

From Warm Glow to Cold Chill: The Effect of Choice Framing on Donations

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Author Note

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ABSTRACT

Extant research and practitioner advice tout that to motivate giving, philanthropic organizations should give prospective donors choice over their impact. We challenge this assumption, identify conditions under which choice can be helpful versus harmful, and uncover the underlying psychological processes. We propose that relative to a choice framed as “what to give” (e.g., a “Basic Needs Basket” or a “Survivor’s Kit”), an otherwise equivalent choice framed as “who to help” (e.g., “help malnourished babies” or “help orphans”) induces emotional decision discomfort and leads people to avoid choosing between donation options, which reduces their donation interest under identifiable conditions. Compared to providing no choice between donation options, we predict that offering a choice framed as “what to give” increases donation interest by elevating a sense of agency; however, offering a choice framed as “who to help” may fail to increase or even harm donation interest because the evoked decision discomfort can counteract or outweigh the positive effects of agency. We support those predictions across three preregistered experiments across field and online settings ($N = 25,399$). Together, our research suggests that while choice can enhance feelings of agency and satisfy individuals’ quest for a “warm glow”, a tradeoff between recipient populations may instead elicit a “cold chill”, freezing the likelihood of donating at all.

Keywords: choice; donations; decision discomfort; agency; moral decision making; prosocial behavior

INTRODUCTION

“Can my organization increase donations by letting people choose their impact?”

According to practitioners, the answer is “yes.” Industry experts believe that donors prefer having a choice over how their donation will be used, predicting that donation opportunities presenting specific options to choose from will increase giving relative to general requests (Samek & Longfield, 2023). Offering choice in donation opportunities is also widespread practice, as “most humanitarian organizations allow donors to earmark [i.e., choose how to direct] their donations” (Aflaki & Pedraza-Martinez, 2023, p. 1451). In fact, 83% of humanitarian aid contributed to the United Nations system of agencies in 2020 is reported to have been earmarked (Development Initiatives, 2021). This practice seems supported by scientific evidence. Allowing private donors to choose their impact has been found to be strongly positively associated with donations garnered (Nunnenkamp & Öhler, 2012). Experimental research in management, marketing, psychology, and economics has further produced causal evidence that giving donors choice over how their contribution will be used can motivate greater donation behavior (Eckel et al., 2017; Fuchs et al., 2020; Kessler et al., 2019; Li et al., 2015; Özer et al., 2024). This abundance of evidence has led scholars to advise that “charities should offer opportunities for donors to choose how to give” (Aknin et al. 2022, p. 543). However, as in other domains, choice is not always beneficial. There are some cases where having to choose may decrease the propensity to give (e.g., Ein-Gar et al., 2021). We propose and test a framework that helps explain when choice increases versus decreases donation behavior, and why.

In this work, we introduce the distinction between two types of choices that are commonly offered by organizations: the choice over “what to give”, and the choice over “who to

help” (see the Web Appendix Table E1 for a list of examples from charities). For example, the charity Save the Children lets donors choose to give “Childhood Health Essentials” or “Rescue Meals for Kids” (support.savethechildren.org). These two options have the same cost and recipient population, so the primary choice in this case is a choice over *what to give*: health essentials or rescue meals. Save the Children also provides the option to donate to “Educate a Girl” or to “Educate a Refugee Child.” Both of these options let donors provide education for the same cost. The primary choice in this case is to decide *who to help*: a girl or a refugee child. We argue that the psychological process of deciding *what to give* differs from the process of deciding *who to help*. In the former, the choice is among objects; in the latter, it is among humans. We propose that unlike tradeoffs over objects, tradeoffs involving humans can instill an aversive feeling of decision discomfort, which hinders donor engagement.

Across three field and online experiments (total $N = 25,399$), we find that framing a donation solicitation as a choice over “who to help”, relative to an otherwise equivalent choice over “what to give”, produces emotional discomfort and induces choice avoidance. Under identifiable conditions, the avoidance induced by a “who”-framed choice manifests as lower donation interest relative to a “what”-framed choice. Integrating with prior research, we further posit that these different types of choice affect donor psychology and behavior, relative to a no-choice condition where donations go to a general fund. We predict that while offering either type of choice elevates donors’ sense of agency relative to no choice, only the “what”-framed choice consistently increases donation interest due to enhanced feelings of agency; in contrast, a “who”-framed choice may not boost donation interest relative to no choice, since the emotional discomfort associated with this framing can counteract the benefits of agency. Our data support these predictions.

This work adds important nuance to the literatures on charitable giving and choice. First, we show why providing choice in donation settings is not a panacea: While having choice over one's impact fosters a positive feeling of agency that can promote donations, a choice over who to help can induce negative emotional consequences and cause an aversion to the decision process. Second, although past literature suggests that donors are more generous when they have more concrete details about the opportunity to give (Cryder et al., 2013; Kogut & Ritov, 2005a, 2005b; Small & Loewenstein, 2003; Wald et al., 2021), our work suggests that information that presents a tradeoff over recipients can reduce giving due to the uncomfortable decision process. Third, this work contributes to a greater understanding of the psychological and behavioral reactions to choice. While people tend to value opportunities with choice because choice caters to the desire for control (deCharms, 1968; Deci & Ryan, 1985, 2000; Leotti et al., 2010; Ryan & Deci, 2006), there are several known factors that make choice aversive, such as when the choice options are unattractive (Beattie et al., 1994; Botti & Iyengar, 2004; Dhar, 1997) or too extensive (Gourville & Soman, 2005; Iyengar & Lepper, 2000; Jacoby et al., 1974; Levav et al., 2010; Long et al., 2024; Schwartz et al., 2002). We introduce a novel factor causing negative reactions to choice: whether the choice involves a tradeoff about *humans* rather than *objects*.

Overall, we challenge the common assumption that offering choice increases donation interest, identify under which conditions choice in donation opportunities is helpful versus harmful, and uncover the underlying psychological processes. When attempting to capitalize on individuals' quest for a "warm glow" (Andreoni, 1990) by offering people a choice to determine their prosocial impact (Aknin et al., 2022; Özer et al., 2024), charities may inadvertently instill a "cold chill" and ultimately freeze donation-related decision making.

THEORETICAL BACKGROUND

Giving donors choice by allowing them to specify the cause they want to support (instead of having their donations enter a general fund) is commonly considered an effective tactic to increase donation interest by researchers and practitioners alike (Aknin et al., 2022; Nunnenkamp & Öhler, 2012; Samek & Longfield, 2023). However, we argue that the consequences of offering such a choice is more nuanced than previous work suggests.

Notably, academic research highlighting the benefits of choice in donation contexts has typically operationalized choice as a decision between specific objects or programs, while holding the recipient population constant (see Web Appendix Table E2 for a review). For instance, in Esterzon et al. (2023), participants chose between two specific objects that both supported people with disabilities (“donate a wheelchair” vs. “donate a prosthesis”). Similarly, in Kessler et al. (2019), donors chose among several university funding priorities that all benefited students (e.g., “Student Financial Aid,” “Student and Academic Life,” “Residential Life”). We characterize this type of choice as a choice over “what to give.”

In contrast, it is also common industry practice to ask donors to decide on the specific beneficiaries to help (e.g., “Educate a Girl” or “Educate a Refugee Child” from Save the Children; “Help sexually exploited girls” or “Home for vulnerable children” from World Vision; see Web Appendix Table E1 for data on organizational practice). We characterize this type of decision as a choice over “who to help.” This type of choice has been largely overlooked in the literature and is critical to examine, as insights derived from studies focused on choices over “what to give” may not apply to choices over “who to help.”

In the following sections, we first theorize how framing a donation choice as “who to help” versus “what to give” can elicit distinct psychological and behavioral reactions. We then

develop hypotheses about how these two types of choice affect donor psychology and behavior, relative to situations in which donors cannot choose how their donation will be used.

What- vs. Who-Framed Choice

A “who”-framed choice incites a tradeoff over human beneficiaries, whereas a “what”-framed choice incites a tradeoff over objects. We posit that facing tradeoffs over human beneficiaries instills a unique and aversive feeling of decision discomfort relative to facing tradeoffs over objects. An emotional reaction of discomfort—the tendency to feel “worried”, “uneasy”, and “troubled” (Luce, 1998)—can be triggered when decision processes pose a threat to important goals or values (Baron, 1986; Baron & Spranca, 1997; Luce et al., 2001). Compared to making a tradeoff between different objects to give, making a tradeoff about different human beneficiaries may uniquely violate two moral principles.

