

Eager to Help yet Reluctant to Give:
How Pro-social Effort and Pro-social Choices Diverge

Adelle X. Yang

University of Chicago Booth School of Business

adelle.yang@chicagobooth.edu

Christopher K. Hsee

University of Chicago Booth School of Business

christopher.hsee@chicagobooth.edu

Oleg Urminsky

University of Chicago Booth School of Business

oleg.urminsky@chicagobooth.edu

**** Please contact authors before citing ****

First Version: November 2013

Current Version: July 2014

Abstract

Charity marketers face the challenge of understanding how pro-social decisions are made. Are all solicitations made equal? The authors found that a *helping* opportunity and a *giving* opportunity reveal different pro-social preferences. In a series of four studies, involving hypothetical and real pro-social opportunities, participants showed high willingness to help (i.e. exerted more task effort for a charitable cause than for themselves), as well as reluctance to give (i.e. the majority kept resources for themselves rather than giving to charity, when given a choice). The authors propose that the consideration of direct self-interest plays a key role in the observed discrepancy. When deliberate consideration of direct self-interest is activated, as in direct choices, it trumps other motives, resulting in more selfish behaviors. When the direct self-interest remains implicit, as in effort persistence, pro-social behaviors can be effectively driven by other indirectly beneficial motives, such as the pursuit of meaningfulness. These findings have important practical implications for how charitable organizations can convey their needs effectively and design persuasive marketing messages.

Keywords: pro-social behavior, helping, giving, self-interest, meaningfulness

The core marketing challenge for over a million charity organizations in the US is to solicit adequate resources to carry out their mandates. It is therefore crucial for charity marketers to understand how pro-social decisions are formed, in order to effectively convey their needs and design persuasive marketing messages. Accordingly, research on pro-social behaviors has been gaining increasing importance in the marketing field in recent years (Bendapudi, Singh and Bendapudi 1996, Shang, Reed and Croson 2008, Small and Verrochi 2009, Puntoni, Sweldens and Tavassoli 2011, Winterich and Barone 2011).

This body of literature, which has a long tradition in marketing, psychology and economics, investigates the question: “When do people invest in others’ welfare?” Researchers have operationalized pro-social preferences in a variety of different ways and have debated the factors that motivate pro-social behaviors, as well as the degree of altruism revealed in the resulting empirical tests. One way to think of pro-social behavior is as “helping”, i.e. “How willing are you to do something in order to help another person?” Another common perspective is to think of pro-social behavior as “giving”, i.e. “How willing are you to give some of your resources to another person?” Helping and giving behaviors are commonly observed in daily life and both have been widely but separately studied on their own, as instantiations of the same construct, pro-social behavior.

These two ways to interpret opportunities for pro-social behavior, *helping* vs. *giving*, may, at first glance, appear equivalent. After all, taking an action to help others almost always occurs at some explicit or implicit cost of one’s own time, effort, money, attention, or other available resources. Normatively, when people help others, they should think of what they are giving, either directly or via opportunity costs, and when they give to others, they should correspondingly think of the help they are providing. From this normative perspective, it might be expected that similar levels of pro-social behavior would emerge regardless of whether people interpret the situation as an opportunity to *help* or an opportunity to *give*.

We argue, however, that a helping opportunity and a giving opportunity are not equivalent, and can evoke critically distinct considerations in the decision process, yielding systematic differences in revealed pro-social preferences. Specifically, we posit that there is a broad and important distinction between the decision processes involved in gauging the amount of effort one is willing to exert to improve other’s welfare, and the

processes involved in determining the amount of resources one is willing to re-allocate from oneself to others. As a result, we hypothesize that, even in the same decision context, an appeal interpreted as helping will elicit stronger pro-social behaviors than an opportunity interpreted as giving.

In four studies, we provide empirical evidence for this discrepancy in pro-social behavior, largely overlooked in the prior literature, and explore the underlying psychological factors. We discuss the implications of our findings for prior findings involving helping and giving, and discuss the policy and marketing implications. Although our studies are not designed to draw general conclusions about the degree to which people's motives reflect "pure" altruism (e.g., Cialdini 1991, Batson 2010, List 2007), we also discuss the implications for inferring the motives behind revealed pro-social behaviors.

HELPING VS. GIVING

A key distinction between helping and giving decisions is that a helping decision typically involves effort exertion, whereas a giving decision typically involves resource allocation. These helping and giving interpretations of pro-social opportunities parallel the two major experimental paradigms that researchers have adopted to study the topic. Findings from these two lines of research display rather different views of human pro-sociality, one optimistic, the other skeptical.

One line of research, primarily in psychology, has examined an array of factors that affect people's *helping* decisions (see Berkowitz 1972, Dovidio, Piliavin, Schroeder and Penner 2006, for reviews). Findings from this approach have suggested that people are generally motivated to help, although the degree of motivation can be moderated by such factors as the strength of empathy towards the potential recipient (Darley and Batson 1973, Mikulincer et al. 2005). The motive to help is widespread, and is evident even among toddlers (Warneken and Tomasello 2006). People often offer help, even anonymously (Switzer, Simmons and Dew

1996, Deaux 1974), and more so than presumed by those asking for help (Flynn and Lake 2008). Reminding people that their work helps others (Grant and Hofmann 2011, Grant and Dutton 2012) improves their job performance. Marketers often use cause-related marketing (i.e. linking pro-social causes to the company image) to leverage helping motives for consumer engagement (Varadarajan and Menon 1988, Barone, Miyazaki and Taylor 2000, Koschate-Fischer, Stefan, and Hoyer 2012).

Helping has been linked with better psychological and physical well-being for the helper, both in the volunteering context (Thoits and Hewitt 2001, Meier and Stutzer 2008, Wheeler, Gorey and Greenblatt 1998), as well as in the workplace (Grant and Sonnentag 2010). These personal benefits of helping are often posited to be achieved via the fulfillment of psychological needs (Weinstein and Ryan 2010), including heightened self-worth (Piliavin and Siegl 2007), connection to a greater whole (Schwartz and Sendor 1999), and a fulfilled sense of meaningfulness (Sappington, Bryant and Oden 1990).

In contrast, a different research literature, in both psychology and economics, has focused instead on *giving* decisions, where people can directly allocate resources to others. Perhaps the most widely studied paradigm is the Dictator Game, in which people choose to allocate a certain amount of resources (usually in monetary form) between themselves and others (Forsythe, Horowitz, Savin and Sefton 1994, Andreoni, Harbaugh and Vesterlund 2003). Across different versions of this game, participants typically only give between 10% and 30% (Camerer and Thaler 1995, Engel 2011), which further declines when ulterior motives are controlled for and minimized (Haley and Fessler 2005, Dana, Webet and Kuang 2007). Some researchers have argued that even the remaining giving could be attributed to social norms (Camerer and Thaler 1995) and demand characteristics (List 2007), rather than a genuine concern for others' welfare.

These two approaches, which can be seen as focusing primarily on either *helping* or *giving* contexts, appear to yield qualitatively different conclusions about the degree of human pro-sociality. Research on what we would label "helping" posits inherent and pervasive pro-social inclinations, while research on "giving" is largely pessimistic about the extent of people's pro-social motives. The generally unremarked fact that these literatures have studied different factors in different contexts makes it difficult to draw direct comparisons. As a

consequence, the literature has not established whether factors related to helping necessarily extend to giving and vice versa, or if helping and giving involve different psychological underpinnings. In this paper, we contend that the seeming discrepancy in helping and giving findings may be due to the different pro-social opportunities studied, and the underlying systematic differences in how people reason about pro-social behavior in helping and giving contexts.

Some recent findings support our argument that the decision to help and the decision to give could stem from different psychological processes. For example, willingness to help others in need *increases* with positive affect (Isen and Levin 1972, Cunningham 1979), but willingness to give in Dictator Games *decreases* with positive affect (Tan and Forgas 2010). Likewise, results from a large panel survey suggest that volunteering correlates with self-reported altruism and desire for self-improvement while donating correlates with the donor's financial resources (Jackson, Bachmeier, Wood and Craft 1995, also see Sokolowski 1996). These findings provide initial support for our proposal that helping and giving involve distinct psychological motives. As we describe next, such differences in how people think about helping or giving may be traced back to the ways in which the context of giving promotes the consideration of direct self-interest.

DIRECT SELF-INTEREST VS. INDIRECT SELF-BENEFITS

Economic models of decision-making often assume that people are primarily motivated by self-interest. In this view, people choose to take actions that they judge as maximizing their own utility. Engaging in pro-social behavior can therefore be thought of as providing some kind of benefit to the giver. People may gain a “warm glow” (Andreoni 1990) -- positive utility or satisfaction from the mere act of giving. If anticipating a “warm glow” from giving is what motivates the choice to give, then such giving can also be seen as a pursuit of self-interest (Cialdini et al. 1987).

It is therefore important to distinguish between two types of benefits that people can obtain from a given behavior. One is direct economic self-interest, which typically manifests itself in maintaining or increasing personal wealth. When measured solely by direct economic self-interest, pro-social behavior can appear selfless, unless motivated by anticipated reciprocation (Orhun 2014) or some other valuable compensatory reward, such as costly social status. Direct self-interest often yields immediate hedonic consequences, such as the attainment of pleasure and avoidance of pain (Kraut 1979, Deci and Ryan 2008). This can be contrasted with what we will refer to as *indirect self-benefits*. These benefits do not include greater wealth, and in fact often occur at the cost of direct economic self-interest. However, these benefits are often intrinsically related to the satisfaction of basic psychological needs (Ryan and Deci 2000b).

The perception of meaningfulness is particularly typical of indirect self-benefits, as it is unassociated with any tangible form of direct self-interest, but is closely tied to many constructs that contribute to higher psychological well-being. Since Aristotle (Irwin 1985), it has been argued that a good life is not simply a happy life, but a meaningful life, stressing the disproportionate attention people attach to hedonia (happiness from pleasure and positive affect) over eudaimonia (a sense of fulfillment from personally expressive and meaningful goals). The pursuit of meaning is a fundamental and constant human endeavor (Frankl 1946, Baumeister and Vohs 2002). However, compared with hedonic happiness (Kahneman, Diener and Schwarz 1999), the pursuit of meaning is easily dismissed in people's decision making. In fact, in the marketing context, consumers' need for meaningfulness (Smith 2007) has been largely underexplored.

We contend that indirect self-benefits in general often become secondary considerations in face of the maximization of direct self-interest. Specifically, we propose that the role of direct self-interest and indirect self-benefits (particularly the pursuit of meaningfulness) is an important aspect of the difference between how people think of helping and giving opportunities.

PRIORITIZING THE PURSUIT OF DIRECT SELF-INTEREST

Given that the benefits of direct self-interest are generally more salient and immediate, we propose that when people have the opportunity to equally consider direct and indirect benefits, they will prioritize direct self-interest over indirect self-benefits. However, when direct self-interest is not highlighted in the context (e.g., not offered as a salient option in a decision), other motives that involve indirect self-benefit, particularly the pursuit of meaningfulness, may be the primary driver of behaviors.

This proposition builds on prior behavioral research, which has suggested limitations to the view of people as “homo economicus” who constantly calculate self-interest in order to maximize economic utility. Key inputs for optimizing self-interest, such as opportunity costs (Thaler 1980, Frederick, et al. 2009), outcome probabilities (Rottenstreich and Kivetz 2006) and even outcome value (Urminsky and Yang 2014) can be neglected when not specifically prompted by the decision context. Furthermore, in social interactions, direct economic self-interest may not be a first order consideration, unless the interaction involves monetary transactions, prompting an economic mindset and use of explicit cost-benefit calculations (Fiske 1991). Students of economics, partly due to the extensive training in utility maximization that they receive (Marwell and Ames 1981, Frank, Gilovich and Regan 1993), are more likely to interpret decisions in terms of direct self-interest, and thus behave more “selfishly” (Bauman and Rose 2011). In sum, there appears to be considerable flexibility in how much direct economic self-interest enters one’s decision process and how much it affects the behavioral outcome.

Returning to the primary distinction of interest, between a helping opportunity and a giving opportunity, we propose that the degree to which direct self-interest is considered will systematically differ between the two. In a *giving* opportunity, because one’s own direct self-interest is directly and saliently pitted against other’s welfare, the consideration of direct self-interest may play a key role in the decision of whether and how much to give. In contrast, in a *helping* opportunity, considerations involving direct self-interest, such as the evaluation of the direct cost and opportunity cost of helping, may only be indirectly implicated, enabling other motives, such as the perceived meaningfulness of the action, to drive behavior.

In sum, we hypothesize that when direct self-interest is not salient, people can be highly motivated by goals that only yield indirect self-benefits. However, when direct self-interest and indirect self-benefits are juxtaposed, the direct self-interest is often prioritized over indirect benefits. As a result, when a pro-social opportunity is perceived as a *helping* opportunity, people may be more likely to engage in pro-social behaviors than when the same situation is interpreted as a *giving* opportunity. Conversely, cueing the consideration of self-interest in helping opportunities can supplant the pro-social motive, resulting in similarly selfish-seeming behavior as in a giving opportunity.

Therefore, we predict that people will be willing to help, yet reluctant to give, *ceteris paribus*. In other words, when people are relatively willing to exert effort to improve others' benefit in a given situation, they will still tend to shun away from directly giving resources away to others. Moreover, the relative generosity to help can be reduced when people become aware of the opportunity to benefit themselves with the same resources.

This proposed difference between helping and giving suggests an important factor for charity marketers to consider in soliciting resources. In general, our account suggests that *helping* requests may generally be more effective than *giving* requests, unless consideration of self-interest is activated in the decision context or in the resource solicitation. Specifically, comparing solicitations for volunteering services versus those for direct donations, the former may have higher marketing appeal than the latter. And when monetary funds are needed, people may be more willing to participate in valuable volunteering work from which funds are generated, than to comply with direct donation solicitation.

We test these hypotheses in a series of four studies, using both prospective judgments and actual in-laboratory behavior. In Study 1, we test the basic prediction that the same pro-social behavior in the form of effort exertion (a helping frame) elicits higher prospective pro-social intentions than in the form of resource allocation (a giving frame). Next, we employ a novel experimental paradigm, in which participants are provided with an opportunity to engage in pro-social behavior, either in the form of *helping* (i.e. exerting effort for a charity), or *giving* (i.e. donating the earnings from the same exerted effort). In Studies 2 through 4, participants were given an unexpected opportunity to work on an effortful task while waiting for an unrelated study. They

could either earn money for a specified charity (helping condition), or earn money for themselves with the option to donate (giving condition). The option to donate was either framed as a reminder that the money could be donated to the charity at any time (Studies 2 and 3) or a direct request to choose between keeping and donating their earnings before or after the task (Study 4). In this paradigm, we first compare the effort exerted in the helping condition to that in the giving condition, to determine whether the helping or giving opportunity is more motivating. Then, we further contrast the participants' relative motivation to work when helping with their actual giving (choosing to donate their earnings).

