Research Report

Opening a donor's wallet: The influence of appeal scales on likelihood and magnitude of donation

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Abstract

We examine the influence of appeal scales on the likelihood and magnitude of donation in a large field experiment. We argue and show that the leftmost anchor on the appeal scale most strongly influences the likelihood of donating; the lower the anchor, the higher the donation likelihood. Furthermore, our findings indicate that increasing the steepness of the amounts on the appeal scale increases the magnitude of donations. Both effects are stronger for infrequent than for frequent donors. Our results demonstrate that by using what a charity knows about past donor behavior, it can alter appeal scales to change donation behavior.

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Introduction

Charities struggle with how much they should ask for when soliciting donations. An effective fundraising campaign depends on (1) whether a target donor will donate, and (2) if so, how much. A general practice is to suggest a donation range (e.g., $20–$30–$50–$100), which we refer to as an appeal scale. Appeal scales provide anchors that signal the range of expected contributions and have substantial financial impact (Verhaert & Van den Poel, 2011; Simonson & Drolet, 2004; Croson & Marks, 2001; Wansink, Kent, & Hoch, 1998). The objective of this paper is to show that by incorporating donor's past behavior (operationalized as what they donated previously), charities can manipulate appeal scales to optimize the likelihood and the magnitude of donations.

We argue and show that the leftmost anchor on the appeal scale most strongly influences the likelihood of donating; the

lower the anchor, the higher the donation likelihood. Furthermore, we argue and show that simultaneously increasing the steepness of the amounts to the right on the appeal scale increases the magnitude of donations.[3] In a large field experiment, we incorporate donors' last donation in both the experimental design and the statistical analysis of the results. Our results demonstrate that by using what a charity knows about past donor behavior, it can alter appeal scales to change donation behavior.

Theoretical Background

We examine the donation behavior as a two-stage process. Donors (similarly to shoppers), when confronted with a donation opportunity (in a form of an appeal scale), have a general donation procedure or script stored in their memory (Schank & Abelson, 1977; Xu & Wyer, 2007), which is composed of a series of decisions (deciding whether to donate, deciding how much to donate). They are likely to retrieve and use this script as a guide in making donation decisions, just as in making general shopping decisions. The decisions that comprise the script are typically

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[3] All changes to the appeal scale (the magnitude of the leftmost number as well as the increase in the steepness) have to be made prior to the solicitation.

activated and applied in sequence; for example, if the decision to donate is affirmative, the solicited donor will proceed to the next decision on how much to donate (Xu & Wyer, 2007). In line with this conceptualization of the donation process, we focus on the two donation decisions — (i) increasing the commitment to donate, and then (ii) determining how much to donate.

We use the assimilation–contrast theory to establish our predictions about the effect of the design of an appeal scale on the likelihood of donation (Sherif, Taub, & Hovland, 1958). The assimilation and contrast theory (Sherif, 1963) states that individuals evaluate a new stimulus using a reference point that is based on their past experience. A stimulus that is close to the reference point falls in the latitude of acceptance, whereas a stimulus that is far from the reference point falls in the latitude of rejection. If a stimulus falls in latitude of acceptance, it is accepted, but if it falls in the latitude of rejection, it is rejected. Thus, a donor decides to donate depending on whether he finds the suggested amounts acceptable or not. We argue that donors use their last donated amount as a basis for comparison when they encounter suggested amounts on the appeal scale (Adaval & Monroe, 2002; Nunes & Boatwright, 2004). Thus, in line with the assimilation–contrast theory, an increase in the suggested donation amounts should lead to donor's acceptance provided that the distance between the last donated amount and the suggested amount range is moderate, but rejection when it is extreme (Forehand, Perkins, & Reed, 2011; Herr, 1986; Lockwood & Kunda, 1997; Pelham & Wachsmuth, 1995). Building on this, we discuss how appeal scales can be modified to increase donation likelihood.