The first principle concerns the moral distaste for comparing the value of human lives. Individuals faced with choice tend to evaluate and compare the options to select the one with the highest value (“principle of value maximization”, Tversky & Shafir, 1992). However, this logical procedure may not be considered acceptable when donors are deciding which group of people to help. Consider the donor who is faced with a choice between helping malnourished babies or helping orphans. Comparing the relative worth of those beneficiary groups can feel morally troubling. As demonstrated through the canonical “trolley problem”, choices that involve trading off human lives are not steadily reasoned through with logic (Foot, 1978; Lanteri et al., 2008; Thomson, 1976). It is often considered morally unacceptable to follow logical or utilitarian principles to guide decisions about the value and comparability of human lives (Lanteri et al., 2008). Human lives are seen as “sacred”, and any comparison or transaction suggesting life is fungible is considered “taboo” (Fiske & Tetlock, 1997; Tetlock et al., 2000). Thus, unlike a

tradeoff between objects, a tradeoff about human beneficiaries may feel unacceptable to evaluate.

The second moral principle concerns fairness and equity. Norms regarding fairness are widely endorsed. People derive value from being perceived and perceiving themselves as fair (Andreoni & Bernheim, 2009; Bénabou & Tirole, 2006, Rustichini & Villeval, 2014). Fairness is also a moralized value (Graham & Haidt, 2012; Haidt & Joseph, 2004), meaning that the extent to which a person acts fairly signals the strength of their moral character. Norms of fairness and equity matter when people make decisions about who gets helped, but not when making decisions about what is given. This is because an unfair allocation favoring one party over the other can be incongruent with the expectations people have around the social relationships invoked by the donation process when “who to help” is highlighted (Fiske, 1992; Gallus et al., 2022; Rai & Fiske, 2011). In fact, fairness is a main consideration in decisions about how to allocate resources to help others (Ein-Gar et al., 2021; Sharps & Schroeder, 2019). The value of fairness drives an aversion to inequitable distributions (Adams, 1965; Fehr & Schmidt, 1999; Gordon-Hecker et al., 2017; Nai et al., 2020), both in public (Shaw, 2013) and in private contexts (Choshen-Hillel et al., 2015). In the face of limited resources, adults and children alike even opt to discard resources, or let a random device decide, rather than make an allocation that would make them appear partial (Choshen-Hillel et al., 2015; Kimbrough et al., 2014; Shaw & Knobe, 2013; Shaw & Olson, 2012, 2014). As a result, fairness may be a heightened concern when people choose among beneficiaries, but not when they focus on which objects to give.

Taken together, we posit that compared to contemplating what object to give, making a choice about who to help can uniquely violate two fundamental moral principles, namely, by asking people to compare the value of human lives and to contribute to unfair outcomes. Since

decision processes that threaten important principles can foster an unpleasant emotional reaction of decision discomfort (Baron, 1986; Baron & Spranca, 1997; Luce et al., 2001), we propose that a choice set presenting a tradeoff between who to help will increase decision discomfort relative to a choice set presenting a tradeoff between what to give.

Hypothesis 1. Potential donors experience a greater sense of decision discomfort when faced with a choice framed as "who to help" than when faced with a choice framed as "what to give."

This psychological reaction of decision discomfort may have behavioral consequences. Negative decision-related emotions, like decision discomfort, can induce avoidance behaviors, wherein people refuse to engage with a distressing decision altogether (Anderson, 2003; Beattie et al., 1994; Einhorn & Hogarth, 1981; Luce et al., 1997). Avoidance behaviors are characterized by delaying a decision or refusing to select an option, and this “experience of postponing and avoiding certain choices” (Anderson, 2003, p. 139) is considered a common approach to reducing decision-related negative emotions (Luce, 1998). In a donation context presenting tradeoffs, choice avoidance would manifest as a refusal to choose one donation option over the other. As we expect a “who to help” donation choice framing to yield decision discomfort, we further predict that it will increase choice avoidance, compared to a “what to give” framing.

Hypothesis 2. Potential donors demonstrate greater choice avoidance when faced with a choice framed as "who to help" than when faced with a choice framed as "what to give."

When giving donors choice over how their donation will be used, charities often encourage donors to select only one option (“single-selection”). Among the organizations in our review that allow donors to choose their impact, 63% use a single-selection format, where the online donation system restricts donors to select only one cause to support per donation transaction (see Table E1 in the Web Appendix). While donors can make multiple donations to

support different causes, this format directs them to pick a single option to support at a time. The single-selection format also mirrors the structure used in prior research about charitable giving, where study participants are asked to make an exclusive choice between alternatives or not donate at all (e.g., Cryder et al., 2017; Ein-Gar et al., 2021; Esterzon et al., 2023; Fuchs et al., 2020). In such environments, avoiding a choice between donation options means forgoing the donation altogether—thus, choice avoidance manifests as not donating. Extending the logic from Hypotheses 1 and 2, we predict that when the environment only allows donors to make a single selection at a time, framing the choice as “who to help” increases choice avoidance and thereby reduces donation interest, relative to a “what to give” framing. Given the prevalence of this structure in both practice and research, we formalize the following hypothesis:

Hypothesis 3. In single-selection choice contexts, potential donors demonstrate less donation interest when faced with a choice framed as "who to help" than when faced with a choice framed as "what to give."

Comparing Two Types of Choice with No Choice

We next discuss how and why the two types of choice shape donation interest, relative to situations where individuals could not select their donation target. Notably, when comparing the two choice types with a no-choice situation, we can only examine donation interest—choice avoidance is not relevant to these comparisons, since people facing a no-choice donation opportunity are not presented with a trade-off between donation options.

Prior research suggests that an enhanced sense of agency is one key reason that the ability to choose can motivate prosocial action (Esterzon et al., 2023; Fuchs et al., 2020). Agency is conceptualized as a mental state of control (Bandura, 1989), where the actor feels as though they can directly cause or generate an action (Gallagher, 2000; Sato & Yasuda, 2005; Sebanz, 2007) or outcome (Wegner, et al., 2004), even if this control is limited (Choshen-Hillel & Yaniv,

2012), partial, or not fully fulfilled (Bandura, 2006). Allowing donors to choose their specific impact has been found to induce a greater sense of agency (Esterzon et al., 2023; Fuchs et al., 2020). This has been associated with enhanced emotional benefits of prosocial spending for donors (Aknin et al., 2022), increased willingness to donate (Costello & Malkoc, 2022; Esterzon et al., 2023; Fuchs et al., 2020; Li et al., 2015), and larger donation amounts (Eckel et al., 2017; Esterzon et al., 2023).

Our predictions about the presence of choice on psychology and behavior build on and extend this literature. We expect that the mere presence of choice will instill agentic feelings, but that the ultimate effects on donation behavior will depend on the choice framing. A choice framed as “what to give” should capitalize on the purported benefits of agency, without the decision discomfort anticipated for a “who”-framed choice. Thus, relative to those who do not have the opportunity to choose how their donation will be used, we predict that prospective donors facing a “what”-framed donation choice will experience a stronger sense of agency, and, given the established benefits of agency on prosocial spending (e.g., Costello & Malkoc, 2022; Esterzon et al., 2023; Fuchs et al., 2020; Li et al., 2015), will in turn demonstrate greater donation interest. Formally, we hypothesize:

Hypothesis 4. Potential donors experience a greater sense of agency when faced with a choice framed as “what to give” than when faced with no choice over how a donation will be used.

Hypothesis 5. Potential donors demonstrate greater donation interest when faced with a choice framed as “what to give” than when faced with no choice over how a donation will be used.

Extending the prior literature, we expect that the comparison between a “who”-framed choice and a no-choice donation opportunity will be more nuanced. Relative to facing no choice, the presence of choice over donation outcomes should induce feelings of agency, which should

be positively associated with donation interest. However, our theorizing earlier suggests that the uncomfortable tradeoff inherent in the choice of “who to help” and the associated concerns about violating moral principles will enhance decision discomfort, relative to a no-choice donation opportunity (not just relative to a “what”-framed choice). This heightened decision discomfort may in turn reduce the inclination to make a choice between the donation options, which can dampen donation interest in single-selection choice environments where donors must make a choice in order to donate. The relative strength of those two competing psychological processes (agency and decision discomfort) determines whether offering choice over “who to help” increases, decreases, or has no detectable impact on donation interest, relative to not offering a choice over how one’s funds will be used. Altogether, we formally hypothesize:

Hypothesis 6. Compared to having no choice over how a donation will be used, potential donors who are faced with a choice framed as "who to help" experience a greater sense of agency, which is positively associated with donation interest, but also greater decision discomfort, which is negatively associated with donation interest.

