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## To Give or Not to Give? Choosing Chance Under Moral Conflict

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Although prior research suggests that people should not prefer random chance to determine their outcomes, we propose that in the context of prosocial requests, a contingent of people prefer to rely on chance. We argue that this is because they are conflicted between losing resources (e.g., time, money) and losing moral self-regard. Across five studies, in both choices with binary outcomes (whether to volunteer) and ranges of outcomes (how much to donate), some people preferred to be randomly assigned an outcome rather than to make their own choices. This did not negatively affect prosocial behavior in binary choices and improved prosocial behavior in choices with a range of outcomes. We also found that the preference for a random outcome was stronger when participants felt particularly conflicted. Furthermore, we examined precisely who sorted into the random option. Importantly, choosing the random option decreased moral self-reproach, thus increasing consumer welfare. Our findings speak to consumers' psychological experience of prosocial requests and suggest an intervention that may increase consumer welfare and prosocial behavior.

**Keywords** Behavioral decision theory; Charity and prosocial behavior; Decision making; Ethics and morality; Preference and choice

With prosocial organizations like St. Jude's Children's Hospital pairing with big companies like KMart and Best Buy, consumers are increasingly faced with prosocial appeals in their everyday lives. When checking out online or at a brick-and-mortar store, consumers are commonly asked whether they would like to donate a set amount (e.g., a dollar) to a cause. Other times, they are asked if they would like to choose one of a range of donation options (e.g., rounding up to the nearest dollar, donating \$1.00, or donating \$5.00). These appeals are clearly effective at eliciting prosocial behavior. Donations made by individuals rose in 2016 to \$281.86 billion, making up 72% of donations to prosocial organizations (Giving USA Foundation, 2017). Although directly asking consumers to donate time or money certainly increases prosocial behavior, it may do so at a cost to consumer welfare; that is, consumers facing prosocial requests can feel trapped in a moral dilemma: they can help

at the cost of their resources (e.g., time or money), or they can act out of self-interest at the cost of their moral self-regard (Berman & Small, 2012; Dunn, Ashton-James, Hanson, & Aknin, 2010; Gneezy, Gneezy, Riener, & Nelson, 2012). Thus, many consumers view prosocial requests as lose-lose situations that necessarily leave them worse off than they were originally.

Research has shown that prosocial requests can be so uncomfortable for some consumers that they would prefer to avoid them altogether (Andreoni, Rao, & Trachtman, 2017; Dana, Cain, & Dawes, 2006; DellaVigna, List, & Malmendier, 2012; Gneezy et al., 2012; Lin, Schaumberg, & Reich, 2016). Even when faced with choices in which they can donate what they want and can choose to donate a small amount, consumers avoid donating for fear that they will send a negative self-signal by donating too little (Gneezy et al., 2012). Consumers go so far as to avoid these tradeoffs at a personal cost, such as foregoing a chance to earn extra money (Lin et al., 2016) or foregoing a chance to buy a

desirable product (Gneezy et al., 2012). These situations thus lead to worse outcomes for consumers and possibly for organizations associated with the prosocial requests. Is it possible to eliminate these costs? We propose that consumers may sometimes prefer to avoid agency in the context of prosocial requests and instead choose to rely on chance to make a decision for them. By relying on chance, we mean choosing to be *randomly assigned* to an outcome rather than choosing to comply with or refuse a prosocial request.

### The Preference for Random Outcomes

#### *Random Outcomes in Decision Making*

Prior literature suggests that people are not likely to choose to give up agency in choice. Rational choice theory and conventional wisdom suggest that people will only choose a random outcome when they are truly indifferent between the outcomes (von Neumann & Morgenstern, 1944). Additionally, people tend to have an aversion to uncertain outcomes (Simonsohn, 2009); for instance, participants valued a lottery between two outcomes (a \$50 gift card and a \$100 gift card) less than they valued the lottery's lowest possible outcome (a \$50 gift card). Furthermore, people are generally averse to resolving issues via concrete randomizers, such as flipping a coin (Keren & Teigen, 2010).

However, there are certain instances in which people have been shown to prefer random outcomes. For example, when relying on a random outcome increases procedural fairness, such as when it can correct for a previous bias, people may prefer to flip a coin (Bolton, Brandts, & Ockenfels, 2005). More relevant to our current research, people also choose to resort to random chance when they wish to be absolved of responsibility or agency for the moral consequences of their choice, for instance, when their decisions could cause harm to others (Leonhardt, Keller, & Pechmann, 2011). This aversion to responsibility for the choice even occurs when people are concerned about simply making the wrong choice between mundane items (e.g., gift card options) and even when randomizers are weighted (e.g., 60% for one choice, 40% for another choice; Dwenger, Kübler, & Weizsäcker, 2012). This suggests that, even if people have a preference for one outcome over another, they may still prefer to be randomly assigned an outcome to decrease personal responsibility for the choice and to avoid potential regret.

#### *Random Outcomes in Prosocial Choice Contexts*

In the current research, we examine whether people have a preference to rely on chance (i.e., choose to be randomly assigned an outcome) when faced with prosocial requests in order to absolve responsibility or agency for the choice. We study this in the context of prosocial requests because, rather than simply being a difficult choice due to uncertainty of preference, these requests elicit a conflict between people's self-interest and moral integrity. This tension inherently exists for some consumers when they face prosocial requests, leading them to trade off self-interest with moral self-view. Prosocial requests further differ from other types of decisions in the type of affect they elicit. Whereas making difficult choices can lead to post-choice regret or dissatisfaction, choosing to refuse a prosocial request can lead to self-conscious emotions, such as shame and guilt (de Hooze, Nelissen, Breugelmans, & Zeelenberg, 2011; Xu, Bègue, & Bushman, 2012). Finding that people choose to rely on chance in this context would have meaningful implications on the threat that prosocial requests impose on people's moral self-views and the affective consequences of such threat.

Prior research has shown that people often prefer to flip a coin when choosing whether to assign themselves or a fellow participant the better of two activities; however, in that research, participants had the option of lying (and indeed tended to lie) after they flipped the coin (Batson, Thompson, Seufferling, Whitney, & Strongman, 1999). Thus, they arguably chose the coin flip to appear as though they had made the self-interested choice fairly. However, there is little research on whether people will choose to adhere to a random outcome when facing prosocial requests. Previous work involving the dictator game provides some initial suggestive evidence for the preference for a random outcome (Dana, Weber, & Kuang, 2007). Specifically, dictators and recipients were informed that if dictators did not decide within a random amount of time, the computer would assign them to a prosocial or self-interested option. Because dictators had this plausible deniability to recipients, they made more self-interested choices. More relevant to the current investigation, a substantial proportion of participants (24%) waited longer than a decision would plausibly take for the computer to randomly assign them (Dana et al., 2007). Although this was an indirect test of the preference for a random outcome, this supports the idea that, when choosing between self-interested and prosocial outcomes, some people prefer to leave their outcomes up to chance.

## Current Research Objectives

We directly test the preference for a random option in the context of prosocial requests by giving participants the opportunity to actively choose to be randomly assigned an outcome. Furthermore, we examine who sorts into this random option—that is, we predict that both those who would have complied with a prosocial request and those who would have refused it would elect to choose a random outcome. This hypothesis is in line with the finding that both those who would have originally complied with and those who would have originally refused a direct request tend to avoid prosocial requests (Cain, Dana, & Newman, 2014; Lin et al., 2016).

In response to prosocial requests, some consumers refuse but feel self-reproach for doing so (de Hooge et al., 2011; Xu et al., 2012). We predict that some of those who would have originally refused the request would prefer to take the choice out of their hands to avoid this self-reproach cost. Other consumers might be attracted to the random option to avoid begrudgingly complying with the prosocial request. This type of consumer complies with prosocial requests to avoid self-reproach in response to direct requests. Indeed, across different experimental settings, roughly 50% of those who give do so reluctantly (Cain et al., 2014). Industry research supports the idea that many who donate do so to avoid self-reproach; 35% of consumers who have donated at checkout counters report doing so out of guilt, with an additional 10% listing peer pressure as a reason (Good Scout Group, 2015). Relatedly, in previous research employing the dictator game paradigm, many dictators chose to avoid information about how a self-interested choice (i.e., receiving \$6.00 over \$5.00) would affect the recipient's payout (\$1.00 or \$5.00 payout). This chosen uncertainty freed them to engage in the self-interested decision, whereas, with full information, participants tended to engage in more prosocial behavior (Dana et al., 2007). Thus, dictators acted out of fairness mostly to be presented positively to themselves or others; relying on uncertainty allowed them to engage in their preferred self-interested behavior by remaining ignorant of whether their behavior negatively affected others. We suggest that allowing an outcome to be determined by chance similarly frees consumers of the self-reproach bind that constrains them to their less preferred prosocial choice, offering them the possibility of obtaining a self-interested outcome without self-reproach. In our case, however, participants themselves are subject to

uncertain outcomes. Therefore, we predict that both those who would have an initial preference for the prosocial option and those who would have an initial preference for the self-interested option might be attracted to a random option, as it would allow them a chance to achieve the self-interested outcome without self-reproach.

We further extend prior research by directly examining consumer welfare consequences of choosing random outcomes. Previous research has shown that people are happier if a self-interested outcome is imposed on them than if they choose it for themselves (Berman & Small, 2012). Being randomly assigned a self-interested outcome removes the self-reproach that ordinarily comes with making the self-interested decision because it removes the agency associated with the outcome. Importantly, in the cited research, participants were not given an opportunity to *choose* a random outcome; rather, they were simply assigned to one option or the other. We propose that some people will choose to be randomly assigned to their outcomes when they are under moral conflict (i.e., when facing a prosocial request) so that they have a chance to achieve a self-interested option while ridding themselves of self-reproach. We predict that this release of agency will lead to higher consumer welfare, even though consumers risk actually engaging in the prosocial behavior. Finally, we examine the obvious practical issue of whether this intervention can increase prosocial behavior in different choice contexts.