Across the studies, we address potential alternative explanations, including motivational crowding-out (Study 2), miscalculation of task experience (Study 3), signaling motives, endowment effects and cognitive dissonance (Study 4). We also provide evidence for our proposed process by manipulating the deliberate consideration of self-interest (Study 3) and measuring self-reported hedonic happiness and experienced meaningfulness.

STUDY 1: THE EFFECT OF HELPING VS. GIVING FRAMING

Using a hypothetical scenario with two between-subjects conditions, we tested the primary hypothesis, that people would be more willing to commit to the same future pro-social behavior when the decision is framed as helping than as giving.

Method

Participants (N = 83, M_{age} = 35.3, 65% Male) were recruited from an online subject pool and completed a survey for \$1. Participants first read the following scenario, which was titled “*How willing are you to help?*” in the helping condition and “*How willing are you to give?*” in the giving condition.

“Imagine that you are working as a street vendor. You sell popsicles for \$2 each. On weekdays you usually make about \$120 a day. In your spare time you don't sell popsicles, instead you engage in your favorite leisure activities.”

In the helping condition, participants read about volunteering to fundraise for a charity event:

“A local charity organization has asked for people's help in a fund-raising charity event. All you need to do is to volunteer to work for them on your regular job for one day. If you sign up to help them, then you'll sell popsicles for them for a day, and your help will raise about \$120. The funds raised will be used to improve the sports facility of a local elementary school.”

In the giving condition, participants read an otherwise identical donation scenario:

“A local charity organization has asked people to give their one-day earnings in a fund-raising charity event. All you need to do is to give them what you earn on your regular job for one day. If you sign up to give, then you'll give away what you earn selling popsicles for a day, and what you give them will raise about \$120. The funds raised will be used to improve the sports facility of a local elementary school.”

Participants were then asked to rate *“In this scenario, how willing would you be to help [give]?”* on a 7-point scale from “not at all” (1) to “very much” (7). They then also rated happiness (*“How happy would you be to help [give] to the charity event?”*), and perceived meaningfulness (*“How meaningful would you find it to help [give] to the charity event?”*) on the same seven-point scales.

Results

Consistent with the hypothesis, participants reported stronger willingness to cooperate with the charitable request in the helping condition than in the giving condition ($M_{\text{helping}} = 4.23$, $SD = 1.84$, $M_{\text{giving}} = 2.03$, $SD = 1.87$; $F(1, 81) = .14$, $p < .005$, $d = .65$, see Figure 1). The charitable requests in the two conditions were essentially the same, including the same recipient of the benefit, the same magnitude of benefit the recipient would receive, and the same time and effort the participant would exert. The only difference was in the

framing, with one decision framed as helping the charity (by working one day on behalf of the charity, which would raise \$120), and the other framed as giving resources (by giving away one day's earnings of \$120) to the charity.

Insert Figure 1 about here

We have proposed that a pro-social behavior being perceived as helping will provide a greater sense of meaningfulness than if the pro-social behavior is understood as giving. Consistent with this prediction, participants perceived higher meaningfulness in the helping condition than in the giving condition ($M_{\text{helping}} = 4.70$, $SD = 1.80$, $M_{\text{giving}} = 3.64$, $SD = 2.07$; $F(1, 81) = 1.62$, $p < .05$, $d = .55$).

Moreover, prior literature has demonstrated that meaningfulness can contribute to intrinsic motivation (Thomas and Velthouse 1990, Ariely, Kamenica and Prelec 2008), and the need for meaning may even lead people to improve other's welfare at one's own costly or even painful effort (Olivola and Shafir 2013). Thus, we suggest that a higher level of meaningfulness may be a key contributor to the greater willingness to cooperate in the helping condition. Supporting this interpretation, a mediation analysis revealed that the perceived meaningfulness of the pro-social behavior completely mediated the effect of helping vs. giving framing on the willingness to participate in the charity event.

First, we confirm that the helping vs. giving manipulation (raising funds via effort exertion vs. resource allocation) impacts the difference in willingness to participate ($\beta = 1.20$, $t = 2.95$, $p < .01$) in a simple regression. Second, we confirm that the helping vs. giving manipulation impacts the difference in perceived meaningfulness in the target behavior ($\beta = 1.06$, $t = 2.50$, $p < .05$) in a simple regression. Lastly, in a multiple regression predicting willingness to participate, we find a significant effect of perceived meaningfulness ($\beta = .81$, $t = 13.76$, $p < .001$) and a non-significant effect of the helping vs. giving manipulation ($\beta = .35$, $t = 1.49$, $p = .14$). Overall, we find a significant indirect effect of the helping vs. giving request manipulation on

willingness to participate via the perceived meaningfulness ($\beta = -.85$, Bootstrapped 95% CI [-1.55, -.20], Sobel $Z = 2.46$, $p < 0.05$).

This provides further evidence that participants' willingness to comply with the pro-social request was driven by how much meaning they perceived in the prospective pro-social behavior.

Insert Figure 2 about here

Our data suggests that it is specifically meaningfulness, rather than a general liking of helping opportunities, which explains the preference for helping. Anticipated happiness ratings were only marginally higher in the helping than giving condition ($M_{\text{helping}} = 4.27$, $SD = 1.97$, $M_{\text{giving}} = 3.46$, $SD = 1.99$; $t(81) = 1.87$, $p = .066$). Furthermore, perceived happiness and perceived meaningfulness were strongly correlated ($r = .83$, $p < .001$), suggesting that people anticipated being happier when a task is perceived as more meaningful. Controlling for perceived meaningfulness, the marginally significant difference in happiness between conditions was eliminated ($t(80) = .337$, *ns*) and did not mediate the effect of the helping vs. giving framing on the willingness to participate.

In this study, we focused on prospective choices about future helping or giving. We found that people perceive the same prospective pro-social opportunity to be more meaningful when framed as helping than as giving. Consequently, they are more willing to commit to future effort when the opportunity is framed as helping than when the opportunity is framed as giving. Next, we will employ a novel experimental paradigm in which actual helping and giving opportunities are present in the same scenario to assess actual pro-social behavior.

STUDY 2: EFFORT PERSISTENCE VS. DONATION CHOICES

Study 1 provided a direct test of the framing effect of helping versus giving. We propose that the difference between helping and giving taps into a fundamental psychological difference between the two primary forms of pro-social behaviors, which extends beyond semantic differences. Therefore, in the following studies, we directly contrast the experience of helping, operationalized as effort exertion, with a giving experience, operationalized as resource allocation. Thus, the study designs will parallel real-world differences in helping versus giving.

In the studies, participants decided how long to work on repeated tasks for per-task compensation. In the helping conditions, the compensation was automatically given to a charity. In the giving conditions, participants earned the money themselves, and decided whether (and how much of the compensation) to donate. To confirm that this manipulation of earmarked effort exertion vs. resource allocation captures the helping vs. giving distinction, we conducted a pretest. Participants ($N = 75$) either read about an experimental scenario where they exerted effort to raise funds for a charity, or an otherwise identical scenario where they earned money and could choose to donate to the charity (see appendix). Then they rated whether they perceived their behavior in the scenario more as “helping” (1) or as “giving” (7). The results confirmed that effort exertion was perceived more as helping while resource allocation was perceived more as giving ($M = 2.88$ vs. 4.28 , $SD = 1.98$ and 2.11 ; $t(73) = -2.95$, $p < .01$).

In Study 2, we introduced the same charity foundation to all participants at the onset of the study. Across three conditions (helping, giving, vs. control), participants worked on an unanticipated coin-searching task. All participants were provided with the same charity information and were given the same opportunity to donate any earnings they wished to the charity. In the helping condition, participants earned funds for the charity by working on the task. In the giving condition, in contrast, participants were paid directly for their work on the task. We refer to this condition as a “giving” condition because of the opportunity participants had to give some or all of their compensation to the charity. Participants in the control condition did not receive any compensation for their work on the task.

In our research design, the incentives to work in the giving condition strictly dominate the incentives in the helping and control conditions. Participants in the giving condition could either keep their earnings or opt to donate their earnings to the charity, while participants in the helping condition did not have a choice, as their earnings were directly donated to the charity. For participants who prefer to help the charity, the giving and helping conditions provide the exactly same opportunity to do so. On the other hand, the giving condition provides a better incentive than the helping condition for those participants who prefer benefits for themselves to benefits for the charity. Therefore, normatively, participants should have been at least as motivated to work in the giving condition as in the helping condition. However, we predicted that participants would work harder in the helping condition than the giving condition, due to the proposed differences in how people think about helping and giving decisions.

We first report the results of Study 2A, in which the incentives were relatively low. The maximum possible earnings were 50 cents in Study 2A for a 6-minutes task (\$5/h), less than half the lab's hourly rate (\$12/h). We then increased the magnitude of incentives in Study 2B, to a maximum of \$2.50 (\$25/h), more than double the lab's hourly rate. This is to test, in our experimental paradigm, whether the magnitude of incentive would have an impact on the effort people exert and their choices.

Method

Participants (Study 2A: $N = 170$, $M_{\text{age}} = 23.6$, 49% Male; Study 2B: $N = 167$, $M_{\text{age}} = 23.5$, 50.3% Male) were recruited in a research lab for a 15-min "coin-flipping study" which paid a \$3 fixed participation fee. The main coin-searching task was presented as an unexpected voluntary task to do while waiting for the unrelated coin-flipping study (which they then did), in order to avoid self-selection in the participant recruiting process. The study was run individually without active monitoring, in order to minimize the common potential for demand effects in studies gauging pro-social intentions (see Levitt and List 2007).

Participants were run individually (see the participant instructions for all studies in the appendix). The experimenter introduced a local children's charity foundation, informing each participant that they could donate

any amount of their earnings to the charity at any time, just by letting the experimenter know. A poster about the charity hung on the wall in the waiting room. Each participant was then told that they had to wait approximately 10 minutes in the room until the last participant finished the coin-flipping study in the next room. The experimenter told each participant that ten target coins (pennies in Study 2A, nickels in Study 2B) would be needed for the coin-flipping study, but they had just ran out. Each participant was asked to find ten target coins from a bowl of various coins that was ostensibly left over from an earlier study. Each participant was told that after finding the ten coins, they could either keep searching for as many more as they wanted or watch documentary videos on the computer.

In the control condition, participants could search for and set aside extra target coins if they wanted. In the giving condition, participants could keep all the target coins they found or donate whatever amount they wanted. In the helping condition, all target coins found would be donated to the charity. Participants had 6 minutes to search in the bowl, where 50 target coins were mixed with approximately 1000 foreign coins. We measured two main dependent variables: how many coins participants found in each condition, and whether participants chose to donate in the giving condition. After the task, participants were given a questionnaire asking them to rate their happiness, from “not happy at all” (1) to “very happy” (7) on a 7-point scale.

Pretests

The coin-searching task was designed to be relatively boring, so that intrinsic motivation for the task would be relatively low and perceived meaningfulness would primarily come from the pro-social motive, rather than from enjoyment, learning, or other sources. The task was also designed and tested to be consistently difficult, so that the level of effort exerted would reflect the effect of incentive motivation throughout the task. We confirmed these characteristics of the task in two pre-tests. All participants in the pretests were recruited in the same research lab used for Studies 2A and 2B.

To measure the difficulty of the task, we recruited one group of participants (N = 30) to search for all 50 coins (half for pennies and half for nickels), without any performance-based incentive. It took less than 2

minutes for most participants to find 10 coins ($M_{\text{pennies}} = 74.6$ seconds, $SD = 32.7$, $M_{\text{nickels}} = 103.5$ seconds, $SD = 48.1$), less than 6 minutes to find 30 coins ($M_{\text{pennies}} = 305.8$ seconds, $SD = 135.5$, $M_{\text{nickels}} = 334.0$ seconds, $SD = 105.4$). This confirms that the task did not become easier as participants progressed, and in fact was increasingly time consuming. No difference in time was found between pennies and nickels (t 's < 2).

After participants completed the coin-searching task, they watched the documentary clips, and were asked to rate their level of interest for both tasks. Reflecting low intrinsic motivation, the coin-searching task was rated as closer to “very boring” (1) than “very interesting (7)” on a 7-point scale ($M_{\text{coin}} = 3.20$, $SD = .847$, $t(29) = -5.17$, $p < .001$), and as significantly less interesting than the alternative of watching documentaries ($M_{\text{documentary}} = 5.90$, $SD = 1.56$; $t(29) = -7.72$, $p < .001$).

Since our task is intended to elicit a low level of intrinsic motivation, we expected that participants in the helping condition (working for the charity-incentive) would be more likely to see the task as meaningful, compared with participants in both the control condition (working for no incentive) and the giving condition (working for the self-incentive). A second group of participants ($N = 90$) were assigned to one of the three conditions (helping, giving vs. control) and asked: “*Imagine if you were a participant in this study, how meaningful would you find the coin-searching task?*” Participants in the helping condition rated the task as more meaningful ($M = 5.73$, $SD = 1.95$) than participants in either the giving condition ($M = 4.80$, $SD = 1.94$, $t(58) = 2.145$, $p < .05$) or the control condition ($M = 4.43$, $SD = 1.99$, $t(58) = 2.897$, $p < .01$).

Study 2A Results

In Study 2A, all participants were required to find at least 10 pennies, in all conditions, but then could continue searching or stop at any time and watch documentary videos. All the participants found at least 10 coins during the six-minute wait. (The experimenter forgot to replenish the bowl for one participant in Study 2A, who was therefore excluded.)

On average, participants found 27.5 pennies (SD = 11.4) in the helping condition, 21.8 pennies (SD = 10.1) in the giving condition, and 17.0 pennies (SD = 8.2) in the control condition. Planned contrasts showed that participants in both helping and giving conditions outperformed those in the no-incentive condition ($t(166) = 4.30, p < .01, d = .70$) and participants in the helping condition outperformed those in the giving condition ($t(166) = 3.01, p < .01, d = .53$; see Figure 3). Further, more participants kept searching after the required ten pennies in the helping condition (86.7%) than in the giving (73.2%) and control conditions (54.7%; $\chi^2(2) = 14.40, p < .005$). These results revealed that participants worked harder in the helping condition when their effort was designated to only benefit others, compared with the giving condition when they earned money for themselves which they could choose to donate for others or keep.

