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**GIVING AGAINST THE ODDS:**

*WHEN TEMPTING ALTERNATIVES INCREASE WILLINGNESS TO DONATE*

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GIVING AGAINST THE ODDS:
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Abstract

The authors examine how a reference to an unrelated product in the choice context impacts consumers’ likelihood of donating to charity. Building on research on self-signaling, the authors predict that consumers are more likely to give when the donation appeal references a hedonic product, as compared to when a utilitarian product is referenced or when no comparison is provided. They posit that this occurs because referencing a hedonic product during a charitable appeal changes the self-attributions, or self-signaling utility, associated with the choice to donate. A series of hypothetical and real choice experiments demonstrate the predicted effect, and show that the increase in donation rates occurs because the self-attributions signaled by a choice not to donate are more negative in the context of a hedonic reference product. Finally, consistent with these experimental findings, a field experiment shows that referencing a hedonic product during a charitable appeal increases real donation rates in a non-laboratory setting. The authors discuss theoretical implications for both consumer decision making and the self-signaling motives behind prosocial choice.

Keywords: Self-signaling; charitable donation; context effects; prosocial behavior; choice
Most consumer research has treated choice as the pursuit of consumption-related goals. However, motives for choice often extend beyond the consumption benefits associated with a chosen option (Ariely and Norton 2009; Levy 1959; Mick 1986). For example, consumers may derive reputational benefits from the information certain choices convey about themselves to others (Berger and Heath 2007; Griskevicius et al. 2007). Recently, researchers have argued that consumers may also derive value beyond consumption from making choices that enhance one’s self-image, for example, by signaling information to the self (i.e., self-signaling; Bodner and Prelec 1995; 2003, Gneezy, Gneezy, Riener and Nelson 2012). Such motives may be especially relevant in the domain of prosocial choices, which often require the consumer to incur a cost but rarely provide direct consumption benefits. Given the potential significance of private self-image motives for understanding prosocial decision making, the current research explores how the choice context affects the self-signal associated with prosocial behavior and the implications of self-signaling for donation choices.

Specifically, in this article we examine a consumer’s willingness to donate to charity when the appeal references an equally priced product (e.g., “Please donate $5. Note, $5 is how much it costs to buy a pint of Ben and Jerry’s Ice Cream”). We contrast consumers’ likelihood of donating when the appeal provides no reference product to contexts where the appeal references either a hedonic product or a utilitarian product. In a series of laboratory experiments and field studies, we demonstrate that the likelihood of giving to a charity increases when the appeal references a hedonic product as compared to when the appeal references a utilitarian product or a neutral context, where no reference product is mentioned.
We explain our results based on the premise that the self-attributions signaled by one’s
donation decision change when a hedonic product is referenced in the donation appeal.
Specifically, we propose that when a donation appeal references a hedonic product, participants
believe the choice not to donate signals more negative personal traits, such as selfishness.
Consistent with our theory, we find that participants believe choosing not to donate when the
appeal references a hedonic product indicates they are more selfish, as compared to choosing not
to donate in other contexts. In support of the mediating role of self-signaling, we also show that
this shift in self-attributions makes subsequent donations more likely.

The present research extends our understanding of the motives underlying consumer
choice and makes several important theoretical contributions. First, we contribute to the literature
on signaling and prosocial behavior by suggesting that even when one’s donation decisions are
mostly private and anonymous, people’s donation decisions can signal information about their
personal traits to themselves. Second, our findings contribute to research on how referencing
unrelated products in a persuasive appeal affects consumer choice. Although many
advertisements reference outside goods in an effort to influence perceptions of cost (e.g., “for the
price of a cup of coffee...”), little is known about whether reference products can have effects
beyond cost perceptions. We show that reference products can alter the self-signaling utility in
choice, and in so doing add to the literature on the role of reference products in decision making.
Finally, our findings contribute to a more nuanced understanding of opportunity costs. Recent
considerations of opportunity costs suggest that references to attractive outside options are likely
to decrease preference for the target option (Frederick et al. 2009). In contrast, we show that
referencing certain outside options can actually increase choice incidence by changing the self-signaling utility derived from the choice.

The remainder of this article is organized as follows. We briefly review current literature on motives for charitable giving, which leads to our prediction that one reason people donate is related to the meaning, or private signal-value, of the donation. We draw from self-signaling and behavioral decision theory to propose that the self-signal associated with the decision not to donate becomes more negative when the donation appeal references a hedonic product, which in turn increases consumers’ likelihood of giving. Next, we test our proposition and its implications in a series of seven studies using real and hypothetical choices. We show that (1) the self-attributions signaled by the decision not to donate are more negative when the donation appeal references a hedonic product, (2) that the reference to a hedonic product in a donation appeal increases the percentage of participants who donate real money and time, and (3) that this increase in giving occurs because the presence of a hedonic product affects the self-signal associated with the decision to donate. We conclude by testing an important boundary condition for the predicted effects and demonstrating the external validity of our results using a field experiment involving actual donation behavior.

**SELF-SIGNALING AND THE DECISION TO DONATE**

Consumers derive direct consumption utility from the choices they make, and they also derive signaling utility from the information their choices transmit. However, in the domain of charitable giving, consumers’ direct consumption utility may be relatively limited: while they do
make a payment, they often do not directly experience commensurate tangible benefits. This raises the question of why people give. Traditionally two broad categories of motivations for charitable giving have been discussed: intrinsic and extrinsic. Intrinsic motivations are internal factors that stimulate donations, such as “the joy of giving” (Batson and Shaw 1991; Anik, Aknin, Norton and Dunn 2009) and empathetic altruism (Batson and Coke 1981). Extrinsic motivations are external benefits or rewards that promote giving, such as tax breaks (Steinberg 1990) and access to exclusive events (Buraschi and Cornelli 2002). Recent theoretical models based on a utility framework propose that people derive additional utility from donations that enhance their reputation or self-image (Andreoni and Petrie 2004; Benabou and Tirole 2006, 2011). For example, Karlan and McConnell (2012) find that listing donors’ names in a public newsletter increases donations; Ariely, Bracha and Meier (2009) show that people work harder to raise money for charity when their effort is observed by others, and Lacetera and Macis (2010) find that recognizing blood donors in a public ceremony increases the frequency of donations. These findings suggest that people are motivated by the social-signal associated with their decision to give, above and beyond any other intrinsic or extrinsic rewards.

