



# Demotivating incentives and motivation crowding out in charitable giving

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Research has shown that extrinsic incentives can crowd out intrinsic motivation in many contexts. Despite this, many nonprofits offer conditional thank-you gifts, such as mugs or tote bags, in exchange for donations. In collaboration with a nonprofit, this study implements a direct mail field experiment and demonstrates that thank-you gifts reduced donation rates in a fundraising campaign. Attention-based multiattribute choice models suggest that this is because prospective donors shift attention to the salient gift offer, causing them to underweight less salient intrinsic motives. Attention to the gift may also cause individuals to adopt a more cost-benefit mindset, further de-emphasizing intrinsic motives. Consistent with these hypotheses, crowding out was driven by those who donated higher amounts in the previous year (i.e., those who likely had higher intrinsic motivation). In a complementary online experiment, thank-you gifts also reduced donation rates but only when the gift was visually salient. This corroborates the mediating role of attention in crowding out. Taken together, the laboratory and field results demonstrate that this fundraising technique can be demotivating in some contexts and that this may occur through an attention-based mechanism.

motivation crowding out | charitable giving | multiattribute choice | attention | saliency

Nonprofits often offer conditional thank-you gifts, such as mugs or t-shirts, to encourage donations (1). However, laboratory experiments have shown that extrinsic incentives can crowd out intrinsic motivation for a task (2–5), often leading to counterproductive outcomes. This study implements both a direct-mail field experiment and an online experiment to test whether thank-you gifts can crowd out motivation in charitable giving contexts.

The field experiment was run in collaboration with a public radio station during its rolling monthly membership renewal campaign. This campaign mailed previous donors a solicitation letter once they were 9 months removed from their last donation. To test for gift effects, the station randomly divided these subjects into gift and no-gift groups. All recipients received a standard solicitation letter and remit form, and those in the gift group also received a large, colored insert advertising an optional thank-you gift (Fig. 1).

Multiple theories in economics and psychology predict that gifts can reduce donation rates in this setting. One commonly cited theory (6, 7) suggests that gifts reduce the donation's ability to act as a self-signal of altruism, thus reducing motivation to donate. Alternatively, attention-based multiattribute choice models (8–15) predict that individuals overweight salient attributes and underweight shrouded attributes when making choices. If the thank-you gift is a particularly salient attribute, this may cause the donor to underweight less salient intrinsic motives such as altruism, potentially leading to lower motivation to donate.

To better identify between these mechanisms, the field experiment implemented two different gift conditions. In the “swag” condition, donors were offered a tumbler in exchange for donations above a certain threshold. In the “meals” condition, the station instead offered to provide 60 meals to the local food bank as the thank-you gift. (These gifts have equal market value of \$15, although this was not stated in the mailer. Although \$0.25 per meal sounds unlikely, the food bank advertises in its own campaigns that every dollar donated provides four meals.) Because the meals gift is

prosocial in nature, it should not dilute the self-signal value of a donation. In addition, both gifts were strictly opt-in. A self-signaling mechanism would predict no crowding out in this context, as opting against the gift would preserve the self-signal value of the donation.

If crowding out still occurs, it may implicate the attention mechanism. The glossy, bright orange inserts were designed to be eye-catching and thus highly salient to recipients. In addition, the insert makes no mention of any intrinsic reasons for donating (such as supporting one's favorite programs). Consequently, the insert may cause prospective donors to overweight the extrinsic incentive while underweighting less salient intrinsic motives. This change in attention may also shift the individual from a prosocial mindset to a more cost-benefit mindset (16, 17), leading to further de-emphasis of intrinsic motives. These effects would reduce an individual's net motivation to donate, leading to lower donation rates and/or donation amounts. Moreover, these shifts can still occur even when the gift is optional and even when the donor does not ultimately opt for the gift. [Although the meals gift is prosocial in nature, attention to this gift would still divert attention away from (and thus decrease the weight placed on) other intrinsic reasons for supporting the radio station.]

A complementary online fundraising experiment was run to replicate the field experiment and further explore these possible mechanisms. To directly test for the attention hypothesis, the online experiment varied not only the presence of a gift but also the visual saliency of the gift. The experiment also varied the desirability of the gift; shifting attention toward the gift (and increasing the weight placed on the salient gift) should not decrease donations when the gift is sufficiently desirable. Finally, the online experiment controlled for other possible mechanisms such as overhead aversion and reference effects.