## Overview of Studies

In our studies, we tested for the preference for a random option when facing a choice between a prosocial and a self-interested action. We operationalized a prosocial action as one that is burdensome, but that has a clear benefit for others. We defined a burdensome action as one requiring personal resources: cognitive, temporal, financial, or any combination of these resources. In Studies 1 through 3, our prosocial option was a task that benefitted others, but at the cost of cognitive and/or temporal resources. In Studies 4 and 5, our prosocial option was a monetary donation.

In Study 1, we tested whether some people prefer a random option when faced with a prosocial request. We further tested whether people would choose the random option even when they were not indifferent and had an initial preference for one of the options. Finally, we examined whether people choose the random option due to a feeling of conflict

between prosocial and self-interested options, rather than for the sake of novelty. In Study 2, we explored whether adding a random option could increase consumer welfare by decreasing the dissatisfaction inherent in making the decision between a prosocial and a self-interested choice. In Study 3, we tested whether people's preference for the random option persisted over repeated decisions rather than decaying over time (as the novelty of a random option wore off). In Study 4, we used a monetary context to examine the preference for the random option when deciding how much to donate within a range of donation options, which is both practically implementable and more likely to lead to higher donations. We again examined the effect of including a random option on consumer welfare. In Study 5, we employed a similar design to Study 4, but we solicited donations without first endowing money. Throughout, we tested whether giving a random option changes rates of prosocial giving relative to cases in which people are not given a random option.

Target sample sizes for each experiment were determined in advance of data collection based on the principle that researchers should collect large samples (Simmons, Nelson, & Simonsohn, 2013). We therefore chose to collect at least 100 participants per cell for each study. In all studies, data were collected until reaching the predetermined sample size and were not analyzed until data collection was complete. No independent variables or manipulations were used besides those reported, and no participant observations were excluded from analysis. All dependent variables are also reported for all studies. A university institutional review board approved the research.

### Study 1

Study 1 had four main objectives. First, we tested whether a contingent of people would be attracted to being randomly assigned either a self-interested or a prosocial outcome. To do this, we gave participants a choice between a burdensome prosocial task and a fun task. We also gave participants the opportunity to be randomly assigned one of the tasks. Second, we tested whether people would choose the random option despite having an a priori preference for one of the tasks. Notably, rational choice theory would suggest that people should only choose a random option when they equally prefer the two options (von Neumann & Morgenstern, 1944). However, we predicted that people would anticipate that

actively choosing their preference comes with a cost (i.e., engaging in a burdensome task or feeling self-reproach), which would lead them to prefer a random option because it provides an opportunity to escape both costs. Third, we tested the effect of having a random option on the rate of prosocial behavior, predicting that it would not lower the rate of prosocial behavior and might even increase it.

Fourth and finally, we aimed to show that the preference for the random option was due to feeling conflicted between the two options rather than being drawn to the random option out of novelty. To do this, we manipulated the amount of conflict that was felt between choosing the two tasks by varying how long the prosocial activity would take. We predicted that participants would choose the random option when the conflict was greatest—that is, when the prosocial task was comparable in length to the fun task. As the prosocial task became longer, we predicted that participants would be less likely to choose the random option and more likely to simply choose the self-interested task.

## Method

### *Participants*

We recruited 300 Amazon Mechanical Turk workers ( $M_{\text{age}} = 31.79$ ; 150 male, 77 female; incomplete demographics due to error in study programming, see procedure) to participate in this study in exchange for \$0.50.

### *Procedure*

Participants read that they would have the opportunity to choose a task to complete and that, *on average*, the tasks should take about 5–10 min to complete. They then viewed two options: a prosocial task and a humorous task. The prosocial task required reading and evaluating an informational pamphlet for The Water Project, which would provide meaningful feedback for the organization, and the humorous task required reading a humorous anecdote (average time 5 min) (all study materials can be viewed in Appendix S1). We manipulated the time that the prosocial task would take to complete; the amount of time varied from 1 to 15 min (randomly generated integers). We expected that the choice would generate less conflict as the prosocial task became unreasonably burdensome (as people would much prefer the humorous task).

Before making any decision, participants indicated how torn they felt between the two options

(1 = *not at all torn*, 7 = *extremely torn*), which was our measure of conflict (van Harreveld, Rutjens, Rotteveel, Nordgren, & van der Pligt, 2009). They were also asked to indicate their preference on a 100-point sliding scale (numbers were not displayed to participants); the left endpoint (0) was labeled “much prefer task 1 (informational pamphlet),” the right endpoint (100) was labeled “much prefer task 2 (humorous materials),” and the midpoint was labeled “equally prefer.” We used this measure to categorize participants into groups indicating their original preference: having a preference for the prosocial task (preference < 50), preference for the humorous task (preference > 50), or equal preference (preference = 50). Next, all participants were given the opportunity to choose to be randomly assigned to a task or to choose the task they would complete on the next page. Finally, participants completed the task that they chose or to which they were assigned.

Afterwards, participants indicated in open-ended format any feedback they had about the study and what they thought the study was about. They then indicated their gender, age, and how often they volunteer. We collected volunteering information as a potential moderator, but it did not have any moderating effects on any of the outcomes, and thus we do not mention it in any of the results sections. However, there was an error in programming such that those who ended up completing the prosocial task did not view these questions, so demographics are incomplete.

## Results

### *Choice of Random Option*

First, we assessed actual choice without considering the length of time manipulation (to be analyzed in the feelings of conflict section). Overall, of the 300 participants, 41 (13.67%) chose the prosocial task, 197 (65.67%) chose the humorous task, and 62 (20.67%) chose the random option (95% CI of proportion of random option: [0.16, 0.25]). Thus, a contingent of participants chose the random option instead of making a choice for themselves.

### *Who Sorts Into the Random Option*

We next tested whether those who originally preferred either a prosocial or a self-interested option (i.e., those who did not equally prefer both tasks) would choose the random option. Overall, 55

Table 1  
*Predicted Choice Versus Actual Choice in Study 1*

	Predicted choice	Actual choice
Prosocial task	18.33% (55)	13.67% (41)
Random option	1.67% (5)	20.67% (62)
Humorous task	80% (240)	65.67% (197)
Total	100% (300)	100% (300)

*Note.* Before being given the random option, participants indicated their initial preference on a 0–100 sliding scale (0 = *much prefer prosocial*, 50 = equal preference, 100 = *much prefer humorous task*). Participants were coded as predicted to choose the random option if they were originally indifferent (50), the prosocial task if they originally preferred the prosocial task (0–49), and the humorous task if they preferred the humorous task (51–100).

(18.33%) preferred the prosocial task (preference < 50), 240 (80.0%) preferred the humorous task (preference > 50), and 5 (1.67%) indicated that they equally preferred both options (preference = 50) (Table 1). A chi-square test revealed that the distribution of actual choice was significantly different from original preferences,  $\chi^2(2, N = 300) = 661.07, p < .001$ . Further analyses revealed that participants were more likely to choose the random option than predicted by their original preferences,  $z = 7.39, p < .001$ . Participants were less likely to choose both the humorous task,  $z = 4.0, p < .001$ , and the prosocial task,  $z = 2.03, p = .04$ , when given the random option than predicted by original preferences. Thus, participants chose the random option despite having preferences for either the self-interested option or the prosocial option. For the specific breakdown of final choice by original preference (e.g., how many of those who originally preferred the self-interested task ultimately chose the random option), see Appendix.

### *Rate of Prosocial Behavior*

Next, we tested whether adding a random option affected the rate of prosocial behavior by comparing outcomes to original preferences. To calculate the rate of prosocial behavior, we assumed that those who chose the random option would be evenly distributed between the two tasks. In this study and all subsequent studies, we used the expected outcomes for those who chose the random option (i.e., the expected rate of prosocial behavior with random assignment) to prevent our dependent measure (i.e., prosocial behavior) from being subject to randomly skewed outcomes. Results based on actual random assignments for all studies are included in the Appendix; in all cases, significance levels remained the same as those obtained when

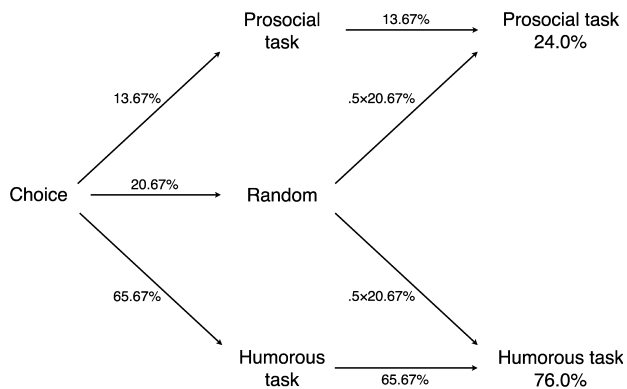


Figure 1. Expected outcome of participants' choices in Study 1.

using expected outcomes. Thus, half of the 20.67% of participants who chose the random option were expected to complete the prosocial task (10.33%); adding this to the original 13.67% who chose the prosocial task led to 24.00% completing the prosocial task (Figure 1). We tested whether this differed from what was predicted by original preferences. To calculate this, we summed half of the 1.67% who were indifferent between the two options (0.84%) and the original 18.33% who indicated a preference for the prosocial task. Thus, original preferences predicted that 19.17% would complete the prosocial task. Comparing this to the 24.00% based on participants' actual choices, participants' original preferences did not predict a significantly different rate of prosocial behavior from actual choice ( $z = 1.4, p = .15$ ).