Much of the empirical work on the image motives for charitable giving has emphasized the role of social-signaling, when the audience for the signal is external. Instead, the current research focuses on self-signaling and the notion that people’s choices also can generate utility by signaling information about their own traits to themselves. Our attention to these private signaling motives is supported by previous research indicating that people make inferences about themselves based on their choices (Bem 1972; Khan and Dhar 2006). For example, participants who chose to donate $2 of their participant payments to the Make-a-Wish Foundation rated
themselves as more helpful and less selfish than participants in a control condition (Gneezy et al. 2012). In summary, people believe their actions or choices can signal positive or negative information about their own traits.

Bodner and Prelec (2003) proposed a theoretical framework that integrates traditional notions of consumption utility with the incremental utility from self-signaling. According to this model, the total utility derived from a choice is based on two distinct factors: (1) the outcome utility, or utility derived directly from consumption, and (2) the additional self-signaling utility associated with the information about one’s self conveyed by the choice. In support of this, Dhar and Wertenbroch (2012) found that the total utility associated with choosing a healthy snack (e.g., an apple) is greater when that snack is chosen from a set that includes temptations or vices (e.g., tasty chocolates), as compared to when the same healthy snack is chosen from a set that includes only other virtuous options (e.g., oranges and bananas). This increase in total utility occurs because choosing a healthy snack from a set that includes temptations sends a positive self-signal, as compared to choosing a healthy snack from a set that includes all healthy snacks. Similarly, choosing a chocolate from a set that contains some virtuous options (e.g., fruit) sends a negative self-signal (e.g., that one lacks the willpower to select a healthy option), which results in lower total utility than if the chocolate is selected from a set that contains only tempting options (e.g., cake and cookies).

Building on this work, we propose that the self-signaling utility, and hence the total utility, associated with charitable giving can be changed by a reference to an equivalently priced hedonic alternative during the donation appeal. Our proposal draws on research demonstrating that consumer choice is fundamentally comparative; that is, options are evaluated relative to
other options (Kahneman and Miller 1986; Schwarz and Bless 1992). Recent research indicates that references to unrelated products can impact decision making by influencing which comparisons consumers make (Simonson, Bettman, Kramer and Payne 2012). This result holds even when the comparative options are not part of the choice set (Dholakia and Simonson 2005). For example, reference products can be used in advertisements to influence perceptions of cost by establishing the reference price consumers use when constructing a standard of comparison (Adaval and Monroe 2002; Nunes and Boatwright 2004; Dholakia and Simonson 2005). Most of the work on reference products has explored the effects of higher or lower priced reference products on price perceptions, which pertain to transaction utility. In the current research, we examine how reference products that are similarly priced but differ in their hedonic versus utilitarian nature can affect self-signaling utility in a donation context and in turn affect people’s choice to donate.

Our main proposition is that referencing a similarly priced hedonic product during a charitable appeal can change the self-attributions associated with the act of not giving and thereby affect donation likelihood. This occurs because the reference product encourages the consumer to compare the choice to donate with the choice of an outside alternative. In the absence of a reference product, the choice not to donate may signal very little information about one’s personal traits, either because people are less inclined to spontaneously make self-attributions when comparisons are not salient or because people may generate justifiable reasons for not donating (i.e., personal budget constraints). Said otherwise, in the absence of a reference product, not giving may be an uninformative, noisy signal of one’s personal traits. In contrast, the reference to a hedonic product encourages consumers to compare donating with the choice to
purchase the referenced product or similar items. In such instances, people are relatively more likely to infer that their choice not to donate is a signal of being selfish, an undesirable personal trait. Through this process, the total disutility associated with choosing to not donate increases, resulting in increased likelihood of giving.

Our self-signaling account would further predict that the nature of the product that is referenced will moderate the negativity of the associated self-signal and its effect on donation likelihood. Products perceived as comparable in terms of value and attractiveness can systematically vary along a hedonic versus utilitarian dimension (see Khan, Dhar and Wertenbroch 2005 for a review). Hedonic products are generally characterized as fun, pleasurable and indulgent (Dhar and Wertenbroch 2000; Hirschman and Holbrook 1982). Because of this, hedonic consumption is often associated with self-indulgence (Kivetz and Keinan 2006; Kivetz and Zheng 2006). If a donation appeal prompts consumers to compare the choice to donate with a hedonic product, choosing not to donate may suggest selfish motives (i.e., self-indulgence), which increase the negative self-attributions associated with not giving. In contrast, utilitarian products are characterized as being more functional, useful and practical (Dhar and Wertenbroch 2000; Strahilevitz and Myers 1998). Therefore comparing the choice to donate with a utilitarian alternative may suggest functional motives for not donating, which are less likely to lead to negative self-attributions. As a consequence, not donating in the context of a utilitarian reference product is a comparatively uninformative or neutral self-signal about one’s personal traits. This suggests that people’s likelihood of donating should only increase when the donation appeal references a hedonic product, and not when the appeal references a utilitarian product.
We test these predictions in a series of seven lab and field experiments. Experiments 1A and 1B demonstrate that choosing not to donate in the context of a hedonic reference product signals more negative information about the self, as compared to when a utilitarian product is referenced or when no product is mentioned. Experiments 2A and 2B examine the effect of reference products on real donation choices, and find that the likelihood of donating both money and time increase when a hedonic reference product is referenced. Experiment 3 tests our theoretical account by utilizing the same reference product (a blender) framed as either hedonic (e.g., “to use for making exotic cocktails”) or utilitarian (e.g., “to use for healthy smoothies”), and shows that donation interest increases when the product is framed as hedonic. In support of the proposed mechanism, we also show that people believe the choice not to donate sends a more negative self-signal when the appeal references a hedonic product, and that this shift in self- attributions mediates the effect of the reference product on donation interest. We next explore the external validity and managerial relevance of this effect by testing an important boundary condition (Experiment 4) and demonstrating the effectiveness of the reference product manipulation in a field setting (Experiment 5). We conclude with a discussion of the theoretical and practical implications of these findings.

**EXPERIMENT 1A: THE EFFECT OF REFERENCING A HEDONIC PRODUCT ON THE SELF-SIGNAL FROM CHOOSING TO DONATE**

Experiment 1A tests whether the self-signal associated with the choice not to donate changes as a function of the product that is referenced in the appeal. We predict that when the
charitable appeal references a hedonic product, the decision not to donate will be interpreted as signaling more negative information about one’s self, as compared to when a utilitarian product is referenced or to a control condition when no product is referenced.