## Significance

Many nonprofits solicit contributions by offering thank-you gifts, such as mugs, in exchange for donations. However, these gifts may have counterproductive effects by drawing a prospective donor's attention away from altruistic motives and leading him or her to use a more cost-benefit mindset. This study tests for the effect of thank-you gifts during a nonprofit's direct-mail fundraising campaign and finds that gifts reduced donation rates in this campaign. A complementary online experiment confirms that thank-you gifts can reduce donation rates but only when the gift is visually salient and thus more likely to occupy the donor's attention. Nonprofits should consider their donor's psychological incentives carefully before implementing these types of extrinsic incentives.

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## Membership Renewal

\$180     \$120     Other \$ \_\_\_\_\_

Single payment     Monthly Sustainer

Please send me the [redacted] Travel Tumbler for my gift of \$180 or more

### Payment Method

Check enclosed, payable to [redacted]

Charge (Visa, American Express, Discover, MasterCard)

Card No. \_\_\_\_\_

Exp. Date \_\_\_\_\_ Signature \_\_\_\_\_



**Fig. 1.** Mailer inserts and remit forms. (Top) Remit form (all conditions). This form was included with all solicitation letters in all treatments. The tumbler check-box is replaced with a meals check-box in the meals condition and removed altogether in the control condition. The remit form also contained additional irrelevant text not displayed. (Middle) Insert included in swag condition. A colored version of this insert was included in the swag condition only. The station name and logo are redacted for confidentiality. (Bottom) Insert included in meals condition. A colored version of this insert was included in the meals condition only. The station and food bank names are redacted for confidentiality.

## Literature Review

This study adds to the set of field experiments that test for the effectiveness of common fundraising incentives, including donation-matching, seed money, and raffle tickets (18–20). Unlike these other studies, this experiment demonstrates that extrinsic incentives in these fundraising campaigns can, under certain conditions, reduce donation rates.

This difference may be in part because prior studies were not calibrated to detect crowding out. In one such study on thank-you gifts, researchers offered a gift in exchange for donations of any size (21); consequently, any reduction in donation rates may have been counterbalanced by donors who chose to give low amounts to obtain the gift. In addition, that study targeted primarily donors who had never donated before, and donation rates were less than 1%. This led to low statistical power for detecting negative treatment effects. The present study implements more favorable conditions for detecting crowding out by targeting donors with higher

baseline donation rates and by requiring a minimum donation amount for the gift.

Other studies have examined the use of extrinsic incentives in blood donation drives (22, 23). In this literature, blood donors are offered pay in exchange for a service (i.e., donating blood). This differs from thank-you gifts, where the incentive more closely resembles a purchase transaction from the donor's perspective. These differences could imply that individuals use different mindsets in each context, ultimately leading to different outcomes. Even if the contexts were more similar, the results in the blood donations literature are mixed, making them difficult to extrapolate.

Some laboratory experiments have examined thank-you gifts in charitable giving (24–26). These experiments offered incentives that were automatic upon donating; however, many nonprofits offer opt-in thank-you gifts instead of automatic gifts in order to maintain lower costs. The present experiment mirrors this by offering opt-in gifts. Unlike automatic gifts, the opt-in feature allows donors to avoid diluting the self-signal value of their donation by simply opting against the gift.

The attention mechanism proposed in this paper adds to different lines of literature. It extends multiattribute models of consumer decision-making in economics (8–10), psychology (11–13), and marketing (14, 15) to both charitable giving and motivation crowding-out contexts. In addition, the proposed role of donor mindsets extends previous literature in psychology (16, 17) by suggesting that these mindset effects may be mediated by saliency and attention.