### Feelings of Conflict

Finally, we wished to test whether the preference for the random option was a result of feeling torn between the prosocial and self-interested options. As a manipulation check, we first ensured that indeed the length of the prosocial task predicted feelings of being torn. We regressed feeling torn on the length of the prosocial task and found, as predicted, that as the length of the prosocial task increased, torn feelings decreased,  $\beta = -.26, t(298) = -2.59, p = .01$ . Further, there was a significant effect on preference such that the longer the prosocial task was, the more participants preferred the humorous task,  $\beta = 17.42, t(297) = 11.44, p < .001$ .

Employing a binomial logistic regression, we regressed the likelihood of choosing the random outcome on the length of the prosocial task. As predicted, as the prosocial task became longer people were less likely to choose the random option,

$B = 0.62, SE = 0.16, p < .001$ . Thus, participants were more likely to choose the random option when the prosocial task was shorter (i.e., when the conflict was at its highest). Importantly, as expected, a bootstrapping mediation analysis (5,000 simulations) revealed that the effect of the length of the prosocial task on the choice of the random option was mediated by how torn people felt; as the task became longer, participants felt less torn and therefore were less likely to choose the random option, 95% CI: [0.011, 0.078].

## Discussion

In Study 1, we found that when given the choice between a prosocial and a self-interested option, some people choose to be randomly assigned their outcome. Furthermore, more people chose the random option than their original preferences would have predicted (i.e., more participants chose the random option than indicated being indifferent between the two options). We also found that those who chose the random option were both those who would have engaged in self-interested behavior and those who would have engaged in prosocial behavior. Importantly, the overall rate of prosocial giving was not diminished by the addition of a random option. Finally, the choice of random outcome was more likely to occur when there was a higher level of conflict between the prosocial and self-interested options, and was due to feeling torn between them. This suggests that participants were not simply being drawn to the random choice by chance, or interested in the novelty of the random option.

## Study 2

In Study 2, we employed a between-subjects design in which participants were either given a random option or not. Further, we sought to examine the effect of having a random option on consumer welfare. Specifically, we examined whether having a random option could lower dissatisfaction associated with choice. We argue that both those who would have chosen to engage in prosocial behavior and those who would have chosen to engage in self-interested behavior shift to a random option so that they can satisfy their preference for the self-interested option without the accompanying self-reproach. We therefore predicted that the random option would make consumers feel less dissatisfied with their choice.

## Method

### Participants

We aimed to collect 400 participants from Amazon Mechanical Turk and stopped collecting data when this request was filled by Amazon, resulting in 429 participants ( $M_{\text{age}} = 36.55$ ; 205 male, 223 female) who participated in this study in exchange for \$0.50.

### Procedure

In a between-subjects design, participants were randomly assigned to either a random option condition or control condition. In the control condition, participants were asked to choose between the prosocial and humorous tasks from Study 1 (evaluate informational pamphlet for The Water Project vs. read humorous anecdote), but they were not informed how long either task would take (although participants might have assumed that the prosocial task would take longer, as the description made it seem like a more in-depth task). Participants in the random option condition were asked to choose between these two tasks as well, but were given a third option to be randomly assigned to one of these tasks. In both conditions, before making their choice, participants were asked how difficult they found the decision to be, how conflicted they felt, how frustrated they felt having to choose between the two (or three) options, and how trapped they felt having to choose between the two (or three) options, all on 5-point scales (1 = *not at all*, 5 = *extremely*). Measures were derived from previous research designed to test decision difficulty (e.g., Evans, Dillon, & Rand, 2015; Haynes, 2009) with the exception of the “trapped” item, which we included for its theoretical relevance to our current hypothesis (i.e., that the random option would make participants feel less trapped between two outcomes). We combined these to form one measure of choice conflict ( $\alpha = 0.81$ ). In addition, participants indicated how much they liked or disliked the two (or three) options that they were given on a 7-point scale (1 = *dislike extremely*, 7 = *like extremely*) as an overall attitude measure toward their choice set (Krosnick & Fabrigar, 1997). They then also indicated how appealing the humorous anecdote choice, The Water Project choice, and the random assignment choice (in the random option condition only) were on a 7-point scale (1 = *extremely unappealing*, 7 = *extremely appealing*) (Zaichkowsky, 1985).

Participants then made a choice as described. Before completing the task, they indicated how

certain they were that they made the right choice and how confident they felt about their choice (1 = *not at all*, 5 = *extremely*) (adapted from attitude certainty literature; e.g., Petrocelli, Tormala, & Rucker, 2007). They then indicated how much they felt the following about their choice: happy, satisfied, dissatisfied, guilty, ashamed, and proud (1 = *not at all*, 5 = *extremely*). Guilt, shame, and pride measures were extracted from the PANAS (Watson, Clark, & Tellegen, 1988) as the self-conscious emotion measures (Tangney, 1999; Tangney & Fischer, 1995). Happiness, satisfaction, and dissatisfaction were primarily added to disguise the focus of our research, but were analyzed as a secondary interest. A factor analysis on these items with varimax rotation revealed two factors with eigenvalues >1. Factor 1 was composed of the negative items (guilty, ashamed, and dissatisfied), and Factor 2 was composed of the positive items (happy, satisfied, and proud). We noted that, whereas guilt and shame loaded highly on Factor 1 (0.83 and 0.98 respectively), dissatisfaction did not load as highly (0.50). Similarly, whereas happiness and satisfaction loaded highly on Factor 2 (0.89 and 0.84 respectively), pride did not load as highly (0.57). Furthermore, we had a priori intended to analyze the negative self-conscious emotions as our primary focus, because guilt and shame are considered the major moral self-conscious emotions that are felt when violating internal or external moral standards of behavior (Tangney, 1999; Tangney & Fischer, 1995). They thus were most relevant to our theoretical interest in moral self-reproach, and so we combined them to create one measure of moral self-reproach ( $r = .83$ ).

We expected that those who would have chosen the self-interested option with high self-reproach would instead choose the random option, leading to lower self-reproach. We also analyzed dissatisfaction separately because those who would have chosen the prosocial task should feel less dissatisfied, but not less moral self-reproach, when given a random option. That is, those who would have chosen the prosocial task to avoid self-reproach would have felt dissatisfied about it, and would therefore opt for the random option, leading them to feel less dissatisfied. However, their moral self-reproach should not be reduced because it would have already been low if they had chosen the prosocial option. Thus, we predicted that people would feel less moral self-reproach and less dissatisfaction after being offered a random option. We were agnostic as to whether people would also actively feel more positive about their decision (i.e., proud, happy, satisfied) when offered a random option.



Participants responded to the same open-ended questions as in Study 1 and indicated their gender, age, and how often they volunteer.

## Results

### Choice of Random Option

Of the 223 participants given a random option, 48 (21.52%) chose it (95% CI of proportion: [0.16, 0.27]).

### Who Sorts into the Random Option

Participants in the random option condition were less likely to choose the humorous task (148 of 223; 66.37%) than those in the control condition (160 of 206; 77.67%),  $z = 2.60, p = .009$ . Participants in the random option condition were also less likely to choose the prosocial task (27 of 223; 12.11%) than those in the control condition (46 of 206; 22.33%),  $z = 2.82, p = .005$ . Thus, as a conceptual replication of Study 1, we found that both those who would have complied with the request and those who would have refused it opted for the random option.

### Rate of Prosocial Behavior

We used the same calculations as in Study 1 to determine final rates of prosocial behavior. We found that the proportion of people who eventually engaged in the prosocial task did not differ across the random option condition (22.87%) and the control condition (22.33%), *ns*.

### Subsequent Self-Reproach

We first examined how much self-reproach (using the composite of guilt and shame) participants felt about their decisions across the two conditions. We regressed self-reproach onto condition and found that participants felt less self-reproach after their choice in the random option condition ( $M = 1.22, SD = 0.62$ ) than after their choice in the control condition ( $M = 1.38, SD = 0.73$ ),  $t(427) = -2.44, p = .015$ .

To examine what was driving this main effect, we examined participants' self-reproach depending on the decisions they made in the two conditions. To do this, we regressed self-reproach onto choice, condition, and their interaction.<sup>1</sup> There was a significant effect of the choice by condition interaction on self-reproach,  $t(424) = -2.33, p = .021$  (Figure 2),

such that participants' choice of humorous vs. prosocial task affected their self-reproach differently depending on whether they were given a random choice option or not. Specifically, those who did not have a random option felt higher self-reproach when they chose the humorous task ( $M = 1.47, SD = 0.79$ ) than when they chose the prosocial task ( $M = 1.04, SD = 0.23$ ),  $t(424) = 3.85, p < .001$ . However, participants in the random option condition felt equal self-reproach when they chose the prosocial task ( $M = 1.19, SD = 0.68$ ) as when they chose the humorous task ( $M = 1.20, SD = 0.55$ ),  $t(424) = 0.10, p = .92$ . Decomposed differently, those in the control condition felt more moral self-reproach about choosing the humorous task than those in the random option condition,  $t(424) = -3.60, p < .001$ . However, those in the control condition did not feel a significantly different level of moral self-reproach about choosing the prosocial task than those in the random option condition,  $t(424) = 0.88, p = .38$ . This suggests that those in the random option condition who would have chosen the humorous task, but would have felt high levels of self-reproach about it, opted instead to choose the random option, which led to lower levels of self-reproach. Indeed, we found that those in the random option condition who chose to be assigned to a random outcome felt equally low self-reproach ( $M = 1.29, SD = 0.79$ ) as those who chose to engage in the humorous task,  $t(424) = 0.84, p = .40$ , and prosocial task,  $t(424) = 0.67, p = .51$ .