We test these hypotheses across three experiments reported in the paper, along with one additional replication study in the Web Appendix. We first examine how the presence and framing of choice affect donation interest in a large-scale field experiment. We then turn to an incentive-compatible online experiment, where we replicate the effects of the field experiment and provide support for our hypothesized psychological processes. The final study extends the earlier results from single selection choice contexts to a different choice environment, where we further establish decision discomfort and choice avoidance as the fundamental processes underlying individuals’ reactions to a “who”-framed choice.

RESEARCH TRANSPARENCY STATEMENT

All studies were preregistered on AsPredicted prior to data collection (study 1: <https://aspredicted.org/wqnm-k4zy.pdf>; study 2: <https://aspredicted.org/x8s4-22hq.pdf>; study 3: <https://aspredicted.org/s5cn-5h85.pdf>). These preregistrations included formal hypotheses, manipulations of the independent variable, measures for the dependent variables, desired sample sizes, exclusion criteria, and detailed plans for how the data would be analyzed. Minor deviations from the preregistration are reported in the main text. All study materials, data, code, and online appendices are available at <http://tinyurl.com/5275h68v>. We used R to analyze the data.

STUDY 1

Methods

We first examine how different types of choice affect behavior in a large-scale preregistered field experiment with a humanitarian organization that is top-rated by charity evaluators like Charity Watch and Charity Navigator based on its financial management, transparency, and accountability. We focus on a single-selection choice structure where potential donors are prompted to only choose one option.

Sample. On April 21, 2021, the organization sent a Mother’s Day-themed donation solicitation email to 89,459 individuals who had subscribed to their emails and were deemed “active” as they had opened an email from the charity within the previous 120 days.

Procedures. Our field experiment was embedded within the Mother’s Day email campaign introduced above. Across our three experimental conditions, each email had the same subject line (“Give the gift of opportunity for Mother’s Day”), header image, and introductory text (see Figure 1). Below the introductory text, people were prompted to “Choose your impact in honor of your mother” and presented with a donation opportunity that differed across the three conditions (see Figure 2).

In the Who condition, individuals read, “Who do you want to give a gift of opportunity to?” They were presented with two images from the organization’s website, which exemplified the populations that they support, and the two buttons beneath the images read, “Help Children” and “Help Trafficked Girls”, respectively. In the What condition, individuals read, “Which gift of opportunity do you want to give?” They were presented with the same two images as in the Who condition, but they were shown two buttons beneath the two images that read, “Basic Needs Basket” and “Survivor’s Kit”, respectively. The Who condition and the What condition presented the choice between the different donation options as mutually exclusive—where the potential donors are prompted to only choose one group of recipients to help or one gift to give. As stated previously, this single-selection format reflects practice (see Table E1 in the Web Appendix) and is consistent with the structure of donation choices often examined in prior research (e.g., Cryder et al., 2017; Ein-Gar et al., 2021; Esterzon et al., 2023; Fuchs et al., 2020). If participants in the Who and What conditions clicked on a button, they were directed to the location on the organization’s website where the respective donation option could be added to a “cart” for purchase. Notably, the button for “Help Children” in the Who condition directed participants to the same webpage as the button for the “Basic Needs Basket” in the What condition, and the “Help Trafficked Girls” button in the Who condition directed participants to the same webpage as the button for “Survivor’s Kit” in the What condition.

In the Control condition, individuals were presented with the same two images as in the previous conditions, but were simply prompted to “Give a Gift of Opportunity” with a single button that, if clicked, directed them to a Mother’s Day-themed donation page on the organization’s website. Holding the images constant across conditions (see Figure 2) helped make this a clean field test. However, it also makes this a conservative test of our theory, because

the images presented vivid “who”-based information about the potential aid recipient groups and may make the three conditions perform more similarly to each other.

The information presented in the rest of the email was equivalent across the three conditions. Since participants could only be exposed to our experimental manipulations after they opened the email, the decision to open the email could not be affected by our manipulation. Indeed, the email open rate did not differ by condition (see Web Appendix A for detail). Thus, as preregistered, we focused our analysis on the 23,834 (i.e., 26.64%) people who had opened the email. We did not receive information about participant demographics.

Figure 1. Email header image and introductory text for all conditions

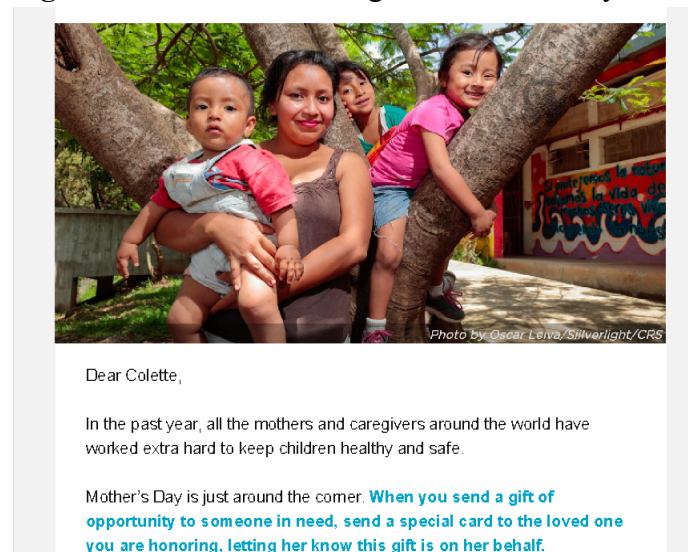
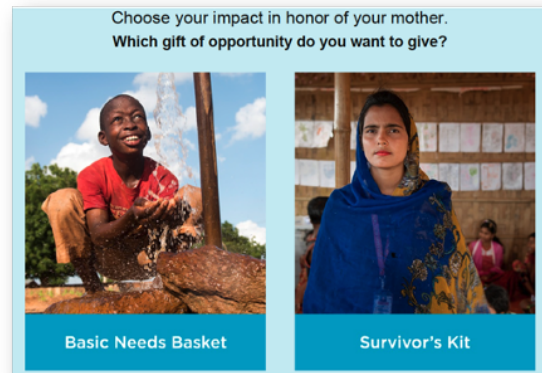


Figure 2. Description of donation opportunity in the email by condition (Study 1)

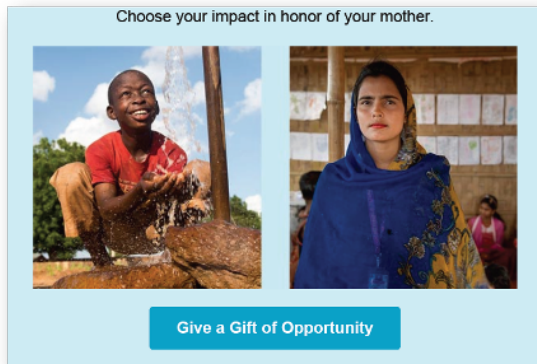
Panel A. Who condition



Panel B. What condition



Panel C. Control condition



Measures. Our preregistered primary outcome measure was whether an individual clicked on any link in the email that would direct them to a donation page on the organization's website. We examined email click-through behavior for 19 days, starting on the campaign launch date (April 21, 2021) and lasting through Mother's Day (May 9, 2021), as preregistered. The average click-through rate in our sample of people who opened the email was 1.57%. We interpret email click-throughs as a proxy for donation interest. This follows the practice of prior research that measured click-through data as a primary outcome in charitable settings (e.g., Exley & Petrie, 2018; Silver & Small, 2024), given its predictive validity for downstream actions, like donations (Exley & Petrie, 2018; see also Nickerson & Rogers, 2010).

We also measured donation rate and amount as secondary outcomes, but we had not preregistered those as main dependent variables because of expected statistical power issues that stem from anticipated low baselines (since charitable giving in response to online campaigns is considered a low-frequency behavior at the individual level; Adena & Hager, 2025), and the noise coming from aspects of the donation infrastructure that are unrelated to the study (e.g., the donation webpage loading time; ease of payment process).

Results

We ran an ordinary least squares (OLS) regression with heteroskedasticity-robust standard errors to predict the click-through rate as a function of the experimental condition people were assigned to. Across all studies, we report results from OLS regressions following our preregistrations, which is recommended when modeling binary outcomes for the ease of interpretation (Gomila, 2021). Logistic regressions are reported in the Web Appendices and reveal robust results.

What- vs. Who-Framed Choice

As shown in Figure 3, the click-through rate in the Who condition (1.47%) was significantly lower than in the What condition (1.93%; $b = -.005$, $SE = .002$, $p = .019$), amounting to a relative decrease of 24%. This suggests that prospective donors were less interested in donating when the choice was framed as “who to help” rather than “what to give”.