Increasing Donation Likelihood

Previous research shows that the most selected alternative on the appeal scale is not the central value (as predicted by extremeness aversion theory; Simonson & Tversky, 1992) but the lowest scale value (Schibrowsky & Peltier, 1995). That is, most donors use the lowest value on the scale as the anchor against which they judge the appropriateness of their intended contribution. When deciding whether to donate, a donor evaluates his/her intended contribution by comparing it against this lowest suggested (leftmost) amount on the appeal scale. If this suggested amount is smaller than what the donor intended to give or has given in the past, it should facilitate donation, because it is easy for the donor to comply with the stated request. If the initial suggested amount instead is higher, complying with this request is more challenging since giving would require donating a larger amount than what the donor has done in the past. Moreover, it might not produce guilt and a desire to comply, as the charity hopes (e.g., Cotte, Coulter, & Moore, 2005), but instead produce negative reactions to a high-pressure sales pitch, which might discourage donation altogether. Thus, we hypothesize that decreasing (increasing) the leftmost value on the appeal scale increases (decreases) donation likelihood (H_1).

Furthermore, we argue that not all suggested donation amounts have a symmetrical effect on the donation likelihood. As described earlier, increases above the last donated amount might be perceived as more challenging than decreases because they are more

than what the donor wants to donate. Donors might be concerned that they will be negatively perceived if they donate too little, so instead they decide not to donate at all (Gneezy, Gneezy, Nelson, & Brown, 2010). Thus, we hypothesize that the leftmost amount on the appeal scale exerts an impact of larger (smaller) magnitude on donation likelihood when that amount is higher (lower) than the donor's last donation (H_2).

Increasing Donation Amount

After a donor has decided to donate, s/he must determine how much to give (magnitude of donation). Findings from previous research suggest that this judgment could be influenced by the suggested amounts on the appeal scale, as subjects use the response alternatives as information to make inferences about the distribution of responses in the population (Adaval & Monroe, 2002; Ostrom & Upshaw, 1968; Schwarz, Hippler, Deutsch, & Strack, 1985). Thus, we argue that donors use the appeal scale to infer what an average donor gives from the donation amounts provided to them and then use it as a standard of comparison in evaluating their intended donation behavior. Scales with less steep increases will have lower average points while those with more steep increases will have higher average points. Consequently, the amount that is donated should be lower in the former condition than in the latter. This reasoning works for both ends of the appeal scale in regards to their influence on the magnitude of donation as both affect the "average" donation, although we expect that the left end of the appeal scale still has a stronger impact because it signals the minimum socially acceptable amount. We predict that increasing the steepness of the amounts on the appeal scale increases donation amounts (H_{3a}, H_{3b}); however, the leftmost (smallest) amount on the appeal scale has a stronger impact on donation amounts than the steepness of the increase (H_{3c}). These hypotheses are conditional on the donor making a donation.

Frequency of Donation as a Moderator

The question that arises is whether all donors are equally susceptible to appeal scale manipulations. We argue that it depends on how well formed their intention is for whether and how much to give, which can be approximated by the frequency of their donations. If the donor gives frequently, s/he more generally knows what s/he wants to give and what is appropriate to give, and is thus less influenced by the suggested amounts on the appeal scales. But if the donor does not give frequently, s/he has a weaker notion of what s/he intends to give, and of what is appropriate to give, and is thus more likely to rely on readily available anchors (internal or external) to come up with estimates; as a result, suggested amounts on the appeal scales will exert a greater influence.

Previous research argues that a better understanding of donor behavior could be achieved by categorizing donors according to the frequency of their behavior (Burnett & Leigh, 1986). A meta-analysis of 64 studies also reveals robust evidence for the impact of past behavior on both intentions and future behaviors (Ouellette & Wood, 1998). When the behavior is well practiced in a constant environment, the frequency of past behavior reflects

habit strength and has a direct effect on future behavior. In addition, research on the question-behavior effect (also known as the mere measurement or the self-prophecy effect) shows that measuring intentions to perform a future behavior has less of an effect on those with more past-related experience (Morwitz, Johnson, & Schmittlein, 1993; Sprott, Spangenberg, & Fisher, 2003; Sprott et al., 2006). Thus, donors who have given frequently in the past should be less influenced by suggested amounts on appeal scales. We therefore hypothesize that appeal scale manipulations affect infrequent donors' donation (a) likelihoods and (b) donation amounts more than they affect frequent donors' (H_{4a}; H_{4b}).

