) are at play in these sorts of letters.

We conducted a field experiment in partnership with a local charitable group, "Feel the Warmth," during their annual holiday door-to-door campaign. Over 1500 households were approached and randomized to either a control condition or a treatment condition. The only difference between the two solicitations was that in the treatment condition, conditional upon donating any amount above \$0, donors could opt to include a holiday card with a message to the unknown recipient. In the control condition, on the other hand, donors were told that "Feel the Warmth" volunteers would provide holiday cards for recipients. To limit any room for reputation effects, the cards were not linked to the size of gift, and were not identified with the full name of the donor. By giving donors the opportunity to write a personalized message on a holiday card, the manipulation aimed to increase the donors' utility from giving. However, the manipulation may also increase the cost of giving.

We do not find evidence of an increase in donation amount as a result of treatment. In fact, the strongest result is that giving rates decrease. We propose that one major reason for this finding is that the manipulation creates a cost to the donor. First, writing a card increases the transaction cost from giving, for instance by requiring time (an opportunity cost) or requiring greater cognitive effort (due to the simultaneous decisions of whether to give, the amount to give, whether to write on the card, and what to write on the card). Second, we conjecture that donors may perceive that if a card is enclosed, the donation should be larger. We motivate this second conjecture through a social pressure effect, as discussed in Section 3.

This paper contributes to the literature on charitable giving, and more broadly to the behavioral economics literature, in several ways. First, it provides alternative predictions for the effect of an approach commonly used by charities in practice and tests this approach in the field. Our findings also have broad practical relevance: fundraisers should be careful in considering the potential effects of solicitation approaches prior to adopting them widely. In particular, different manipulations on the act of giving may not only affect giving motivations, but also exact differential costs to different types of potential donors.

Second, our paper demonstrates that providing donors with more choice may have adverse effects on giving rates. In particular we present the novel result that giving potential donors the option of making their gift more meaningful decreased the incidence of giving. The unanticipated costs of our manipulation generated incentives to abstain from giving: rather than increasing the fraction of people that gave by allowing people to make their gift more special, our manipulation decreased the incidence of giving due to a combination of transaction and social costs. One possible reason is that some potential donors would prefer to give no gift over a small gift when they receive the signal that the gift should be meaningful.

The paper also demonstrates how the option to communicate may change the parameters of the potential donor's decision. Similarly, in a previous experiment Andreoni and Rao (2011) have investigated the impact of giving individuals the ability to communicate. While our work experimental setup differs substantially from Andreoni and Rao (2011), we both explore communication between donors and recipients.

2. Related literature

2.1. Altruistic giving and meaningfulness

Related literature has used experimental methods to identify motivations for altruistic giving across a wide range of environments. For instance, researchers have identified the important roles of reciprocity (through experimental manipulations of donor gifts, see Falk, 2007; Gneezy and List, 2006), quality signaling (through manipulation of the existence of seed grants, leadership gifts, etc., see List and Lucking-Reiley, 2002; List and Rondeau, 2003; Kumru and Vesterlund, 2010; Bracha et al., 2011) and empathy (Verhaert and Van den Poel, 2011; Dickert et al., 2011; Basil et al., 2008). Decreasing the social distance between giver and recipient, i.e., through revealing the recipient's identity, has been shown to increase giving (Jenni and Loewenstein, 1997; Charness and Gneezy, 2008; Burnham, 2003; Bohnet and Frey, 1999a,b). Social identity and the sense of belonging to a group also play a role in the decision to give to others (Candelo-Londoño et al., 2011; Charness et al., 2011). Onderstal et al. (2013) find that an all-pay auction decreases donation rates relative to a voluntary contribution mechanism since an extrinsic reward diluted the intrinsic motivation people felt from giving. Our work adds to the literature

on charitable giving through seeking evidence for the existence of another possible motivation to give – the meaning in the act of giving.

By providing donors the option of writing a personalized holiday card for a needy recipient, the treatment aims to increase the meaning donors associate with the act of giving. Laboratory experiments have found evidence that individuals are more likely to engage in actions when they perceive those actions to be meaningful. For example, [Liu and Aaker \(2008\)](#) were able to increase the perceived meaningfulness of charitable acts (and, subsequently, donations to a charity) through priming laboratory subjects to think about the amount of time they might donate to the charity prior to the donation decision.

Lab experiments have demonstrated that meaning is an important driver of economic activity. Meaning increases effort and worker satisfaction in the workplace ([Ariely et al., 2008](#); [Norton et al., 2012](#)). For example, [Norton et al. \(2012\)](#) find that workers value products of their own making just as highly as (higher quality) products made by professionals. [Ariely et al. \(2008\)](#) use evidence from lab experiments to demonstrate that worker effort increases when the work is more meaningful. In addition, individuals may find an action more personally meaningful if they perceive themselves to have had a greater role in bringing the act into fruition. Evidence from the psychology literature suggests that a greater sense of self-efficacy will increase giving, since greater self-efficacy may increase the guilt associated with not giving ([Basil et al., 2008](#)). However, experimental studies that manipulate the meaningfulness of an act in other contexts – in our case, in the context of charitable contributions – are still few and far between.