### Choice Dissatisfaction

We analyzed the dissatisfaction item separately from the other negative self-conscious emotions (see procedure section for a discussion of the reasoning of this approach). Participants felt less dissatisfied with their decisions when they had a random

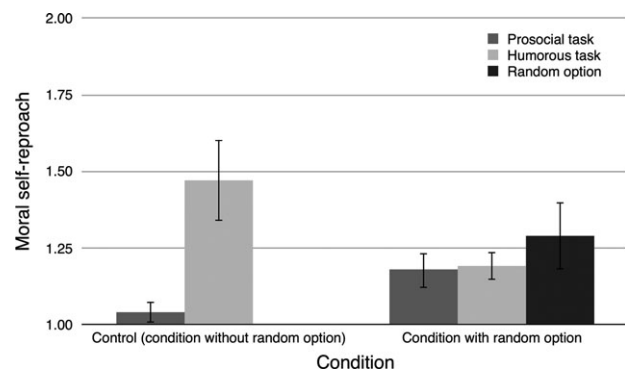


Figure 2. Moral self-reproach by condition and choice in Study 2.

option ( $M = 1.16$ ,  $SD = 0.54$ ) than when they did not ( $M = 1.27$ ,  $SD = 0.68$ ),  $t(427) = -1.94$ ,  $p = .053$ . Although the interaction between choice and condition on dissatisfaction was not significant,  $t(424) = -1.35$ ,  $p = .18$ , we examined what drove this dissatisfaction. Of relevance here, we tested whether those who chose the prosocial task felt less dissatisfied when given a random option than when not given a random option. Our theory suggests that those who would have chosen the prosocial task to avoid self-reproach would have felt dissatisfied about this decision and would also have opted for a random choice. Thus, we expected the average dissatisfaction of those who chose the prosocial task would be lower when given a random option. However, we did not find evidence for this ( $M_{\text{random}} = 1.26$ ,  $SD_{\text{random}} = 0.71$ ;  $M_{\text{control}} = 1.24$ ,  $SD_{\text{control}} = 0.71$ ),  $t(424) = 0.136$ ,  $p = .89$  (to be elaborated on in the discussion of the study). The effect of choice condition on dissatisfaction instead largely mirrored the effect on self-reproach: those who chose the humorous task were less dissatisfied in the random option condition ( $M = 1.08$ ,  $SD = 0.40$ ) than the control condition ( $M = 1.28$ ,  $SD = 0.67$ ),  $t(424) = -2.88$ ,  $p = .004$ . In line with this, a bootstrap mediation analysis (5,000 samples) revealed that the overall effect of choice condition on dissatisfaction was mediated by moral self-reproach, 95% CI:  $[-0.13, -0.01]$ .

### *Feeling of Conflict*

We expected participants to feel less conflicted when given a random option. However, we found no significant difference between the random option condition ( $M = 1.40$ ,  $SD = 0.60$ ) and the control condition ( $M = 1.45$ ,  $SD = 0.65$ ),  $t(427) = -0.93$ ,  $p = .35$ , which we elaborate on (along with other null findings) in the discussion of this study. We therefore tested whether conflict predicted choice of the random option in the random option condition, as it did in Study 1. A binomial logistic regression revealed that those who felt more conflicted were indeed more likely to choose the random option,  $B = .59$ ,  $SE = 0.25$ ,  $p = .017$ .

## **Discussion**

In Study 2, we conceptually replicated the findings of Study 1 and additionally found that offering an option to be randomly assigned between a prosocial and a self-interested task increased consumer welfare by lowering moral self-reproach after

making a decision. Our data indicate that those who would have otherwise chosen the self-interested option but would have felt particularly high moral self-reproach were able to shift their choice to the random option to remove their agency from the choice. Furthermore, we found that feelings of conflict predicted whether people chose the random outcome, supporting the experimental evidence in Study 1.

Somewhat unexpectedly, participants did not feel less conflicted when they had the ability to select the random option (see Appendix for descriptive statistics). Furthermore, they did not feel more certain or confident that they had made the right decision after the fact. Although we do not have empirical evidence to support this, it is possible that participants felt less conflicted because they were given a random option, but also felt more conflicted simply due to the number of choices given, or for other reasons, such as having a general distaste for risk (Simonsohn, 2009). In addition, our theory would predict that those who would have begrudgingly chosen the prosocial option would switch to the random option, leaving them less dissatisfied. However, we did not find that participants felt less dissatisfied about choosing the prosocial option when they were given a random option than when they were not. It is possible that people in the control condition did not wish to admit to feeling dissatisfied about engaging in prosocial behavior, but wished instead to take moral credit for their choice (Lin, Zlatev, & Miller, 2017). Also, given the low rates of people directly choosing the prosocial task, it is possible that there was insufficient power to detect the effect if one existed.

Furthermore, although participants in the random option condition felt less negative (due to the alleviation of the self-reproach of those who would have chosen to engage in self-interested behavior), we did not find evidence that participants also felt more *positive* (i.e., happier, more satisfied, or prouder) about their choice in the random choice condition. This suggests that people feel ambivalent (i.e., both negative and positive, Reich & Wheeler, 2016; Thompson & Zanna, 1995) about engaging in prosocial behavior and that choosing to be randomly assigned only makes people feel less self-reproach about *not* engaging in prosocial behavior, but it does not make them feel more positive about the idea of actually engaging in prosocial behavior.

Overall, this study provided evidence that adding a random option can increase consumer welfare without sacrificing actual rates of prosocial behavior.

### Study 3

People often face prosocial requests not only once, but repeatedly. For instance, those who tend to shop at the same grocery stores may be asked to donate each time they check out; those who walk down the same streets might run into solicitors from the same organizations asking them to spare a minute of their time. Thus, in Study 3, we sought to test participants' choice of the random option over time. We hypothesized that it is not simply novelty that attracts participants to the random option, but rather it is the way in which the random option helps resolve psychological conflict. Thus, we hypothesized that the preference for the random option would remain even after repeated requests.

### Method

#### *Participants*

We aimed to recruit 300 participants for this study from Amazon Mechanical Turk and stopped data collection once this request was filled by Amazon, resulting in 301 participants ( $M_{\text{age}} = 29.97$ ; 193 male, 108 female). Participants were paid \$0.50 for participating in the study and a \$0.50 bonus if they participated in the follow-up study.

#### *Procedure*

Participants chose between the same two tasks as Studies 1 and 2, except the times were set at 6 min for the prosocial task and 5 min for the humorous task. As mentioned in the introduction, we operationalize a burdensome action as one that requires financial, cognitive and/or temporal resources. Here, we made the task both more difficult and unambiguously longer. As MTurk workers generally seek simple tasks with high payout per amount of time (Ipeirotis, 2010), we reasoned that this would ensure that the prosocial task would be seen as burdensome. However, we kept the timing of the prosocial task close to the timing of the humorous task (6 vs. 5 min) so that participants would still feel conflicted between the tasks (given that participants grew less conflicted when the task was extremely long in Study 1). Again, participants in the control condition simply chose between the two tasks whereas those in the random option condition were additionally given the option to be randomly assigned their outcome. At the end of the first study, participants were asked whether they

would like to participate in a subsequent study that would be emailed to them in 1 week for a bonus payment of \$0.50. They were asked to provide an email address if they wished to participate in the study and were assured that the email would be used only to send the second study and that details of their records would not be kept.

After 1 week, those who reported their email addresses received a link to the new study. In the instructions, they were told they could again choose between two different tasks and were told (in large, bold, italicized font) that although the descriptions looked similar, the content of the tasks would be different from those completed in Part 1 of the study. They then read descriptions of the two tasks: evaluating the website content (as opposed to a pamphlet) for The Water Project or evaluating a humorous anecdote. Those originally in the random option condition again received the random option, whereas those originally in the control condition did not. Participants then completed the study as described and answered a few free response questions about how they felt about their outcome and about the study in general. Finally, participants indicated gender, age, and how often they volunteer per month.

### Results

#### *Part 1 Choice of Random Option*

In the first part of the study, we found that of the 151 participants given the random option, 54 (35.76%) chose it (95% CI of proportion: [0.28, 0.43]).

#### *Who Sorts into the Random Option in Part 1*

Participants in the random option condition were less likely to choose the humorous task (82 of 151; 54.30%) than those in the control condition (115 of 150; 76.67%),  $z = 4.08$ ,  $p < .001$ . Participants in the random option condition were also less likely to choose the prosocial task (15 of 151; 9.93%) than those in the control condition (35 of 115; 23.33%),  $z = 3.12$ ,  $p = .002$ . This again indicated that both those who would have complied with the request and those who would have refused it opted for a random option.

#### *Part 1 Rate of Prosocial Behavior*

As before, we confirmed that the rate of people who eventually engaged in the prosocial task was not significantly lower in the random option

condition (27.81%) than in the control condition (23.33%),  $z = .89$ ,  $p = .37$ .

### Part 2 Choice of Random Option

Two hundred and sixteen participants engaged in the second half of the study with no evidence of uneven attrition across conditions ( $z = 0.67$ ,  $p = .50$ ). Of the 111 participants given a random option, 38 (34.23%) chose it (95% CI of proportion: [0.25, 0.43]). Thus, even in a repeated choice context, a similar proportion of participants chose the random option.

### Who Sorts into the Random Option in Part 2

Participants in the random option condition were less likely to choose the humorous task (65 of 111; 58.56%) than those in the control condition (91 of 105; 86.67%),  $z = 4.61$ ,  $p < .001$ . This time, those in the random option condition were not significantly less likely to choose the prosocial task (eight of 111; 7.21%) than those in the control condition (14 of 105; 13.33%),  $z = 1.49$ ,  $p = .14$ . Thus, in this part, those who chose the random option seemed mostly to be those who would have chosen the humorous task in a traditional choice context.