Experimental Study

Experimental Design

A large European nonprofit organization sent a solicitation letter to its existing donors. All the solicited donors had made at least one donation in the past. If a donor was willing to make a donation, s/he would send a check together with the reply coupon. The reply coupon was personalized with the donor's name, address, and unique identifier, as well as a personalized appeal scale that contained a varying list of four suggested donation amounts (Fig. 1).

The study design proceeded as follows: First, the research team worked closely with the charity for several months before the experiment took place. We obtained the charity's donor database and extracted the last donation amount for all donors. Second, we randomly assigned each donor to one of the 3 × 3 experimental conditions that we describe next. We used stratified sampling to ensure that donors in all charity-defined segments were equally represented across conditions. Third, we constructed a customized appeal scale for each donor, tailored to both his/her last donation and the assigned experimental condition. Considering the pivotal role of donors' last donation, it needed to be embedded (at the individual level) in the experimental design. We first manipulated how the donor's last donation appeared in the appeal scale. Traditionally, solicitations have offered a first suggested amount very close to the donor's most likely behavior, and the other amounts represented upgrading options. We manipulated this first, leftmost amount as follows:

Lower   First suggested amount lower than the donor's last gift.
Equal   Equal to the donor's last gift.
Higher   Higher than the donor's last gift.

The other suggested amounts then increased monotonically, such that the steepness of this increase was manipulated as follows:

Steep   Suggested donation amounts increased at a 20% rate.
Steeper   Increased at a 50% rate.
Steepest   Increased at an 80% rate.

❏ 100 € ❏ 120 € ❏ 150 € ❏ 200 € ❏ Other: _____

Fig. 1. Typical appeal scale.

Thus, two donors in the same experimental condition could be exposed to different scales, depending on their last donation, because the experimental scales were designed in proportion to donors' individual last donated amount. In Table 1, we report the specific proportions used for the four suggested amounts for all 3 × 3 experimental conditions. In Table 2, we detail the leftmost amount and the steepness of the increase of the appeal scales (after rounding) for two hypothetical donors with different last donation amounts. We sent back a file with these tailored appeal scales to the charity, which personalized the reply coupons based on the research team's recommendations. Each experimental cell was tested with 5,578 donors.

It should be noted that the two manipulations interact to determine the exact suggested donation amounts, resulting in a non-orthogonal experimental design. This method resulted from two managerial constraints, namely, that the suggested amounts need to increase monotonically, and that donor's last donation should appear on the grid if possible (the first suggested amount in the EQUAL condition, and the second position in the LOWER condition). These two conditions combined prohibited a perfectly orthogonal design.

Six months after the launch of the campaign, we obtained a new file containing a list of donors who had made a donation, along with their donation amounts. Only donors who used the reply coupon (the vast majority) appeared in the analysis, which ensured they had been exposed to the manipulations.

Impact on Donation Likelihood

Of the 50,208 solicited donors, 4539 made a donation, for a return rate of 9.0% on the entire sample, slightly higher than historical averages (and close to a control group of equal size not subject to our experimental manipulations). This figure varied between 7.9% and 10.1% across conditions, as we show in Table 3. A three-by-three factorial analysis of variance (ANOVA) shows that the differences across groups were statistically significant ($F_{50199,\ 8} = 3.783$, $p < .001$).