Method

The experiment utilized a between-participants design, where the reference product (hedonic vs. utilitarian vs. control) was the manipulated factor. Participants were two hundred and seventy-two individuals (65 males) recruited from a US based online pool\(^1\). All participants were shown a charitable appeal asking for a US$5 donation to UNICEF. After reading the charitable appeal, participants in the hedonic reference product condition further saw, “Note, $5 is how much it costs to buy a pint of Ben and Jerry’s Ice Cream,” and were shown an image of a pint of ice cream. Participants in the utilitarian reference product condition saw, “Note, $5 is how much it costs to buy Colgate 12-hour multi-protection toothpaste” and were shown an image of a tube of toothpaste. Next, participants were asked to report how they would feel about themselves if they chose not to donate. Specifically they were asked to rate the extent to which they agreed with the following statements: “I am a good person,” “I am compassionate,” “I am sympathetic,” “I am helpful” on a seven point scale (1=Strongly Disagree to 7=Strongly Agree). Positive statements were used based on prior research suggesting that people respond to self-concept related assessments more accurately when the statements are positive (Marsh 1996; Schmitt and

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Sample sizes for this experiment and all other experiments conducted online were set with the goal of having between 50 – 100 participants per experimental cell.
Allik 2005). Decreased agreement with positively phrased statements indicates a more negative self-assessment.

Results and Discussion

We proposed that participants would believe the choice not to donate signals more negative information about the self when the appeal referenced a hedonic product, as compared to other conditions. In order to test this, items were reversed scored such that higher numbers indicated increased negative self-attributions (of selfishness). Next a composite measure of selfishness was formed by averaging participants’ ratings across the four dependent measures ($\alpha = .97$). This measure was then submitted to a single factor analysis of variance ($F (2, 269) = 2.6$, $p = .075$, see figure 1). As predicted, planned contrasts revealed that when a hedonic reference product was present, choosing not to donate was interpreted as a greater signal of selfishness, as compared to either the utilitarian reference product condition ($M_{\text{hedonic}} = 2.95$, $SD = 1.6$, $M_{\text{utilitarian}} = 2.49$, $SD = 1.4$, $t(269) = 2.0$, $p < .05$) or the control condition, ($M_{\text{hedonic}} = 2.95$, $SD = 1.6$, $M_{\text{control}} = 2.51$, $SD = 1.5$, $t(269) = 2.0$, $p < .05$). There was no difference in self-attributions between the utilitarian reference product condition and the control condition ($M_{\text{utilitarian}} = 2.49$, $SD = 1.4$, $M_{\text{control}} = 2.51$, $SD = 1.5$, $t (269) = -.061; p > .9$).
In Experiment 1A, participants reported that choosing not to donate would lead to more negative self-attributions when the donation appeal referenced a hedonic product, as compared to other conditions. This pattern of results is consistent with the notion that the self-attributions people make based on their choices can vary as a function of the comparative context. Further, these findings support our prediction that merely referencing a hedonic product in a donation appeal can impact people’s self-signaling utility from their choice to donate.

**EXPERIMENT 1B: THE EFFECT OF REFERENCING A HEDONIC PRODUCT ON THE SELF-SIGNAL, THE VALUE OF MONEY AND PERCEPTIONS OF NEED**

Experiment 1B was designed to provide a conceptual replication for the results of Experiment 1A, and to test two other potential consequences of reference products. Hedonic purchases are often characterized as indulgent and discretionary (Dhar and Wertenbroch 2000). Therefore, it is possible that referencing a hedonic product during the donation appeal could cause consumers to perceive the requested donation amount as more dispensable, and hence they would be more likely to donate. To address this, Experiment 1B tests if people believe the dollar amount requested in the donation is less valuable when the same dollar amount is associated with a hedonic product. A second possibility is that a reference to a hedonic product during a charitable appeal might generate a contrast effect (Schwarz and Bless 1992) whereby the charity
is perceived as needier or more worthwhile when contrasted against a hedonic alternative to donating. Experiment 1B tests for this directly.

Method

Experiment 1B used a 3 x 3 between-participants design, with reference product as the manipulated factor (hedonic vs. utilitarian vs. control) and the dependent measure (self-signal ratings vs. subjective value of $2 vs. perceptions of need) as measured variables. Participants were one hundred and sixty-seven individuals (91 males, \( M_{\text{age}} = 34.36, SD = 12.5 \)) recruited from a US based online pool. All participants were shown a charitable appeal asking for a $2 donation to UNICEF’s Fund for the Children of Sudan’s Darfur. After reading the charitable appeal, participants in the hedonic reference product condition further saw, “Note, $2 is about how much it costs to download a top rated television show off iTunes, such as an episode of Entourage.” Participants in the utilitarian reference product condition saw, “Note, $2 is about how much it costs to download a top rated documentary off iTunes, such as an episode of Into the Universe with Stephen Hawking.”

Next, participants were randomly assigned to answer one of three sets of dependent measures. One-third of the participants were asked to report how they would feel about themselves if they chose not to donate, using the same measures as in Experiment 1A. One-third of the participants completed a subjective valuation of money task, which required participants to evaluate ten different items and indicate how many of each of item could be purchased with $2.
Items included gumballs, paper clips, pieces of Skittles candy, and others (Alter and Oppenheimer 2008). The final third of participants completed two items designed to measure perceptions of the charity’s level of need. They responded to two statements (“The children of Sudan's Darfur are very needy,” and “UNICEF is an efficient and worthwhile charity”) using seven point scales (1=Strongly Disagree to 7=Strongly Agree).

Results and Discussion

A self-signaling account predicts that participants perceive the choice not to donate as a greater signal of selfishness when the appeal references a hedonic product, as compared to other products or when no products was referenced. In contrast, perceptions of the value of the requested amount or the perceived neediness of the charity should not vary as a function of the reference product. Because participants were randomly assigned to answer only one of the three sets of dependent measures, we present results for each measure independently in the next section.

Self-Signaling: As in Experiment 1A, participants’ self-attribution ratings were reverse scored and then averaged across the four dependent measures (α = .96) to form a composite measure of perceived selfishness that was submitted to a single factor analysis of variance (F (2, 49) = 5.6, p < .01). In line with our predictions and replicating the results of Experiment 1A, planned contrasts revealed that choosing not to donate signaled more negative information about the self when a hedonic product was referenced, as compared to when a utilitarian product was
referenced \( M_{\text{hedonic}} = 4.2, SD = 1.2, M_{\text{utilitarian}} = 2.7, SD = .77, t (47) = 3.03, p < .01 \) or a control condition when no product was referenced \( M_{\text{hedonic}} = 4.2, SD = 1.2, M_{\text{control}} = 2.9 SD = 1.3, t (47) = 3.04, p < .01 \). There was no difference in self-attributions between the utilitarian reference product condition and the control condition \( p > .5 \).