A potential concern is that the extrinsic incentive could crowd-out people's intrinsic motivation to search for the coins (Ryan and Deci 2000a), potentially resulting in low effort in the giving condition when the compensation is low. However, participants in both helping and giving conditions actually outperformed those in the no-incentive condition, which suggests that people had low levels of intrinsic motivation in this task, precluding crowding-out.

The differential levels of effort across the two incentive conditions seem to suggest high level of altruism, such that participants worked even harder for the charity-incentive than for the self-incentive. However, if effort exertion and money allocation decisions were based on the same underlying level of pro-social preferences, then participants would not only work harder for others, as observed, but also choose to donate their earnings rather than keep the money for themselves.

In fact, all participants were provided with a salient opportunity to donate. However, contrary to the seemingly high altruism observed from their effort when working for the charity, we observed minimal donation. Only one person out of fifty-six in the giving condition volunteered to donate the earnings to charity, and the results were similar when excluding this participant. Consistent with our suggestion that helping and giving fundamentally differ in how people make decisions about pro-social opportunities, participants were

simultaneously more willing to *help* the charity accrue funds than to benefit themselves, and not willing to *give* what they earned on the task to the same charity.

We have characterized the higher effort in the helping conditions as participants being more motivated to work in the more meaningful helping condition. However, an alternative interpretation is that participants felt a stronger obligation to comply due to social signaling associated with the charity incentive in the helping condition (Ariely, Bracha and Meier 2009). To preclude this possibility, all the studies were conducted privately, with the participant performing the task alone in a room, similar to the private condition in Ariely et al. (2009).

As a further test, after completing the task, participants rated both how happy they had felt during the task as well as how happy they now felt, post-task. If participants were induced by a feeling of obligation to put in more effort than they wanted to in the helping condition, we expect that they would be less happy with the experience. Participants in the helping condition reported feeling as happy during the task as in the giving condition ($M_{\text{helping}} = 5.70$, $SD = 1.20$, $M_{\text{giving}} = 5.70$, $SD = 1.35$, $t(114) = .015$, *ns*), and marginally happier than in the control condition ($M_{\text{control}} = 5.36$, $SD = 0.98$, $t(113) = 1.64$, $p = .103$). We found very similar results on the post-task happiness ratings. These results suggest that the differences in effort are due to differential motivation across the conditions, rather than differential obligation.

Study 2B Results

Study 2B replicated Study 2A, increasing the incentives in all conditions five-fold by using nickels instead of pennies as the target coins. Participants found an average of 24.1 nickels in the helping condition ($SD = 9.6$), 22.1 nickels ($SD = 9.7$) in the giving condition, and 15.8 nickels ($SD = 8.0$) in the control condition (see Figure 3). Consistent with Study 2A, more participants persisted after the required ten coins in the helping (86.2%) and giving (78.2%) conditions than those in the control condition (46.3%; $\chi^2(2) = 23.7$, $p < .001$).

Similar to Study 2A, very few participants in the giving condition (three out of fifty-five) donated their earnings to the charity, and the relative effort findings are similar when excluding these three participants.

Thus, we see again that most people are simultaneously more willing to work to *help* the charity accrue funds even compared with benefiting themselves, yet not willing to *give* what they earned on the task to the same charity.

A comparison of the equivalent control (no-incentive) conditions in Study 2A and 2B reveals no differences in base-line effort. Therefore, we combine the data from Studies 2A and 2B to test the effect of incentive magnitude. The difference in effort between helping and giving conditions was directionally smaller when incentives were higher. However, an ANOVA analysis of the merged data revealed that the level of effort differed significantly by incentive type (charity vs. self vs. none; $F(2, 330) = 24.85, p < .05, \eta_p^2 = .961$), but not by incentive magnitude ($F(1, 330) = .116, ns$), and no interaction was found between the incentive types and incentive magnitude ($F(2, 330) = 1.02, ns$). Therefore, we conclude that the effect was robust across a reasonable range of incentives, from less than half the lab's hourly rate (\$12/h), to more than double the lab's hourly rate (\$25/h).

Insert Figure 3 about here

Discussion

We find substantially more effort is exerted in the helping conditions than in the giving conditions. The high pro-sociality revealed by effort exertion is not matched by resource allocations, however, with very few participants donating in Study 2. Because we test helping and giving within a single study, using the same context, these effects cannot be explained by dispositional differences across people, or situational differences across scenarios.

We contend that these results reflect the effect of considering direct self-interest on the pursuit of meaningfulness. Since direct self-interest is not a salient consideration when making a decision about helping, the motive to pursue meaningfulness drives behavior. When making a decision about giving, however, the option to benefit oneself seems to directly dominate the option to benefit others, and the motive to improve direct self-interest overshadows a powerful motive to derive meaningfulness from working to benefit others. As

a result, people were not only unlikely to donate in the giving condition, but also found the task less meaningful, and were therefore less motivated to persist on the task.

Importantly, these results don't seem to be limited to small-magnitude incentives. Across Study 2A and 2B, the disjunction between effort and choice persisted for quite different incentives. That said, when monetary incentives are sufficiently high relative to the effort involved in the task, people's effort and their choices may both be determined by direct self-interest (Imas 2013).

STUDY 3: PREDICTED MOTIVATION AND THE ROLE OF SELF-INTEREST

In Study 3, we first replicate Study 2 using a different task (Study 3A), and then directly test whether the consideration of self-interest impedes the exertion of effort on behalf of the charity (Study 3B). We predict that merely prompting consideration of the self-incentive will make direct self-benefit sufficiently salient to reduce pro-social effort in the helping condition, even when the self-incentive is not available.

Since the donation opportunity was introduced at the beginning in Study 2, it is not clear when people decided whether or not to donate. One interpretation is that they decided after earning the money, which they then did not want to give away. Alternatively, they could have decided between working for themselves and working for the charity before starting the task.

This introduces a potential misprediction account of our results. People sometimes have difficulty predicting how motivated they will be in a given situation (Goldsmith and Dhar 2013, Goswami and Urminsky 2014). Between working for themselves and working for the charity, participants might have assumed prior to starting the task that the task would be more engaging and thus more motivating in the former case, consistent with the self-interest norm (Miller 1999). The low rate of donation in the giving condition could then be explained as a consequence of participants' initial anticipation for what would be more engaging and

motivating, rather than reluctance to give. We directly test the misprediction necessary for this explanation in the present study.

Method

Participants (Study 3A: $N = 112$, $M_{\text{age}} = 20.0$, 53.0% Male; Study 3B: $N = 74$, $M_{\text{age}} = 20.3$, 51.4% Male) were recruited in a university research lab and paid \$3 for an unrelated 15-min “number guessing” study. Participants were provided with the same charity information, poster, and donation opportunities as in Study 2. The experimenter told each participant that due to technical issues they had to wait to start the “number guessing” study (which in fact would only take about 5 min), and that they could take part in another task while they waited (for about 10 min).

The experimenter then showed participants a stack of cards, each with 30 black dots printed on one side, and gave them a handheld hole-puncher. The participants’ task was to accurately punch out the dots, earning one cent per dot. The experimenter told each participant that only 30 punched holes (one completed card) were needed but that they could punch as many additional holes as they wanted. Participants in Study 3A were randomly assigned to either the giving condition (earning one cent per hole punched), or the helping condition (one cent donated to the charity per hole punched). Participants in the giving condition always had the option to donate their earnings to the charity, as they were notified about the charity and donation solicitation at the start of the experiment. Each participant was told that if they did not want to punch more holes, they could open a folder named “Fun Fact Trivia Q&A” on the same desk and read the Trivia questions and answers instead.

In Study 3B, participants were first asked to punch fifteen holes to test the hole-puncher. Next, in a short questionnaire, they predicted how many holes they would punch in the following five minutes, in the condition they had been assigned to (self-incentive in the giving condition or charity-incentive in the helping condition). Then they read about the alternative incentive, and predicted how many they would punch if they were assigned the alternative incentive (i.e., in the giving condition, imagining if they had to work for the charity only; and in

the helping condition, if they had to work for themselves). Participants then each performed the task for the initially assigned incentive, as in Study 3A. The alternative Trivia task was also available to all participants.

Pretests

We conducted two pretests. First, we tested whether the hole-punching task elicited intrinsic motivation. Second, we tested whether the perceived meaningfulness of working on the task differed between the giving and helping conditions, as predicted.

In the first pre-test, we recruited 30 participants in the same research lab and paid each participant \$2 for a 5-minute task and a follow-up questionnaire. We presented each participant with the two tasks: the hole-punching task and the “Fun Fact Trivia Q&A”. They were told they needed to punch at least 30 holes for the hole-punching task. Participants were free to switch between the two tasks during the five minutes, and did not earn money (either for themselves or for charity) by doing the hole-punching task.

In the allotted 5 minutes, participants punched 46.0 (SD = 31.0) holes on average, an average of 16 more than the 30 required, with only 50% of participants punching any more than required. In a short follow-up questionnaire, participants rated the hole-punching task as closer to “boring and pointless” (1) than to “fun and exciting” (7) ($M = 2.47$, $SD = 1.63$), and as significantly less interesting than the alternative “Fun Fact Trivia Q&A” task ($M = 4.77$, $SD = 1.55$; $t(29) = -5.17$, $p < .001$). This confirms that the hole-punching task elicits little intrinsic motivation.

We recruited another group of participants from the same population ($N = 70$, Age = 20.4, 52.9% Male) to read about the task, and rate the perceived meaningfulness of the task in either the helping condition or the giving condition, between-subjects. Results confirmed that the task was rated as more meaningful in the helping condition than the giving condition ($M_{\text{giving}} = 2.94$, $SD = 1.80$, $M_{\text{helping}} = 3.94$, $SD = 1.80$, $t(68) = 2.33$, $p < .05$).

Study 3A Results:

Seven participants who failed to follow the instructions (e.g., double-punched, or came out of the waiting room before 5 minutes) were excluded from analyses, leaving 105 participants.

Replicating the results observed in Study 2, participants in the helping condition outperformed those in the giving condition ($M_{\text{helping}} = 102.0$, $SD = 44.1$, $M_{\text{giving}} = 83.4$, $SD = 37.0$; $F(1,103) = 5.43$, $p < .05$, $d = .46$; see Figure 4). Both incentives were motivating, as participants in both the giving and the helping conditions punched more holes than in the no-incentive pre-test ($M_{\text{helping}} = 102.0$, $SD = 44.1$, vs. $M_{\text{pre-test}} = 46.0$, $SD = 31.0$; $t(132) = -6.33$, $p < .001$; $M_{\text{giving}} = 83.4$, $SD = 37.0$, vs. $M_{\text{pre-test}} = 46.0$, $SD = 31.0$; $t(132) = -4.183$, $p < .001$), inconsistent with a crowding-out account.

Likewise replicating Study 2, only three of the fifty-one participants in the giving condition (6%) donated their earnings to the charity, with the majority keeping money to themselves. Thus, while participants were highly motivated to help, working more for the charity-incentive than the self-incentive, they were also highly reluctant to give by donating some of their earnings when working for the self-incentive.

Similar to Study 2, we found no differences between the helping and giving conditions in self-reported happiness ($M_{\text{helping}} = 4.80$, $SD = 1.12$, $M_{\text{giving}} = 4.73$, $SD = 1.17$; $t(103) = .317$, *ns*), suggesting that the higher effort in the helping condition was not due to a stronger sense of obligation in the helping condition.

Study 3B Results

In Study 3B, participants first made two predictions about how much effort they would invest, one for each condition, before working on the task. After having been made aware of both possible incentives through the prediction questions, participants in Study 3B exerted marginally more effort for the self-incentive than the charity-incentive ($M_{\text{self-incentive}} = 86.7$, $SD = 36.6$, $M_{\text{charity=incentive}} = 71.2$, $SD = 32.1$; $F(1,72) = 3.79$, $p = .056$, $d = .45$; see Figure 2), contrary to Study 3A. Participants working for the self-incentive (in the giving conditions) exerted similar levels of effort in Studies 3A and 3B ($M_{\text{giving-3A}} = 83.4$, $SD = 37.0$, $M_{\text{giving-3B}} = 86.7$, $SD = 36.6$; $F(1, 83) = .160$, *ns*). However, participants working for the charity-incentive (in the helping conditions) worked

significantly less in Study 3B (after considering the unavailable self-incentive) than in Study 3A ($M_{\text{helping-3A}} = 102.0$, $SD = 44.1$, $M_{\text{helping-3B}} = 71.2$, $SD = 32.1$; $F(1, 92) = 14.0$, $p < .001$, $d = .80$).

Insert Figure 4 about here

These results suggest that merely considering self-interest undermined pro-social motivation, even when the self-incentive was unavailable to the participant. It is important to note that the differences between Study 3A and 3B were asymmetric, with awareness of both conditions reducing motivation in the helping condition but having no effect on the giving condition. This is consistent with our argument that the helping opportunity is motivating only to the degree that self-interest does not enter into consideration.

Participants' predictions of their own effort were similar between subjects ($M_{\text{helping}} = 112.4$, $SD = 79.0$, $M_{\text{giving}} = 123.8$, $SD = 91.1$; $t(72) = -.576$, *ns*), as well as within-subjects (in the helping condition: $M_{\text{for-charity}} = 112.4$, $SD = 79.1$, $M_{\text{for-self}} = 115.8$, $SD = 84.6$; $t(39) = -1.07$, *ns*; in the giving condition: $M_{\text{for-self}} = 123.8$, $SD = 91.1$, $M_{\text{for-charity}} = 126.9$, $SD = 109.1$; $t(33) = -.417$, *ns*). Hence, participants did not predict differences in their effort associated with different incentives, even within-subjects, suggesting that they did not hold a misbelief that working for the self-incentive would lead to higher effort and more money, contrary to the misprediction account.

Moreover, participants' predictions of similar effort between conditions were also inconsistent with the actual results in Study 3A, where people worked harder for the charity-incentive in the helping condition. This suggests that the greater effort observed in the helping conditions was likely due to greater persistence in the effort exertion process, rather than a stronger initial intention to benefit the charity than oneself.

Discussion

In sum, Study 3A replicated our key finding: people exerted more effort in a helping opportunity than in a giving opportunity. Also, consistent with the proposed willingness to help and reluctance to give, very few ended up donating in the giving condition. Study 3B showed that merely considering the alternative self-

incentive supplanted the pro-social effort, and that the discrepancy between effort exertion and choice cannot be explained by misprediction of motivation. When the option to pursue direct self-interest was not present, participants' persistent effort was motivated by indirect self-benefits, such as perceived meaningfulness. In Study 4, we will directly test this underlying process.