### Part 2 Rate of Prosocial Behavior

In Part 2, participants were more likely to engage in the prosocial task in the random option condition (24.43%) than in the control condition (13.33%),  $z = 2.06$ ,  $p = .039$  (Figure 3). This seems driven by the fact that the rate of prosocial behavior dropped in the control condition (23.33%–13.33%), whereas the rate of prosocial behavior remained similar when there was a random option (27.81%–24.43%).

## Discussion

In this study, we found not only that people were still attracted to the random option under repeated choice, but that upon second asking, they were more likely to engage in prosocial behavior when they had a random option than when they did not. While we do not argue this would carry over to any context, this suggests that adding a random option might increase prosocial behavior over time.

Furthermore, of those who chose the random option in the second part of the study, 60.53% had chosen the random option in the first part, 26.32%

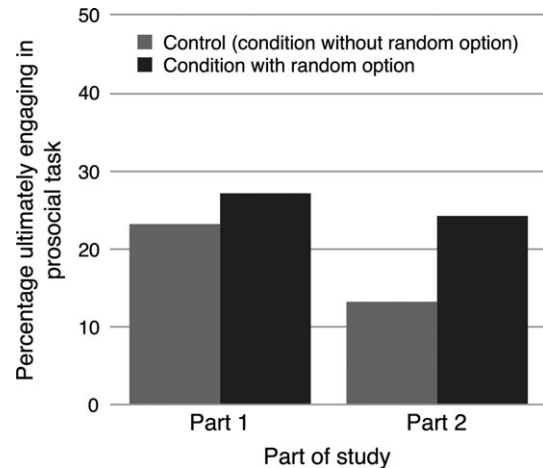


Figure 3. Percentage ultimately engaging in prosocial task in Part 1 and Part 2 of the study as a function of condition in Study 3.

had chosen the self-interested option, and 13.16% had chosen the prosocial option (see Appendix Table A4). This suggests that the random option remains attractive to those who originally chose it, and it may also attract people who had previously chosen other options. Delving even deeper, of the 23 participants who chose the random option twice, both those who were originally assigned the prosocial option (10 participants, 43.48%) and those who were originally assigned the self-interested option (13 participants, 56.52%) chose the random option. This suggests that the attraction to the random option was not driven by people who were assigned a certain outcome (e.g., those who were assigned to engage in the self-interested option feeling that they should take a chance because they “owe” a prosocial behavior).

The higher rate of prosocial behavior in Part 2 of the study seemed due to the fact that some participants who originally engaged in prosocial behavior in the control condition switched to a self-interested option in Part 2, whereas rates of prosocial behavior remained stable in the random option condition. One potential explanation for this is that those who engage in prosocial behavior to avoid moral self-reproach are less likely to repeat this behavior in the future (e.g., Hadesstrom & Johansson, 2016), which accounts for the drop-off rate of givers from the first and second parts of the study in the control condition. It is precisely these types of people who we argue are attracted to the random option. Another possibility is that a random option leads to lowered reactance; that is, reactance theory suggests that strong appeals for help and feelings of obligation to help can sometimes lead people to be less

likely to help due to a feeling of constrained psychological freedom (Berkowitz, 1973; Brehm, 1966). This reactance might be particularly strong in situations in which people have already engaged in prosocial behavior once and are asked to do so again. One way to lessen this constraint might be to offer a random option, which gives more choice freedom and feels like a less “strong” request, especially in repeated requests.

#### Study 4

In Study 4, we sought to expand the scope of our examination by testing the preference for the random option in monetary donations rather than in volunteering. Further, we examined the preference for the random option within a range of outcomes instead of a binary (yes or no) outcome. When checking out while shopping, organizations often ask consumers to donate to a charitable cause by choosing from a range of outcomes, for example, rounding their total up to the nearest dollar, donating \$1.00, or donating \$5.00. Other organizations simply let consumers choose how much to donate with an empty text box at checkout (e.g., while online shopping). In these contexts, consumers face a conflict between paying a high amount and facing negative self-judgment for paying too little (Gneezy et al., 2012). As discussed earlier, some consumers avoid buying products in pay-what-you-want price schemes when the money will go to charity because they are concerned about how paying less than the “appropriate” amount would reflect on their prosocial self-image (Gneezy et al., 2012). Theoretically, these consumers should be attracted to a random outcome to mitigate these self-signaling concerns. Thus, out of both practical importance and theoretical interest, we examine in Study 4 whether people would prefer a random outcome when they can choose how much (if any) to donate. Specifically, in the control condition, participants were asked how much of a \$2.00 bonus they would be willing to donate, if any. In the random option condition, participants could additionally choose to be assigned a random amount to donate between \$0.00 and \$2.00.

In addition to anticipating that a subset of participants would choose the random option, we expected that only those who would have refused the request would be attracted to the random option and not those who would have complied with the request. This is because, for those who would have donated, the outcome of the randomizer would not likely

differ from what they would have chosen to donate originally. For example, if the randomizer assigned a value between \$0.00 and \$2.00, the expected outcome would be \$1.00, which is how much they likely would have donated (it was the modal donation amount in this study).

## Method

### *Participants*

We aimed to collect 300 participants on Amazon’s Mechanical Turk and stopped data collection after Amazon fulfilled the request, resulting in 322 participants ( $M_{\text{age}} = 37.40$ , 158 male, 163 female, one other).

### *Procedure*

Participants first completed an unrelated study pertaining to everyday consumption decisions. At the end of the study, they were told they would also receive a \$2.00 bonus for completing the study and that they may decide to keep the bonus or donate any amount of it to St. Jude’s Children’s Hospital. In the control condition, participants could choose an amount to donate (an option that read “donate amount below,” with a text box underneath) or could choose not to donate. In the random option condition, in addition to these two options, participants could choose to be randomly assigned a donation amount between \$0 and \$2.00. Afterward, participants indicated how they felt about their choice on the same post-choice scales as Study 2 (guilty, ashamed, happy, satisfied, dissatisfied, proud). A factor analysis with varimax rotation revealed the same two factors, with Factor 1 comprising the negative items and Factor 2 comprising the positive items. For Factor 1, guilt and shame again loaded strongly as in Study 2 (0.85 and 0.93, respectively), and dissatisfaction also loaded fairly strongly (0.78). For Factor 2, happiness and satisfaction loaded strongly (0.91 and 0.87, respectively) while pride loaded less strongly (0.67). For the same theoretical reasons we listed in Study 2, we focused on guilt and shame as our main dependent measure ( $r = .83$ ). The reasoning behind the separate dissatisfaction analysis was not relevant here, because we did not expect those who would have chosen to donate to switch to the random option. Dissatisfaction and other results are reported in the Appendix.

After responding to these measures, participants were informed that we were only interested in

their preference, and thus their choice was only hypothetical.

## Results

### Choice of Random Option

Of the 165 participants given the random option, 25 (15.15%) chose it (95% CI of proportion: [0.10, 0.21]). As with choices with binary outcomes, a contingent of participants was attracted to the random option.

### Who Sorts into the Random Option

As before, we found that participants in the random option condition were less likely to choose not to donate at all (67 of 165; 40.61%) than those in the control condition (88 of 157; 56.05%),  $z = 2.77$ ,  $p = .005$ . Furthermore, as expected, participants were not less likely to donate a fixed amount in the random option condition (73 of 165; 44.24%) than those in the control condition (69 of 157; 43.95%),  $z = 0.05$ ,  $p = .96$ . In contrast to binary choice contexts, this suggests that those who chose the random option were those who would have counterfactually chosen not to donate at all and not those who would have donated a fixed amount.

### Donation Amount

We also tested whether participants gave more on average when they had the random option. Following the reasoning in previous studies, we used the expected value of the random outcome rather than the observed randomly assigned values. Thus, for every participant who selected the random outcome, we assigned him or her the value of a \$1.00 donation, the expected outcome over time of random assignments between \$0.00 and \$2.00. We found that participants in the random option condition donated marginally more ( $M = \$0.57$ ,  $SD = 0.64$ ) than those in the control condition ( $M = \$0.45$ ,  $SD = 0.65$ ),  $t(320) = 1.75$ ,  $p = .081$ . Of those who chose to donate a fixed amount, those in the random option condition did not donate significantly more or less than those in the control condition ( $M_{\text{random}} = \$0.96$ ,  $SD = 0.64$ ;  $M_{\text{control}} = \$1.03$ ,  $SD = 0.60$ ),  $t(139) = 0.71$ ,  $p = .48$ .

### Subsequent Self-Reproach

Unlike Study 2, participants did not feel more moral self-reproach in the control condition ( $M = 1.47$ ,  $SD = 0.80$ ) than in the random option

condition ( $M = 1.41$ ,  $SD = 0.72$ ),  $t(320) = -0.70$ ,  $p = .49$ . We also did not find an interaction between condition and choice (donating a fixed amount vs. no donation) on moral self-reproach,  $F(1, 317) = .24$ ,  $p = .62$ . We did, however, find a main effect of choice on moral self-reproach, such that those who did not donate felt more self-reproach ( $M = 1.66$ ,  $SD = 0.90$ ) than both those who donated a fixed amount ( $M = 1.24$ ,  $SD = 0.54$ ),  $t(319) = 5.00$ ,  $p < .001$ , and those who chose the random option ( $M = 1.20$ ,  $SD = 0.50$ ),  $t(319) = -2.94$ ,  $p = .003$  (Figure 4). Those who chose to donate a fixed amount or a random option did not differ in self-reproach,  $t(319) = -0.25$ ,  $p = .80$ . Although we did not observe a main effect between the random option condition and the control condition, this pattern should emerge with a larger sample size if the pattern of results we observed here remains consistent.