**Perceived value of the requested amount:** To test if the reference product affected the perceived value of the requested amount, participants’ estimates of how many of each item could be purchased with $2 were transformed into standardized \( z \)-scores. Standardized estimates formed a reliable scale \( (\alpha = .80) \), and were averaged to form an aggregate measure of participants’ subjective value of $2 (Alter and Oppenheimer 2008). A single factor analysis of variance revealed that the reference product manipulation had no effect on the subjective value of $2 \( (F (2, 61) = .38, p > .65) \). Planned contrasts revealed no difference between any conditions \( (M_{\text{hedonic}} = -.03, SD = .37, M_{\text{utilitarian}} = .11, SD = .93, M_{\text{control}} = -.05, SD = .45, all p’s > .5) \). These results suggest that referencing an equally priced hedonic product during a charitable appeal does not significantly alter the perceived value of the requested amount, as compared to other conditions.

**Perceptions of Need:** A single factor analysis of variance revealed that the reference product manipulation had no effect on perceptions of the charity’s need \( (M_{\text{hedonic}} = 6.0, SD = 1.2, M_{\text{utilitarian}} = 5.95, SD = 1.1, M_{\text{control}} = 5.6, SD = 1.0, F (2, 50) = .75, p > .47) \), and no effect on how worthwhile the charity was rated \( (M_{\text{hedonic}} = 5.3, SD = 1.2, M_{\text{utilitarian}} = 5.6, SD = 1.1, M_{\text{control}} = 5.12, SD = 1.2, F (2, 50) = .83, p > .44) \). Thus an alternative account suggesting an increased perception of the charity’s level of need in the context of a hedonic reference product
is not supported. Instead, the overall pattern of results is consistent with the notion that a hedonic reference product primarily affects the self-signaling utility from the act of donating.

Thus far, our experiments have tested the effect of reference products on participants’ self-attributions using hypothetical donation scenarios. The next set of experiments investigates if the observed effect of a hedonic reference product on the self-signal has implications for consequential donation choices involving real money and time. We predict that donation rates should increase when a hedonic product is referenced as compared to other conditions, due to an increase in the self-signaling utility from the choice to donate.

**EXPERIMENT 2A: THE EFFECT OF REFERENCING A HEDONIC PRODUCT IN A DONATION APPEAL ON REAL DONATIONS OF MONEY**

Experiments 2A and 2B test if people are more likely to give to a charity when the donation appeal references a hedonic product as compared to when the donation appeal references a utilitarian product or a control condition.

**Method**

The experiment used a between-participants design, where the reference product (hedonic vs. utilitarian vs. control) was the manipulated factor. Participants were fifty-five undergraduate students who completed a series of unrelated studies as part of a laboratory session in exchange
for US$6\textsuperscript{2}. Prior to beginning the experiment, all participants were given their compensation inside an unsealed envelope placed at their workstation. The envelope was discreetly marked with a code that corresponded to their experimental condition.

At the conclusion of the experimental session, all participants were shown a charitable appeal asking for a $1 donation to UNICEF. Participants in the hedonic reference product condition then read, “One dollar is the cost of downloading one top ten song off of iTunes, such as the current #1 hit ‘Hallelujah’ by Justin Timberlake.” Those in the utilitarian reference product condition read, “One dollar is the cost of downloading one top ten podcast lecture from iTunes U, such as MIT Professor of Physics Walter Lewin’s lecture, ‘Electricity and Magnetism’.\textsuperscript{3}” Participants in the control condition received no additional information. Participants who wished to donate were instructed to leave $1 in the envelope at their workstation. If they chose not to donate, they were instructed to simply leave the empty envelope at their workstation. The dependent measure was participants’ decision to donate. Because these donations were anonymous, no demographic data was collected.

Results and Discussion

In line with our prediction, referencing a hedonic product in the donation appeal significantly increased donation rates above both the control condition ($P_{hedonic} = 88\%, \ P_{control} = 47\%$, $\chi^2 = 7.0, p < .001$), and the utilitarian reference product condition ($P_{hedonic} = 88\%, \ P_{control} = 47\%$). Sample sizes for experiments conducted in a laboratory setting were determined based on the total number of participants that attend the laboratory session on the day the experiment was conducted.\textsuperscript{2} The hedonic and utilitarian reference products were the top ranked downloads from iTunes and iTunes U respectively the week of the experiment.\textsuperscript{3}
utilitarian = 57%, \( \chi^2 = 4.7, p < .05 \). Donation rates did not differ reliably across the utilitarian reference product condition and the control condition \( (p > .5, \text{see table 1}) \)

EXPERIMENT 2B: THE EFFECT OF REFERENCING A HEDONIC PRODUCT IN A DONATION APPEAL ON REAL DONATIONS OF TIME

In order to extend the generalizability of our results, Experiment 2B tests if the effect of reference products on donations observed in Experiment 2A extends to donations of time. Furthermore this experiment employs a different participant population (a national panel).

Method

The experiment used a three group between-participants design, where the reference product (hedonic vs. utilitarian vs. control) was the manipulated factor. One hundred and forty-three participants (53 males, \( M_{age} = 38.38, SD = 13.1 \) were recruited from a US based online
pool. After completing an unrelated study, all participants received the following actual charitable appeal, “Please consider donating two hours of your time to UNICEF’s Emergency Relief Fund for the Children of Sudan’s Darfur. During this time you will be asked to help with UNICEF’s annual fund raising drive. You will be able to volunteer from home, working on a project from your computer”. Participants in the hedonic product condition then read, “Two hours is how long it takes to watch the season finale of MTV’s “The Jersey Shore”” (a popular reality show). Those in the utilitarian product condition read, “Two hours is how long it takes to watch the season premiere of “House”” (a popular medical drama). Participants in the control condition received no additional information. The dependent measure was participants’ choice to donate their time.

Results and Discussion

The results of Experiment 2B replicated the previous results in the context of donations of time. Participants’ likelihood of donating their time increased when the donation appeal referenced a hedonic product as compared to either the control condition \( P_{\text{hedonic}} = 30.4\% \), \( P_{\text{control}} = 11.8\% \), \( \chi^2 = 4.1, p < .04 \), or the utilitarian reference product condition \( P_{\text{hedonic}} = 30.4\% \), \( P_{\text{control}} = 11.8\% \), \( \chi^2 = 4.1, p < .04 \).