2.2. Giving due to social pressure and transaction costs

A recent literature reports that social pressure also plays a major role in the decision to give. Dictator games in which dictators are given the costly opportunity to opt out of participating tend to achieve lower participation rates and giving amounts than experiments where participation is mandatory ([Lazear et al., 2012](#); [Dana et al., 2006](#)). Showing photos of subjects who gave the lowest amount has a big effect on increasing donations in a laboratory public goods game ([Samek and Sheremeta, 2014](#)). In the field, [DellaVigna et al. \(2012\)](#) cite social pressure motivations for giving as the reason that small donors opt out of being asked to give in a door-to-door campaign. [Andreoni et al. \(2012\)](#) present field evidence that individuals take extreme measures to avoid the social pressure associated with giving. In both of the above studies, donors have the opportunity to opt out prior to being asked to give. This is different from our study, which does not vary the difficulty for potential donors to avoid solicitors, but rather exploits the fact that donors may feel differing levels of social pressure depending on the content of ‘the ask,’ as discussed in Section 3.

Finally, the card manipulation is related to literature on cognitive costs. Giving the option to write a card increases the choices potential donors must make. Simultaneously choosing whether to donate, how much to donate, whether to write a card, and what to write on a card could increase the cognitive costs experienced by subjects in treatment. Such cognitive costs are likely to influence decisions. In their paper, [Iyengar and Lepper \(2000\)](#) find that individuals are more likely to undertake activities that have low, versus high, number of choices. Similarly, [Bertrand et al. \(2010\)](#) find that providing more options reduces take-up of loan offers.

3. Conjectures

In this section, we summarize two competing conjectures for alternative outcomes of our treatment below. First, we propose that the opportunity to write the card increases the meaningfulness of the act of giving, broadly defined. Studies on personality identify multiple sources of meaning, including creativity and social commitment (see [Schnell, 2011](#) for an overview). Writing a card allows the potential donor to express additional social commitment and his or her creativity. When individuals donate to ‘sponsor a child’ type charities like WorldVision or Compassion, they have the opportunity to send messages to that child. We propose that since such charities are quite popular, consumers must place some value on the card they themselves wrote for the recipient over a card that was provided on their behalf. We attribute this increase in valuation to the meaning associated with the act of giving when donors write their own card and personalize their gift.

We predict that making the charitable act more meaningful through our treatment may increase contributions through increasing the utility associated with the act of giving. Assuming that private messages and donations are strategic complements, along the extensive margin, it may move non-donors to donor status by increasing the utility of giving relative to not giving. Along the intensive margin, it may encourage donors to give more, since the marginal utility of giving has increased. Since these changes primarily operate from increasing the perceived marginal utility of giving, increases in giving can be mostly attributable to increases in the warm glow felt by donors.

Conjecture 1. Treatment will increase giving, through increasing the meaning in the ‘act of giving.’

On the other hand, the treatment manipulation may create a cost for the donor. In particular, we note in Section 2.2 that another type of donor is motivated mainly by social pressure and gives only when asked. In [DellaVigna et al. \(2012\)](#), solicitees could decrease social cost from not giving, by giving any amount greater than \$0. However, we posit that the solicitation frame may also change the social cost of giving at certain contribution levels. For example, presenting donors with the option of writing a personalized holiday message, as in our treatment, may signal to donors that a large donation is expected, even though donors were told that any amount was appreciated. Broadly, we call this the social cost effect. Suppose there exists a level above which gifts make an impact and below which giving a gift is functionally equivalent to giving nothing. Writing

a holiday message is an act of altruism that is at odds with giving a tiny donation. Solicitees feel guiltier about small gifts when presented with the option of making their gift more meaningful, and so would rather give nothing (which solicitees know to be a frequent occurrence in fundraising campaigns and can easily be explained away by a variety of excuses). Put in another way, if the treatment makes potential donors feel that they are expected to care, they might feel guilt that they are not able to do more (or feel that a small gift is not enough). This guilt would increase the social cost from giving a small amount relative to giving nothing, and deter those donors who normally give small amounts in order to avoid the social cost from giving nothing. A similar mechanism was postulated in [Edwards and List \(2013\)](#).

The effect of the message treatment under the social cost conjecture would be similar to that found in [Weyant and Smith \(1987\)](#) and [Warwick \(2003\)](#), who observed that asking for a generous gift decreased the instance of donations relative to telling potential donors that “even a penny helps.” Results from consumer research suggest that telling the potential donor that “every penny helps” alleviated the social cost of giving a small gift ([Cialdini and Shroeder, 1976](#); [Reingen, 1978](#); [Shearman and Yoo, 2007](#); [Andrews et al., 2008](#)). [Onderstal et al. \(2013\)](#) also show that people who would give a small amount opt out in case of small manipulations they may disagree with. Such results indicate that the marginal utility from giving small amounts is low, and that small manipulations in the solicitation request may generate significant responses on the extensive margin for people who would otherwise give a small gift. In particular, we predict that the social cost effect should cause a reduction in relatively small gifts, but not in relatively large gifts.

Second, in addition to a social cost, writing a card increases the transaction cost from giving, for instance by requiring time (an opportunity cost) or requiring greater cognitive effort (as noted in [Iyengar and Lepper \(2000\)](#), individuals are less likely to undertake activities with a high amount of choice). This brings us to our alternative conjecture:

Conjecture 2. Treatment will decrease giving, through increasing the cost of giving. In particular, the incidence of small gifts will decrease due to social and/or transaction costs.

Note that writing a card in the treatment was optional. Some donors in the treatment group chose not to write a message and did not incur extra time costs. However, the heightened expectation of generosity and the cognitive cost of making that decision could nevertheless present be for these donors, as well as all donors in the treatment group who interacted with our solicitors.