## Discussion

In this study, we found that people who had the opportunity to donate a random amount were more likely to donate, and thus donated marginally more money, than those who had to choose an amount to give (if any). Importantly, the outcome of the random amount option is completely contained within the choice; participants could have chosen the outcome rather than choosing the random option. However, in these prosocial contexts, consumers are conflicted between paying a high amount and incurring self-judgment for paying too little (Gneezy et al., 2012). Thus, in this study, we found that participants could resolve this conflict by choosing to donate a random amount, which indeed resulted in lower feelings of moral self-reproach than not donating at all.

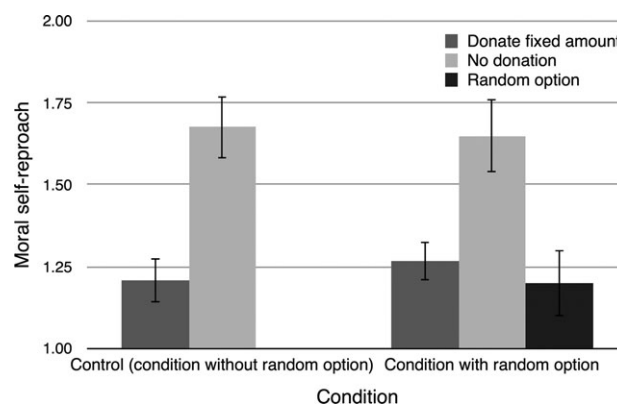


Figure 4. Moral self-reproach by choice and condition in Study 4.

Our results in this study on moral self-reproach were not an exact replication of the pattern of results found in Study 2, in which participants in the random option condition who chose not to donate felt less moral self-reproach than those in the control condition. In Study 4, those in the random option condition who chose not to donate at all still felt higher moral self-reproach than those who chose the random option. However, these results are consistent with the idea that allowing for a random option attracts those who would not have otherwise donated and also decreases moral self-reproach among those people as a result. Although speculative, it is possible that the difference between these two studies might have occurred because refusing to engage in a burdensome task was more justifiable (e.g., “I probably wouldn’t give good enough feedback to be helpful to that charity anyway”; Liu & Lin, in press) than refusing to give up just part of their windfall bonus to a worthy cause. Indeed, people were generally more likely to choose the prosocial option in this study, with 43.95% in the control condition donating compared to 22.23% choosing the prosocial task in Study 2. Prior research has shown that people who act out of self-interest often justify their decisions to protect their moral self-image (Lin et al., 2017; Shalvi, Gino, Barkan, & Ayal, 2015). Thus, perhaps those in the random option condition who chose the self-interested task in Study 2 were only those who were able to justify their decision, and those who could not justify that decision shifted to the random option. In this study, perhaps even those who chose the self-interested option (i.e., not donating) could not justify their unambiguous decision not to donate their money.

Finally, as expected in this study, we found that only those who would have refused the prosocial request were drawn to the random option in this context. Those who would have donated had little to gain, as their random outcome would likely match their original intentions. Thus, this is an especially promising intervention context, as it does not cannibalize those who would have donated otherwise. By the same logic, even if this intervention *did* cannibalize those who would have donated, it would still be more likely to lead to increased prosocial giving than in binary choice contexts. This is because those who choose to donate a fixed amount are likely to donate a moderate amount (in this study, the modal fixed amount donated was \$1.00, and the mean fixed amount was 0.99,  $SD = 0.62$ ), which is similar to the expected value of donation from a random option.

## Study 5

In Study 5, we wished to replicate the effect from Study 4 in a setting in which money was not endowed to participants. Although participants in Study 4 may have felt pressured to donate because they received a windfall bonus that was large relative to their payment, participants in this study better represent everyday consumers who face requests to donate their own money to charity. We asked participants who were exiting behavioral studies whether they would donate some of their earnings to a charitable organization. Importantly, participants were not aware they were partaking in a study, and their donations were indeed made to the specified cause. In the random option condition, they could choose an amount to donate, choose not to donate, or choose to be randomly assigned an amount to donate (\$1.00, \$2.00, or \$3.00), whereas in the control condition they were not given the option to be randomly assigned a donation amount.

## Method

### *Participants*

Participants were recruited on their way out of the behavioral lab at a west coast university. We aimed to collect 300 participants and stopped data collection once that number was reached ( $M_{age} = 24.64$ , 100 male, 199 female, one other).

### *Procedure*

Participants were recruited as they were completing any study being run at the behavioral laboratory. At the end of whichever study they were taking (which paid between \$5.00 and \$25.00),<sup>2</sup> participants were directed to collect their payments from an experimenter who was running the study. The experimenter asked participants to fill out a survey before they left. The survey began with their demographic information (gender and age). On the next page, they were asked whether they would be willing to donate some of their earnings to St. Jude’s Children’s Hospital. In the control condition, participants were told that if they would like to donate, they should indicate how much they wanted to give below (options were: ‘\$1,’ ‘\$2,’ ‘\$3,’ and ‘No Thanks’). In the random option condition, participants were additionally told that they could choose to be randomly assigned an amount to donate (\$1, \$2, or \$3) and were given the

corresponding choice as part of their choice set. We used integer amounts in this study because participants were paid in dollar bills with no change.<sup>3</sup>

No other measures were collected in this study for the sake of consistency with the cover story (i.e., to limit word of mouth about the study). Furthermore, if we had repeated the self-conscious emotion measures from earlier, future participants in the waiting area might witness current participants filling out a series of questions following what was ostensibly a real prosocial request; this might then make them suspicious of the study's real purpose. Thus, at the end of the study, participants were simply given the amount that the study paid, minus the amount they chose to donate. Donations were actually made to St. Jude's Children's Hospital on participants' behalf at the completion of the study.

## Results

### *Choice of Random Option*

Of the 149 participants given the random option, 16 (10.74%) participants chose the random option (95% CI of proportion: [0.06, 0.16]).

### *Who sorts into the Random Option*

As in Study 4, participants in the random option condition were less likely to choose not to donate (101 of 149; 66.89%) than those in the control condition (116 of 151; 77.85%),  $z = 1.12$ ,  $p = .034$ . As in Study 4, participants in the random option condition were not less likely to donate a fixed amount (34 of 149; 22.82%) than those in the control condition (33 of 151; 22.15%),  $z = 0.20$ ,  $p = .84$ .

### *Donation Amount*

As before, we assigned participants who selected the random option the expected outcome of random assignment (\$2.00). We found that participants on average donated more in the random option condition ( $M = \$0.64$ ,  $SD = 1.01$ ) than in the control condition ( $M = \$0.42$ ,  $SD = 0.87$ ),  $t(298) = 2.06$ ,  $p = .040$ .

## Discussion

In this study, we again found that adding a random option can decrease self-interested behavior and even increase the average donation amount. Importantly, the money here was not endowed—it

was earned by participants for their participation in a study, in which many participants take part due to financial need; thus, if anything, they should have felt particularly justified in not donating their hard-earned money.

We chose to ask participants whether they would like to donate before paying them for participating in the study in order to mimic a checkout experience in which participants might be asked to add a donation onto their payment. Although the situations are clearly different in that participants are being paid money rather than spending it, we believe that this best logistically mimics the process of an online or in-person checkout during which this intervention could be implemented. For instance, participants might be asked to donate before entering their credit card information, which is before the final exchange is completed. This furthers the ecological validity of this study, and suggests that people may be attracted to a random option in point-of-sale contexts.

## General Discussion

In five studies, we find that when facing a prosocial request, a contingent of people would prefer to leave their decision up to chance. That is, some people prefer choosing to be randomly assigned an outcome over actively choosing an outcome for themselves. Furthermore, the preference for a random option can occur in binary choices (Studies 1 through 3) as well as in ranges of outcomes (Studies 4 and 5), and it can increase the rate and amount of donations in the latter. We find evidence that this choice is driven by feeling conflicted between the prosocial and self-interested options (Studies 1 and 3). We also find that those who chose the random option were not only those who equally preferred the prosocial and self-interested options (Study 1). Indeed, in binary choices, both those who would have complied with and those who would have refused the prosocial request sometimes prefer to be randomly assigned an outcome (Studies 1 through 3). However, in choices with a range of outcomes, only those who would have originally refused the request are attracted to the random option (Studies 4 and 5). Finally, we find that being given a random option can reduce feelings of self-reproach in choice (Studies 2 and 4); we contend that this is because some of those who would have chosen a self-interested outcome with high self-reproach choose instead to leave the outcome up to chance.



### *Theoretical Contributions and Practical Implications*

Some people comply with prosocial requests for altruistic reasons (Batson & Shaw, 1991) and others refuse them without any guilt perhaps because helping others is not important to them (Aquino & Reed, 2002). If these were the only two types of people, then we should not expect people to choose a random option in prosocial requests. The fact that we find that some prefer a random option identifies two other types of people: those who comply with prosocial requests to avoid moral self-reproach and those who refuse prosocial requests at a moral self-reproach cost. Our research sheds light on the trap that prosocial requests set for these two latter groups: they face a lose-lose situation in which they must give something up (i.e., resources or moral self-regard). This suggests that prosocial requests in themselves can inherently reduce these consumers' welfare regardless of their overt behavior. Thus, mass efforts to increase giving likely regularly reduce consumer welfare, forcing consumers to reflect on their own (im)moral nature.