## Materials and Methods (Field Experiment)

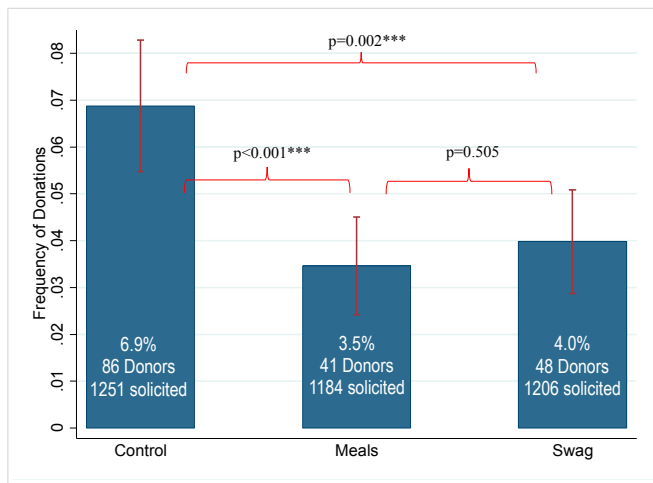
The field experiment was run during the public radio station's rolling, monthly, direct-mail membership renewal campaign. (All field experimental procedures were approved by the Committee for the Protection of Human Subjects at the California Institute of Technology. It was not necessary to inform participants that they were participating in an experiment since the risks were minimal and they would have received the mailers regardless of this study.) The station defines a member as any individual who has contributed any amount within the past 12 months. In this campaign, donors are solicited by mail to renew once their membership is 3 months from expiration (i.e., the donor is 9 months removed from their most recent donation). This experiment represents the first time the station ever offered thank-you gifts via its direct-mail campaign, although thank-you gifts have been offered in the past on its webpage and during on-air pledge drives.

The mailer used in this campaign consisted primarily of a one-page renewal letter thanking the members for their past support and requesting a new donation. The solicitation letter also reminded donors of the many intrinsic reasons why they donate, such as supporting the station's original programming. The letter included a detachable remit form (Fig. 1, Top) that donors could mail back using a business envelope included in the mailer. These remit forms contained a unique identifier that allowed the station to track the exact mailer being responded to.

Testing was run by mail from May 2014 through July 2014. A total of 3,641 members coming up for renewal were included and randomly divided into three groups. For each month's list of renewal candidates, the radio station used Microsoft Excel's random number generator to assign random numbers to each individual; it then sorted individuals by those numbers to divide the list into two groups. For May, the first half was assigned as a control condition, and the second half was further split into two gift condition groups using the same random numbers. For June and July, at the researcher's request, the lists were instead split into three approximately equal-sized groups.

Each group received identical mailings except for the gift offer. The control group received the standard solicitation letter and remit form described above. The gift groups received the same solicitation letter but also received a glossy colored insert advertising one of two thank-you gifts (Fig. 1, Middle and Bottom). One gift group received an offer of a tumbler in exchange for a \$180+ donation, whereas the other gift group received the meals gift offer in exchange for a \$180+ donation. This \$180 threshold was also mentioned in all groups (including the control group) as the higher of two suggested donation amounts on the remit form (Fig. 1, Top). (Suggested donation amounts were \$120 and \$180 for all except a small handful of members who had given the lowest amounts the previous year; these donors instead saw suggested amounts of \$25 and \$89.)

The remit forms were the same across all conditions except for an opt-in check-box for the gift. Naturally, this was only present in the gift conditions. Donors would mark this box if they qualified for and chose to request the gift. Donors did not pay shipping charges for requesting either gift.



**Fig. 2.** Donation rates by condition. Each bar represents the fraction of mailers returned with donations, by condition, collapsed across all 3 months. Red bars represent 95% confidence intervals. *P* values correspond to two-sample difference-in-means *t* tests (two-tailed).

A few basic inferences can be drawn about the characteristics of the sample. According to the station, a significant majority of its donors are over 40. Analysis of donor last names (using 2000 US Census data) suggests that 82% of donors are Caucasian, and first name analysis suggests approximately 53% are female. Finally, although political preferences are not available, the station serves a region that skews progressive.

## Results

Fig. 2 displays summary statistics and difference-in-means *t* tests between conditions. In total, 6.9% of donors in the control group chose to donate by mail, whereas 3.5% and 4.0% of donors in the meals and swag conditions chose to donate, respectively. Difference-in-means *t* tests between gift and control groups are significant at the  $P < 0.01$  level. Because it is unknown whether donors actually opened the envelope and saw the gift offer, these results represent intend-to-treat effects.

In total, 175 mailers across all conditions resulted in donations. Conditional on donating, donations averaged \$103 (SD = 102) across all conditions. Donations averaged \$102 (SD = 85) in the control group, \$115 (SD = 135) in the meals group, and \$94 (SD: 96) in the swag group. Only 20 donors gave at or above \$180—six each in the gift conditions and eight in the control condition. Of the 12 who gave \$180 or more in the gift conditions, only 1 requested the gift.