4. Experimental design

4.1. Charities

The two groups we collaborated with in this experiment are Feel the Warmth and Respond Now. Feel the Warmth, in Flossmoor, Illinois, is a student-run club at Homewood-Flossmoor High School that raises money every fall for the purpose of purchasing material to make blankets for families in need. These blankets typically go to Respond Now, a registered 501(c)(03) in neighboring Chicago Heights, IL, which solicits donations of food, clothing and furniture for its low-income clients. Respond Now agreed to deliver the blankets with the holiday cards that were collected as part of the experiment. Flossmoor, IL is a relatively wealthy suburb of Chicago, while nearby Chicago Heights, IL is one of the poorest.³

We worked with Feel the Warmth and the Advanced Placement Economics teacher at the high school to recruit 50 volunteers (ages 17–18) who would be trained to carry out the door-to-door campaign. The volunteers were either unpaid or received National Honors Society credit for their participation. While our students are a few years younger than those typically employed for this sort of experiment, note that students in the United States are not new to door-to-door solicitation. In fact, many students in Homewood-Flossmoor have engaged in door-to-door campaigns, raising money for extra-curricular activities and societies. However, this was the first time these students had been given a specific route and script to follow.

4.2. Treatments

We used a door-to-door campaign because it is the way that Feel the Warmth is accustomed to raising funds, and because our design is easy to implement in this setting. We conducted a control and a treatment condition. The control and treatment conditions were identical in all respects except for the ability for donors to write their own message on a holiday card in the treatment group (see [Appendix I](#) for scripts). Solicitors were instructed to knock on the door, deliver the solicitation message about Feel the Warmth and the cost of one blanket (\$20), and ask for a donation. In the treatment condition, solicitors also offered the option of writing a message on the holiday card that would accompany the blanket.⁴ While all solicitees were informed of the holiday card opportunity, only those who donated could write a holiday message, since the holiday card would accompany the blanket they helped fund. To avoid reputation effects, donors were asked not to include their last name on the card, and could either include a first name or no name at all. In the control condition, solicitors informed all

³ In the 2007–2011 American Community Survey, per capita income in Flossmoor is reported to be \$55,187 with 2.4% below poverty level while per capital income in Chicago Heights is reported to be \$17,539 with 26% below poverty level (in 2011 inflation adjusted dollars).

⁴ For donations less than \$20 (the cost of a blanket), multiple cards were included with each blanket as needed. While solicitors were instructed to explain this to potential donors if asked, we have no record of this issue ever coming up.

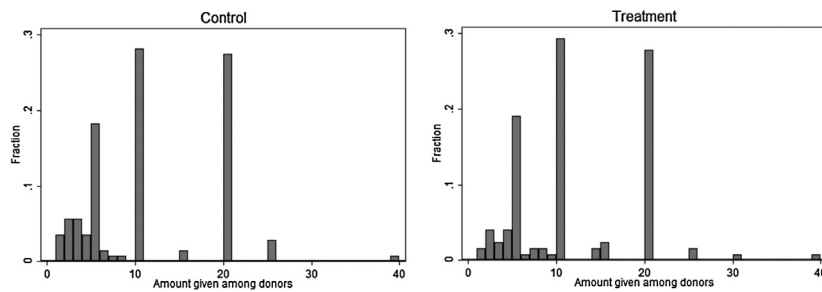


Fig. 1. Histograms of giving amounts, by treatment.

solicitees that a pre-written holiday card would be included with the gift. In the treatment condition, solicitors were trained to say that if the donor gave a gift but did not write a message, a pre-written card would accompany the blanket sent to the recipient. Due to an implementation error, this last line – that a card would be included for them should they wish not to write one – was left out of the printed scripts. However, since we worked with the solicitors to have the right information for the potential donor in training, we are confident that the intended procedure was followed.

We conducted two sessions that were each 2 h long – a morning session and an afternoon session, both held on Saturday, December 1, 2012. We used computer software to place households into routes, which consisted of 20–30 adjacent households on the same street, or in neighboring streets. Then routes were randomized to treatment or control with roughly an equal number of routes in control and treatment within each census tract.

When solicitors arrived for training, we randomly assigned half of the solicitors to control or treatment for the morning session and trained them separately (so that neither group knew what the other would be doing). After solicitors returned for the afternoon, we flipped the groups such that the solicitors who implemented the control condition in the morning implemented the treatment condition in the afternoon, and the solicitors who implemented the treatment session in the morning implemented the control condition in the afternoon. While the control and treatment results from the morning session are the ‘cleanest’ in the sense that solicitors could not have mistakenly delivered the wrong message, the afternoon session allows us to control for solicitor fixed effects in the analysis.⁵

4.3. Procedures

Solicitors arrived at 10 am in the morning and were asked to pair up into groups of two. One person in each group recorded data while the other solicited donations for the entire day. We randomly assigned half of the pairs to control and half to treatment, and trained the two groups separately in a one-hour training session led by staff.