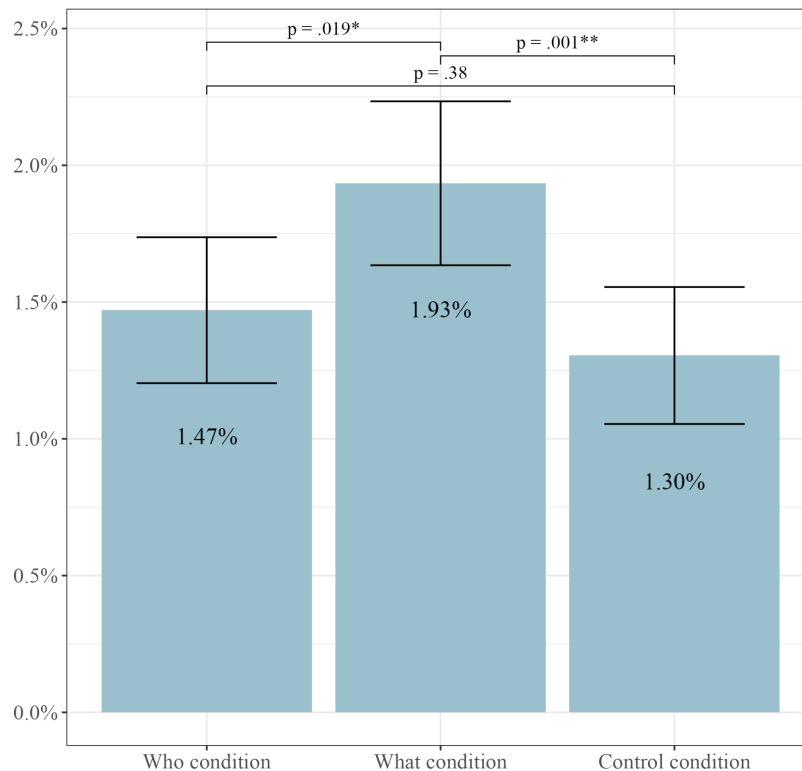
Why might the “who”-framed choice reduce donation interest, relative to the “what”-framed choice? We theorize that prospective donors experience greater discomfort when choosing between groups of beneficiaries, leading to increased aversion to making an active choice. Since this study’s choice environment implicitly prompts donors to select one donation option, the primary way to avoid making that choice was to disengage—by not clicking on either

donation option in the email. Accordingly, the lower click-through rate in the Who condition may reflect greater choice avoidance than the What condition.

We note that an alternative explanation for the difference in donation interest is that the “who” (vs. “what”) framing simply made both donation options seem less worthwhile. For example, omitting the details on what type of support is being offered in the Who condition may lower the perceived importance of the donations. We provide direct evidence for our theorized psychological process in Studies 2 and 3 and empirically test—and rule out—this alternative explanation in Study 3.

Comparing Two Types of Choice with No Choice

To examine how the two types of choice affect donation interest relative to no choice, we compare the click-through rates in each choice condition relative to the no-choice condition. As shown in Figure 3, the click-through rate in the What condition (1.93%) was significantly higher than the click-through rate in the Control condition (1.30%; $b = .006$, $SE = .002$, $p = .001$), representing a relative increase by 49%. There were no detectable differences in the click-through rates between the Who condition and the Control condition ($b = .002$, $SE = .002$, $p = .38$).

Figure 3. Email click-through rate by condition (Study 1)

Notes. The figure reports the average email click-through rate by condition. Error bars represent 95% confidence intervals. $^*p < .05$; $^{**}p < .01$

We conducted additional exploratory analyses. First, we confirmed that there were no detectable differences between conditions in the rates at which participants unsubscribed from future emails from the organization (see Web Appendix A for details). Next, the donation rate did not differ significantly by condition (Web Appendix A). This may be because of a very low baseline (0.17%), as had been expected by the field partner, or because of the conservative nature of this test: As described in the methods, the same images featuring potential recipient groups were presented in all three conditions, which may have reduced differences across conditions. For example, this could have attenuated the differences between the What and Who conditions by inadvertently prompting potential donors in the What condition to also consider the tradeoff between two recipient groups.

Discussion

In this field experiment, we examined how the presence and framing of choice affects donation interest. In line with our theorizing, we saw that donation choice framing mattered: Participants were less likely to click through the donation solicitation email when faced with a “who”-framed choice relative to a “what”-framed choice. This evidence provides support for Hypotheses 2 and 3, whereby framing a donation choice as “who to help” increases choice avoidance, and in a single-selection choice environment, reduces donation interest, relative to a choice framed as “what to give.” We also detected evidence in support of Hypothesis 5, whereby a “what”-framed choice increases donation interest relative to not offering a choice over the donation use. However, a “who”-framed choice did not detectably increase donation interest relative to a no-choice alternative. This is consistent with our theorizing that competing psychological forces are at play when donors face a “who”-framed choice relative to no choice, which extends the prior literature by questioning whether choice is universally beneficial to increase donations.

STUDY 2

Study 2 sought to extend the findings from Study 1 by examining actual donation behavior as the primary outcome, assessing the underlying mechanisms, and employing a different set of stimuli. Study 2 uses an online experimental setting, which follows the practice of prior research (Exley & Petrie, 2018) that coupled a field experiment focusing on click-through behavior in a charitable giving campaign with online experiments assessing donation behaviors in the same conceptual paradigm. In this study, we again set up a single-selection environment in the choice conditions, but we explicitly ask prospective donors to at most select one option (as

opposed to an implicit encouragement to do so, as in Study 1), following prior research (e.g., Cryder et al., 2017; Ein-Gar et al., 2021; Esterzon et al., 2023; Fuchs et al., 2020).

Relative to a choice framed as “what to give”, we predicted that a choice framed as “who to help” would create a greater sense of decision discomfort (Hypothesis 1) and lead to greater choice avoidance (Hypothesis 2), which manifests as reduced donation interest in this single-selection choice environment (Hypothesis 3). Relative to no choice, we predicted that both types of choice would induce greater psychological agency, which increases donation interest for a choice framed as “what to give” (Hypotheses 4 and 5) but is counteracted by the heightened sense of decision discomfort under a “who”-framed choice (Hypothesis 6). We examine each of these predictions in Study 2.

Methods

Sample. We recruited 1,206 participants ($M_{\text{age}} = 41.9$ years, $SD_{\text{age}} = 13.4$; 56.8% female; 78.0% White) on Amazon Mechanical Turk (“MTurk”) for a five-minute survey that paid \$0.50.

Procedures. Participants were first asked to complete a short filler task, and they learned about the opportunity to earn a bonus based on their performance (see Web Appendix B for details). After completing the task, all participants were told that based on their performance, they would receive a \$0.60 bonus. On the same page, participants learned that they could donate half of their earned bonus (\$0.30 of a \$0.60 bonus) to a charity, Save the Children, if they wanted. Participants received background information about Save the Children, which portrayed this charity as legitimate and trustworthy (see Web Appendix B for the exact language).

Figure 4. Description of donation opportunity by condition (Study 2)

Panel A. Who condition

You can give a gift of opportunity by donating \$0.30 to Save the Children.
Choose who you want to help!

Help Malnourished Babies <i>Nutritious food for malnourished babies</i>	OR	Help Orphans <i>Hygiene essentials for orphans</i>
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Panel B. What condition

You can give a gift of opportunity by donating \$0.30 to Save the Children.
Choose what you want to give!

Give Nutritious Food <i>Nutritious food for malnourished babies</i>	OR	Give Hygiene Essentials <i>Hygiene essentials for orphans</i>
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Panel C. Control condition

You can give a gift of opportunity by donating \$0.30 to Save the Children.

Give A Gift of Opportunity

*Examples of how your donation may be used:
 nutritious food for malnourished babies,
 hygiene essentials for orphans*

On the next page, all participants read, “You can give a gift of opportunity by donating \$0.30 to Save the Children.” They were presented with additional text and a donation opportunity based on which condition they had been assigned to (Figure 4). In the Who condition, participants read “Choose who you want to help!”. They could select “Help malnourished babies”, “Help orphans”, “Not interested in either option”, or “Not ready to make this decision; ask again at the end of the survey.” In the What condition, participants read, “Choose what you want to give!”, where they could select “Give nutritious food”, “Give hygiene

essentials”, “Not interested in either option”, or “Not ready to make this decision; ask again at the end of the survey.” In the Control condition, participants could select “Give a gift of opportunity”, “Not interested in this option”, or “Not ready to make this decision; ask again at the end of the survey.” We counterbalanced the order in which the gift options appeared.