The results in Table 3 support H_1, because the means indicate that increasing the leftmost suggested donation decreased the rate of donation ($F_{50206,\ 2} = 13.545$, $p < .001$). When the leftmost amount was higher than the donor's last donation, the response rate decreased by an average of 1.0% (from 9.2% in the EQUAL

Table 1
Ratio of four suggested amounts to last donation amounts for all experimental conditions.
Notes: For a donor in the Lower/Steepest condition, the first suggested amount is 56% of the last donation; the second amount equals his or her last donation, and the last suggested amount is more than three times larger the last donation.

		First Amount		
		Lower	Equal	Higher
Steepness	Steep	.83; 1.00; 1.20; 1.44	1.00; 1.20; 1.44; 1.73	1.20; 1.44; 1.73; 2.07
	Steeper	.67; 1.00; 1.50; 2.25	1.00; 1.50; 2.25; 3.38	1.50; 2.25; 3.38; 5.06
	Steepest	.56; 1.00; 1.80; 3.24	1.00; 1.80; 3.24; 5.83	1.80; 3.24; 5.83; 10.50

Table 2
Low and high ends of suggested appeal scales (rounded) for two typical donors with last donation amount of 20 € (Left) and 100 € (Right).

Notes: Because the suggested amounts are proportional to the last donation amount, two donors in the same experimental condition may be exposed to different appeal scales in absolute values. Compared with their last donation amount, however, they are proportionally identical.

		First amount					First amount		
		Lower	Equal	Higher			Lower	Equal	Higher
Steepness	Steep	18...30	20...35	25...40	Steepness	Steep	85...140	100...170	120...200
	Steeper	14...45	20...70	30...100		Steeper	70...230	100...350	150...500
	Steepest	10...65	20...120	35...200		Steepest	55...320	100...580	180...1000

condition to 8.2% in the HIGHER condition, $t_{33454} = 3.56$, $p < .001$). When the leftmost amount was lower than the donor's last donated amount, the response rate increased by .6% (from 9.2% in the EQUAL condition to 9.8% in the LOWER condition, $t_{33485} = 2.08$, $p = .069$). The direction was as predicted. We explored the statistical significance of these t-tests using bootstrap variance estimation (Davison & Hinkley, 1997) over 100 replications; the former effect was significantly stronger than the latter ($t_{98} = 3.50$, $p < .001$), in support of H2.

Subsequent amounts on the appeal scale should not have same effects as the leftmost amount, as they merely list possible options beyond the minimum threshold. Therefore, the steepness should not influence donation likelihood. Consistent with our expectations, neither steepness ($F_{50205, 2} = .422, p = .656$) nor its interaction with the leftmost donation amount were significant ($F_{50203, 4} = .583, p = .675$).

Impact on Donation Amount

We compared how the manipulations of the donation scale affected the donation amount of the 4539 donors who responded to the solicitation. To facilitate these comparisons, we report the donation amounts as a proportion of the donors' most recent donation,[4] such that a high value (>1) indicates a donation amount above what the donor gave last time, whereas a low value (<1) indicates a smaller donation amount. The average donation amounts, in Table 4, span all conditions, and by construction, the grand average equals 1.

The factorial, three-by-three ANOVA revealed that manipulating the appeal scale strongly influenced donation amounts ($F_{4530, 8} = 16.246, p < .001$). For the leftmost amount manipulation, donation amounts varied on average from .927 (−7.3% compared with the base) for the LOWER condition to 1.109 (+10.9%) for the HIGHER condition. The main effect was significant ($F_{4536, 2} = 49.94, p < .001$), in support of H3a.

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[4] This value equaled (donor i's donation amount for this campaign/donor i's last donation) × scaling factor, where the scaling factor was computed across all donors who made a donation for this campaign to correct for campaign-specific differences. It is equal to (average of all last donations/average donation amount for this campaign), to ensure that the grand average equals 1.

Table 3
Average return rates (donations) of the solicitation campaign.