Following training, solicitors were given mapped routes to follow in the Homewood/Flossmoor area. We sorted the control routes in random order, and handed them out to solicitor teams assigned to the control group. We did the same for the treatment routes. Upon visiting each household, solicitors were required to record key information about each visit, including whether or not the door was opened, whether the individual donated, the amount of donation and (in the treatment condition) whether the donor chose to write a personalized message on a holiday card (see [Appendix II](#)). Solicitors were asked to return to the school after they had solicited for 2 h. After lunch, we completed a 15-min training session on the solicitation requirements for the afternoon (during which all solicitors worked on the alternate treatment to the one from the morning). Solicitors were again given routes to follow for the next 2 h.⁶

5. Results

5.1. Treatment effects

A total of 1536 houses were approached during the experiment. [Table 1](#) provides the summary statistics by treatment group and session. Over one third of households approached opened the door, and a little under half of those who opened the door gave a positive amount. Conditional on giving, the average amount given in the experiment was around \$12. As demonstrated by [Fig. 1](#), which provides a histogram of all giving binned at \$1 increments, bunching occurred at \$5, \$10, and \$20 in both treatment and control groups. This is in line with related work – for instance, bunching also occurred at \$5 and \$10 in [DellaVigna et al. \(2012\)](#), and at the suggested gift amount of \$20 in [Edwards and List \(2013\)](#). Few people (15 out

⁵ It is possible that solicitors may have had a different perception of expected household behavior by treatment and adjusted their own soliciting to account for this. Our results using fixed effects partially account for this.

⁶ The afternoon training session was shorter since solicitors were instructed to follow the previous procedure, only using a slightly different script. Groups that switched from control to treatment also received blank holiday cards to supply to interested donors, while unused holiday cards were taken away from groups that switched from treatment to control.

Table 1

Summary statistics with Wilcoxon–Mann–Whitney test results.

Session		Control	Treatment
Full sample	Total households approached	765	771
	Total households that answered door	286	305
	% Households that answered door	37.39%	39.56%
	# Households that contributed	150	130
	% Households that contributed	52.45%	42.62%**
	Average donation per household that answered door	\$6.22 (10.22)	\$5.40 (9.13)
	Average donation per household that gave	\$12.26 (11.49)	\$12.76 (10.17)
	Median donation per household that gave	\$10	\$10
	Total amount raised	\$1777.65	\$1645.67
	% Households that wrote card	N/A	31.54%
Morning	Total households approached	372	334
	Total households that answered door	136	127
	% Households that answered door	36.6%	38.0%
	# Households that contributed	58	47
	% Households that contributed	42.65%	37.01%
	Average donation per household that answered door	\$5.13 (10.84)	\$5.62 (10.63)
	Average donation per household that gave	\$12.03 (13.93)	\$15.18** (12.69)
	Median donation per household that gave	\$10	\$10
	Total amount raised	\$697.65	\$713.31
	% Households that wrote card	N/A	29.79%
Afternoon	Total households approached	393	437
	Total households that answered door	150	178
	% Households that answered door	38.17%	40.7%
	# Households that contributed	92	83
	% Households that contributed	61.33%†††	46.63%***,††
	Average donation per household that answered door	\$7.20 (9.55)	\$5.24 (7.92)
	Average donation per household that gave	\$12.41† (9.61)	\$11.37 (8.16)
	Median donation per household that gave	\$10	\$10
	Total amount raised	\$1080	\$932.36
	% Households that wrote card	N/A	32.53%

Note: Asterisks denote significant differences between treatment and control, using non-parametric Wilcoxon–Mann–Whitney tests. Crosses denote significant differences between morning and afternoon, using non-parametric Wilcoxon–Mann–Whitney tests.

*** $p < 0.01$.

** $p < 0.05$.

* $p < 0.1$.

††† $p < 0.01$.

†† $p < 0.05$.

† $p < 0.10$.

of 274, with 7 in treatment and 8 in control) gave above \$20, possibly because potential donors were told that the cost of one blanket was \$20. Relative to similar door-to-door fundraising experiments (Landry et al., 2006; DellaVigna et al., 2012), about the same fraction of households opened the door in the control group (37%), but a substantially higher fraction of households contributed (conditional on opening the door, this was 52% in the control group). We suspect that the age of our solicitors may have contributed to the relatively high giving rates.

We ran morning and afternoon fundraising sessions. Table 1 also shows a difference between morning and afternoon giving. In the afternoon session, giving rates are higher by between 9 (treatment) and 18 (control) percentage points and solicitors reached 124 more households (treatment and control) compared to the morning session. We posit that this difference between morning and afternoon sessions may be driven primarily by solicitor experience. By the afternoon, solicitors had more experience and therefore were more convincing and reached a greater number of households. In addition, a greater proportion of households were home and opened their doors, though this accounts for just a 2 percentage point increase in door opening rates. Alternatively, perhaps households are more generous in the afternoon, or a different set of households are home in the afternoon – however, this alternative may be less likely since time of day effects have not been reported in related studies that we know of. Our experiment is not able to disentangle these two explanations.