We allowed participants to defer the donation decision (“Not ready to make this decision; ask again at the end of the survey”) for two reasons. First, theoretically, decision deferral is one element of avoidance behavior and a method of emotion regulation when people face emotionally uncomfortable tradeoffs (Anderson, 2003). Second, practically speaking, allowing participants to delay the decision increases the ecological validity of the design: When people receive email solicitations in the real world, as participants in our field experiment did, they can be undecided in the moment and defer the decision to a later time.

Importantly, as shown in Figure 4, the information about what the donation could be used for was held constant across the three conditions. All participants read that their donation could be used to provide nutritious food for malnourished babies or to provide hygiene essentials for orphans. This ensured that factors associated with the donation options themselves—such as the emotional evocativeness of certain words (e.g., “orphans”) in the appeal—were held constant across conditions. Thus, any observed differences between conditions can be attributed to the presence and framing of the choice, rather than to differences in the content of the donation appeals.

After participants had made their decision, they answered a series of questions assessing their psychological reactions to and perceptions of the donation opportunity, including the key questions summarized in the next section, along with additional exploratory questions. After participants reported demographics, those who had opted to defer the decision were presented

with a second opportunity to donate, with the same donation option(s) that they had seen previously. After our data collection ended, we made actual donations to Save the Children following participants' selections.

Measures. Our preregistered primary outcome was whether participants opted to donate at the first donation opportunity. In the Who and What conditions, it meant participants donated \$0.30 of their bonus to either of the two options presented. In the Control condition, this meant participants donated \$0.30 of their bonus to “Give a Gift of Opportunity.” The results are unchanged when we include the final donation decision of the 8.1% of participants who opted to defer their decision, rather than focusing on the decision at the first donation opportunity (Web Appendix B). We use the rate at which participants opted to donate to measure donation interest.

Decision discomfort was measured by taking the average of each participant's agreement ratings with the following two statements ($r = .86$), randomized in order: “I found it unpleasant to make this decision” and “I felt a sense of discomfort when trying to make this decision” (adapted from Luce et al., 1999; 1 = Strongly disagree, 6 = Strongly agree). The sense of agency participants experienced during the donation opportunity was measured with three questions, randomized in order, asking if participants felt like they could “determine exactly how to help”, “influence where to make an impact”, and “control what would happen with my donation”, on a scale from 1 (Strongly disagree) to 6 (Strongly agree; adapted from Fuchs et al., 2020). The three items were collapsed into a composite sense of agency score (Cronbach's alpha = 0.89). We counterbalanced whether participants first reported feelings of agency or feelings of decision discomfort.

The choice to focus on decision discomfort deviates from our preregistration for this study, where we had intended to look at the broader measure of decision burden. Decision

burden is a combination of decision discomfort and decision difficulty (see Web Appendix B). We ultimately focused on decision discomfort for two reasons. First, we have since learned from the prior literature that cognitive decision difficulty and emotional decision discomfort reflect two sides of decision burden (Luce et al., 2001). Decision difficulty reflects the cognitive challenges associated with choosing between two options that possess similar attributes (Luce et al., 2001; Sloman, 1996). Decision discomfort reflects the emotional process of unpleasant or distressing feelings that can arise when a decision environment threatens an important goal for the individual (Luce et al., 1999, 2001). Second, our data similarly showed that the four items we used to measure decision difficulty and decision discomfort loaded onto two separate factors (see exploratory factor analysis in Web Appendix B). Our posterior theory development has focused on the emotional decision discomfort, rather than the cognitive decision difficulty—if the framing of *who to help* introduces a tradeoff that violates moral principles for potential donors, it leads to feelings of discomfort, which should affect the emotional side of the decision process. In contrast, the attributes of the donation choices in the Who and What conditions were objectively equivalent, so cognitive decision difficulty should not explain the effect of choice framing on donation interest. We thus report the results for the theoretically meaningful mechanism of decision discomfort in the main text, and show the results for the measure of decision burden in Web Appendix B. For transparency, we highlight in the main text when the results are different for the measure of decision burden.

Results

The means, standard deviations, and correlations of the primary measures are presented in Table 1. Donation rates are presented in Figure 5. The analyses reported in the main text rely on OLS regressions with heteroskedasticity-robust standard errors to estimate the effect of condition on the primary outcome measures.

Table 1. Means, Standard Deviations, and Zero-Order Pairwise Correlations of Condition Assignment and Primary Outcome Measures (Study 2).

Variable	Mean	SD	1	2	3	4
1. "Who" Choice condition (1 or 0)	0.33	0.47	1			
2. "What" Choice condition (1 or 0)	0.33	0.47	-0.50***	1		
3. Donation interest (1 or 0)	0.46	0.50	-0.06*	0.08**	1	
4. Decision discomfort (1-6)	2.84	1.53	0.20***	-0.07*	-0.20***	1
5. Sense of agency (1-6)	3.70	1.29	0.08**	0.14***	0.31***	-0.14***

Notes: * $p < .05$; ** $p < .01$; *** $p < .001$

What- vs. Who-Framed Choice

We first examine the effects of choice framing. Replicating the pattern in the field experiment, participants in the Who condition were significantly less likely to donate (42.2%) relative to those in the What condition (52.0%; $b = -.098$, $SE = .035$, $p = .005$), amounting to an 19% relative decrease. In this single-selection environment, choice avoidance could only manifest as either deferring the decision or forgoing the donation opportunity altogether. This operationalization aligns with prior research that measures choice avoidance as a preference for the no-choice options, which allow participants to avoid making an active selection between alternatives (e.g., Dhar & Simonson, 2003; Ritov & Baron, 1992). In this sense, the lower donation interest observed in the Who condition (vs. the What condition) suggests that the “who to help” framing induces greater choice avoidance.

Why did the Who condition evoke greater choice avoidance, which manifested as decreased donation interest? We hypothesized that decision discomfort plays a role. Indeed, as shown in Figure 6 Panel A, participants in the Who condition experienced significantly greater feelings of decision discomfort ($M = 3.282$, $SD = 1.515$) than in the What condition ($M = 2.680$,

SD = 1.376; $b = .601$, SE = .102, $p < .001$). In other words, as we theorized, facing a tradeoff over which human beneficiaries to help is more psychologically distressing than facing a tradeoff over which objects to give. To further assess the relationship between decision discomfort and choice avoidance, we conducted statistical mediation analyses. We report mediation analyses with donation interest (as the flip side of choice avoidance) as the outcome measure to maintain consistency with mediation analyses reported later for comparisons involving the no-choice condition. All statistical mediation analyses reported in the paper estimate 95% confidence intervals (CI) around the indirect effects using 5,000 bootstrapped samples, and are interpreted as estimating correlational (rather than causal) evidence for the mechanisms (Fiedler et al., 2001).

Figure 7 Panel A depicts the path diagrams for the mediation analyses that assess whether decision discomfort is a potential mechanism explaining the difference between the What and Who conditions in donation interest (and thus, choice avoidance). We found that higher levels of decision discomfort were associated with a lower likelihood to donate ($b = -.041$, SE = .012, $p = .001$) in an OLS regression where we simultaneously controlled for an indicator for the Who (vs. What) condition. The decrease in donation likelihood in the Who (vs. What) condition was significantly mediated by the increase in decision discomfort (indirect effect = $-.025$, 95% CI = $[-.044, -.011]$). Consistent with our theory, feelings of discomfort over the decision-making process were pertinent to potential donors' likelihood to (not) engage with the choice-based donation process.

Comparing Two Types of Choice with No Choice

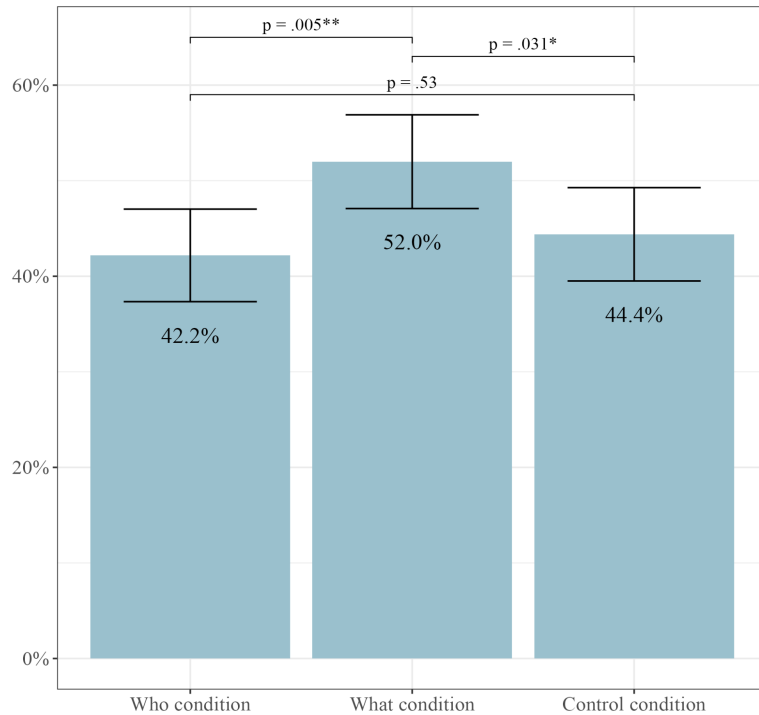
We next compare each choice condition to the no-choice control condition. As shown in Figure 6 Panel B, we found that feelings of agency were significantly higher in the What condition ($M = 3.952$, SD = 1.174) than in the Control condition ($M = 3.288$, SD = 1.347; $b =$