Table 1 reports OLS estimates of how thank-you gifts affected donation rates while controlling for month fixed effects. In models 1 and 2, the dependent variable is a binary indicator representing whether a donor chose to donate in response to the mailer. Model 1 pools both gifts into a single gift-effect indicator, whereas model 2 separately estimates swag and meal gift effects. Both models suggest that thank-you gifts significantly decreased donation rates by over 2 percentage points on average. In addition, model 2 suggests that the effects of each gift are not statistically different from one another ( $P = 0.415$ ). Finally, although the OLS results never yield out-of-sample predictions, model 3 presents a logistic regression version of model 1. This specification yields the same sign and statistical significance as OLS.

Model 4 examines whether donation amounts, conditional on donating, differed across treatments. Model 4 limits the sample to those who donated, and it also transforms pledge amount to the log of pledge amount to correct for skewness; this transformed variable is the dependent variable. Results show negative point estimates for both gift coefficients, which would be consistent with a negative gift effect on the intensive margin; however, because neither coefficient reaches statistical significance, the regression cannot reject the null hypothesis that conditional donation amounts are the same across treatments.

The station also provided donations data from the previous year (2013) for each donor. [Not all donors appear to have 2013 pledges or payments data archived in the station's dataset, so there may be some missing data (affecting less than 10% of the sample).] Model 5 of Table 2 demonstrates that gift effects are robust to controlling for whether the donor gave by mail in 2013. (A total of 130 of these members gave by mail in 2013. Table S1 shows that results are also robust to dropping all 130 of these donors.) Models 6 and 7 demonstrate that crowding out is only observed in those who donated at least \$60 in 2013 (the \$60 threshold represents the median amount donated in 2013 for these donors). Those who gave less than \$60 do not show statistically significant responses to gift offers. [Results are similar when using other cutoffs (e.g., \$30, \$90); see Table S2. Too few donors gave at \$180+ in 2013 (604 out of 3,691) for results to be significant when using the \$180 threshold, although point estimates are still negative.]

## Interpretation and Possible Mechanisms

These results do not appear consistent with the self-signaling mechanism. The meals gift did not offer any extrinsic incentive to the recipient and thus should not have diluted the self-signal value of a donation. In addition, both gifts were opt-in, and opting against the gift should have protected against any devaluing of the self-signal. If anything, the act of declining the gift could have increased the self-signal value of the donation.

**Table 1.** Main regressions

Specification	Model			
	1	2	3	4
Regression model	OLS	OLS	Logit	OLS
Dependent variable	Chose to donate	Chose to donate	Chose to donate	Log(pledge)
Sample	All	All	All	Pledge > \$0
<i>N</i>	3,641	3,641	3,641	175
<i>R</i> <sup>2</sup> /pseudo- <i>R</i> <sup>2</sup>	0.022	0.023	0.051	0.037
Any gift offered	-0.026 (0.008)***			
Swag offered		-0.023 (0.009)**	-0.456 (0.189)**	-0.274 (0.169)
Meals offered		-0.029 (0.009)***	-0.628 (0.197)***	-0.092 (0.155)
Constant	0.131 (0.016)***	0.131 (0.016)***	-1.751 (0.165)***	4.487 (0.113)***
Month fixed effects	Yes	Yes	Yes	Yes

All SEs are Huber-White robust. \*\* $P < 0.05$ ; \*\*\* $P < 0.01$ .

**Table 2. Donor characteristics regressions**

Specification	Model		
	5	6	7
Dependent variable	Chose to donate	Chose to donate	Chose to donate
Regression model	OLS	OLS	OLS
Sample	All	Gave <\$60 in 2013	Gave \$60+ in 2013
N	3,641	1,652	1,989
R <sup>2</sup>	0.027	0.030	0.022
Treatment			
Swag offered	-0.027 (0.009)***	-0.005 (0.013)	-0.030 (0.013)**
Meals offered	-0.031 (0.009)***	-0.014 (0.012)	-0.035 (0.012)***
Past donation methods			
Gave by mail in 2013	-0.002 (0.032)		
Interactions			
Swag × Mail-2013	0.166 (0.094)*		
Meals × Mail-2013	0.040 (0.054)		
Constant	0.128 (0.017)***	0.083 (0.024)***	0.149 (0.021)***
Month fixed effects	Yes	Yes	Yes

All SEs are Huber–White robust. \* $P < 0.10$ ; \*\* $P < 0.05$ ; \*\*\* $P < 0.01$ .