First, we consider the treatment effect on probability of giving. We find strong support for the role of costs as posited by Conjecture 2 – overall, the percentage of households contributing (conditional on opening the door) is 52% in the control group and only 43% in the treatment group, a statistically significant difference (Wilcoxon–Mann–Whitney p -value < 0.05). Individuals are 20% less likely to give when presented with the option to write a holiday card. Splitting the sample into

Table 2
Regressions of treatment status on giving (solicitor fixed effects).^a

Dep. Var:	Indicator for giving		Indicator for giving				Average donation (≥ 0)	
			Small gifts (≤ 10)		Large gifts (> 10)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	−0.0968 ^{***} (0.0482)	−0.0914 [*] (0.0527)	−0.0719 [*] (0.0429)	−0.0759 (0.0478)	−0.0181 (0.0343)	−0.00887 (0.0388)	−1.081 (1.046)	−0.993 (1.097)
Afternoon session	0.136 ^{***} (0.0484)	0.155 ^{***} (0.0528)	0.0916 ^{**} (0.0425)	0.0958 [*] (0.0474)	0.0317 (0.0340)	0.0485 (0.0385)	0.0885 (1.067)	0.445 (1.143)
Female		0.0636 (0.0443)		0.0548 (0.0407)		−0.00163 (0.0331)		0.208 (0.918)
Black		−0.103 ^{**} (0.0494)		0.0332 (0.0454)		−0.132 ^{***} (0.0369)		−2.132 ^{**} (1.004)
Hispanic		0.202 (0.160)		0.0578 (0.164)		0.147 (0.133)		2.355 (2.448)
Other race		−0.106 (0.121)		−0.00726 (0.106)		−0.0778 (0.0859)		0.475 (3.200)
Constant	0.404 ^{***} (0.0998)	0.421 ^{***} (0.107)	0.259 ^{***} (0.0916)	0.235 [*] (0.099)	0.147 [*] (0.0732)	0.191 ^{**} (0.0806)	5.496 ^{***} (1.642)	6.038 ^{***} (1.866)
Solicitor fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	590	502	590	502	590	502	590	502
R-squared	0.142	0.183	0.078	0.094	0.083	0.124	0.108	0.151

Note: Robust standard errors in parentheses. “Treatment” = 1 for treatment and 0 for control. “Afternoon session” = 1 if solicitation was carried out in the afternoon and 0 if it was carried out in the morning. “Female”, “Black”, “Hispanic”, and “Other race” indicate dummy variables on characteristics of the solicitee.

*** $p < 0.01$.

** $p < 0.05$.

* $p < 0.1$.

^a Additional regressions using clustering of standard errors by solicitor team and including solicitor characteristics are reported in [Appendix IV, Table A.1](#). Similar results are obtained.

morning and afternoon sessions, we find the same effect directionally for the morning and afternoon, but only the afternoon is significantly different (potentially due to small sample sizes).

Linear probability models in [Table 2](#) provide further evidence that treatment lowers the probability of giving. Specifications (1) and (2) report on the probability of giving, conditional on opening the door, including solicitor fixed effects. We observe an overall decrease in giving rates in the treatment group (coefficient on treatment dummy of −0.09, significant at the 5% level and 10% level, with and without household demographics, respectively). [Table 2](#) also provides evidence of a greater likelihood of giving in the afternoon (coefficient of 0.13–0.15 with and without demographics, significant at 5% and 1% level). We observe a lower likelihood of giving by black solicitees relative to other races (coefficient of −0.10, significant at 5% level), but do not observe differences in giving by gender (coefficient of 0.06 on female, not significant). This brings us to the first result:

Result 1. The rate of giving is significantly higher in the control group relative to the treatment group, providing support for the conjecture that treatment increased the costs of giving among some donors.

Note that in columns (7) and (8), in which average donations (including 0) are used as the outcome variable, the coefficient on treatment is negative and insignificant. This is further support that treatment did not increase average donations. We find similar results when we compare average amounts given, conditional on giving a nonzero amount, between treatment and control. However, selection into giving prevents us from making causal claims about this subgroup in our sample.

5.2. Comparing small and large gifts

We now make an attempt to determine whether relatively small or large donors were crowded out by the treatment manipulation. [Fig. 2](#) provides a histogram of all ‘small gifts’ in treatment and control, and provides evidence that the smallest donors (who would have given less than \$5) are crowded out by the treatment. Notice that the frequency of households who opened the door and declined to give is much higher in treatment, whereas the frequency of households who gave between \$1 and \$5 is smaller in treatment. This suggests that the households that would have given a small amount in control opted out of giving anything entirely. For gifts of \$5 and above, the frequency of donations does not significantly change between treatment and control, which suggests that there is no substitution of smaller gifts for larger gifts in treatment.

Using a two-sample proportionality test and a Wilcoxon–Mann–Whitney test, we find evidence that giving is significantly lower among small gifts in treatment compared to control. Conditional on giving, donors in treatment were less likely to give \$5 or less, conditional on giving a positive amount ($p < 0.05$ by a two-sample proportionality test and $p < 0.10$ by a Wilcoxon–Mann–Whitney test) and less likely to give \$10 or less, conditional on giving a positive amount ($p < 0.05$ by a two-sample proportionality test and $p < 0.10$ by a Wilcoxon–Mann–Whitney test). We found no significant difference in giving for gifts larger than \$10.

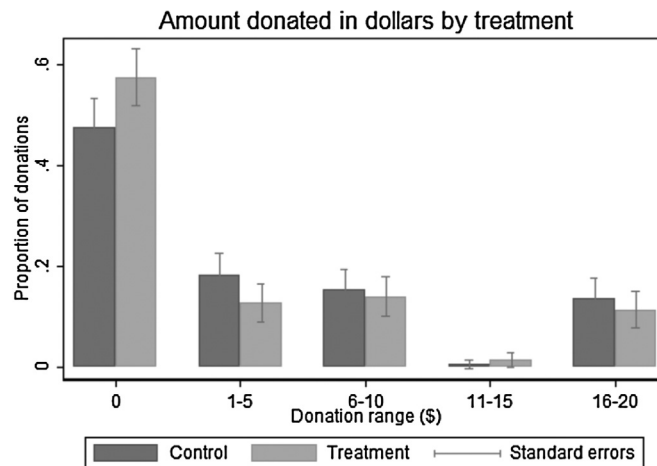


Fig. 2. Donation amounts (up to \$20) in control and treatment.