One limitation of the experimental paradigm used thus far was that while the option to donate was available at all times during the study, there was no specific ask, so whether and when an active choice was made is not known. In particular, if the participants made their decision about donation initially when they first heard about the charity, that choice might have had an influence on the subsequent effort. Conversely, if they only decided whether or not to donate after completing the task, then the choice might have been affected by the exerted effort. Therefore, in order to better understand these questions, we manipulate the timing of an active donation choice in Study 4.

STUDY 4: ROBUSTNESS TO THE TIMING OF CHOICE AND IMAGE MOTIVES

In this study, participants in two different giving conditions worked for a self-incentive and were presented with an active binary choice about whether or not to donate, either before or after the task. We also included a helping condition (with charity-incentive only), and added a self-benefiting-only condition (self-incentive without option to donate), in which the charity was not mentioned at all. We directly measured perceived meaningfulness after participants had completed the task, to test whether experiencing the opportunity to help indeed elicits a stronger sense of meaningfulness than does the opportunity to give.

Method

We paid 164 male participants ($M_{\text{age}} = 21.4$) \$2 each for a 10-min “Stepping Study” at a university research lab. Each participant was given the opportunity to use a step-climber for 5 minutes. Participants were run individually in a private room, and the number of steps was unobtrusively measured by a counter on the

machine, in order to minimize any social pressure. In addition to the base compensation for the study, participants earned one cent for each 4 stepping cycles (8 steps) they took on the machine. Participants were told that the stepping task was a voluntary and non-competitive task, and that the number of steps they took was completely up to them. Participants were randomly assigned to one of four between-subjects incentive conditions (helping, self-benefiting-only, pre-task-giving, and post-task-giving).

In the helping condition, the earnings were donated to a charity that helps people with spinal injuries walk again. In the self-benefiting condition, participants received the earnings and were not exposed to any information about the charity. In these two conditions, participants did not know about the existence of the alternative incentive. In the two giving conditions, participants were told about the charity, and that they would make a choice between earning money for the charity or keeping the earnings for themselves. Participants learned about the choice options before the stepping session, and made their choice on a computer screen either before doing the stepping task (pre-task-giving condition) or after the task (post-task-giving condition).

After the session, all participants filled out a follow-up survey on the computer. In the survey, participants rated their experience during the stepping session on two 7-point scales, from 1 (not happy at all) to 7 (very happy) for experienced happiness (*“How happy did you feel during the last 5 minutes?”*), and from 1 (not meaningful at all) to 7 (very meaningful) for experienced meaningfulness (*“How meaningful did you feel during the last 5 minutes?”*).

Results

Six participants failed to follow the instructions (e.g., started stepping without letting the experimenter know, jumped to the final survey before the stepping session) and were stopped from further participation and excluded from analysis, leaving 158 participants. During the debriefing following the experiment, none of the participant expressed doubts about the charity foundation or whether the money would be donated.

As in the prior studies, participants in the helping condition put in the most effort, outperforming those in the other three conditions ($M_{\text{helping}} = 297.7$, $SD = 72.8$, $M_{\text{pre-task-giving}} = 260.7$, $SD = 85.4$, $M_{\text{post-task-giving}} = 268.2$,

SD = 72.7, $M_{\text{self-benefiting-only}} = 251.5$, SD = 104.4; $t(154) = 2.44$, $p < .05$, $d = .46$; see Figure 5). Thus, the effort results again suggest a substantial pro-social motive. In contrast, when given an active choice, relatively few participants in both the pre-task (20.0%) and post-task giving conditions (24.4%) decided to donate the money, consistent with the prior studies. Thus, participants were more motivated by helping than by either giving or self-benefiting, yet when they had the option to donate, few chose to give.

Insert Figure 5 about here

These results support our proposition that when self-interest enters consideration, even if a decision has not yet been committed to, people's behavior will reveal less pro-sociality. We have proposed that when an effortful task is interpreted as helping others and direct self-interest is not a salient consideration, the task is perceived as meaningful and hence motivating. However, when people consider direct self-interest, the task is seen as less meaningful, and people are therefore less motivated. We found consistent support for this proposition in the prior studies, via prospective judgments of anticipated task meaningfulness. In this study, we also measured people's post-task experienced meaningfulness.

We find that participants in the helping condition derived higher meaningfulness from the task ($M_{\text{helping}} = 4.37$, SD = 1.34), compared with the other conditions, which did not differ from each other ($M_{\text{pre-task-giving}} = 3.77$, SD = 1.59, $M_{\text{post-task-giving}} = 3.76$, SD = 1.73, $M_{\text{self-benefiting-only}} = 3.88$, SD = 1.86). The post-task meaningfulness was significantly higher in the helping conditions than the other conditions ($M_{\text{helping}} = 4.37$, SD = 1.34 vs. $M_{\text{other}} = 3.80$, SD = 1.72; $t(156) = 2.14$, $p < .05$, $d = .37$; see Figure 6). This provides further evidence for our proposition that when people focus on the help that their efforts provided, they find the task to be more meaningful than if they consider direct self-interest for the same task. In contrast, we found no significant difference in reported happiness between the helping condition and other conditions ($M_{\text{helping}} = 4.55$, SD = 1.32, $M_{\text{pre-task-giving}} = 3.97$, SD = 1.47, $M_{\text{post-task-giving}} = 4.40$, SD = 1.30, $M_{\text{self-benefiting-only}} = 4.78$, SD = 1.22; $t(152) = -.685$, *ns*).

Insert Figure 6 about here

However, we only find a directional mediation of the effect of helping vs. other conditions on exerted effort by ratings of experienced meaningfulness (Sobel $Z = 1.40$, $p = 0.16$, see appendix). There are two factors that might have reduced our ability to detect the mediation. First, meaningfulness was measured post-task in Study 4, unlike all the prior studies. Post-effort, people generally want to feel that what they've done is meaningful (Festinger 1962), so measuring meaningfulness after participants have already invested in and completed the task may reduce the differences across conditions.

Furthermore, effort exerted was positively correlated with rated meaningfulness overall ($r = .16$, $p < .05$). Specifically, in the helping condition, participants who rated the task as more meaningful exerted significantly more effort ($r = .31$, $p < .05$), suggesting that perceived meaningfulness was a key factor in their persistence. In contrast, the level of effort in the other conditions did not significantly correlate with perceived meaningfulness ($r = .101$, ns), consistent with the idea that meaningfulness is no longer taken into account in the effort exertion decision, once self-interest is considered. While not definitive, our data suggest that when self-interest was highlighted in the decision context, not only was the task perceived as less meaningful, but meaningfulness may have also no longer been as relevant a consideration for effort investment.

Discussion of Alternative Accounts

Some researchers have found that people are generally more sensitive to the magnitude of self-incentives than of charity-incentive (Hsee and Rottenstreich 2004, Imas 2013). This differential-sensitivity account would suggest that the higher effort we observe in the helping vs. giving conditions would only occur for relatively low incentives. In fact, Imas (2013) suggests that when the self-incentive is sufficiently high, participants would both work harder for the self-incentive and choose the self-incentive. However, in Study 2 where we varied the incentives, our participants seem to show similar insensitivity towards both incentives in the tested range, and hence we replicated willingness to help and unwillingness to give for both lower and higher incentives. Moreover, results from Study 4 provide even stronger evidence against this account.

Participants in this study made an active choice of whether or not to donate in two conditions, while working for either the charity only or themselves only in the other two conditions. While Imas (2013) predicts that choice and effort would align with each other, we found that even though people worked harder for the charity-incentive, they still strongly preferred not to donate in the choice conditions. While we agree that extremely high incentives may lead to a consistent tendency to both work harder for the self and not donate, we do not find this differential sensitivity effect in the range that we tested.

In Study 4, we can also address several other theories that could provide an alternative account of some of the earlier results. First, the similar results in the two giving conditions in Study 4 are inconsistent with a potential dissonance reduction account. Cognitive dissonance theory (Festinger 1962) would suggest that people might exert less effort when they are attempting to reduce dissonance, such as after choosing to keep the money for themselves instead of donating it. However, we observe the same level of effort both before and after the active choice, as well as in the self-benefiting-only condition, when participants did not make a choice. The only participants who exerted more effort were those who were designated to work specifically to benefit others without the option to directly benefit themselves, who could be expected to experience the least dissonance.

A second alternative account is the endowment effect (Kahneman, Knetsch and Thaler 1991). In the giving scenario, participants might have perceived the benefit (e.g., the money they had earned) as theirs and thus be less willing to give it up than in the helping scenario, where participants might not have considered the benefit as theirs. This explanation overlaps with the self-interest consideration account that we have proposed, and is arguably consistent with the main results we found in Study 1 and Study 2. However, the endowment effect alone does not suffice to explain the results of Study 3, where merely considering a self-benefiting opportunity reduces the altruistic effort. Neither is it sufficient to explain the results of Study 4, where participants were less willing to donate even if the decision was made before working on the task. Therefore, we contend that while the endowment effect, and loss aversion in general, could have contributed to the reluctance to give in some studies, our overall findings are better explained by a differential focus on either the pursuit of direct self-interest or the pursuit of indirect self-benefits, such as meaningfulness.

Another potential concern arises from the argument that people's pro-social behaviors may reflect how they believe others would judge and react to their acts (Ariely et al. 2009; List 2007), as opposed to from their own internal intentions. According to this account, participants in the helping condition might have done more of the task due to self-presentation motives, rather than the positive indirect motives we propose. For this reason, the task in this study was conducted in private and with unobtrusive measurement of the effort, similar to the low social-pressure (control) condition in Ariely et al. (2009).

Furthermore, our findings are not consistent with a negative motive in the helping condition, such as a feeling of unavoidable obligation or a fear of being negatively judged by others for not working hard. There was no significant difference in self-reported happiness between the helping condition and the other conditions ($M_{\text{helping}} = 4.55$, $SD = 1.32$, $M_{\text{self-benefiting}} = 4.78$, $SD = 1.22$, $M_{\text{pre-task-giving}} = 3.97$, $SD = 1.47$, $M_{\text{post-task-giving}} = 4.40$, $SD = 1.30$; $t(152) = -.685$, *ns*). The consistent lack of differences in self-reported happiness across Studies 2 through 4 suggest that the higher levels of effort in the helping vs. giving conditions did not result in negative hedonic consequences that would be expected if people experienced the helping condition as coercive. In addition, if people felt obligated to work longer when earning for charity because of what others might think, we would expect them to also donate their earnings for the same reason, which we did not find.

In order to further test the possibility that social expectations might have affected our results, we conducted an additional post-test, using the paradigm in Study 4. Participants recruited online ($N = 145$, $M_{\text{age}} = 24.9$, $SD = 13.0$, 57% Male) were randomly assigned to one of three conditions (helping, giving, or self-benefiting-only), and each read about the Study 4 procedure in their corresponding condition. In the helping and self-benefiting-only conditions, participants were asked to estimate how favorably others would judge them if they did 100 steps, or if they did 400 steps, counterbalanced within-subjects. We selected 400 as near the 95th percentile and 100 as near the 5th percentile, based on results from Study 4. Participants in the giving condition were asked how favorably others would judge them if they chose to keep the money they earned and if they chose to donate the money (also counterbalanced within-subjects).

If participants' behaviors in our studies were primarily driven by image motives, then the observed pattern of behaviors in Study 4 should align with estimates of perceived favorability. First, on effort exertion, participants' estimates of perceived favorability should be more sensitive to the number of steps in the helping condition than in the self-benefiting-only condition. Specifically, participants should anticipate that doing only 100 steps in the helping condition results in relatively low favorability. Second, an image motive explanation of our choice findings would suggest that anticipated favorability should either be relatively insensitive to the choice between donating and keeping the money, or that keeping the earnings is seen more favorably than donating.

Participants' beliefs about perceived favorability did not support either test of the above account. First, taking fewer steps in the helping condition was not predicted to be seen as particularly unfavorable. Taking more steps was predicted to be judged more favorably, in both the helping condition ($M_{100\text{steps}} = 5.32$, $SD = 2.28$, $M_{400\text{steps}} = 8.20$, $SD = 2.16$, $t(49) = -9.54$, $p < .001$) and in the self-benefiting-only condition ($M_{100\text{steps}} = 4.74$, $SD = 1.67$, $M_{400\text{steps}} = 7.39$, $SD = 2.02$, $t(45) = -7.45$, $p < .001$). Overall, participants in the helping condition were judged more favorably than those in the self-benefiting-only condition, regardless of the number of steps they took ($M_{\text{helping}} = 6.76$, $SD = 1.95$, $M_{\text{self-benefiting-only}} = 6.07$, $SD = 1.40$, $t(94) = -2.02$, $p < .05$). A mixed ANOVA analysis revealed a significant main effect of number of steps ($F(1, 94) = 141.9$, $p < .001$) and of incentive type ($F(1, 94) = 3.97$, $p < .05$), but no interaction ($F(1, 94) = .241$, ns).

These results suggest that participants' beliefs about others' judgments did not provide them motives to do more steps in the helping condition. Likewise, participants' beliefs about others' judgment were inconsistent with the tendency not to donate. Choosing to work for the charity was predicted to elicit much more favorable judgment than was choosing to keep the incentive for one-self ($M_{\text{donating}} = 8.35$, $SD = 2.35$, $M_{\text{keeping}} = 3.80$, $SD = 1.83$; $F(1, 48) = 127.5$, $p < .001$).

Moreover, people were well-calibrated about how others would perceive their behavior, across the situations. In another post-test using similar procedures with a separate group of participants ($N = 84$) from the

same subject pool, we asked participants how favorably they would judge the behavior of other people in the stepping scenario, in each of the conditions. The results closely matched participants' predictions of social judgment favorability (see Appendix). Given people's beliefs about the image consequences of their behaviors as well as the actual image consequences of the behaviors, image concerns do not provide adequate motives for either working harder in the helping condition or for choosing not to give in the giving condition.

GENERAL DISCUSSION

Across four studies, we found that people were eager to help, yet reluctant to give. For the same pro-social opportunity, a helping framing elicited higher willingness to contribute than a giving framing. Moreover, while participants showed higher willingness to exert effort to benefit others (a helping opportunity), they were not as willing to allocate the resources to others rather than themselves when given a choice (a giving opportunity) within the same context. We argue that the consideration of direct self-interest crucially underlies these effects. While in a helping decision the implication for self-interest is typically implicit, a giving decision often directly pits one's direct self-interest against other's welfare. Therefore, consideration of direct self-interest often plays a more central role in a giving decision, whereas other motives, such as the pursuit of meaningfulness, may be stronger drivers in a helping decision.

It is useful to consider how our finding that people are willing to help but reluctant to give may relate to prior accounts of the motives underlying pro-social behavior. In general, a pro-social act can be attributed to three distinct categories of motives: ulterior motives (e.g., expecting reciprocity, gaining social approval and desirable reputation), pure altruism (genuine concern for other people's welfare), and "warm glow" (the satisfaction one gets simply from the act of altruism).