Thus, this mechanism would not have predicted the observed results in this particular context.

The attention-based mechanism may provide a better explanation for the crowding out observed in this study. The glossy, colored insert made the gift offer highly salient to individuals. This likely diverted attention away from the solicitation letter and the intrinsic motives that it mentions. This would have caused prospective donors to place less weight on their intrinsic motives, potentially leading to crowding out in both gift conditions.

This proposed attention mechanism may also have shifted mindset in a manner that further de-emphasized intrinsic motives. Attention to the gift may have caused donors to use a more cost-benefit and less prosocial mindset. Prior research suggests that individuals do not use cost-benefit mindsets for social decisions, but they do once a monetary incentive is mixed into the decision (16). Similar research in marketing suggests that a “calculative” mindset will lead to more selfish and less socially oriented decision-making (17). Therefore, any shift toward a cost-benefit mindset would have led to further decreases in the weight placed on intrinsic motives, thus increasing the possibility of crowding out.

This underweighting of intrinsic motives would be more likely to affect prospective donors with higher intrinsic motivation to donate. Regression models 6 and 7 are consistent with this hypothesis; they demonstrate that crowding out was driven by those who likely had relatively higher intrinsic motives (i.e., those who chose to give higher amounts the previous year). Previous studies have also assumed that higher donations may correspond to higher intrinsic motives such as altruism (27).

Although the attention-based mechanism may predict crowding out along both the intensive and extensive margins, the results only indicate significant effects on the extensive margin (point estimates were consistent with crowding out on the intensive margin, but they did not reach statistical significance). This may be because of donor heterogeneity in response to gifts. For donors with relatively low intrinsic motivation (such as those who gave low amounts in 2013), shifting attention away from those motives would not have much impact on their net motivation to donate, yielding no detectable effects on either margin. For donors with high intrinsic motives (such as those who gave high amounts in 2013), a shift in attention may be enough for many of them to change their decision to donate. This would yield detectable effects on the extensive margin but not necessarily on the intensive margin in aggregate. Both models 6 and 7 are consistent with these

predictions (as are the regressions in Table S3). For additional results on donor heterogeneity, see Table S4.

There are other reasons that may also contribute to the null result on the intensive margin. Some of those who gave during the mail campaign may have already planned ahead of time to donate. In general, many individuals plan their annual charitable donations in advance for accounting and tax-related purposes. These donors would have made their decision even before receiving the mailer, and their donations would not have been affected by treatment assignment. Donors with high intrinsic motivation who donated despite the gift may be especially likely to fall into this category. These donors would reduce the effects observed on the intensive margin and potentially make effects on this margin difficult to detect in the aggregate.

It is also important to consider other mechanisms aside from attention and self-signaling, such as whether the gift signaled meaningful information to the donor. For instance, the \$180 gift threshold could have caused prospective donors to infer that \$180 is the expected donation amount, leading them to use reference-dependent utility (28). [The radio station decided against including similar colored inserts to the control condition that would mention the \$180 threshold, as it felt it would seem out of place to donors (while also increasing printing and packaging costs).] In this scenario, giving less than \$180 would be perceived as falling short of expectations, thus decreasing the utility associated with donating less than \$180. However, the remit form in all conditions (including the control group) contained suggested donation amounts (Fig. 1, *Top*) that served as a much more meaningful signal of expected donation amount. In addition, because \$180 was one of these suggested donation amounts, the \$180 threshold was already relevant across all conditions.

Alternatively, the gift could have signaled that the station was wasting money on expenditures unrelated to its cause. [A similar argument would be that donors find it strange that the radio station is giving to an unrelated cause (the food bank); this could also be interpreted as a negative signal of nonprofit quality.] This is similar to literature suggesting that donors dislike giving to nonprofits with high overhead expenditures (29). However, according to the radio station, its donors were likely already aware that the station offers thank-you gifts in fundraisers. Multiple times each year, the station airs advertisements for seasonal pledge drives that mention thank-you gifts; in addition, its webpage often advertises thank-you gifts. The station therefore believes that it is unlikely the thank-you gift

offer would have provided new information to donors about the station's gift expenditures.