Table 3

Treatment households are less likely to give small gifts (including \$0).

	(1) Gave ≤3	(2) Gave ≤4	(3) Gave ≤5	(4) Gave ≤6	(5) Gave ≤7	(6) Gave ≤8	(7) Gave ≤10 ^a
Treatment	−0.0427** (0.0170)	−0.0448* (0.0237)	−0.0573* (0.0293)	−0.0647** (0.0291)	−0.0613** (0.0292)	−0.0548* (0.0307)	−0.0704* (0.0401)
Afternoon session	0.0354* (0.0180)	0.0522* (0.0247)	0.0613* (0.0297)	0.0678* (0.0292)	0.0630* (0.0296)	0.0611* (0.0312)	0.0733* (0.0410)
Constant	0.0549*** (0.0136)	0.0635*** (0.0189)	0.150** (0.0244)	0.153** (0.0239)	0.159*** (0.0250)	0.164*** (0.0251)	0.297*** (0.0370)
Observations	590	590	590	590	590	590	590
R-squared	0.014	0.017	0.013	0.015	0.013	0.011	0.011

Note: Robust standard errors in parentheses. Regressions are clustered by team. Team is missing for 1 observation among this sample; hence we have 590 observations here as opposed to 591 in the previous table. Outcome variable is indicator for giving less than 'x'. Solicitor fixed effects are not used due to power concerns, although the coefficients on treatment are still significant and little changed when solicitor and solicitee demographics are included.

*** $p < 0.01$.

** $p < 0.05$.

* $p < 0.1$.

^a No donors gave above \$8 and less than or equal to \$9, so this was omitted from the table to avoid redundancy.

Similar to the social cost story in DellaVigna et al. (2012), we expect relatively 'small' donors to be crowded out by treatment if it increases the cost of giving. In Table 2, specifications 3–6, we split the sample and consider those individuals giving \$10 or less as relatively small donors and those giving more than \$10 relatively large donors (as in DellaVigna et al., 2012). We then use seemingly unrelated regression to investigate rates of giving. Our results suggest that the decrease in giving rates due to treatment is concentrated among small donors, and this result is marginally significant (coefficient −0.07 significant at the 10% level without demographics). While the probability of receiving large gifts also decreased somewhat in treatment, the effect is not significant (coefficients close to 0). We test the coefficients in columns (3) and (5) for differences and do not have sufficient evidence to reject the null hypothesis that the effects are the same. Consequently, our regression results can only give suggestive evidence that the decrease in probability of giving was primarily driven by donors who would normally give less than \$10.

In Table 3, we also regress treatment on indicators for a gift of less than or equal to \$3–\$10 (specifications 1–6) and observe that giving rates in treatment are significantly lower for each of those groups, at the 5% and 10% level, depending on specification. Households in treatment are less likely to give below a fixed amount ranging from \$3 to \$10 than households in control.

Together, the results reported here provide support that the transaction and social costs of treatment may have crowded out donors who would usually give small amounts. This brings us to our next result:

Result 2. The decrease in giving rates in treatment is primarily due to the exit of small donors, providing some support for the social cost conjecture.

5.3. Choice to write a card

Next, we are interested in whether the meaning manipulation increased the gift amount, as would be predicted by Conjecture 1. Over 30% of donors in treatment chose to write a card, suggesting that the card opportunity was valued at

least by some.⁷ There were no significant differences in giving amounts for households who chose to write a card (\$12.13) versus those who did not (\$12.85). This is consistent with our finding that providing solicitees with the option to send a personalized card did not increase average donations.

Overall, the average donation per household that gave is \$12.26 in the control group and \$12.76 in the treatment group, a difference that is in the direction we would expect if the card increased 'warm glow'. However, the difference is not large (only 4% higher) or statistically significant. When looking only at the morning session, we do find a significant difference in gift amount: \$15.18 in the treatment group, and only \$12.03 in the control group, but the effect does not hold when using a Student's *t*-test (only for Wilcoxon–Mann–Whitney test). We do find that the overall amount raised across the two treatments is 8% higher in the control group (\$1777) as compared to the treatment group (\$1645).

How can this result be reconciled with findings in the literature, which claim that donations may increase when the act of giving is perceived to be more meaningful? First, it is possible that, while our offer to write a holiday card was taken up by over 30% of donors, the card treatment did not make giving more meaningful to the point of affecting philanthropic behavior. Second, while [Liu and Aaker \(2008\)](#) made the donation decision more meaningful prior to making 'the ask', we attempt to make the donation decision more meaningful as part of the ask. Manipulating the meaning associated with giving may be more effective before the donation solicitation, rather than during the donation solicitation. For instance – perhaps meaning is only increased after writing the card, and not simply by knowing that there is an option to write the card. Second, the increased costs of giving in the treatment group may make it difficult for us to observe the effect described in [Conjecture 1](#). Finally, manipulating emotional meaning may work better with 'warm list' rather than 'cold list' donors, since a larger proportion of 'warm list' donors may be altruistically motivated. Altruistically motivated donors may seek meaningful ways to give through volunteering and signing up with Compassion or WorldVision (the charities that allow donors to write letters to the recipient).