		First Amount			
		Lower (%)	Equal (%)	Higher (%)	Average (%)
Steepness	Steep	9.8	9.2	8.5	9.2
	Steeper	9.4	9.1	8.1	8.9
	Steepest	10.1	9.3	7.9	9.1
	Average	9.8	9.2	8.2	9.0

The steepness of the grid also affected donation amounts, as hypothesized, though to a lesser extent. On average, the donation amount increased from .980 in the STEEP condition (−2% compared with STEEPER) to 1.031 in the STEEPEST condition (+3.1% compared with STEEPER). The main effect of the steepness manipulation was significant ($F_{4536, 2} = 6.154, p = .002$); manipulating steepness affected donation amounts (H3b), though to a lesser extent than manipulating the leftmost amount, confirming H3c ($t_{98} = 3.40, p < .001$).

When we compared donation amounts in absolute terms (i.e., not scaled by last donated amount), the results were less conclusive; the large variance found naturally in the data masked most effects. To analyze the impact of appeal scales properly, researchers need to control for the donor's prior donations, which prior studies have not done.

Frequency of Donations as a Moderator

Frequency of donations likely affects donors' donation likelihood and magnitude of donation (i.e., frequent donors are more likely to respond positively to subsequent donation appeals), so comparisons in absolute terms are difficult. Therefore, we compared the relative impact (in percentage points) of the manipulations. First, we split the donor population according to their frequency of donation prior the solicitation campaign, such that "infrequent" donors made one donation in the past (N = 10,222) and "frequent" donors made two or more donations (N = 39,986). Different splits led to essentially equivalent results. In Table 5, we report the average return rates and relative donation amounts of both groups for all 3 × 3 experimental manipulations. The average response rate of the infrequent donors was 4.6%, and that for frequent donors was 10.2%.

Second, for a better contrast, we compared the relative impact of moving from the lowest to the highest level of each manipulation, for both infrequent and frequent donors, and explored the statistical significance of these differences using bootstrap variance estimation (Davison & Hinkley, 1997). In terms of donation likelihood, the difference between LOWER and HIGHER manipulations for infrequent donors was ($.053 − .043)/.053 = −.186$; that is, moving from the LOWER to the HIGHER level reduced donation likelihood by 18.6%. This difference was ($.109 − .091)/.109 = −.160$ for frequent donors. The difference between these two figures was significant ($t_{98} = 2.11$, $p = .037$), in support of H4a. Manipulating the leftmost amount on the scale had a stronger impact on infrequent donors than on frequent donors (in relative terms).

Table 4
Donation amounts as deviations from base of 1.

		First Amount			
		Lower	Equal	Higher	Average
Steepness	Steep	.949	.960	1.037	.980
	Steeper	.895	1.000	1.085	.989
	Steepest	.937	.982	1.212	1.031
	Average	.927	.980	1.109	1.000

As already reported, manipulating steepness did not influence donation likelihood at the population level, and this result holds for both infrequent and frequent donors. Average response rates ranged from 4.49% (STEEP) to 4.68% (STEEPEST) for infrequent donors ($t_{6781} = 0.38$, $p = .702$), and from 10.34% to 10.21% for frequent donors ($t_{26675} = .34$, $p = .728$).

In terms of donation amount, the leftmost amount and steepness manipulations both exerted stronger impacts on infrequent donors' than on frequent donors' magnitude of donation. Increasing the leftmost amount increased donation amounts by 24% for infrequent donors and 19% for frequent donors, with a difference significant at $p < .01$ ($t_{98} = 2.67$). Manipulating the steepness of the scale (STEEP to STEEPEST) increased donation amounts by 10.4% for infrequent donors and 4.7% for frequent ones. The difference also was significant at $p < .01$ ($t_{98} = 3.81$), in support of H_{4b}. Frequent donors appeared less susceptible to appeal scale manipulations than infrequent donors.

In confirming all of our hypotheses, this section has demonstrated the key role of donors' last donation for predicting the impact of appeal scale manipulations on donor's behavior.