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A pretest using a separate sample drawn from the same population confirmed that ‘The Jersey Shore’ (a popular reality show) was seen as more hedonic (indulgent) than “House” (a medical drama) (scale: 1=Not at all Indulgent to 7 = Very Indulgent) \( M_{JS} = 5.52 \ SE = .09, M_H = 4.93 \ SE = .08, p < .001 \). These shows were selected as both were top-ranked shows with during the timeframe of this experiment.
$P_{\text{utilitarian}} = 13.7\%, \chi^2 = 4.2, p < .05$). Donation rates did not differ reliably across the utilitarian reference product condition and the control condition ($p > .7$, see table 1).

Thus far we have demonstrated that referencing a hedonic product during the donation appeal (1) increases the negative self-attributions associated with not donating, and (2) increases donation rates for consequential choices. Further, we observe that the hedonic reference product does not influence the subjective valuation of the requested amount, nor does it affect perceptions of the charity’s need. Instead, results from Experiments 1 and 2 are consistent with our theoretical account that referencing a hedonic product increases donation rates because the reference product increases the negative self-signal associated with not donating. In Experiment 3 we directly investigate our proposed theoretical framework. We show that the reference product affects donation interest because when the product is hedonic, the choice not to donate signals more negative information about the self. This shift in self-attributions mediates interest in donating. Experiment 3 also addresses a potential alternative account for the observed results. Although the hedonic and utilitarian products used in the prior experiments were equally priced and were selected to be equally appealing, it is possible they varied systematically on a dimension other than their hedonic versus utilitarian nature. To directly control for this possibility, all participants in Experiment 3 receive a charitable appeal that references the same product; however, the framing of the product (as hedonic vs. utilitarian) is manipulated between participants (Khan and Dhar 2010).
EXPERIMENT 3: THE DIFFERENTIAL EFFECT OF A HEDONIC VERSUS UTILITARIAN FRAMED REFERENCE PRODUCT ON SELF-SIGNAL AND DONATION INTEREST

Method

The experiment used a two group between-participants design, where the reference product framing (hedonic vs. utilitarian) was the manipulated factor. Three hundred and twelve participants (125 males, $M_{age} = 33.03$, $SD = 12.5$) were recruited from a US based online pool. All participants were shown a charitable appeal asking for a US$10 donation to UNICEF. After reading the charitable appeal, participants in the hedonic-framed reference product condition further saw, “Remember, $10 is about the cost of a hand blender, which is great for making exotic cocktail drinks and is a good tool for a luxurious lifestyle,” and were shown an image of a hand blender. Participants in the utilitarian-framed reference product condition saw, “Remember, $10 is about the cost of a hand blender, which is great for making healthy shakes and is a useful tool for a healthy lifestyle,” and were shown the identical image of a hand blender. Participants were then asked to indicate how interested they were in donating to UNICEF's Fund for the Children of Sudan’s Darfur using an unnumbered slider bar scale (anchors: 0=Not at all interested in donating to 100=Very interested in donating). Next, they reported how they would feel about themselves if they had chosen not to donate, using self-signal measures identical to those in Experiments 1A and 1B. Finally, participants completed a manipulation check, which asked them to rate the hedonic (vs. utilitarian) nature of the reference product they had been
shown by indicating the extent to which the product was “Fun”, “Useful” (R), and “Practical” (R) (scale: 1=Not at all to 7=Very much).

Because the framing manipulation used in this experiment relied entirely on participants reading the text-description of the blender, a priori we expected that participants who failed to read the experimental text and instructions would not perceive any differences in the hedonic versus utilitarian nature of the blender and hence would not be affected by the manipulation. To account for this, we included an Instrumental Manipulation Check (IMC; Oppenheimer, Meyvis, and Davidenko, 2009) in this experiment, which allowed for the identification of participants who did not read experimental instructions. Following the main experiment, participants continued to a separate screen, which contained the following text, “For this study, and for most of the research we conduct, it is very important for us to know whether you tend to read the instructions you are given. If you are reading these instructions, please just skip the following question and proceed to the next page.” Below that paragraph, this question appeared: “On average, how many movies do you see in the theater per month?” Participants could select a number between 0 and 6 from a dropdown menu, or, as the instructions indicated, they could click on a button to proceed to the next page. Two hundred and forty-four participants (78% of the original sample) complied with the instructions and clicked to proceed to the next screen without choosing a number of movies. Sixty-eight participants chose a number from the dropdown menu, and thus were categorized as failing the IMC, following the procedure used in Oppenheimer, Meyvis and Davidenko (2009). Thus our primary analysis was conducted only on participants who passed the IMC; however, we also report the results for the full sample below.
Results and Discussion

In line with our prediction, donation interest was significantly higher when the hand blender was framed as hedonic as compared to when the same hand blender was framed as utilitarian ($M_{hedonic} = 62.63, SD = 31.1, M_{utilitarian} = 53.83, SD = 33.6, F (1, 241) = 4.49, p = .035$, see figure 2). Results were similar when all participants, including those who failed the IMC, were retained in the analysis ($M_{hedonic} = 62.60, SD = 30.9, M_{utilitarian} = 56.48, SD = 32.4, F (1, 309) = 4.49, p = .089$).

Our main proposition is that when a reference product is perceived to be a hedonic alternative to donating, the self-attributions from choosing not to donate are more negative as compared to when the reference product is utilitarian, and that this shift in self-signal mediates the effect of the reference product on donation likelihood. We test these relationships and find evidence consistent with our hypothesis. First, participants rated the hedonic-framed blender as more hedonic than the utilitarian-framed blender ($\beta = .27, t = 4.38, p < .001$). Second, the more

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5 To account for variance in the effectiveness of our hedonic versus utilitarian framing manipulation, we included participant ratings of the hedonic/utilitarian nature of the product into the mediation model, as described.
participants believed the blender was hedonic, the more they believed the choice not to donate signaled negative self-attributions ($\beta = .25, t = 2.14, p = .034$). Finally, the more negative the self-signal, the more likely participants were to donate ($\beta = 5.12, t = 4.57, p < .001$). To test the significance of the process path, we then conducted a serial mediation analysis (Hayes 2009). The overall serial mediation path was significant ($\beta = .36, 95\% \text{ CI } [.02, 1.04]$). It is valuable to note that the product rating measure did not mediate the effect of framing on donation interest (A-B-D), nor was the reverse mediation path (A-C-B-D) significant. Note, the serial mediation path remained significant at conventional levels when all participants, including those who failed the IMC, were retained in the analysis ($\beta = .22, 95\% \text{ CI } [.02, .72]$). Therefore, the mediation analysis supports our proposed process model, whereby referencing a hedonic product (or a hedonic-framed product) increases donation likelihood because the perceived hedonic nature of the product increases the negative self-signal associated with choosing not to donate.