6. Conclusion

We conducted a door-to-door field experiment to investigate whether we could increase the meaning associated with the act of giving by providing an opportunity to send a holiday message to the recipient. We do not observe an effect of increased giving as a result of this manipulation, but do observe a significant decrease in giving rates, concentrated among small donors. The decrease in giving rates can be explained by greater cost of giving in the treatment condition. This cost could be driven by increased perceived social cost from giving a small gift, opportunity cost of time, or cognitive cost from an additional choice set. The total amount raised was 8% greater in the control group than in the treatment group (\$1777 versus \$1645), a practically important difference for most non-profits. In addition, treatment imposes an additional cost on the charity to sort through the messages.

While we document the decrease in giving due to cost, several explanations can account for why increasing the meaning associated with giving did not lead to significant increases in donation amounts. First, the strong social and/or transaction costs that go in the opposite direction may overwhelm the effect. In particular, we used a 'cold list', while our manipulation may be more effective with 'warm list' donors or a larger sample of altruistically motivated donors. In addition, this particular treatment, despite being taken up by over 30% of donors, may not enhance meaning. This could be because we administered the meaning manipulation simultaneously with the donation request, rather than administering the meaning manipulation immediately before the donation request. A possible direction for future work would be to explore providing the opportunity to write a card after the donor had already decided to give, which would ameliorate the cognitive cost of making two decisions simultaneously.

It is notable that our results seem to run counter to the expected effects based on related laboratory experiments on communication. For instance, in [Andreoni and Rao \(2011\)](#), putting the allocator in the shoes of the receiver in a standard dictator game enhanced empathy and increased giving. We may have expected our treatment to do the same given that writing a card may increase empathy. However, one notable difference between a lab experiment like [Andreoni and Rao's \(2011\)](#) and a field experiment like the one we describe here is that there is a lower transaction cost from writing a message.

Our findings are practically relevant for practitioners. In particular, fundraisers should be careful to consider the potential effects of solicitation approaches on the cost of giving. Our experiment demonstrates that social costs, cognitive costs, and non-monetary transaction costs could all play a significant role in the donation decision. Not only did our manipulation decrease the revenue generated from the solicitations, but it also added an additional cost to the charity of sorting and delivering the holiday cards from donors. Avenues for future work include considering the effect of emotional meaning manipulations on warm list donors and the role of emotional meaning in the decision to give time (volunteer). It will also

⁷ 14 out of 29 of those who gave less than \$10 in the treatment group chose to write a message on the holiday card we provided, and only 5 who gave below \$5 did so. 26 out of 53 of those who gave \$10 or more in the treatment group chose to write a message. When controlling for solicitor and solicitee demographics, the coefficient of card on the average amount given is positive ($p = 0.114$). However, note that our paper is concerned with the self-sorting between giving and not giving that occurs given a solicitation attempt to increase the meaning inherent in the act of giving. Consequently our conjectures focus primarily on the effect of presenting the option to write a message. Since the donor's decision to write a message is endogenous, we cannot make a causal inference about the influence of writing a message on giving behavior.

be interesting to consider the effects of different manipulations conducted just prior to, rather than during, an ask – these would be free from a cost of giving effect.

Appendix I: Solicitation scripts.

Control group

Hello, we are volunteers from the Feel the Warmth organization. A few years ago, a couple of high school students in the Homewood-Flossmoor area started a service project to help people in need keep warm during the cold holiday season. Each year high school students raise money to purchase fleece material, which are used to make blankets. Today we are asking you to make a difference in somebody's holiday season and donate. \$20 will purchase one fleece blanket, but we appreciate any amount you contribute. **A holiday card for a person in need will accompany your gift.**

Treatment group⁸

Hello, we are volunteers from the Feel the Warmth organization. A few years ago, a couple of high school students in the Homewood-Flossmoor area started a service project to help people in need keep warm during the cold holiday season. Each year high school students raise money to purchase fleece material, which are used to make blankets. Today we are asking you to make a difference in somebody's holiday season and donate. \$20 will purchase one fleece blanket, but we appreciate any amount you contribute. **If you give a gift, you can write a personalized holiday card for the person who received the blanket you contributed to.**

Appendix II: Data sheets.

Figs. A.1 and A.2

A		Route 1: Card Feel the Warmth		
time	address	Did they give?	Amount Given	Did they fill out their own Card?
	100 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	102 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	103 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	104 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	105 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	106 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	107 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	108 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	109 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	110 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	111 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	112 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	113 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	114 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	115 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	116 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	117 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	118 ABC Street	Y ☐ N ☐		Y ☐ N ☐
	119 ABC Street	Y ☐ N ☐		Y ☐ N ☐

Fig. A.1. Data sheet for asker. Note: Addresses have been falsified to protect subject identity.

⁸ Notice that the treatment script does not include the last line, "If you do not write a card, a card will be included for you" as intentioned. Unfortunately, by mistake this was left out of the printed script. During training, solicitors were instructed to include this line.