Discussion

Over the last couple of decades, an increasing number of researchers have examined the effectiveness of appeal scales in the domain of charitable donations. No uniform picture emerges, however, from the marketing and psychology literature examining two main dependent variables, the likelihood and the magnitude of donations. For example, some authors have reported that suggested donation amounts on an appeal scale affect only donation magnitudes (Berger & Smith, 1997; Brockner, Guzzi, Kane, Levine, & Shaplen, 1984; Reingen, 1982; Weyant & Smith, 1987), while others have found that they only affect donation likelihoods (Desmet, 1999; Desmet & Feinberg, 2003; Doob & McLaughlin, 1989). Moreover, some authors have found no impact whatsoever of appeal scales on donation behavior (Abraham & Bell, 1994; DeJong & Oopik, 1992). We argue that these mixed results are due to the fact that most of prior studies have generally considered internal reference points for what to give unobservable (e.g., Fraser, Hite, & Sauer, 1988). Only a few studies have acknowledged differences in internal reference points by considering tailoring amounts on the appeal scale, but they have only done so on the segment level. For example, Schibrowsky and Peltier (1995) as well as Verhaert and Van den Poel (2011) show initial evidence that the influence of the amounts on the appeal scale on the likelihood and the magnitude of donation differs among donor segments, and that personalizing amounts is a necessary step to maximize total campaign revenues. For those studies that did not acknowledge heterogeneity in internal reference points, researchers have applied identical manipulations to all participants, increasing the likelihood that such manipulations included too low or too high amounts for some participants. Per assimilation–contrast theory, such amounts would be rejected and would bear no impact on the behavior, which explains why so few significant effects have been found to date in field experiments.

This study extends previous research on the effectiveness of fundraising appeals by demonstrating a need for tailoring amounts on the appeal scale to individual donors. Furthermore, we make two distinct contributions to extant marketing and psychology literature. First, we demonstrate how different amounts on the appeal scale influence two stages of the donor's decision-making process: (1) the likelihood to donate, and (2) the magnitude of donation. The leftmost amount on an appeal scale serves as a psychological entry barrier that affects both donation likelihood

Table 5
Response rates (top) and relative donation amounts (bottom) for infrequent (left) and frequent (right) donors.

		First amount			
		Lower	Equal	Higher	Average
Steepness	Steep	5.3%	4.0%	4.1%	4.5%
	Steeper	5.3%	4.1%	4.5%	4.6%
	Steepest	5.4%	4.2%	4.4%	4.7%
	Average	5.3%	4.1%	4.3%	4.6%

		First amount			
		Lower	Equal	Higher	Average
Steepness	Steep	10.9%	10.5%	9.6%	10.3%
	Steeper	10.4%	10.4%	9.1%	10.0%
	Steepest	11.3%	10.6%	8.8%	10.2%
	Average	10.9%	10.5%	9.1%	10.2%

		First amount			
		Lower	Equal	Higher	Average
Steepness	Steep	.895	.886	1.032	.935
	Steeper	.898	.965	1.248	1.030
	Steepest	1.017	.875	1.195	1.032
	Average	.937	.909	1.162	1.000

		First amount			
		Lower	Equal	Higher	Average
Steepness	Steep	.956	.968	1.037	.985
	Steeper	.894	1.004	1.063	.984
	Steepest	.926	.993	1.214	1.031
	Average	.926	.988	1.102	1.000

and magnitude, but the steepness in amount increase is an upgrading option that only influences magnitude of donations, and to a lesser extent. We show that charities should proceed with caution when manipulating the leftmost amount, but face less risk when manipulating the steepness.