Nevertheless, to more strongly rule out these information signaling alternatives and to more directly test the attention mechanism, this study implemented an additional online experiment. This experiment replicated many aspects of the field experiment in a different context, while also including additional controls and treatments.

### Online Experiment

This online experiment was run using an Amazon Mechanical Turk subject pool. (Experimental procedures were approved by the Committee for the Protection of Human Subjects at the California Institute of Technology and the Institutional Review Board at Williams College.) Subjects were invited via the Mechanical Turk platform to fill out a very brief "opinions and demographics" survey on Qualtrics. [Subjects were eligible if they had completed at least 100 previous Mechanical Turk tasks (HITs), had a HIT approval rate of 98% or above, were classified by Amazon as a US resident, and had never completed the survey before.] Subjects were offered \$0.30 plus a \$0.15 bonus for completing the survey. The very first question of the survey asked subjects whether they would donate their \$0.15 bonus to the Red Cross. The rest of the survey included demographics and filler questions.

Subjects were randomly sorted into three groups. The first group was a control group where no gift was offered (Fig. 3, *Top*). The second group, the gift/no-image treatment, was offered an opt-in \$0.01 Staples egift code in exchange for donating (Fig. 3, *Middle*). The third group, the gift/image treatment, was offered the same gift but was also presented with an image of a \$0.01 Staples gift card during the ask (Fig. 3, *Bottom*). The \$0.01 Staples gift code was chosen because it was unlikely to be popular, which maximizes the chances for crowding out.

The picture in the gift/image treatment was intended to increase the visual saliency of the gift without adding new information or altering any other aspect of the gift, such as its perceived desirability. This directly tests whether increased gift saliency (and consequently increased attention to the gift) can lead to crowding out while holding information and other parameters constant. To confirm that the image did not change how subjects perceived the desirability of the gift, I recruited a separate sample of 204 Mechanical Turk subjects and asked them to rate the desirability of the \$0.01 Staples gift code. Only half of the subjects were shown the image of the gift card when rating the gift. The no-image group rated the gift as having an average desirability of 1.7 on a scale of 1 (low desirability) to 5 (high desirability), confirming that the gift was undesirable (Fig. S1). Those shown the image rated the item as a 1.6 on average (difference-in-means:  $P = 0.395$ ). The image therefore did not impact the perceived desirability of the gift.

A total of 771 subjects completed the opinions survey in late July 2016. In total, 28% (70/252) of subjects in the control condition chose to donate, and 24% (64/264, nine gifts requested) of subjects in the gift/no-image treatment chose to donate (difference-in-means:  $P = 0.361$ ). Only 16% (41/255, five gifts requested) of subjects in the gift/image treatment donated, which is significantly different from both other treatments (difference-in-means:  $P = 0.001$  and  $P = 0.021$ , respectively). Therefore, increasing the visual saliency of the gift, without influencing the perceived desirability of the gift, decreased donation rates. This is as predicted by the attention-based mechanism. [Subjects who requested the gift code were instead paid \$0.01 via a Mechanical Turk bonus, although subjects (and initially the researcher) were unaware that this would happen. This was done because it turns out that Staples does not actually offer \$0.01 gift codes for purchase (it is highly unlikely that subjects would have been aware of this; the situation was also explained to subjects when they were paid the bonus).]

These results cannot be explained by the information signaling mechanisms discussed previously. First, the \$0.15 donation

The figure displays three sequential screenshots of a survey interface. Each screen contains a text prompt, a question, and a dropdown menu. The top screen (control) asks if the user will donate their \$0.15 bonus to the Red Cross. The middle screen (gift/no-image) asks if the user would like to qualify for a \$0.01 Staples gift code by donating their \$0.15 bonus to the Red Cross. The bottom screen (gift/image) is identical to the middle screen but includes a visual image of a Staples eGift Card for \$0.01. The image shows the Staples logo in a red box above the text 'eGift Card \$0.01'.