In summary, the results of the previous experiments offer converging evidence of the effect of hedonic reference products on giving and support the proposed self-signaling process account. Having shown this, in Experiments 4 and 5 we next explore issues related to the managerial relevance and potential applicability of these findings. In the previous experiments, we demonstrated that including a hedonic reference product in the donation appeal increased the negative self-attributions related to not donating, thereby increasing donations. However, it is important to note that including a hedonic reference product in a donation appeal is a relatively subtle, indirect way to associate negative self-attributions with not donating. Therefore, it is possible that more direct interventions, which explicitly associate the act of not donating with selfishness, could lead to even greater donation rates. Conversely, the hedonic reference product
may be effective in increasing donation rates in part because this subtle approach is not perceived as a marketing tactic designed to manipulate consumers and therefore does not arouse the resistance and/or reactance that could follow from a direct approach (Friestad and Wright 1994; Williams, Fitzsimons and Block 2004). If so, the more direct approach of explicitly associating choosing not to donate with selfishness may not increase, and may even decrease, donation interest. Experiment 4 investigates this question by examining how a donation appeal that directly highlights the negative personal traits associated with not donating affects donation interest, as compared to a donation appeal that references a hedonic product and a control condition.

**EXPERIMENT 4: THE EFFECT OF HIGHLIGHTING EXPLICIT NEGATIVE SELF-ATTRIBUTIONS ON DONATION INTEREST**

Experiment 4 compares how explicitly associating negative personal traits with not donating impacts donation interest, as compared to presenting a hedonic reference product and/or a control condition.

**Method**

Two hundred and twenty-seven participants (154 males, $M_{age} = 29.8$, $SD = 9.5$) were recruited from a US based online pool. Participants were randomly assigned to one of three
reference product conditions. Similar to previous experiments, participants in the hedonic
reference product condition were presented with a charitable appeal that contained a reference to
an equally priced hedonic product (see below). In contrast, in the explicit-selfish condition
participants received the same appeal and saw the same hedonic reference product but were
explicitly told that choosing not to donate can be associated with being selfish. In the control
condition, no product was referenced.

All participants received a charitable appeal asking for a US$5 donation to UNICEF.
Participants in the hedonic reference product condition also read, “Remember $5 is how much it
costs to buy a pleasurable 5 minute chair massage, recommended for relaxation purposes and to
make you feel great,” and were shown an image of a person relaxing on a massage chair.
Participants in the explicit-selfish condition read, “Remember, if you do not donate, and instead
spend the $5 on a pleasurable treat for yourself, you may feel selfish and unsympathetic,” and
were shown the same image of a person relaxing on a massage chair. Participants in the control
condition only received the charitable appeal. Finally, all participants indicated how interested
they were in donating to UNICEF's Fund for the Children of Sudan’s Darfur using an
unnumbered slider scale (anchors: 0=Not at all interested in donating to 100=Very interested in
donating).

Results and Discussion

Donation interest was submitted to a single factor analysis of variance (\(F (2, 224) = 5.09,\)
\(p < .01\), see figure 3). Replicating prior results, planned contrasts revealed that participants in the
hedonic reference product condition were more interested in donating as compared to those in
the control condition ($M_{\text{hedonic}} = 62.8$, $SD = 31.3$, $M_{\text{control}} = 52.2$, $SD = 33.2$, $t(224) = 2.03$, $p < .05$) or the explicit-selfish condition ($M_{\text{hedonic}} = 62.8$, $SD = 31.3$, $M_{\text{explicit}} = 46.15$, $SD = 32.9$, $t(224) = 3.14$, $p < .01$). This pattern indicates that although the negative self-attributions that are
activated by a hedonic reference product increase donation interest, an explicit reminder about
the association between not donating and negative personal traits (e.g., selfishness) does not have
the same effect. In addition, donation interest was directionally lower in the explicit-selfish
condition as compared to the control condition ($M_{\text{explicit}} = 46.15$, $SD = 32.9$ vs. $M_{\text{control}} = 52.2$, $SD = 33.2$, $t(224) = 3.14$, $p = .26$), although this difference was not statistically significant. Prior
research indicates that when people perceive a marketing tactic as an intentional effort to
persuade it can activate their persuasion knowledge and can trigger coping mechanisms (Friestad
and Wright 1994; Williams et. al. 2004), which may lead to reduced levels of compliance with
the persuasion attempt. The results of Experiment 4 are consistent with the notion that an appeal
that only references a hedonic product may be less likely to be perceived as a persuasion attempt
than an appeal that explicitly associates not donating with negative personal traits. Note, it may
also be possible that the reference product-only appeal is seen as a persuasion attempt intended
to affect price perceptions, and not self-attributions about donating, and therefore is less likely to
trigger persuasion knowledge for this reason. In either case, including a hedonic reference
product in a donation appeal is more effective for increasing donation interest, as compared to
the more direct strategy of explicitly associating not donating with negative personal traits.
EXPERIMENT 5: FIELD EXPERIMENT TESTING THE EFFECT OF REFERENCING A HEDONIC PRODUCT IN A DONATION APPEAL

The results so far were obtained using both real and hypothetical choices made in an experimental setting. Although the use of consequential choices improves the external validity of the findings, Experiment 5 was designed to investigate if the observed effect of reference product will replicate when people were asked to donate their own money in a non-laboratory setting where donations are commonly solicited. To address this, a field experiment was conducted at a university in a location where it is common for student organizations to set up tables during the lunch hour in order to solicit donations for charitable causes. Student supporters of a well-known charitable organization who were blind to the hypothesis conducted the experiment, and students’ personal funds were solicited as donations.

Method

This field experiment utilized a two group between-participants design, where the reference product (hedonic vs. utilitarian) was the manipulated factor. A table with posters containing information about a charity, Doctors without Borders, was set up in the student union.
Sixty-one individuals passing by the table were approached and handed envelopes that had been pre-printed with the donation request and the reference product manipulation. The reference product manipulation was printed on the envelope to ensure that participants were not aware of the experimental manipulation prior to being approached. Further, this technique allowed participants in both conditions to be recruited simultaneously, while minimizing concerns that participants would become aware of other experimental conditions. After receiving the envelope, participants were left alone to make their donation decision. Demographic information was not collected in order to minimize experimenter intervention.