The pro-social effort we observed was not likely to be due to ulterior motives, since the study was conducted individually in private sessions, there were no opportunities for reciprocation, and participants'

behaviors do not match beliefs about social favorability (Study 4). Furthermore, ulterior motives would apply to both effort exertion and choices about whether to give, and would therefore not explain the observed discrepancy. Pure altruism likewise fails to provide a full account of our findings. While the high level of effort when working for the charity seems to suggest altruism, the lack of donation in the giving conditions is not consistent with this interpretation. Furthermore, altruism-motivated persistence would predict greater effort for a higher magnitude of charity-incentive (Studies 2A vs. 2B), due to the higher impact on others' welfare, which we did not observe. We have also ruled out motivational crowding-out (Studies 2 and 3), misprediction of motivation (Study 3), cognitive dissonance and endowment effects (Study 4).

Our findings seem most consistent with a “warm glow” motivation. However, while “warm glow” effects have been documented before (Andreoni 1990, Crumpler and Grossman 2008), little is known about the source of the experience of the “warm glow”. Our studies provide initial evidence that experienced meaningfulness may be an important component of the “warm glow” that people can gain from pro-social behaviors.

Importantly, we provide the first evidence that the act of helping, particularly via exerting effort to help others, may generate a stronger “warm glow” than the act of giving via resource allocation. This is because, as we have argued, once the pursuit of direct self-interest is deliberately considered, it dampens the importance of indirect self-benefits such as “warm glow”. More generally, our findings suggest that a crucial component of the “warm glow” that people gain from engaging in pro-social behaviors may be a sense of fulfilled meaningfulness, but only as long as it does not conflict with the pursuit of direct self-interest. In a sense, the “warm glow” shines brighter on its own - once self-interest enters into consideration, the cold glint of gold can outshine the “warm glow”.

Given the differences between helping and giving, it is important to note that most research on “warm glow” in the pro-social domain has focused on monetary donations (Andreoni 1990, Harbaugh 1998, Crumpler and Grossman 2008). Thus, prior research may have provided a fairly conservative test of “warm glow”, which may be substantially more relevant to helping decisions that don't involve a direct conflict with self-interest.

Conversely, “warm glow” in donation contexts may be facilitated by factors that enrich the meaning of donations, such as investing costly effort or even suffering (Olivola and Shafir 2013).

While we have focused on differences in meaningfulness as a primary distinction between the experienced consequences of helping and giving, future research should look into other psychological processes that contribute to “warm glow” and further differentiate between helping and giving decisions. Prior researchers have posited various basic psychological needs that people intrinsically strive for (Ryan and Deci 2000b), including the need for belonging, esteem, and self-actualization (Maslow 1943), as well as autonomy, personal growth and connection to a greater whole (Deci and Ryan 2000), beyond the sense of meaningfulness and purposefulness that we have explored.

Interpreting Prior Research in the Helping and Giving Framework

Our findings and the helping vs. giving distinction we have developed may help illuminate some prior findings. Based on large-scale surveys, Jackson et al. (1995) and Sokolowski (1996) reported that volunteering and donation, the two primary forms of helping and giving, correlate with different social ties and socio-economic variables. Moreover, while volunteering has been widely associated with improved psychological well-being, charitable giving is much less frequently reported to directly promote well-being. These observed differences are consistent with our findings that helping is more strongly associated by indirect “warm glow” benefits, such as meaningfulness, which can be largely over-ruled by direct self-interest in giving contexts.

Our findings may also help to explain some recent findings that are inconsistent with previous theories of prosociality. For example, Dunn, Aknin, and Norton (2008) have found that, although spending money on others can make people happier than spending on themselves, people are still more likely to choose to spend on themselves. Our findings suggest that people may be more willing to spend on others when the decision is not construed as a direct choice between spending on others vs. oneself, since it is difficult to forgo direct self-interest when it is a salient consideration. Furthermore, reframing spending on others as helping others achieve their goals, rather than giving resources away from oneself, may motivate people to do so. More research is needed on how to effectively reframe donation as helping.

One approach that might reframe donation as helping is suggested by the “time-ask effect,” in which people are more willing to donate when they first think of how much time they are willing to spend volunteering for a charity, compared with when they first think of how much money they are willing to donate (Liu and Aaker 2008). Conversely, people become less willing to volunteer when they are reminded of the monetary value of their time (DeVoe and Pfeffer 2007). We propose that these effects could also be explained by differences in the degree to which direct self-interest is being considered, unbounded by the specific type of resources considered. The deliberate consideration of monetary cost (Liu and Aaker 2008) and the opportunity cost of time (DeVoe and Pfeffer 2007) could both lead to more selfish decision outcomes. However, when such consideration is not salient, such as when only considering spending time and effort to help, the pursuit of meaning among other motives may loom larger and guide behaviors more effectively.

Lastly, our findings also present a novel perspective for the debate on the role of altruism in observed pro-social behaviors (e.g., Cialdini 1991, Batson 2010; List 2007). Although this paper cannot resolve the genuineness of altruism behind pro-social behaviors observed either in the laboratory or in the field, our results do provide useful insight into the malleability and susceptibility of revealed pro-social preferences. Specifically, research focusing on direct tradeoffs between self and others involving scarce resources, such as Dictator Games, might have underestimated the overall degree of people’s altruism, because the opportunity to derive meaning from the generous action could have been undermined by the salience of the opportunity to maximize direct self-interest. Are people egoistic or altruistic? The answer may depend on whether the situation shines a spotlight on self-interest, eclipsing the potential for meaningful effort.

Implications for Future Research

In addition to the immediate benefits we have discussed earlier, there may also be differences in the long-term benefits of helping and giving. People’s goals often extend beyond present circumstances and include having an overall purposeful life (Maslow 1943, Ryan and Deci 2000b). The pursuit of indirect self-benefit, in contrast with direct self-interest, may have less impact on a person’s immediate affective consequences and

hedonic well-being (Kraut 1979, Deci and Ryan 2008), yet more on eudaimonic well-being and longer-term psychological and physical well-being (Steger, Kashdan and Oishi 2008, Fredrickson et al. 2013).

In this view, our account shares interesting parallels with the widely documented tendency of consumers to be myopic, such that the presence of immediate rewards is prioritized over potentially larger long-term rewards (Ainslie 1975, Hsee, Yu, Zhang and Zhang 2003, Soman et al., 2005; see Urminsky and Zauberan 2014 for a review). Some selfish-seeming behaviors, such as when people choose to keep their money rather than donate to a cause they value, could then be understood as myopic, as small sums of money and the immediate benefits they buy can be gone soon, while meaningful experiences of helping others may bring lasting fulfillment. If direct self-interest is not made a salient option, the same person may be more likely to behave selflessly, and may potentially obtain higher personal welfare in the long run resulting from indirect self-benefits.

In the present paper, we only measured the immediate self-relevant consequences of helping and giving decisions. We find that, in the short-term, pro-social behaviors have a more consistent effect on eudaimonic well-being (meaningfulness) than hedonic well-being (happiness). Future research should examine the long-term consequences of helping and giving decisions, as well as whether people recognize and incorporate the potential long-term benefits into their decisions.

Practical Implications

Our account is consistent with the idea that conflict between direct self-interest and others' welfare can create an unpleasant tension (Mellers et al. 2010). In a recent paper, Berman and Small (2012) reported that people enjoy externally imposed self-interested outcomes more than when they have to choose the same outcome over others' welfare. Correspondingly, our research suggests that people might also benefit from not having to choose between pro-social and self-interested outcomes when engaging in pro-social tasks. Situations in which people are willingly assigned to pro-social tasks (rather than having to make choices) may lead people to perceive their efforts as more meaningful and hence motivate them to exert more persistent effort. Taken together, these findings suggest a counter-intuitive consequence for public welfare, that giving people salient

choices and complete information may sometimes reduce both individual happiness and pro-social motivation (Botti and Iyengar 2006).

The tension between the self-interest motive and the pro-social motive may also affect the effectiveness of cause-related marketing tactics. In some cases, participating in cause-related marketing programs such as donation conditional upon purchase may make consumers less happy, and subsequently generate less funds, compared with only asking consumers for charitable donations (Krishna 2011). Furthermore, donation requests emphasizing both potential benefits to others and benefits to the self can yield fewer donations than requests which stress only one benefit (Feiler, Leigh and Grant 2012). Our framework suggests that pro-social intentions are better preserved when separated from direct self-interest considerations. As a result, mixing direct self-interest and pro-social intentions at the point of purchase or donation can indeed reduce the motivation to participate. Therefore, we would predict that cause-related marketing may be more effective if the company's donations are either not conditional on consumers' actions or are linked to consumers' efforts on behalf of the company (such as recycling or spreading word of mouth), rather than advertising donations as conditional on consumers' purchases.

More broadly, our theory has important potential implications for charity marketers soliciting volunteer services and charitable donations, as well as for policy interventions to promote pro-social behaviors in general. First, as people may gain more "warm glow" from the act of helping than from the act of giving, pro-social requests may be more effective when presented in a "helping" frame, than in a "giving" frame. Likewise, requests that highlight effort exertion over resource allocation are likely to be more effective, and result in higher meaningfulness experienced by the helper, all else equal. For example, asking doctors to provide free medical consultation to the poor might therefore be more effective than asking them to donate money to the poor for their hospital visits, and potentially also help fulfill the doctors' need for meaning.

Since considering self-interest may supplant the meaningfulness motive and hence reducing the resulting pro-social intention, solicitations that even unintentionally prompt self-interest consideration in pro-social opportunities may be less effective. For example, asking volunteers to donate may actually undermine their

motivation to continue volunteering, particularly if they choose not to donate (Yeomans and Al-Ubaydli 2014). Likewise, if volunteers incur personal costs such as transportation or meals, and are provided with corresponding monetary compensation, they may be less motivated than if those needs are provided for directly. Moreover, research has shown that when people are being directly compensated for the pro-social behavior, their intention may be regarded as tainted by self-interest, and thus perceived as less desirable (Newman and Cain 2014).

In sum, selfless behaviors might indeed need a “self-less” environment to blossom. Small changes in the decision context that preclude the consideration of direct self-interest may enable potential donors and help providers to feel that the magnanimous effort they exerted makes their life more meaningful, enhance the marketing appeal of solicitation requests, and facilitate desirable social outcomes.

REFERENCES

- Ainslie, George (1975), "Specious reward: a behavioral theory of impulsiveness and impulse control," *Psychological Bulletin*, 82 (4), 463.
- Andreoni, James (1990), "Impure altruism and donations to public goods: a theory of warm-glow giving," *The Economic Journal*, 464-477.
- Andreoni, James, William Harbaugh, and Lise Vesterlund (2003), "The carrot or the stick: Rewards, punishments, and cooperation," *American Economic Review*, 893-902.
- Ariely, Dan, Anat Bracha, and Stephan Meier (2009), "Doing good or doing well? Image motivation and monetary incentives in behaving prosocially," *The American Economic Review*, 544-555.
- Ariely, Dan, Emir Kamenica, and Dražen Prelec (2008), "Man's search for meaning: The case of Legos," *Journal of Economic Behavior & Organization*, 67 (3), 671-677.
- Barone, Michael J., Anthony D. Miyazaki, and Kimberly A. Taylor (2000), "The influence of cause-related marketing on consumer choice: does one good turn deserve another?" *Journal of the Academy of Marketing Science* 28, no. 2 248-262.
- Batson, C. Daniel (2010), "Empathy-induced altruistic motivation." *Prosocial Motives, Emotions, and Behavior: The Better Angels of Our Nature*, 15-34.
- Bauman, Yoram and Elaina Rose (2011), "Selection or indoctrination: Why do economics students donate less than the rest?" *Journal of Economic Behavior & Organization*, 79 (3), 318-327.
- Baumeister, Roy F., and Kathleen D. Vohs (2002). "The pursuit of meaningfulness in life." *Handbook of Positive Psychology*, 608-618.
- Bendapudi, Neeli, Surendra N. Singh, and Venkat Bendapudi (1996), "Enhancing helping behavior: An integrative framework for promotion planning." *The Journal of Marketing*, 33-49.
- Berkowitz, Leonard (1972), "Social norms, feelings, and other factors affecting helping and altruism," *Advances in Experimental Social Psychology*, 6, 63-108.

- Berman, Jonathan Z. and Deborah A. Small (2012), "Self-Interest Without Selfishness The Hedonic Benefit of Imposed Self-Interest," *Psychological Science*, 23 (10), 1193-1199.
- Botti, Simona and Sheena S. Iyengar (2006), "The dark side of choice: When choice impairs social welfare," *Journal of Public Policy & Marketing*, 25 (1), 24-38.
- Camerer, Colin and Richard H. Thaler (1995), "Anomalies: Ultimatums, dictators and manners," *The Journal of Economic Perspectives*, 209-219.
- Cialdini, Robert B. (1991), "Altruism or egoism? That is (still) the question," *Psychological Inquiry*, 2 (2), 124-126.
- Cialdini, Robert B., Mark Schaller, Donald Houlihan, Kevin Arps, Jim Fultz, and Arthur L. Beaman (1987), "Empathy-based helping: is it selflessly or selfishly motivated?" *Journal of Personality and Social Psychology*, 52 (4), 749.
- Crumpler, Heidi and Philip J. Grossman (2008), "An experimental test of warm glow giving," *Journal of Public Economics*, 92 (5), 1011-1021.
- Cunningham, Michael R (1979) "Weather, mood, and helping behavior: Quasi experiments with the sunshine samaritan," *Journal of Personality and Social Psychology*, 37 (11), 1947.
- Dana, Jason, Roberto A. Weber, and Jason Xi Kuang (2007), "Exploiting moral wiggle room: experiments demonstrating an illusory preference for fairness," *Economic Theory*, 33 (1), 67-80.
- Darley, John M. and C. Daniel Batson (1973), ""From Jerusalem to Jericho": A study of situational and dispositional variables in helping behavior," *Journal of Personality and Social Psychology*, 27 (1), 100.
- Deaux, Kay (1974) "Anonymous altruism: Extending the lost letter technique," *The Journal of Social Psychology*, 92 (1), 61-66.
- Deci, Edward L. and Richard M. Ryan (2008), "Hedonia, eudaimonia, and well-being: An introduction," *Journal of Happiness Studies*, 9 (1), 1-11.
- DeVoe, Sanford E. and Jeffrey Pfeffer (2007), "Hourly payment and volunteering: The effect of organizational practices on decisions about time use," *Academy of Management*, 50 (4), 783-798.