We further contribute to prior literature on the reliance on chance in decision-making. Although rational choice theory (von Neumann & Morgenstern, 1944) and prior research (Simonsohn, 2009) suggest that people have a distaste for random outcomes, other research has shown that people do sometimes rely on chance when they are concerned about regretting their decisions (Dwenger et al., 2012). Leaving an outcome up to chance removes the feeling of agency or responsibility about the choice, lowering regret (Dwenger et al., 2012). We extend this finding to prosocial requests, finding that a contingent of people prefer to "flip a coin" to resolve their internal moral conflict. Our context differs from that in previous research because in the case of prosocial behavior, conflict and anticipated regret are necessarily a result of a different psychological driver. The conflict people feel when facing prosocial requests reflects an ambivalence toward helping others—that is, people feel both strongly positive (feeling that they should help society) but also strongly negative (wanting to maintain their own resources) (Reich & Wheeler, 2016; Thompson & Zanna, 1995). This choice between helping oneself at a cost to others and helping others at a cost to oneself reflects on people's moral character and can lead to moral self-conscious emotions (i.e., guilt, shame). This is substantively different than simply facing a difficult choice, which merely reflects one's preference and should not lead to the same affective consequences. In our case, offering the choice to remove agency

allows us to isolate a preference to engage in self-interested behavior without accompanying self-reproach. Understanding the psychological underpinnings of this conflict might open the door to other interventions as well. For instance, resolving ambivalence can occur not only through increasing a positive attitude toward giving but also through decreasing a negative attitude toward losing one's resources. As an example, soliciting delayed donations (e.g., automatically withdrawn at some time in the future) might decrease pain of payment while leading to higher donations (Andreoni & Serra-Garcia, 2016).

The current research also contributes to previous work on the preference to randomize outcomes in moral contexts. In contrast to prior literature that suggests that people prefer to flip a coin as plausible deniability for choosing self-interested behavior (Batson et al., 1999), we find that people sometimes prefer to rely on chance even when they must adhere to it. For those who would have engaged in self-interested behavior with this moral self-reproach cost, some are willing to risk actually engaging in prosocial behavior if it means they have a chance to obtain a self-interested outcome (e.g., not volunteering or donating very little) without incurring the self-reproach cost. This shifts initially self-interested consumers to relatively more prosocial behavior, resulting in a lower rate of purely self-interested behavior. In binary choices specifically, we also found that those who would have engaged in prosocial behavior in order to avoid moral self-reproach are sprung from the confines of their self-reproach and allowed to indulge in the possibility of achieving a self-interested outcome without needing to choose it. Thus, we add to prior literature (Dana et al., 2007) by demonstrating a clear preference for random choice in prosocial contexts and by showing that both those who would have refused and those who would have complied with prosocial requests sort into the random option.

Our research also has promising practical implications. In binary outcomes, such as whether or not to volunteer, we found that our intervention improves consumer welfare without decreasing prosocial behavior and perhaps even increases prosocial behavior in repeated choice contexts. Furthermore, it is possible that adding a random option in binary outcomes could prevent prosocial request avoidance and thus improve outcomes both for prosocial organizations and consumers. Some people respond to being trapped between a self-interested and a prosocial option by avoiding the choice altogether (Lin et al.,

2016). This avoidance leads to fewer donations to the prosocial organization and even leads consumers to forgo self-interested outcomes (e.g., people avoid a choice between a fun task they would enjoy and a prosocial task, thereby forgoing the opportunity to engage in the fun task). This latter finding also suggests possible negative outcomes for partner organizations, such as grocery stores that ask people to donate at checkout—people may decide that purchasing a product from the store is not worth facing the decision to comply with or refuse a prosocial request. Our findings suggest that offering a random option in binary choice might reduce avoidance of the decision, which may lead to higher rates of prosocial giving. Furthermore, in decisions with ranges of outcomes, such as donating \$1.00, \$2.00, or \$3.00, we found that a random option has the potential to increase donations, as it does not reduce the rate of consumers choosing to donate a set amount.

#### *Limitations and Future Directions*

This work focuses on the preference for the random option in the context of direct requests, rather than in unsolicited donation contexts. Accordingly, the relatively low rates of prosocial behavior in our studies (between 13.67% and 43.95%) are closer to prosocial behavior in the context of responses to direct requests, such as donation at point of sale. In previous research in which people are directly asked to donate small amounts in field settings, rates of giving have been low (e.g., around 10%; Andreoni et al., 2017). However, when consumers make unsolicited donations, they should not face the same psychological conflict, as they have actively decided to support a charitable cause. Indeed, consumers seem to prefer making unsolicited donations (Zinsmeister, 2015). Thus, our findings should be considered relevant to giving in the context of direct requests, rather than generalized to contexts in which people make unsolicited donations.

Across the studies, a minority of participants chose the random option (between 11% and 36%). Although absolute rates of choosing the random option were low, they were sometimes comparable to or even higher than the predicted rate of prosocial behavior (Study 1) or the rate of prosocial behavior in the control conditions (Studies 2 and 3). Notably, the size of the group choosing the random option seems qualitatively lower in Studies 4 and 5 (15.15% and 10.74%, respectively). It is possible that the random option is less appealing in choices with a range of outcomes, as participants who wish to

compromise between self-interested and prosocial behavior already do so by giving some amount in the middle of the range. Future work could examine this possibility.

Future research might also investigate whether people who encounter a random option repeatedly over a long period of time would adjust away from choosing the random option. Study 3 suggests that the interest in the random option remains attractive over a short period of time (1 week), with one repeated ask. Furthermore, in Study 3, the random option actually offset attrition of prosocial behavior that was observed in the control condition. Recent research suggests that people who donate to avoid moral self-reproach are less likely to repeat this behavior in the future (e.g., Hadesstrom & Johansson, 2016). We posit that these types of people may instead be attracted to the random option, leading them to choose this option repeatedly (instead of giving once and then never giving again). Choosing the random option repeatedly would allow them to always escape the self-reproach from refusing a prosocial request. However, it is possible that with frequent exposure people would eventually learn that they donate the average amount over time (or half the time, in binary outcomes) and thus cease to choose it. Whether people will continue to choose the random option over a long period of time and the ideal frequency of exposure to a random option remain to be examined further.

To contribute to an overall theoretical understanding of the psychological drivers of choosing the random option, it would be worthwhile to identify conditions under which the propensity to choose the random option would be higher versus lower. For instance, people may not wish to leave a high stakes situation up to chance (e.g., if the donation amounts are higher). They may instead have a stronger preference for avoiding the burdensome action, or receiving moral credit (from themselves and others) for selflessly engaging in the prosocial action (Zlatev & Miller, 2016). It would also be informative to examine whether people would be more likely to choose the random outcome privately (e.g., via keypad or online) than publicly (e.g., having to directly tell a cashier that they would like a random option). In support of our theorizing that people wish to avoid moral self-reproach rather than other-reproach, we find that participants do select the random option when the choice is relatively unobserved (e.g., online). Although people may be additionally concerned about public appearances, this concern may not increase the choice of the random option. In

fact, consumers may feel that selecting the random option would still reflect poorly on them, as it expresses an internal uncertainty about whether to engage in prosocial behavior. Indeed, our lowest rate of donation was in Study 5 (10.74%), in which participants had to interact directly with an experimenter to be paid. Thus, future research may directly manipulate whether one's decision is observable to others or not; if participants were to choose the random option more often when unobserved, this would be evidence that those choosing the random option are mostly those internally conflicted between self-interest and self-reproach (as opposed to other-reproach). In addition, future research may directly manipulate the desire to avoid self-reproach to provide further mechanistic evidence. For instance, participants who are previously morally licensed (Khan & Dhar, 2006; Merritt, Effron, & Monin, 2010) should feel they can refuse a prosocial request without self-reproach and thus be less likely to choose the random option (and more likely to simply refuse the request).

It may also be illuminating to identify characteristics of the consumers who choose the random option. One theoretically relevant possibility is that these consumers have high self-discrepancies between their standards of behavior and their actual behavior—in particular, a discrepancy between who they are and who they feel like they ought to be (Higgins, 1987). In our case, it is likely that facing a prosocial request activates self-discrepancies (e.g., the feeling that they have failed their own or society's moral standards) leading to self-reproach (Higgins, 1999; Higgins, Shah, & Friedman, 1997). Our theory suggests that people choose the random option to reduce these feelings of self-reproach, implying that those with high self-discrepancies would be more inclined to choose the random option.

### Conclusion

We find that some consumers who are conflicted between acting prosocially and acting out of self-interest would prefer to be randomly assigned an outcome in order to rid themselves of the responsibility of making a choice. In leaving the outcome up to chance, consumers reduce the moral self-reproach that would come with choosing a self-interested outcome. Importantly, this moral self-reproach is so

aversive that people prefer to risk being assigned a prosocial outcome in order to have the chance of getting to engage in self-interested behavior without self-reproach. These findings suggest that for some consumers, prosocial requests in themselves pose a threat to their self-view and that choosing a random option can mitigate this threat. Thus, our findings provide insight into consumers' psychological experience of prosocial requests, and a promising and implementable intervention to both improve consumer welfare and increase prosocial behavior.

### Endnotes

<sup>1</sup>Because participants could not choose the random option in the control condition, the interaction only included participants in either condition who chose either the humorous or prosocial task. However, simple effects of self-reproach for those who chose the random option vs. other options in the random option condition were still observable in this analysis, which are reported here.

<sup>2</sup>We did not record which study participants took before this study, and thus analyses cannot be conducted on whether payment amounts may have affected outcomes. Importantly, random assignment should have ensured that average amounts of pay did not differ between conditions.

<sup>3</sup>In this study, the range of possible outcomes did not include 0, whereas the range in Study 4 technically did. We decided not to include 0 in the range of possible outcomes in Study 5 to better match Study 4 in that participants who donated would have a certain chance of donating some amount of money. In Study 4, the chance of donating was almost certain, with only a 1/200 chance of not donating anything, and thus we argue that the chance of donating 0 was not highly salient for participants. However, it is possible that the inclusion of 0 in the possible outcomes changes the psychological appeal of the random option; if 0 is very salient, for instance, consumers might react negatively, as choosing the random option might be viewed as more self-interested. On the other hand, it might be more appealing, as it gives a chance for participants not to have to donate at all without self-reproach. Whether either or both of these effects exist should be tested in future research.