In the hedonic reference product condition the message on the envelope read, “Please donate $2 to Doctors without Borders. For reference, this is about the price of a [popular local] cookie.” In the utilitarian reference product condition the envelope read “Please donate $2 to Doctors without Borders. For reference, this is about the price of a bar of soap.” In order to minimize self-presentation or social-signaling considerations, participants were instructed that if they chose to donate they should place their donation in the envelope then insert the envelope into a collection box on the table. If they chose not to donate, it was requested that they insert the empty envelope into a collection box on the table. All participants returned an envelope. The dependent measure was whether or not individuals chose to insert their own money into the envelope.

Results and Discussion

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6 The sample in this experiment consisted of all students who were approached by members of the student organization during lunch on the day of the experiment.
We compared the percentage of people who made a donation to the percentage of people who donated nothing (returned an empty envelope) across the two conditions. We observed that participants exposed to the hedonic reference product were significantly more likely to make a donation, as compared to those in the utilitarian reference product condition ($P_{hedonic} = 75\%$, $P_{utilitarian} = 39\%$, $\chi^2 = 7.8$, $p < .01$, see table 1). Thus the pattern of results observed in Experiments 2A and 2B was replicated in this more naturalistic setting.

**GENERAL DISCUSSION**

Most research on decision-making has considered consumer preferences through the lens of utility from consumption. However, consumers can also derive utility from the information their choices signal to themselves. As a consequence, consumer choice can reflect utility from consumption, utility from signaling or a combination of the two (Bodner and Prelec 2003). The current article builds on this framework to examine if the choice context can affect the self-signaling utility associated with the choice to donate to charity, and through this process affect donation rates. Across seven experiments, we find that making a reference to a hedonic product in a donation appeal increases consumers’ likelihood of donating by affecting the self-signaling utility from donating. Specifically, we find that participants believe the choice not to donate signals more negative information about the self when the donation appeal references a hedonic product (Experiment 1A, 1B, and 3), which leads to an increase in actual donation rates for money (Experiments 2A and 5) and time (Experiment 2B), as compared to when a utilitarian product is referenced or when no product is referenced. In support of our proposed process, we
show that negative self-attributions signaled by the decision not to donate mediate the effect of
the reference product on donation interest (Experiment 3). We conclude by testing an important
real-world boundary condition (Experiment 4) and by demonstrating the ecological validity of
our results by replicating the effect of reference products on donation in a field experiment
involving real donations of money (Experiment 5).

In addition to offering evidence for our predicted effect and our proposed process, the
current data addresses several possible alternate explanations for the results. In Experiment 1B
we considered an alternate account based on the premise that referencing a hedonic product
during a donation might generate a contrast effect (Schwarz and Bless 1992), whereby charities
may be perceived as needier and/or more worthwhile when viewed in the context of a hedonic
product. Experiment 1B tested for this effect and did not find support for it. Experiment 1B
further shows that the reference to a hedonic product does not reduce the perceived value of the
requested donation amount. Said otherwise, the requested amount (e.g., $2) does not seem like
“less money” when consumers are reminded of a hedonic product of equal cost. Together with
the data supporting the role of self-signaling in the decision to donate, the current set of
experiments provides strong support for our theoretical account.

Implications, Limitations, and Future Research

The current findings contribute to the literature on prosocial behavior by demonstrating
the consequences of self-signaling motivations on actual donation decisions. Empirical
investigations into image-signaling motives for prosocial behavior have thus far emphasized signaling to others (i.e., social-signaling) as an explanation for giving behavior (Ariely et al. 2009; Karlan and McConnell 2012). In the current paper we demonstrate that signaling motives can increase donation rates even when the decisions are anonymous and unobservable. These findings extend existing work on signaling motives in prosocial decision making by demonstrating that the self-signal that accompanies a donation decision can shift the total utility derived from donating and can thus affect the likelihood of donation.

Our research also contributes to the emerging literature on the role of self-signaling in consumer choice. Research on self-signaling to date has focused on demonstrating that self-signaling occurs and has implications for choice. For example, Gneezy and colleagues (2012) find that consumers are less likely to purchase an item when the price is unspecified (e.g., “Pay-What-You-Want”) than if the price is fixed and low, because people are motivated to avoid the negative self-signal associated with choosing to pay a lower-than-acceptable price. The current research builds on these findings by holding the choice (e.g., to donate or not) constant and testing if self-signaling utility can be influenced by providing reference options. We show that reference products that are not part of the choice set can be effective in altering the self-attributions associated with a choice. Further, we find that the hedonic or utilitarian nature of the product is sufficient to change the self-signal associated with a choice (here, the choice not to donate). Future research could investigate if additional aspects of the choice context or the choice experience may likewise alter the self-signal from one’s choice. For example, opt-in decisions may be seen as more diagnostic of a person’s traits, and therefore send stronger self-signals, compared to status-quo or default choices.
Our findings also contribute to the more general literature on consumer decision making in two ways. First, this research extends our understanding of how reference products can influence choice. Reference products are often used in advertisements for consumer goods as well as in charitable appeals. However, research on reference products has mostly examined how these unrelated products influence perceptions of value, by affecting the reference prices consumers use to construct a standard of comparison (Adaval and Monroe 2002; Nunes and Boatwright 2004; Dholakia and Simonson 2005). In contrast, our research uses similarly priced reference products and finds that although perceptions of cost do not change (Experiment 2A), the self-signal from the choice does. This finding allows for a more nuanced understanding of how reference products affect choices, by showing that not only can the price of a reference product affect cost perceptions, and hence transaction utility, but the nature of the product itself (here, hedonic vs. utilitarian) can have consequential choice implications through self-signaling utility.

Second, these findings extend our understanding of how highlighting opportunity costs can affect choice. To date, reminders of forsaken outside options (opportunity costs) have been thought to decrease choice likelihood. For example, Frederick et al. (2009) demonstrate that consumers are less likely to choose a $1,000 stereo over a $700 stereo when reminded of an attractive alternative use of their $300 ($300 of CDs). In contrast, we demonstrate an instance when reminding consumers of attractive alternative uses for their money actually increases choice of the focal option (here, the option to donate). This occurs because the nature of the outside alternative affects the self-attributions signaled by one’s choice, and thus the self-signaling utility. This underlying shift in self-signaling utility then affects total utility and hence
actual choices. Future research could attempt to integrate these findings in order to provide a broader framework for how outside alternatives affect different components of consumers’ total utility and through this process affect preferences.