- Dovidio, John F., Jane Allyn Piliavin, David A. Schroeder, and Louis Penner (2006), *The Social Psychology of Prosocial Behavior*, Lawrence Erlbaum Associates Publishers.
- Dunn, Elizabeth W., Bara B. Aknin, and Michael I. Norton (2008), "Spending money on others promotes happiness," *Science*, 319 (5870), 1687-1688.
- Engel, Christoph (2011), "Dictator games: A meta study," *Experimental Economics*, 14 (4), 583-610.
- Feiler, Daniel C., Leigh P. Tost, and Adam M. Grant (2012), "Mixed reasons, missed givings: The costs of blending egoistic and altruistic reasons in donation requests," *Journal of Experimental Social Psychology*, 48 (6), 1322-1328.
- Festinger, Leon (1962), *A Theory of Cognitive Dissonance*. Vol. 2. Stanford university press.
- Fiske, Alan Page (1991), *Structures of social life: The four elementary forms of human relations: Communal sharing, authority ranking, equality matching, market pricing*. Free Press, 1991.
- Flynn, Francis J. and Vanessa K. B. Lake (2008), "If you need help, just ask: underestimating compliance with direct requests for help," *Journal of Personality and Social Psychology*, 95 (1), 128.
- Forsythe, Robert, Joel L. Horowitz, Nathan E. Savin, and Martin Sefton (1994), "Fairness in simple bargaining experiments," *Games and Economic Behavior*, 6 (3), 347-369.
- Frank, Robert H., Thomas Gilovich, and Dennis T. Regan (1993), "Does studying economics inhibit cooperation?" *The Journal of Economic Perspectives*, 159-171.
- Frankl, Viktor E. *Man's Search for Meaning*. Simon and Schuster, 1985.
- Frederick, Shane, Nathan Novemsky, Jing Wang, Ravi Dhar, and Stephen Nowlis (2009), "Opportunity cost neglect," *Journal of Consumer Research*, 36 (4), 553-561.
- Goldsmith, Kelly and Ravi Dhar (2013), "Negativity bias and task motivation: Testing the effectiveness of positively versus negatively framed incentives," *Journal of Experimental Psychology: Applied*, 19 (4), 358.
- Goswami, Indranil and Oleg Urminsky (2014), "More Time, More Work: How Non-diagnostic Time Limits Bias Estimates of Project Duration and Scope," working paper.

- Grant, Adam M. and David A. Hofmann (2011), "It's Not All About Me Motivating Hand Hygiene Among Health Care Professionals by Focusing on Patients," *Psychological Science*, 22 (12), 1494-1499.
- Grant, Adam and Jane Dutton (2012), "Beneficiary or Benefactor Are People More Prosocial When They Reflect on Receiving or Giving?" *Psychological Science*, 23 (9), 1033-1039.
- Grant, Adam M. and Sabine Sonnentag (2010), "Doing good buffers against feeling bad: Prosocial impact compensates for negative task and self-evaluations," *Organizational Behavior and Human Decision Processes*, 111 (1), 13-22.
- Haley, Kevin J. and Daniel M. T. Fessler (2005), "Nobody's watching?: Subtle cues affect generosity in an anonymous economic game," *Evolution and Human Behavior*, 26 (3), 245-256.
- Harbaugh, William T. "What do donations buy?: A model of philanthropy based on prestige and warm glow." *Journal of Public Economics* 67, no. 2 (1998): 269-284.
- Hsee, Christopher K., Fang Yu, Jiao Zhang, and Yan Zhang (2003), "Medium maximization," *Journal of Consumer Research*, 30 (1), 1-14.
- Hsee, Christopher K. and Rottenstreich, Yuval (2004), "Music, pandas, and muggers: on the affective psychology of value," *Journal of experimental psychology. General*, 133 (1), 23–30.
- Imas, Alex (2013), "Working for "Warm Glow": On the Benefits and Limits of Prosocial Incentives," , forthcoming, *Journal of Public Economics*.
- Irwin, Terence H. "Permanent Happiness: Aristotle and Solon." (1985).
- Jackson, Elton F., Mark D. Bachmeier, James R. Wood, and Elizabeth A. Craft (1995), "Volunteering and charitable giving: Do religious and associational ties promote helping behavior?" *Nonprofit and Voluntary Sector Quarterly*, 24 (1), 59-78.
- Kahneman, Daniel, Edward Diener, and Norbert Schwarz (1999), *Well-being: Foundations of hedonic psychology*. Russell Sage Foundation.
- Kahneman, Daniel, Jack L. Knetsch, and Richard H. Thaler (1991), "Anomalies: The endowment effect, loss aversion, and status quo bias," *The Journal of Economic Perspectives*, 193-206.

- Koschate-Fischer, Nicole, Isabel V. Stefan, and Wayne D. Hoyer. "Willingness to pay for cause-related marketing: the impact of donation amount and moderating effects." *Journal of Marketing Research* 49, no. 6 (2012): 910-927.
- Krishna, Aradhna (2011), "Can supporting a cause decrease donations and happiness? The cause marketing paradox," *Journal of Consumer Psychology*, 21 (3), 338-345.
- Kraut, Richard (1979), "Two conceptions of happiness," *The Philosophical Review*, 167-197.
- Isen, Alice M., and Paula F. Levin (1972), "Effect of feeling good on helping: cookies and kindness." *Journal of Personality and Social Psychology* 21, no. 3, 384.
- Levitt, Steven D. and John A. List (2007), "What do laboratory experiments measuring social preferences reveal about the real world?" *The Journal of Economic Perspectives*, 153-174.
- List, John A. (2007), "On the interpretation of giving in dictator games," *Journal of Political Economy*, 115 (3), 482-493.
- Liu, Wendy and Jennifer Aaker (2008), "The happiness of giving: The time-ask effect," *Journal of Consumer Research*, 35 (3), 543-557.
- Marwell, Gerald and Ruth E. Ames (1981), "Economists free ride, does anyone else?: Experiments on the provision of public goods, IV," *Journal of Public Economics*, 15 (3), 295-310.
- Maslow, Abraham Harold. "A theory of human motivation." *Psychological Review* 50, no. 4 (1943): 370.
- Meier, Stephan and Alois Stutzer (2008), "Is volunteering rewarding in itself?" *Economica*, 75 (297), 39-59.
- Mellers, Barbara A., Michael P. Haselhuhn, Philip E. Tetlock, José C. Silva, and Alice M. Isen (2010), "Predicting behavior in economic games by looking through the eyes of the players," *Journal of Experimental Psychology: General*, 139 (4), 743.
- Mikulincer, Mario, Phillip R. Shaver, Omri Gillath, and Rachel A. Nitzberg (2005), "Attachment, caregiving, and altruism: boosting attachment security increases compassion and helping," *Journal of Personality and Social Psychology*, 89 (5), 817.
- Miller, Dale T (1999), "The norm of self-interest," *American Psychologist*, 54 (12), 1053.

- Newman, George E. and Daylian M. Cain (2014), "Tainted Altruism When Doing Some Good Is Evaluated as Worse Than Doing No Good at All," *Psychological science*, 25 (3), 648-655.
- Olivola, Christopher Y. and Eldar Shafir (2013), "The martyrdom effect: When pain and effort increase prosocial contributions," *Journal of Behavioral Decision Making*, 26 (1), 91-105.
- Orhun, Yesim (2014), "Reciprocating to Strategically Motivated Kindness", working paper.
- Piliavin, Jane A. and Erica Siegl (2007), "Health benefits of volunteering in the Wisconsin longitudinal study," *Journal of Health and Social Behavior*, 48 (4), 450-464.
- Puntoni, Stefano, Steven Sweldens, and Nader T. Tavassoli (2011), "Gender identity salience and perceived vulnerability to breast cancer," *Journal of Marketing Research*, 48 (3), 413-424.
- Rottenstreich, Yuval and Ran Kivetz (2006), "On decision making without likelihood judgment," *Organizational Behavior and Human Decision Processes*, 101 (1), 74-88.
- Ryan, Richard M. and Edward L. Deci (2000a), "When rewards compete with nature: The undermining of intrinsic motivation and self-regulation," in *Intrinsic and Extrinsic Motivation: The Search for Optimal Motivation and Performance*, Carol Sansone and Judith M. Harackiewicz, eds. San Diego, CA, US: Academic Press, 13-54.
- Ryan, Richard M. and Edward L. Deci (2000b), "Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being," *American Psychologist*, 55 (1), 68.
- Sappington, A. A., John Bryant, and Connie Oden (1990) "An experimental investigation of Viktor Frankl's theory of meaningfulness in life." In *International Forum for Logotherapy*. Viktor Frankl Inst of Logotherapy.
- Schwartz, Carolyn E. and Rabbi M. Sendor (1999), "Helping others helps oneself: response shift effects in peer support," *Social Science & Medicine*, 48 (11), 1563-1575.
- Shang, Jen, Americus Reed, and Rachel Croson (2008), "Identity congruency effects on donations," *Journal of Marketing Research*, 45 (3), 351-361.
- Small, Deborah A. and Nicole M. Verrochi (2009), "The face of need: Facial emotion expression on charity advertisements," *Journal of Marketing Research*, 46 (6), 777-787.

- Smith, Terry (2007), "The existential consumption paradox: an exploration of meaning in marketing," *The Marketing Review*, 7 (4), 325-341
- Sokolowski, S. Wojciech (1996), "Show me the way to the next worthy deed: Towards a microstructural theory of volunteering and giving," *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 7 (3), 259-278.
- Soman, Dilip, George Ainslie, Shane Frederick, Xiuping Li, John Lynch, Page Moreau, Andrew Mitchell, Daniel Read, Alan Sawyer, Yaacov Trope, Klaus Wertenbroach, and Gal Zauberman (2005), "The psychology of intertemporal discounting: Why are distant events valued differently from proximal ones?" *Marketing Letters*, 16 (3-4), 347-360.
- Switzer, Galen E., Roberta G. Simmons, and Mary Amanda Dew (1996), "Helping unrelated strangers: physical and psychological reactions to the bone marrow donation process among anonymous donors1," *Journal of Applied Social Psychology*, 26 (6), 469-490.
- Tan, Hui Bing and Joseph P. Forgas (2010), "When happiness makes us selfish, but sadness makes us fair: Affective influences on interpersonal strategies in the dictator game," *Journal of Experimental Social Psychology*, 46 (3), 571-576.
- Thaler, Richard (1980), "Toward a positive theory of consumer choice." *Journal of Economic Behavior & Organization*, 1 (1), 39-60.
- Thoits, Peggy A. and Lyndi N. Hewitt (2001), "Volunteer work and well-being," *Journal of Health and Social Behavior*, 115-131.
- Thomas, Kenneth W. and Betty A. Velthouse (1990), "Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation," *Academy of Management Review*, 15 (4), 666-681.
- Urminsky, Oleg and Adelle X. Yang (2014), "Outcome neglect: How guessing heuristics supersede expected value," working paper.
- Varadarajan, P. Rajan and Anil Menon (1988), "Cause-related marketing: A coalignment of marketing strategy and corporate philanthropy," *The Journal of Marketing*, 58-74.

- Warneken, Felix and Michael Tomasello (2006), "Altruistic helping in human infants and young chimpanzees," *Science*, 311 (5765), 1301-1303.
- Weinstein, Netta and Richard M. Ryan (2010), "When helping helps: autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient," *Journal of Personality and Social Psychology*, 98 (2), 222.
- Wheeler, Judith A., Kevin M. Gorey, and Bernard Greenblatt (1988), "The beneficial effects of volunteering for older volunteers and the people they serve: A meta-analysis," *The International Journal of Aging and Human Development*, 47 (1), 69-79.
- Winterich, Karen Page and Michael J. Barone (2011), "Warm glow or cold, hard cash? Social identity effects on consumer choice for donation versus discount promotions," *Journal of Marketing Research*, 48 (5), 855-868.

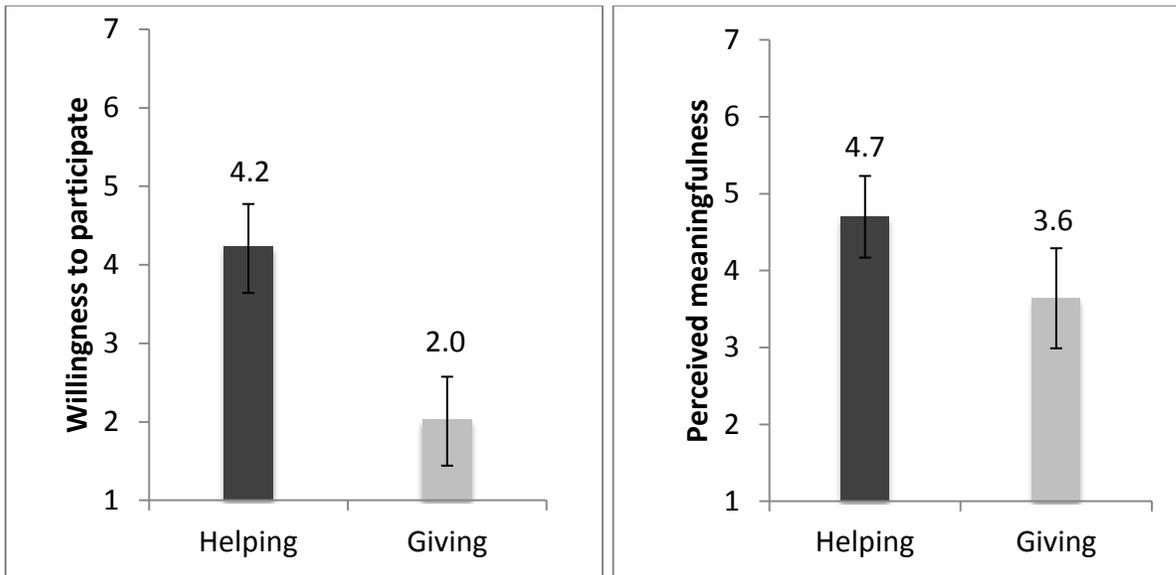


Figure 1. Participants were more willing to comply with the same charity request when it is framed as a helping opportunity (exerting effort) than a giving opportunity (allocating resources) in Study 1. They also perceived higher meaningfulness in the former than in the latter condition. Error bars for all figures represent the 95% C. I.