.663, $SE = .089$, $p < .001$). Participants in the What condition were also significantly more likely to donate (52.0%) compared to those in the Control condition (44.4%; $b = .076$, $SE = .035$, $p = .031$), amounting to a 17% increase. We further found that higher levels of agency were associated with a greater likelihood to donate ($b = .123$, $SE = .013$, $p < .001$) in an OLS regression where we simultaneously controlled for an indicator for the What (vs. Control) condition. The increase in donation likelihood in the What condition (vs. the Control condition) was significantly mediated by the increased feelings of agency (indirect effect = .082, 95% CI = [.058, .111]; Figure 7 Panel B). These results are in line with our theory and previous evidence (Eckel et al., 2017; Esterzon et al., 2023; Fuchs et al., 2020) that providing a donation choice framed as “what to give” boosted individuals’ feelings of agency over their decision, which increased their likelihood to donate.

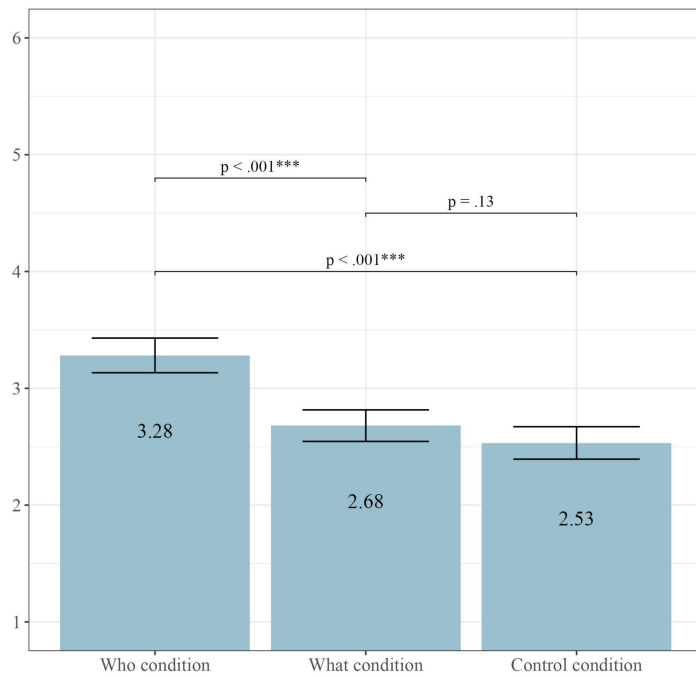
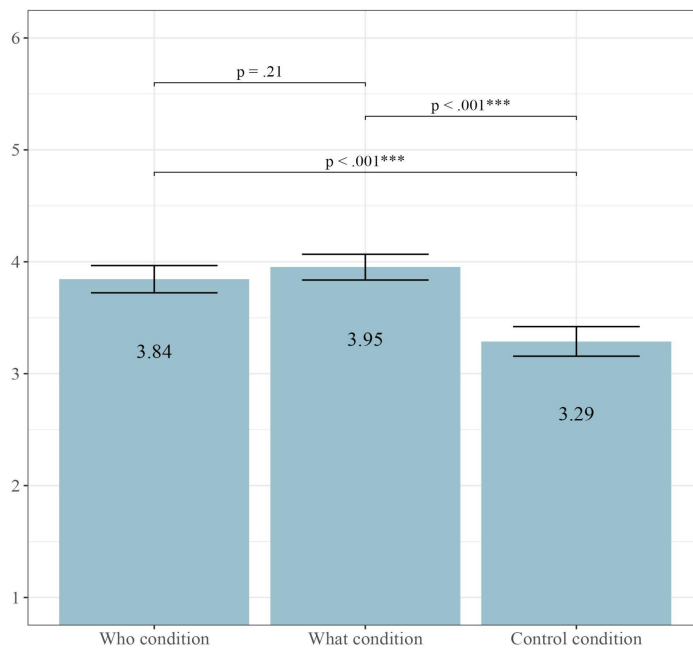
Next, we compared the Who choice relative to the Control condition on the key psychological and behavioral outcomes. We found that participants in the Who condition reported greater feelings of agency ($M = 3.844$, $SD = 1.243$) but also greater feelings of decision discomfort ($M = 3.282$, $SD = 1.51$) than those in the Control condition (agency: $M = 3.288$, $SD = 1.347$; $b = .556$, $SE = .091$, $p < .001$; decision discomfort: $M = 2.532$, $SD = 1.414$; $b = .749$, $SE = .103$, $p < .001$). In an OLS regression where we simultaneously controlled for an indicator for the Who (vs. Control) condition, higher levels of agency were associated with greater donation likelihood ($b = .113$, $SE = .012$, $p < .001$), while more decision discomfort was associated with lower donation likelihood ($b = -.057$, $SE = .011$, $p < .001$). In a parallel mediation model, donation behavior in the Who condition (vs. Control condition) was explained by the positive indirect effect of feeling a sense of agency (indirect effect = .063, 95% CI = [.041, .090]) and, simultaneously, the negative indirect effect of decision discomfort (indirect effect = -.043, 95%

CI = [-.066, -.025]; Figure 7 Panel C). The balanced magnitudes of these competing mechanisms may explain why donation rates were comparable between the Who and Control conditions in this study. Donation likelihood was only directionally but not significantly lower in the Who condition than the Control condition ($b = -.022$, $SE = .035$, $p = .53$).

Figure 5. Donation rate by condition (Study 2)



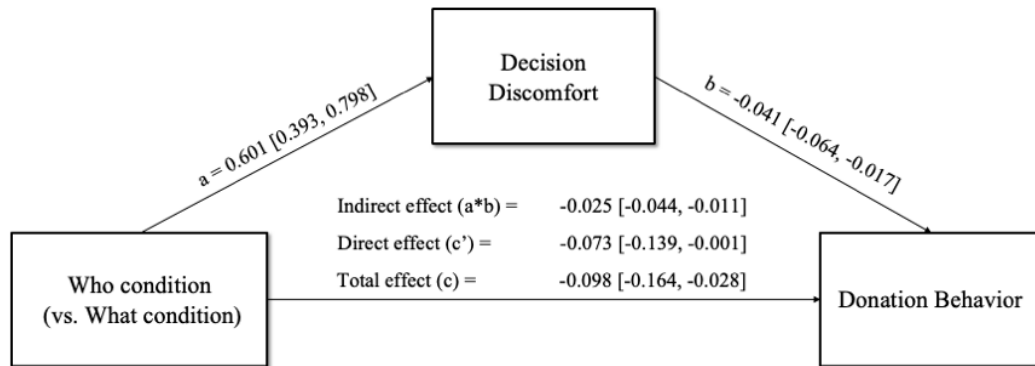
Notes. The figure reports the donation rate at the first opportunity to donate by condition. Error bars represent 95% confidence intervals. $*p < .05$; $**p < .01$

Figure 6. Psychological processes by condition (Study 2)**Panel A. Decision discomfort****Panel B. Sense of agency**

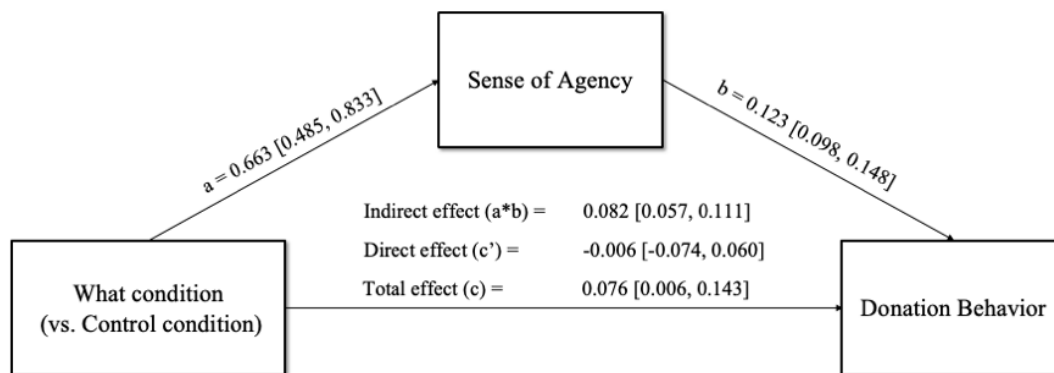
Notes. The figures report feelings of decision discomfort (Panel A) and agency (Panel B) by condition. Error bars represent 95% confidence intervals. *** $p < .001$