One limitation of the current research is that we consistently requested small amounts of money for donations in our experiments. It is possible that if we were to request larger amounts participants might engage in additional processing (Goldsmith and Amir 2010), which might affect our observed pattern of results. We conducted two additional experiments to test the amount of the charitable request as a possible boundary condition. Participants rated their interest in making a larger charitable donation ($50 to UNICEF) when either a hedonic reference product was presented ($50 is the cost of a silver bookmark from Tiffany and Co.) or no reference product was mentioned. Again, we observed that when a hedonic reference product was presented, donation interest increased significantly above the control condition (scale: 1=Not at all interested in donating to 9=Extremely interested in donating; $M_{\text{hedonic}} = 7.0, SD = 1.86; M_{\text{control}} = 5.9, SD = 1.74; F (1, 53) = 4.41; p = .04$). These results were replicated in a separate experiment asking participants their interest in donating $75 to a Hurricane Relief Fund (hedonic reference product: a $75 massage at a spa; $M_{\text{hedonic}} = 6.9, SD = 1.88; M_{\text{control}} = 3.6, SD = 2.65; F (1, 27) = 15.04; p < .001$). Even though these experiments were hypothetical in nature, this preliminary data suggests that the pattern of effects observed in our experiments may hold even when larger amounts of money are requested, albeit the base rates for donation are likely to be lower. Future research might also examine if adding a reference product to a charitable appeal has implications for the total amount donated, in addition to whether or not a donation is made.
Other limitations of the present research point out promising areas for future inquiry. For example, because our research focused on demonstrating the role of self-signaling in prosocial decision-making, we made every attempt to ensure donation decisions were private and anonymous. However, in many real world situations donation decisions are observable, and thus could be subject to both social- and self-signaling motives. To date, little is known about how social- and self-signaling utility interact to affect choice. For example, the two motives might have an additive effect on behavior, such that any signaling benefit is amplified when there is the potential for additional signaling rewards. On the other hand, it is possible that some social-signaling benefits may inhibit self-signaling benefits, via an over justification or crowding-out mechanism (Deci, Koestner and Ryan 1999; Gneezy and Rustichini 2000). For instance, if a person gains a social-signaling benefit from the behavior (e.g., a reputational reward) it is possible that the same behavior will not confer any additional utility from the signal the behavior transmits to the self. Another open question is how behavior based on self-signaling concerns will affect downstream self-perceptions and judgments by outside observers. For example, while the current research shows that concerns about negative self-attributions influence donation choice, we did not test if the reference product manipulation affected how people judged themselves following their donation decision (e.g., as more vs. less altruistic). In addition, the current research does not address if or how the presence of a reference product might affect how an outside observer would judge someone else’s personal traits based on their donation decision. Future research might explore these issues and the general interplay of social- and self-signaling utility on people’s choices more directly.
One intriguing aspect of our research was that we consistently observed that the desire to avoid the negative self-signal from choosing not to give motivated consumers’ donation choices. This emphasis on avoiding negative signaling utility is consistent with recent work suggesting people will often choose an outcome that allows them to avoid sending negative signals over an outcome that maximizes personal gain (Dana, Cain and Dawes 2006) or hedonic pleasure (Dhar and Wertenbroch 2012). Having demonstrated that individuals are motivated to avoid signaling negative information, one might assume that individuals are likewise motivated to pursue opportunities to signal positive information. Although not tested in the current research, recent research in the domain of self-signaling suggests this may not always be the case. Gneezy et al. (2012) find that when self-signaling motives are salient, the motive to avoid a negative self-signal is often stronger than the motive to pursue a positive self-signal. Future research might directly contrast consumers’ utility from avoiding negative self-signals against the utility from accruing positive self-signals in order to explore this potential asymmetry.

The managerial implications for these findings are relatively straightforward. At a strategic level, understanding the factors that affect consumers’ likelihood of making a donation can help charitable organizations increase donation rates. Although there are other ways to increase donation revenue, such as increasing awareness of the charity through advertising, these may be expensive and/or require a long time horizon in order to be effective. Our findings show that donation rates can be immediately and significantly impacted by small changes to existing charitable appeals. Specifically, we show that real donations of time and money increase when the appeal references a hedonic product. This suggests that non-profit organizations and others who seek to raise money or promote volunteerism for prosocial causes can consider referencing a
hedonic product in their appeals as a means to increase donation and participation rates. For example, consider the following appeal from care.org: “By giving a dollar a day - less than the cost of a cup of coffee or Sunday newspaper - you can help alleviate suffering around the world.” Some consumers may consider a cup of coffee and the Sunday paper to be necessary, utilitarian expenditures. The current findings suggest that care.org’s appeal might be improved with a subtle modification: “By giving a dollar a day - less than the cost of an indulgent Frappuccino - you can help alleviate suffering around the world.” However, managers who are contemplating the use of a reference product as a means to increase charitable donations should be cautioned that the product they select will play an important role in the effectiveness of the manipulation. If consumers do not attend to the reference product, or do not perceive it to be sufficiently hedonic, the observed results may be unlikely to replicate (Stroebe and Strack 2014). Further, even if the reference product is noticed and seen as hedonic, this tactic may not have the desired effect if consumers perceive its usage to be deliberately manipulative (Experiment 4).

In summary, the findings presented here allow us to better understand the role of context and self-signaling in the domain of charitable giving. Across seven experiments, we demonstrate that when a hedonic reference product is included in a donation appeal people believe the choice not to donate signals more negative personal traits, which in turn motivates donation behavior. In doing so, this research suggests a number of potential applications for donation requests and beyond.
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Experiment 1 Results. Self-signal of selfishness from choice not to donate as a function of reference product. (1-7)
Figure 2

Experiment 3 Results. Interest in donating as a function of reference product framing. (0-100)
Figure 3

Experiment 4 Results. Interest in donating as a function of reference product condition (0-100).
Table 1: Real Donation Rates as a function of reference products for Experiments 2A, 2B and 5

<table>
<thead>
<tr>
<th>Condition</th>
<th>Experiment 2A</th>
<th>Experiment 2B</th>
<th>Experiment 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>47%**</td>
<td>12%*</td>
<td>-</td>
</tr>
<tr>
<td>Utilitarian</td>
<td>57%*</td>
<td>14%*</td>
<td>39%**</td>
</tr>
<tr>
<td>Hedonic</td>
<td>88%</td>
<td>30%</td>
<td>75%</td>
</tr>
<tr>
<td>Donation Request</td>
<td>$1.00</td>
<td>2 hours</td>
<td>$2.00</td>
</tr>
</tbody>
</table>

* denotes $p < .05$ when compared to the hedonic reference product condition
** denotes $p < .01$ when compared to the hedonic reference product condition