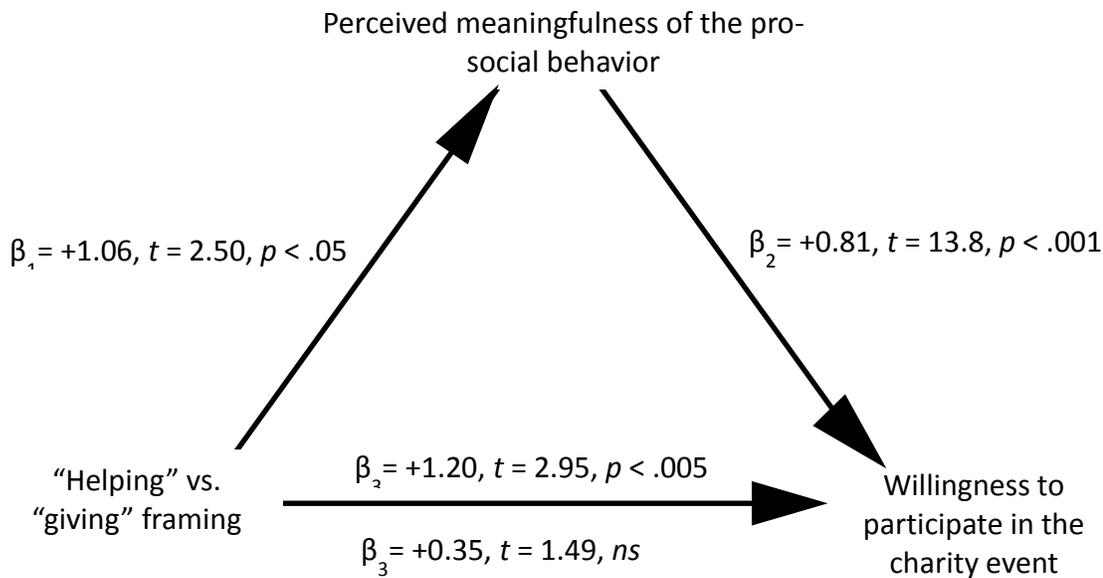


Figure 2. Perceived meaningfulness fully mediates the effect of framing on the willingness to comply with the pro-social request.

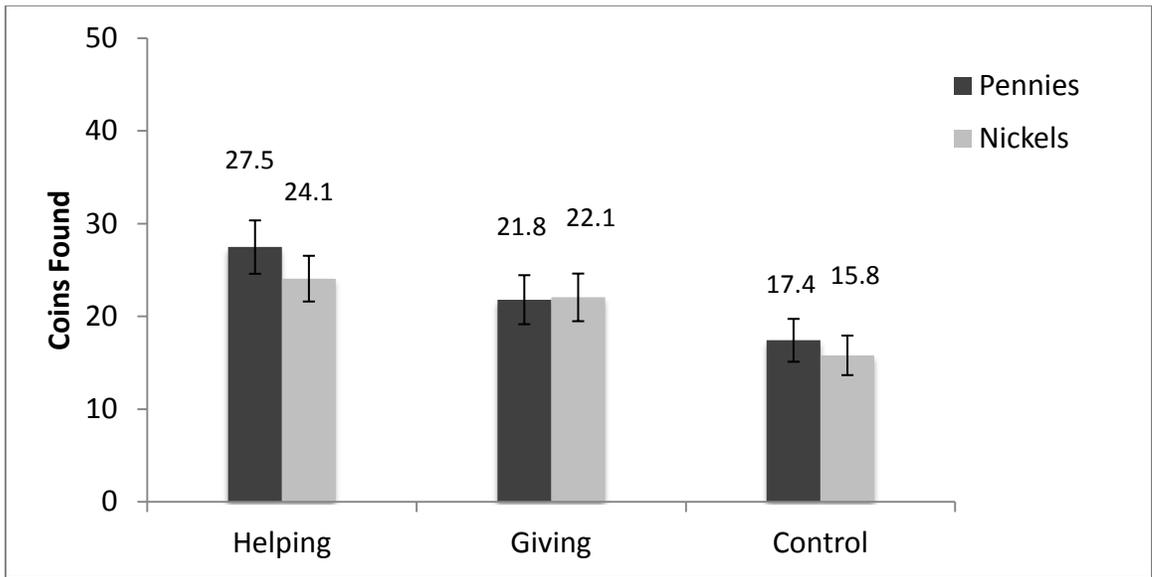


Figure 3. Participants found more coins in the helping condition (for charity-incentive) than the giving condition (for self-incentive with option to donate) and control condition (for no-incentive) in Study 2. The magnitude of incentive (pennies vs. nickels) had no effect.

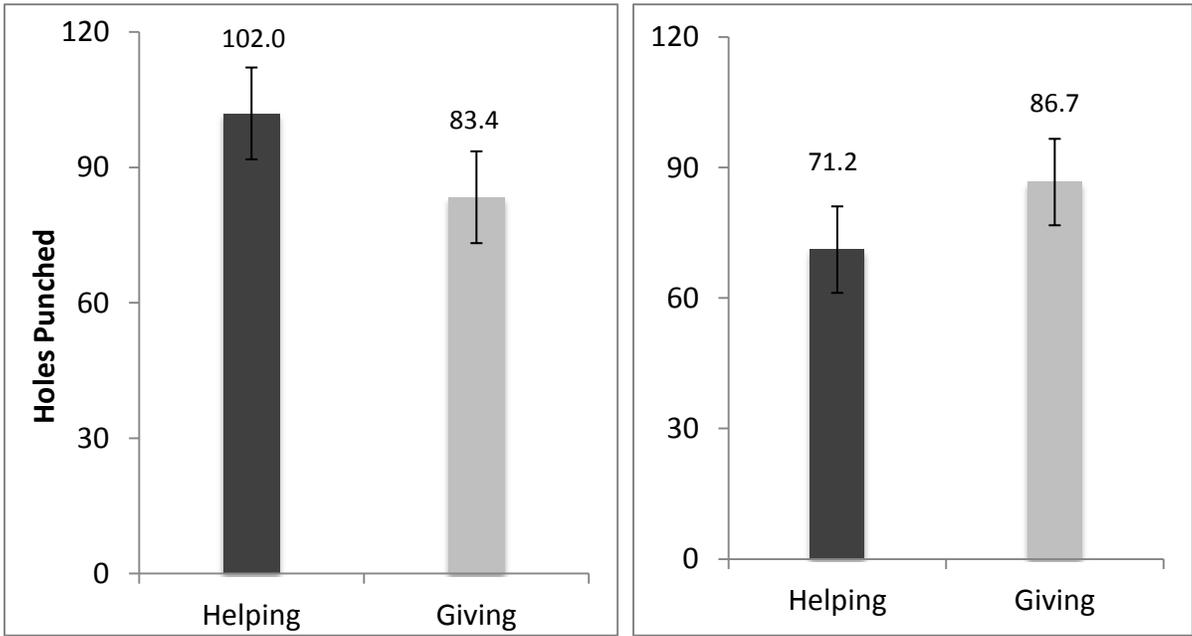


Figure 4. Participants punched more holes for the charity-incentive (in the helping conditions) when they were unaware of the alternative self-incentive in Study 3A; but participants who were made aware of the alternative self-incentive were less motivated by the charity-incentive in Study 3B. Participants working for the self-incentive who know about the alternative charity-incentive (in the giving conditions) punched similar number of holes between Study 3A and 3B.

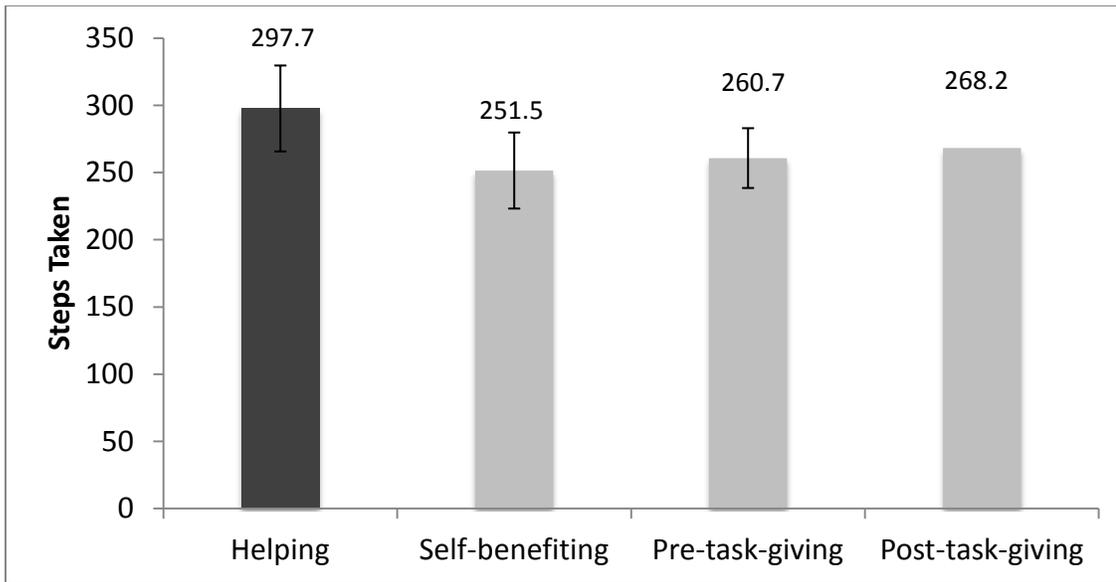


Figure 5. Participants took the most steps in the helping condition than the other three conditions in Study 4.

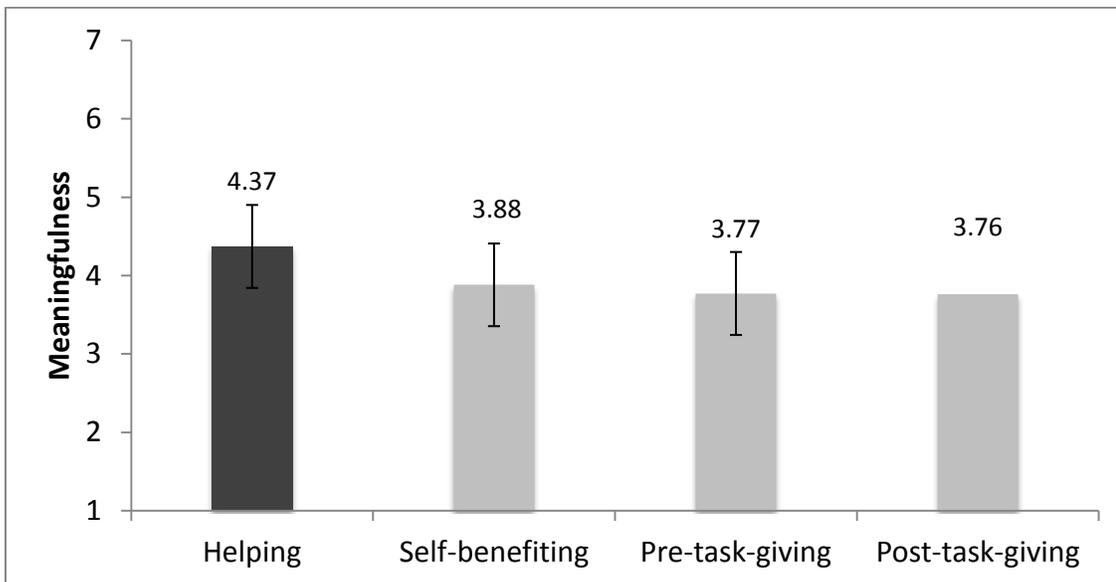


Figure 6. Participants experienced the task to be the most meaningful in the helping condition in Study 4.

SUPPLEMENTARY APPENDIX 1: STUDY METHODS

Study 2

Procedure for the Pretest

Participants (N=60) were randomly assigned to either an effort exertion condition, or a resource allocation condition. They were asked to imagine they were in an experimental scenario. In the effort exertion condition, they read:

“You are given a task in which you can exert effort to raise funds for a local children's charity. In this task, you can exert as much effort as you want. The more effort you exert, the more funds you will raise. All funds raised will be directly transferred to a local children's charity, to improve local children's health and living environment.”

In the resource allocation condition, they read:

“You are given a task in which you can earn money and donate any amount of it to a local children's charity. In this task, you can earn as much money as you want. The more money you earn, the more you can donate if you choose to. All donations will be transferred to a local children's charity, to improve local children's health and living environment.”

After that, participants were asked:

“If you were in this scenario, would you consider your behavior primarily as helping or giving?”

Then they rated on a 7-point bipolar scale from *“I view my behavior primarily as helping”* (1) to *“I view my behavior primarily as giving”* (7).

Procedure for Study 2A

The experimenter first led each participant into a waiting room upon their arrival and explained the basic rules of the lab (e.g., no use of cellphone or other electronic gadgets during the experiments). A big poster of a local children's charity foundation (see Figure 1) hung on the wall next to the participant's seat featuring happy children, and a file folder containing contact, tax and other information about the foundation sat on the desk in front of the participant. The experimenter briefly introduced the foundation to each participant, informed them that the charity had been recently collaborating with the lab, and that participants could donate any amount of their earning to the charity at any time, just by letting the experimenter know.

Confirming that the participants understood the information (and answering any questions), the experimenter told the participant that they had to wait 10 minutes before the last participant finishes the “Coin Flipping Study” in the experimental room. The experimenter said:

“You'll need 10 pennies in the coin flipping study, but we just ran out of prepared pennies, so here is something you can do while you wait.”

Then he showed the participant a big bowl in which 50 US pennies were mixed with about 1000 foreign coins, and said:

“Here is a bowl of mixed coins. We had some US pennies accidentally mixed up with these foreign coins from a previous study. Since you’ll need ten pennies in the upcoming coin flipping study, you may as well find ten pennies from the bowl while you wait. We won’t need more than ten pennies in the study, but after you find ten, you may keep searching for more if you want.”

Participants were also told that they could watch animal documentary video clips on the computer adjacent to them at anytime during the wait, should they not want to find more pennies.

The coin searching session lasted for 6 minutes for each participant, and participants were alone in the room during the search. When the time was up, the experimenter came back into the room, counted the pennies, and led participants to the experimental room for the “Coin Flipping Study” where they were asked to flip ten pennies and recall the pattern after a short break. Participants filled out a short questionnaire reporting their happiness during the coin-searching task and demographic information, and were paid upon completion of the whole experiment. The collected donations were transferred to the charity after the study ended.

Participants in Study 2B were recruited at the same research lab, instructed by the same experimenter, immediately after Study 2A had been run, and the exact same procedure was used, except that nickels were used instead of pennies. Participants in Study 2A were excluded from participating in Study 2B.