Figure 7. The effect of donation opportunity framing on donation behavior via the psychological mechanisms (Study 2)

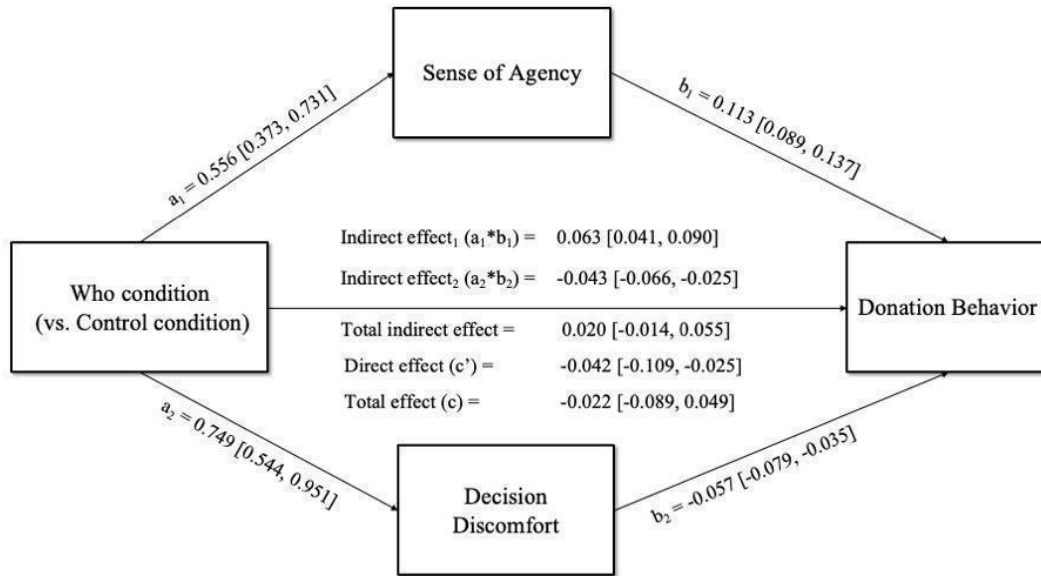
Panel A. Effect of Who condition (vs. What condition) on donation behavior via decision discomfort



Panel B. Effect of What condition (vs. Control condition) on donation behavior via sense of agency



Panel C. Effect of Who condition (vs. Control condition) on donation behavior via sense of agency and decision discomfort



Notes: The numbers in the brackets after each estimate are the 95% CIs around the corresponding estimate. The 95% CIs around the indirect effects in the mediation analyses are estimated using 5,000 bootstrapped samples (with replacement).

As described in the methods section above, the theoretically meaningful mechanism of decision discomfort was a subset of the preregistered decision burden scale, which represented both the emotional aspect of decision discomfort and a separate cognitive element of decision difficulty. The detailed results of decision burden are reported in Web Appendix B. Similar to decision discomfort, decision burden was significantly greater in the Who condition than in the What condition ($p < .001$) and the Control condition ($p < .001$). Decision burden was not a significant mediator of the effect of the Who condition (vs. What condition) on donation behavior (Web Appendix B Table B13), but it was a significant mediator explaining the effect of the Who condition (vs. Control condition) on donation behavior in the model including both decision burden and sense of agency as parallel mediators (Web Appendix B Table B14; agency also held as a significant mediator).

Discussion

This incentive-compatible online study replicates the field experiment and provided evidence for the theorized psychological processes. Specifically, relative to potential donors who were presented with a “what”-framed choice, those offered a “who”-framed choice experienced greater decision discomfort (Hypothesis 1) and were more choice avoidant by opting not to choose between the two donation options (Hypothesis 2), which manifested as lower donation interest (Hypothesis 3). Relative to the no-choice general donation opportunity, potential donors facing a “what to give” choice exhibited a greater sense of agency (Hypothesis 4) and higher donation interest (Hypothesis 5). Finally, our theorized competing psychological processes were at play when considering the effects of a choice framed as “who to help” relative to no choice: A greater sense of agency in the Who (vs. Control) condition was positively associated with donation interest, but an increased sense of decision discomfort in the Who (vs. Control) condition was associated with lower donation interest (Hypothesis 6).

STUDY 3

Studies 1 and 2 presented donation choices in a single-selection format—mirroring both common structures in prior research (e.g., Cryder et al., 2017; Ein-Gar et al., 2021; Esterzon et al., 2023; Fuchs et al., 2020) and the design of real-world donation platforms (see Table E1 in the Online Appendix). In these studies, we interpreted differences in donation interest between the Who and What conditions as reflecting differences in choice avoidance. This approach offers a clean behavioral readout of avoidance and aligns with prior work that infers avoidance from whether people make an active choice between presented options (e.g., Dhar & Simonson, 2003; Ritov & Baron, 1992). However, one limitation of this method is that it conflates aversion to the act of choosing (our theorized mechanism) with diminished prosocial motivation more broadly. That is, although we interpret lower donation interest in the Who (vs. What) condition as

evidence of the discomfort–avoidance pathway and provide support for this decision discomfort mechanism in Study 2, the observed effect could also stem from a decreased appeal of the donation options themselves when framed around recipients rather than objects.

Study 3 addresses this limitation in two key ways. First, we directly measure perceived importance of the donation options to test whether the “who” framing simply makes the donation options seem less worthy of support. Second, we examine the effect of “who” (vs. “what”) framing on choice avoidance in a multiple-selection setting, where prospective donors can choose one, both, or neither of the two gift options. This design allows us to disentangle choice avoidance from a reduced appeal of the donation options: choice avoidance may manifest as either opting to donate to both options or neither option, whereas decreased appeal would only manifest as opting to donate to neither option.

Methods

Sample. We recruited 360 participants ($M_{\text{age}} = 39.9$ years, $SD_{\text{age}} = 12.5$; 48.3% female; 74.4% White) on MTurk for a six-minute survey that paid \$0.65.

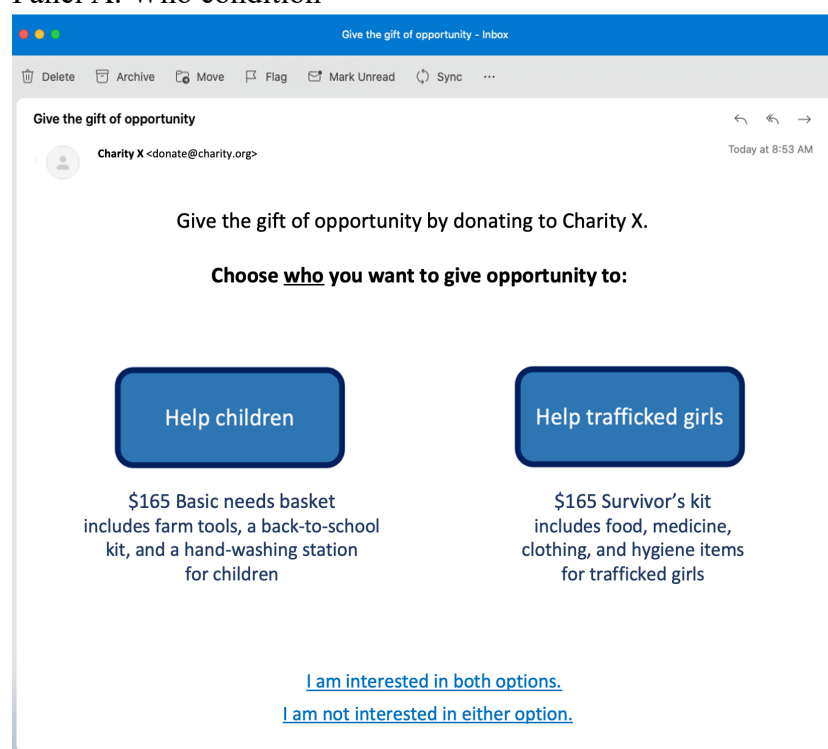
Procedures. Participants were told to imagine that they had donated to a charity in the past, named Charity X.¹ Then, they were told to imagine receiving an email from Charity X. They were presented with an image of this email, which read, “Give the gift of opportunity by donating to Charity X.” The donation choice in the email depended on which of the two conditions they were assigned to (Figure 8). In the Who condition, participants read, “Choose who you want to give opportunity to.” They had the choice to select “Help children”, “Help trafficked girls”, “I am interested in both options”, or “I am not interested in either option.” In the What condition, participants read, “Choose what opportunity you want to give.” They had the

¹ This study was conducted before the social media platform, “Twitter”, was renamed, “X”, so participants would not have drawn connections to this social media platform in this scenario.