Second, we use a large field experiment to demonstrate that by using what a charity knows about past donor behavior, it can alter appeal scale to change donor behavior. Only by manipulating appeal scales at the individual level can theoretical predictions be validated. Even manipulating appeal scales at the segment level is not sufficient, as demonstrated by Desmet (1999) and Desmet and Feinberg (2003), whose hypotheses were partly rejected. Furthermore, our results indicate that the leftmost amount and the steepness of amount increase on the scale generally work in opposition to one another. Thus, there might be situations in which fundraisers should pay more attention to lowering the leftmost amount on the scale versus increasing the steepness. One could argue that the former would be critical when fundraisers are trying to maintain high levels of involvement and the latter would be critical when the fundraisers are trying to maximize contributions from a small set of potential donors. In addition, from our data it would appear that an optimal scale design for many organizations would feature a low leftmost amount and the steepest increase that is reasonable. In our study, this combination provides the second highest total return across the population and the highest overall rate of participation.

Finally, by going beyond a single donation amount and introducing a sequence of amounts to each donor, we better mimic the design problem that fundraisers face in reality. Because most prior fundraising research has investigated only one-amount manipulations and lacked access to detailed data about donors' past donations, we believe this study is the first to report on this phenomenon. In addition, a more sophisticated experimental setting, such as the one we used, opens the door to further theory refinement and testing.

On a more practical level, these findings suggest that although customization of appeal scales can be costly, there are rewards to understanding the past donation behavior of the donor before sending the optimal appeal. Whether these rewards outweigh the costs is of course an empirical question.

Directions for research

This study offers several avenues for research. First, even though our results are consistent with our theorizing, it is important to note that due to the nature of our study (i.e., field), the underlying process cannot be established with certainty and other alternatives are clearly possible. As an alternative explanation for the effect of appeal scale on the magnitude of donations, one could build on the assimilation–contrast theory (Sherif, 1963; Sherif et al., 1958) to argue that the introduction of large amounts alters the context for judging the donor's contribution by shifting the focus away from the last donation and toward larger amounts on the appeal scale. Future research studies could focus on investigating the underlying processes for the observed effects.

Second, we show that incorporating last donation in the appeal scale affects infrequent donors' donation behavior to a greater extent than frequent donors'. One limitation of our current work is that our findings only apply to charities who know their donors' past behavior. Future studies could investigate the difference between first-time, infrequent, and frequent donors in how they approach the two donation decisions and what factors influence them. For example, one could speculate that first-time donors might behave similarly to infrequent donors due to weak or nonexistent internal reference points on what to give, and be influenced by the appeal scale to a larger extent than the frequent donors. In addition, first-time and infrequent donors might be influenced to give more if the charity used other tactics in addition to manipulation of appeal scales (one example could include engaging with them on a more personal level — more information about the charity, description of a concrete donation project, etc.). On the other hand, frequent donors have relatively set internal reference points and seem to resist appeal scale manipulations as well as other fundraising tactics (e.g. referring to their most recent gift leads to suboptimal results; Verhaert & Van den Poel, 2011). For example, recent research in budgeting shows that imposing a price restraint on oneself can have an ironic effect of increasing consumer spending. Future studies could draw on this stream of research to further examine how these internal reference points/amount constraints of frequent donors could be influenced to increase donation amounts (Heath & Soll, 1996; Krishnamurthy & Prokopec, 2010; Larson & Hamilton, 2012).

Another direction for future research could explore other factors that might influence donors' behavior. Our exploratory analyses (not reported) suggest that many factors, beyond last donation amount and frequency, contribute to an understanding of donors' behavior. For example, donors with a very stable pattern of donations (e.g., small median absolute deviation) seem to be less susceptible to appeal scale manipulations than donors who demonstrate greater variability in their donation behavior. For donors with high donation amount variability, charities often suggest steep upgrading opportunities, in a belief that such variability points to a great deal of untapped donation potential. Furthermore, donors who have given very recently are less susceptible to appeal scale manipulations, as they likely have a vivid memory of their most recent donation amount. They are also less susceptible to additional fundraising campaigns, and many charities do not solicit donors who have given recently in a belief that this would hurt their relationship. This research suggests the strong need for a better understanding of donors' behavior and their varying susceptibility to the influence of appeal scales. Future research needs to investigate this issue in more depth in hopes of making costly fundraising optimally effective.

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