Study 3

Procedure for Study 3A

Upon each participant’s arrival, the experimenter explained the basic rules of the lab (e.g., no use of cellphone or other electronic gadgets during the experiments), and introduced the same charity and donation option to them as in Study 2. Participants were run individually. The same poster of the charity (see Figure 1) was on the wall next to the participants, and related information was available on a desk for participants to read if they had any questions. Before participants started the “Number Guessing” study, the experimenter told participants that due to some technical issues, they had to wait for about five to ten minutes before entering the study, and that they could take part in another study while waiting. Then the experimenter showed participants a handheld hole-puncher and a stack of cards, each with 30 black dots printed on one side. The task was to accurately punch out the dots with the hole-puncher, which was calibrated to be heavy and difficult to use in initial tests.

The experimenter told participants that the hole-punching task was not a competitive task, the purpose was for the experimenter to collect punched cards for another study, and only 30 more holes on the cards were needed now. Nonetheless, the experimenter told the participants that they could do more and would still be paid for the extra work. If participants did not want to punch more holes beyond the required amount, then they could engage in an alternative task, reading “Fun Fact Trivia Q&A” where they would read Trivial Pursuit questions and match their answers to a separate answer sheet.

Five minutes later, the experimenter counted the holes punched and led the participant to the “Number Guessing” study. Participants filled out a short questionnaire, which included measures of happiness during the coin-searching task, and were paid upon completion of the whole experiment. Donations were transferred to the charity after the study was completed.

On average, participants punched 93.0 holes (SD =34.9). Five participants punched less than the 30 required holes (three in the charity-incentive condition, two in the self-incentive condition), and were excluded before data analysis.

Procedure for Study 3B

The experimental stimuli used in Study 3B were identical to Study 3A. Participants were recruited at the same research lab, 6 months later than Study 3A. No difference was found in the demographics information (Study 3A: N=105, M_{age}=20.0, Male=53.0%; Study 3B: N=74, M_{age}= 20.3, Male=51.4%) between Study 3A and Study 3B.

Participants were randomly assigned to one of two between-participants conditions (helping/charity-incentive vs. giving/self-incentive), but those in both conditions initially did not learn about the alternative incentive and were not given a choice to donate. Participants were then told they would take part in a hole-punching task for 5 minutes. The task was framed as a voluntary pretest for a future study, and not a competitive test, so that participants were free to punch as many or as few holes, and could engage in the alternative task if they preferred, as in Study 3A. Participants in the self-incentive condition were told they would be paid one cent for each hole they punched whereas participants in the charity-incentive condition were told one cent would be donated to the charity for each hole they punched.

Before starting the task, participants were asked to first punch 15 accurate holes to test out the hole-puncher. Afterwards, they filled out a short prediction questionnaire. They first predicted how many holes they would punch in the following five minutes, and were only aware of the one incentive that applied to them when making their first prediction. Next, they read a hypothetical scenario describing the alternative incentive used in the other condition and estimate how many holes they would punch if they had the alternative incentive.

After finishing the questionnaire, participants were left alone in the room to work on the task. The experimenter returned in five minutes, paid those participants who were initially assigned to the self-incentive, and put money in an envelope addressed to the charity for participants who were initially assigned to the charity-incentive.

Study 4

Procedure for Study 4

Only male participants were recruited in order to minimize the variance of performance on the physical exercise task.

Participants were individually shown into an experimental room with a step climber, a chair, a desk, and a desktop computer. The experimenter explained the basic rules of the lab (e.g., no use of cellphone or other electronic gadgets during the experiments) and gave participants a brief introduction about the study. They told participants that they could freely use the step climber for 5 minutes, and that afterwards they would fill out a follow-up questionnaire about the experience. Participants were paid a \$2 base rate for the entire study. In addition, each 4 stepping cycles (8 steps) they completed on the machine earned one cent.

The experimenter then demonstrated to the participant how to use the step climber and asked the participant to try a few steps. Afterwards, the participant was told to sit down in front of the computer, and read and follow the instructions provided on the screen. Then the experimenter left the participant alone in the room.

Participants were randomly assigned to one of four incentive conditions. In the helping (charity-incentive) condition, participants learned about a charity campaign “Bring Zack Back Home,” the aim of which is to establish a rehabilitation center in Kenya to help people with spinal injuries stand and walk again. The poster was shown to participants in a folder (see Figure 2). Participants read that the more steps they took on the step climber, the more money would be donated to the charity. In the self-benefiting-only (self-incentive) condition, participants read that the more steps they took on the step climber, the more money they would receive to keep. In these two conditions, participants were not aware of the different incentive in the other condition.

In the two giving conditions, participants were informed of both of the above options, and they were asked to make a choice on the computer screen: either take steps to raise funds for charity, or earn money from taking steps. In the pre-task giving condition, participants directly made their choice before beginning the task. In the post-task giving condition, they were asked to think about their choice and were told that they would make their choice after the stepping session was finished.

After that, the participants called the experimenter as instructed. The experimenter returned, confirmed that participants understood all the instructions, asked if they had any questions about the charity foundation in those conditions where participants had learned about it, and answered any questions to ensure participants trusted the validity of the charity. The experimenter then left the participant for a 5-minute session, during which the participant could freely take steps on the step climber, alone and unmonitored. The cumulative step count appeared on a small LCD screen on the top of the machine in an increasing number, and did not specify each individual’s total steps taken. The experimenter recorded the cumulative count before and after each participant’s session in order to calculate the participant’s number of steps. Participants were told both verbally and on the computer the screen that it was a non-competitive voluntary test, and that how many steps they took was completely up to them. In order to facilitate the follow-up process measures, we did not offer an alternative task in this study.

When time was up, the experimenter re-entered the room and asked the participant to fill out a brief follow-up survey on the computer. In the survey, participants in the post-task choice condition made their choice between keeping and donating their earnings on the screen. All participants answered questions about their experience during the stepping session, including how happy they felt, and how meaningful they found the task. Similar wording was used as in Study 1.

Finally, the experimenter read the total count on the step climber, and calculated the compensation for each participant. The participant was then paid by the lab manager, who was not involved in the experimental procedure.

Procedure for Post-test I in Study 4: Anticipated social desirability

Participants recruited online ($N = 145$, $M_{\text{age}} = 24.9$, $SD = 13.0$, 57% Male) were randomly assigned to one of three conditions (helping, self-benefiting-only, and giving) and read about the applicable study procedure. We asked the helping and self-benefiting-only conditions: “*Imagine if you took 100 steps [or 400 steps, counterbalanced] in this task, how favorably do you think others will judge you?*” After that, we asked: “*Now imagine instead if you took 400 steps [or 100 steps, counterbalanced] in this task, how favorably do you think others will judge you?*” We selected 400 as near the 95th percentile and 100 as near the 5th percentile based on Study 4.

In the giving condition, we asked: “*Imagine if you chose to work for the charity foundation [or yourself; counterbalanced] in this task, how favorably do you think others will judge you?*” Participants rated favorability on a 10-point scale.

Procedure for Post-test II in Study 4: Actual social desirability

Participants recruited online ($N = 145$, $M_{\text{age}} = 24.9$, $SD = 13.0$, 57% Male) were randomly assigned to one of three conditions (helping, self-benefiting-only, and giving) and read about the applicable study procedure. We asked the helping and self-benefiting-only conditions: “*Imagine if a participant in this study took 100 steps [or 400 steps, counterbalanced] in this task, how favorably will you judge this person?*” After that, we asked: “*Now imagine instead if a participant took 400 steps [or 100 steps, counterbalanced] in this task, how favorably will you judge this person?*” We selected 400 as near the 95th percentile and 100 as near the 5th percentile based on Study 4, as in Post-test I for anticipated social desirability.

In the giving condition, we asked: “*Imagine if a participant chose to work for the charity foundation [or yourself; counterbalanced] in this task, how favorably will you judge this person?*” Participants rated favorability on a 10-point scale.

Results of Post-test II in Study 4: Actual social desirability

As noted in the paper, people’s predictions in post-test I were fairly accurate. Taking more steps was indeed judged more favorably than taking less, both in the helping condition ($M_{100\text{steps}} = 5.57$, $SD = 1.77$, $M_{400\text{steps}} = 7.64$, $SD = 1.59$; $t(49) = -7.24$, $p < .001$) and the self-benefiting-only condition ($M_{100\text{steps}} = 6.04$, $SD = 2.38$, $M_{400\text{steps}} = 7.04$, $SD = 2.19$; $t(27) = -3.00$, $p < .01$). The differences between doing more vs. fewer steps were similar in the helping and self-benefiting-only conditions (for 100 steps: $t(54) = -.828$, ns; for 400 steps, $t(54) = 1.19$, ns). Slightly different from Post-test I, no main effect was observed between the helping and self-benefiting-only condition ($F(1, 54) = 0.021$, ns).

On the other hand, choosing to work for the charity was judged much more favorably than choosing to benefit the self ($M_{\text{donating}} = 8.21$, $SD = 1.62$, $M_{\text{keeping}} = 4.82$, $SD = 1.83$, $t(27) = 7.23$, $p < .001$).

Figure 1. Charity poster used in Study 2 and Study 3.

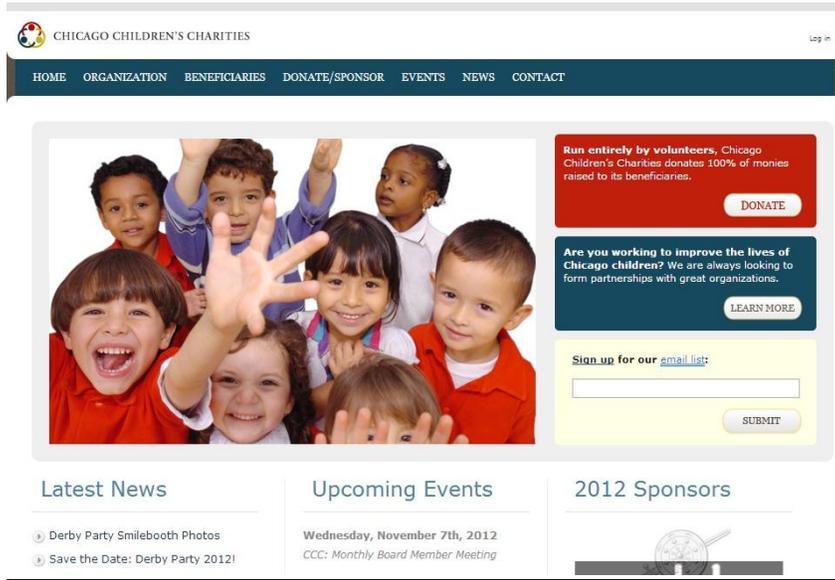


Figure 2. Charity poster used in Study 4



SUPPLEMENTARY APPENDIX 1: DETAILED STATISTICAL ANALYSES

Table 1: Mediation Tables in Study 1

Model 1: Helping vs. Other Conditions on Perceived Meaningfulness					
	Unstandardized Coefficients		Standardized Coefficients	<i>T</i>	<i>p</i>
	B	Std. Error	Beta		
Helping vs. Giving Framings	-1.064	0.425	-0.268	-2.504	0.014
Model 2: Helping vs. Giving Framings on Willingness to Participate					
	Unstandardized Coefficients		Standardized Coefficients	<i>T</i>	<i>p</i>
	B	Std. Error	Beta		
Helping vs. Giving Framings	-1.202	0.408	-0.311	-2.946	0.004
Model 3: Perceived Meaningfulness on Willingness to Participate in the Presence of Helping vs. Giving Framings					
	Unstandardized Coefficients		Standardized Coefficients	<i>T</i>	<i>p</i>
	B	Std. Error	Beta		
Helping vs. Giving Framings	-0.345	0.232	-0.089	-1.487	0.141
Perceived Meaningfulness	0.805	0.059	0.827	13.763	0.000

Sobel $Z = 2.46, p = 0.014$

Table 2. The Marginally Significant Happiness Difference between Conditions Was Primarily Driven by Difference in Meaningfulness

Model 2: Helping vs. Giving Framings on Willingness to Participate					
	Unstandardized Coefficients		Standardized Coefficients	<i>T</i>	<i>p</i>
	B	Std. Error	Beta		
Helping vs. Giving Framings	-0.811	0.435	-0.203	-1.866	0.066
Model 3: Perceived Meaningfulness on Willingness to Participate in the Presence of Helping vs. Giving Framings					
	Unstandardized Coefficients		Standardized Coefficients	<i>T</i>	<i>p</i>
	B	Std. Error	Beta		
Helping vs. Giving Framings	0.086	0.257	0.022	0.337	0.737
Perceived Meaningfulness	0.844	0.065	0.838	13.045	0.000

Table 3: ANOVA For the Number of Coins Found in Study 2

Source	Sum of Squares	<i>F</i>	<i>p</i>
Intercept	154092.521	65.209	0.015
Magnitude of Incentives	211.586	2.223	0.274
Type of Incentives	4729.734	24.85	0.039
Magnitude X Type	190.329	1.021	0.361
Error	30763.96	-	-

Table 4: Comparing Base-line Effort between Study 2A and 2B

	Means	SD
No-incentive Condition Using Pennies (N = 53)	17.4	8.59
No-incentive Condition Using Nickels (N = 54)	15.8	7.99
	<i>t</i> (105) = 1.01	<i>p</i> = .315

Table 5: Independent Samples Test for First Prediction Between Conditions in Study 3

	<i>t</i>	<i>p</i>
Between Conditions	-0.576	0.566

Paired Samples Test Between First and Second Predictions Within Conditions

	<i>t</i>	<i>p</i>
Self-incentive Condition	-1.067	0.293
Charity-incentive Condition	-0.417	0.680

Table 6: Correlations Between Number of Steps and Perceived Task Meaningfulness in Study 4

	Pearson Correlation	<i>P</i>
All Conditions (N=158)	0.164	0.040
Other Conditions (N=117)	0.101	0.279
Charity-incentive Condition (N=41)	0.311	0.048

Table 7: Mediation Tables for Study 4

Model 1: Helping vs. Other Conditions on Experienced Meaningfulness					
	Unstandardized Coefficients		Standardized Coefficients	<i>T</i>	<i>p</i>
	B	Std. Error	Beta		
Helping vs. Other Conditions	0.562	0.296	0.15	1.898	0.06
Model 2: Helping vs. Other Conditions on Number of Steps Taken					
	Unstandardized Coefficients		Standardized Coefficients	<i>T</i>	<i>p</i>
	B	Std. Error	Beta		
Helping vs. Other Conditions	37.53	15.332	0.192	2.448	0.015
Model 3: Meaningfulness on Number of Steps in the Presence of Helping vs. Other Conditions					
	Unstandardized Coefficients		Standardized Coefficients	<i>T</i>	<i>p</i>
	B	Std. Error	Beta		
Helping vs. Other Conditions	33.486	15.407	0.172	2.173	0.031
Experienced Meaningfulness	7.19	4.115	0.138	1.747	0.083

Sobel $Z = 1.29$, $p = 0.199$