R

Route 1: Card
Feel the Warmth

address	Did you approach the house?	Did they open the door?	Race	Gender	Notes
100 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
102 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
103 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
104 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
105 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
106 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
107 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
108 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
109 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
110 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
111 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
112 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		
113 ABC Street	Y ☐ N ☐	Y ☐ N ☐	White ☐ Black ☐ Hispanic ☐ Other ☐		

Fig. A.2. Data sheet for recorder. Note: Addresses have been falsified to protect subject identity.

Appendix III: Holiday card.

Fig. A.3



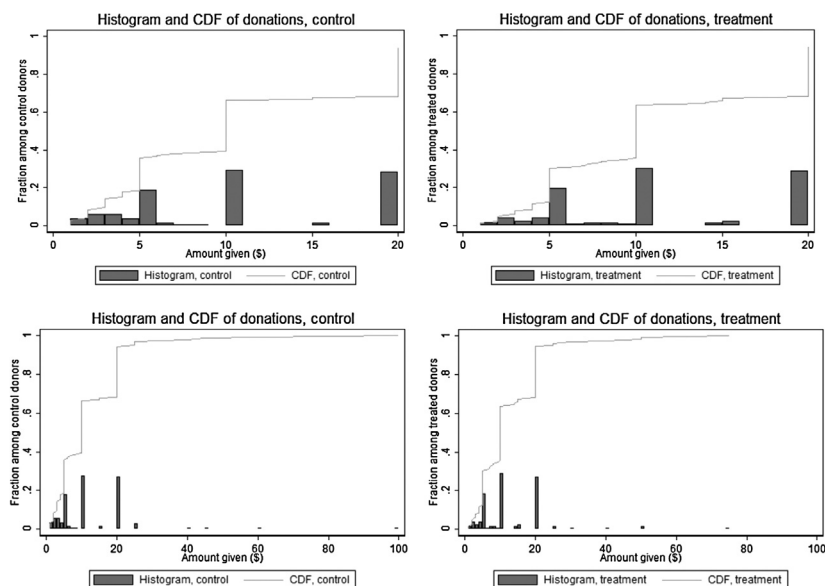
Fig. A.3. Holiday card.

Appendix IV: Additional tables and figures.

Table A.1
Figs. A.4 and A.5**Table A.1**
Regressions of treatment status on giving.

Dep. Var:	Indicator for giving		Indicator for giving				Average donation (≥ 0)	
			Small gifts (≤ 10)		Large gifts (> 10)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	−0.109 [*]	−0.100 [*]	−0.0712 [*]	−0.075 [*]	−0.0200	−0.0152	−0.904	−0.955
	(0.0598)	(0.0499)	(0.0376)	(0.0422)	(0.0303)	(0.0350)	(0.910)	(0.985)
Afternoon session	0.143 [*]	0.144 ^{**}	0.0742 [*]	0.0696 [*]	0.047	0.056	0.863	1.094
	(0.0601)	(0.0547)	(0.0378)	(0.0422)	(0.0305)	(0.0349)	(1.033)	(1.118)
Female		0.0371		0.0297		−0.0052		−0.158
		(0.0391)		(0.0420)		(0.0348)		(0.924)
Black		−0.109 [*]		0.0036		−0.108 ^{***}		−2.053 [*]
		(0.0544)		(0.0446)		(0.0369)		(1.031)
Hispanic		0.0841		0.0616		0.0370		−0.894
		(0.118)		(0.164)		(0.136)		(2.938)
Other race		−0.108		−0.0646		−0.0307		0.819
		(0.117)		(0.113)		(0.0939)		(3.716)
Female asker		0.0133		0.0187		0.0114		0.436
		(0.0937)		(0.0473)		(0.0391)		(1.508)
Female recorder		0.0714		0.0525		0.00129		1.159
		(0.104)		(0.0519)		(0.0430)		(1.479)
Constant	0.449 ^{***}	0.415 ^{***}	0.297 ^{***}	0.231 ^{***}	0.147 ^{***}	0.186 ^{***}	5.763 ^{***}	5.561 ^{***}
	(0.0599)	(0.0814)	(0.0335)	(0.0610)	(0.0270)	(0.0505)	(1.110)	(1.377)
Observations	590	485	590	485	590	485	590	485
R-squared	0.030	0.050	0.0117	0.0178	0.005	0.025	0.004	0.021

Robust standard errors in parentheses. Regressions are clustered by team.

*** $p < 0.01$.** $p < 0.05$.* $p < 0.1$.**Fig. A.4.** Histogram distribution of treatment and control.

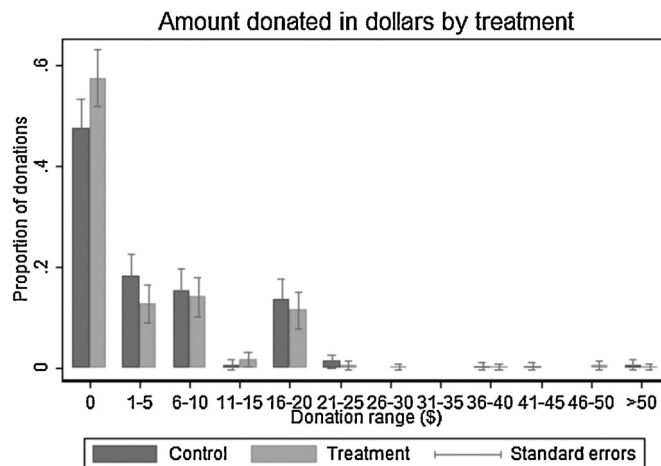


Fig. A.5. Histogram of all donations by treatment.

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