**Fig. 3.** Mechanical Turk solicitation messages. Subjects in the control (*Top*), gift/no-image (*Middle*), and gift/image (*Bottom*) conditions were shown each of the above screens, respectively, at the very beginning of the Mechanical Turk survey. Drop-down box options were "Yes, I will donate" and "No, I will not donate" for the donate question. Drop-down options for the thank-you gift question were similar yes/no statements if they selected to donate; if they declined to donate, the only option for the thank-you gift question was "not eligible."

amount was presented identically across all treatments, so results cannot be attributed to a reference effect from the \$0.15 amount. Second, in all gift treatments, the gift clearly and unambiguously was from the experimenter running the survey and *not* the Red Cross, so subjects should not have inferred that the charity was spending money or overhead on gifts. This experiment therefore demonstrates that crowding out can occur due to gift saliency even when controlling for information signaling effects.

Two additional treatments were run to test whether crowding out still occurs when the gift is more desirable. When a gift is sufficiently desirable, donations might not decrease even when individuals overweight extrinsic incentives and adopt a cost-benefit mindset. These additional treatments were run in early August 2016 using 538 new subjects. These treatments offered a \$0.01 Amazon gift code instead of a \$0.01 Staples gift code, with one treatment also including a visual image of the gift (Fig. S2). (Similar to the case with the Staples gift code, subjects who requested the Amazon gift code were paid \$0.01 via Mechanical Turk instead since it turns out Amazon does not allow purchases of \$0.01 gift codes.) As before, a separate sample of subjects ( $n = 102$  per group) was asked to rate the Amazon gift code, and the image did not influence the perceived desirability of the gift; in addition, the Amazon gift code was rated higher than the Staples gift code, indicating that it is more desirable. [The gift was rated a 2.5 in desirability (scale of 1–5) when no picture was included and a 2.6 when a picture was included (difference-in-means:  $P = 0.512$ ; Fig. S1).]

Results show that increased gift saliency did *not* lead to crowding out with these more desirable gifts (Fig. S3). Donation rates were 29% (74/254) in the gift/no-image condition and 31% (84/275) in the gift/image condition (difference-in-means:  $P = 0.724$ ). Subjects also opted for the gift fairly frequently: 36 out of 74 donors in the gift/no-image treatment and 35 out of 84 donors in the gift/image treatment opted for the gift. This was more than

triple the gift request rate of the less desirable Staples gift code. These results are consistent with the attention and mindset mechanism; increased attention on the gift due to the gift image did not reduce donation rates when the gift was sufficiently desirable.

## Conclusion

This study demonstrates that a commonly used fundraising technique can, at times, have counterproductive effects. These results are consistent with literature in psychology and economics on motivation crowding out (2–5). In addition, both the field and laboratory experiments in this study (and particularly the latter) propose that an attention and mindset mechanism may best explain the observed results. [This saliency mechanism has also been implicated in decisions involving much larger sums of money than \$180 (30).]

Importantly, this study does not claim that these results will generalize to all fundraising contexts. The field experiment was run on prospective donors with strong intrinsic motives to give (because they had given in the past), and gifts may have different effects when donors have low initial intrinsic motivation. Consistent with this, donors who gave higher amounts the previous year (and likely had higher intrinsic motivation) were responsible for the observed crowding out in the field. This study also does not suggest that nonprofits should never offer extrinsic incentives; instead, any extrinsic incentive must have sufficient value and desirability to overcome an accompanying de-emphasis on intrinsic incentives. The online experiment corroborated this by demonstrating that gift saliency only led to crowding out when the gift was particularly undesirable.

Additionally, these results do not imply that crowding out cannot occur via other mechanisms. Crowding out in laboratory

experiments have exhibited evidence of self-signaling (24) and reference (26) mechanisms, and this paper does not contradict those results. This paper simply demonstrates that, given the specific contexts of this study, the observed reduction in donations was likely driven by the proposed attention mechanism. Importantly, this represents an application of these attention-based multi-attribute choice models to both a charitable giving context and a motivation crowding-out outcome.

Practically, these results emphasize that nonprofit organizations must carefully consider the psychological incentives that their donors face. Although conditional incentives often make sense in a standard for-profit marketing perspective, they carry different implications in a nonprofit setting, where donors may be highly intrinsically motivated (16). Nonprofit organizations can better optimize their fundraising strategies by being more cognizant of the psychological incentives that are specific to the contexts in which they operate.

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