## Appendix

### Study 1 Additional Results and Discussion

#### *Prosocial Behavior Based on Actual Random Assignment*

Random assignment led to the exact same rate as the expected rate of prosocial behavior (24.00%).

#### *Choice Depending on Original Preference*

Of the five participants who equally preferred both options, all 5 (100%) chose to be randomly assigned. Of the 55 who preferred the prosocial option, 16 (29.09%) chose to be randomly assigned; finally, of the 240 who were leaning toward the humorous task, 41 (17.03%) chose to be randomly assigned (see Table A1).

Table A1  
*Final Choice by Original Preference in Study 1*

	Final choice			Total
	Prosocial	Random	Humorous	
Original preference				
Prosocial (preference < 50)	37	16	2	55
Equally prefer (preference = 50)	0	5	0	5
Humorous (preference > 50)	4	41	195	240
Total	41	62	197	300

To further illustrate the trends in the data, the reader can view Figure A1. It is clear that participants' preferences for the humorous task grew as the prosocial task grew longer. Furthermore, participants were most likely to choose the random option when their preference hovered around the middle (between 25 and 75). However, more of those choosing the random task came from above the midpoint, leaning toward the humorous option, which explains why the random option led to participants engaging in the prosocial task slightly more often than anticipated.

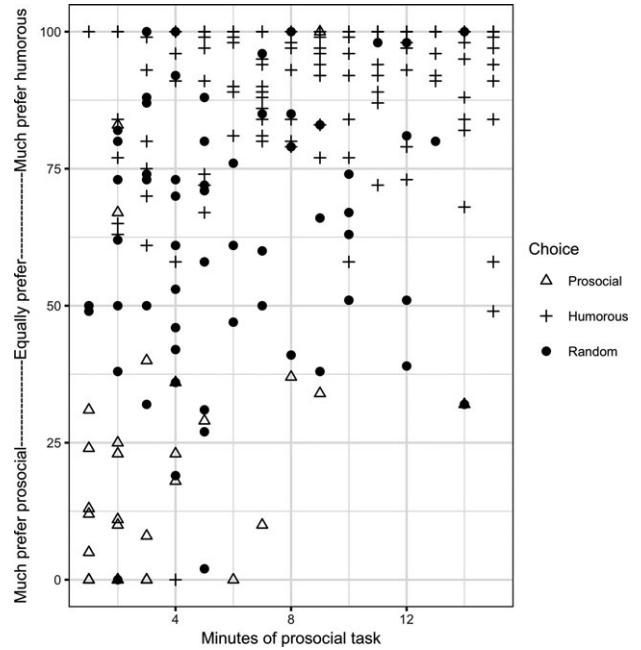


Figure A1. Each participant's preference of task as a function of length of prosocial task, with final choice indicated by shape in Study 1.

### Study 2 Additional Results and Discussion

#### *Prosocial Behavior Based on Actual Random Assignment*

Actual rate of prosocial behavior based on random assignment was 24.22% in the random option condition. This did not differ significantly from the control condition,  $z = 0.46$ ,  $p = .65$ .

#### *Pride*

We did not find a main effect of condition on pride,  $t(427) = 0.19$ ,  $p = .85$ , or an interaction of condition and choice (including prosocial and humorous task only),  $t(426) = 1.35$ ,  $p = .18$ . However, we did find an effect of choice on pride,  $F(2, 426) = 7.10$ ,  $p < .001$ . Participants who engaged in the prosocial task felt prouder ( $M = 3.00$ ,  $SD = 1.33$ ) than those who engaged in the humorous task ( $M = 2.37$ ,  $SD = 1.31$ ),  $t(426) = 3.67$ ,  $p < .001$ . Those who chose the random option fell somewhere in between ( $M = 2.37$ ,  $SD = 1.33$ ); they did not differ from those who engaged in the prosocial task,  $t(426) = 1.35$ ,  $p = .17$ , or from those who engaged in the humorous task,  $t(426) = -1.46$ ,  $p = .15$ .

Unsurprisingly, people felt prouder when they engaged in the prosocial task than the humorous task. Those who chose the random option seemed to fall somewhere in between, suggesting that choosing a random option could actually send a relatively positive self-signal relative to choosing a self-interested option (i.e., the humorous task). We further explore this in Study 4.

*Other Post-Choice Variables by Condition*

We did not find any other main effects on the post-choice dependent variables by condition (see Table A2).

Table A2  
Means and Standard Deviations of the Post-choice Variables by Condition in Study 2

	Random option condition	Control condition
Satisfied	3.69 (1.04)	3.63 (1.01)
Happy	3.44 (1.10)	3.40 (1.16)
Certain	4.00 (0.87)	3.98 (0.99)
Confident	3.98 (0.88)	3.95 (1.04)

*Other Post-Choice Variables by Choice*

For the other post-choice variables, there was a general pattern such that those who chose the humorous and prosocial options did not differ from each other, but those who chose the random option were generally less positive than those who chose the humorous option (see Table A3).

Table A4  
Part 2 Choice Predicted by Part 1 Choice in Each Choice Set Condition in Study 3

	Part 2 choice						Part 1 total choice
	Prosocial task		Humorous task		Random		
	Random option condition	Control	Random option condition	Control	Random option condition	Control	
Part 1 choice							
Prosocial	4	7	3	19	5	NA	38
Humorous	1	7	51	72	10	NA	141
Random	3	NA	11	NA	23	NA	37
Part 2 total choice	8	14	65	91	38	NA	216

This is likely because this measure was taken before participants were given their outcome, and thus were not sure how they would feel with their outcome.

Table A3  
Means and Standard Deviations of the Undiscussed Post-Choice Variables by Choice in Study 2

	Humorous	Random	Prosocial
Satisfied	3.69 <sub>a</sub> (1.04)	3.42 <sub>b</sub> (1.03)	3.70 <sub>ab</sub> (0.92)
Dissatisfied	1.19 (0.57)	1.33 (0.75)	1.25 (0.70)
Happy	3.49 <sub>a</sub> (1.14)	3.04 <sub>b</sub> (1.05)	3.38 <sub>ab</sub> (1.09)
Certain	4.07 <sub>a</sub> (0.92)	3.58 <sub>b</sub> (0.96)	3.91 <sub>ab</sub> (0.89)
Confident	4.05 <sub>a</sub> (0.97)	3.65 <sub>b</sub> (0.96)	3.85 <sub>ab</sub> (0.91)

Note. Choices that do not share a subscript differ in their means at  $p < .09$ .

**Study 3 Additional Results**

*Part 1 Prosocial Behavior Based on Actual Random Assignment*

Actual rate of prosocial behavior based on random assignment was 27.15% in the random option condition. This did not differ from the control condition,  $z = 0.76, p = .45$ .

*Part 2 Prosocial Behavior Based on Actual Random Assignment*

Random assignment led to the exact same rate as the expected rate of prosocial behavior (24.43%).

*Additional Descriptive Statistics*

Participants' choices in Part 2 of the study as predicted by their choices in Part 1 of the study can be viewed in Table A4.

## Study 4 Additional Results and Discussion

### Prosocial Behavior Based on Actual Random Assignment

Actual donation based on random assignment was marginally higher in the random option condition ( $M = \$0.59$ ,  $SD = 0.68$ ) than control,  $t(319) = 1.87$ ,  $p = .063$ .

### Pride

Echoing Study 2, we also found a main effect of choice on pride,  $F(2, 318) = 30.88$ ,  $p < .001$ . Those who did not donate felt less proud ( $M = 1.80$ ,  $SD = 1.20$ ) than those who donated ( $M = 2.96$ ,  $SD = 1.32$ ),  $p < .001$ . This time, participants who did not donate also felt less proud than those who chose the random option ( $M = 2.40$ ,  $SD = 1.29$ ),  $t(318) = 2.2$ ,  $p = .029$ . Those who donated also felt more proud than those who chose the random option,  $t(318) = -2.04$ ,  $p = .042$ .

### Other Variables by Choice

Participants were happiest and most satisfied when they donated a fixed amount, whereas those who chose a random option or who did not donate felt significantly less satisfied and happy (see Table A5). Participants felt more dissatisfied when they donated a fixed amount than when they did not donate at all, whereas those who chose a random amount seemed in between the two. These variables are difficult to interpret because, as in Study 2, participants were asked how they felt before being assigned a random outcome. Thus, those who chose the random option may have felt more negative due to uncertainty of what their outcome would be.

Table A5  
Means and Standard Deviations of the Undiscussed Variables by Choice in Study 4

	No donation	Random	Donate fixed
Satisfied	2.97 <sub>a</sub> (1.21)	2.96 <sub>a</sub> (1.10)	3.78 <sub>b</sub> (1.03)
Dissatisfied	1.53 <sub>a</sub> (0.88)	1.44 <sub>ab</sub> (0.82)	1.29 <sub>b</sub> (0.64)
Happy	2.72 <sub>a</sub> (1.30)	2.64 <sub>a</sub> (1.22)	3.49 <sub>b</sub> (1.19)

Note. Choices that do not share a subscript differ in their means at  $p < .05$ .

### Other Variables by Condition

We found no main effects by condition on the remaining variables (see Table A6).

Table A6  
Means and Standard Deviations of the Undiscussed Variables by Condition in Study 4

	Random option condition	Control condition
Dissatisfied	1.41 (0.78)	1.43 (0.79)
Satisfied	3.35 (1.16)	3.31 (1.23)
Happy	3.10 (1.25)	3.01 (1.36)

## Study 5 Additional Results

### Prosocial Behavior Based on Actual Random Assignment

Actual donation based on random assignment was significantly higher in the random option condition ( $M = \$0.68$ ,  $SD = 1.09$ ) than control,  $t(298) = 2.26$ ,  $p = .024$ .

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### Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's website:

**Appendix S1.** Methodological details