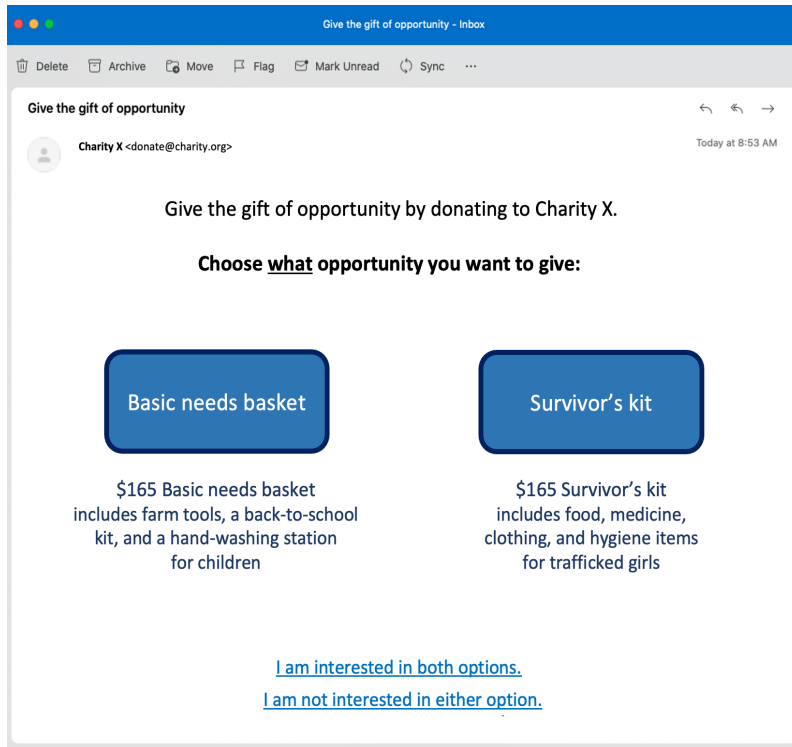
choice to select a “Basic needs basket”, a “Survivor’s kit”, “I am interested in both options”, or “I am not interested in either option.” The order of the gift options (in terms of which gift option was presented on the left in the solicitation email and first in the choice set) was randomized. As shown in Figure 8, the information about what the donation could be used for was held constant across conditions, similar to Study 2. All participants read that their donation could be used to provide a basic needs basket for children or to provide a survivor’s kit to trafficked girls. We only manipulated the focus of the choice.

Figure 8. Description of donation opportunity by condition (Study 3)

Panel A. Who condition



Panel B. What condition



After participants had made their donation decision, they answered a series of questions assessing their psychological reactions to and perceptions of the donation opportunity, including the key questions summarized in the next section, additional exploratory questions, and demographics.

Measures. Our preregistered primary outcome of choice avoidance captured the extent to which participants avoided choosing one of the two donation options. It was measured with an indicator for whether participants opted to either donate to both options or not donate at all. We also preregistered that we would examine whether participants opted to donate to both options, which captures one way for people to avoid choosing between two donation options.

We used three items to measure decision discomfort about choosing one of the two donation options. For participants who had selected one of the two donation options, we asked them (1) how guilty they felt about choosing one option and not the other, (2) how badly they

felt about this choice, and (3) the extent to which they found this decision “pleasant or agonizing.” For participants who had avoided the choice by selecting neither or both of the options, we asked them to imagine they had to choose between the two donation options and then respond to the same three items. All participants responded to these three items in a randomized order on a scale from 1 to 6 (with the scale anchors specific to each item, see Web Appendix C for details). The three items were collapsed into a composite score of decision discomfort (Cronbach’s $\alpha = 0.93$). Similar to Study 2, we focus on the theoretically meaningful mechanism of decision discomfort in the main text, but the results are robust to using our preregistered measure of decision burden (which included decision discomfort along with the cognitive decision difficulty items), which we summarize briefly in the main text and report in detail in Web Appendix C.

We also asked participants to report on the perceived importance of donating to each gift option. Participants responded to the question, “How important did you think it would be to donate to the ‘[donation gift name]’ option?” on a scale from 1 (“Not at all important”) to 6 (“Extremely important”). Participants responded to this question twice, once per gift option, in the same randomized order that the gift options were initially presented. We formed a composite measure of perceived importance with the average of the two ratings.

Results

The means, standard deviations, and correlations of the primary measures are presented in Table 2. The analyses reported in the main text rely on OLS regression with heteroskedasticity-robust standard errors to estimate the effect of condition on the primary outcome measures.

Table 2. Means, Standard Deviations, and Correlations of Condition Assignment and Primary Outcome Measures (Study 3).

Variable	Mean	SD	1	2	3	4
1. "Who" Choice condition (1 or 0)	0.50	0.50	1			
2. Choice avoidance (1 or 0)	0.53	0.50	0.23***	1		
3. Choice of both (1 or 0)	0.37	0.48	0.20***	0.71***	1	
4. Decision discomfort (1-6)	3.03	1.25	0.19***	0.31***	0.45***	1
5. Perceived gift importance (1-6)	4.69	1.03	0.15**	0.04	0.37***	0.41***

Notes: * $p < .05$; ** $p < .01$; *** $p < .001$

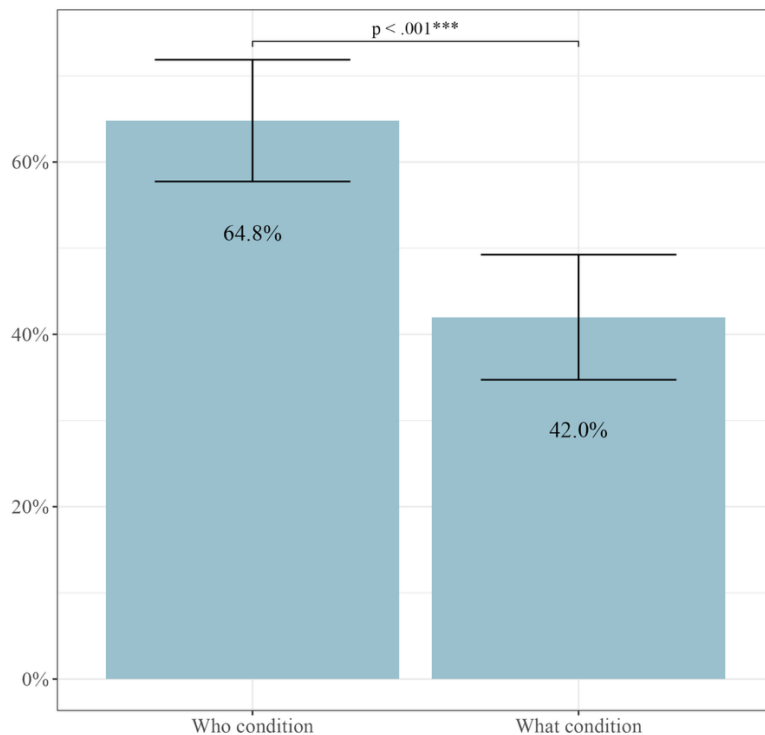
Participants in the Who condition were significantly more likely to be choice avoidant (64.8%) than those in the What condition (42.0%; $b = .228$, $SE = .051$, $p < .001$), representing a relative increase of 54.3% (see Figure 9). In other words, prospective donors were significantly more likely to opt not to make a choice, either by selecting both gift options or by selecting neither option, when faced with a choice over “who to help”, rather than a choice over “what to give.” This formal examination of choice avoidance replicates the patterns detected in the previous experiments.

As shown in Figure 10, decision discomfort was also significantly higher in the Who condition ($M = 3.266$, $SD = 1.240$) than in the What condition ($M = 2.803$, $SD = 1.216$; $b = .463$, $SE = .129$, $p < .001$). This replicates the results in Study 2 and is consistent with our theory that facing a tradeoff over which human beneficiaries to help is more psychologically distressing than facing a tradeoff over which objects to give. To further assess the relationship between decision discomfort and choice avoidance, we conducted statistical mediation analyses. Higher levels of decision discomfort were associated with greater choice avoidance ($b = .109$, $SE = .018$, $p <$

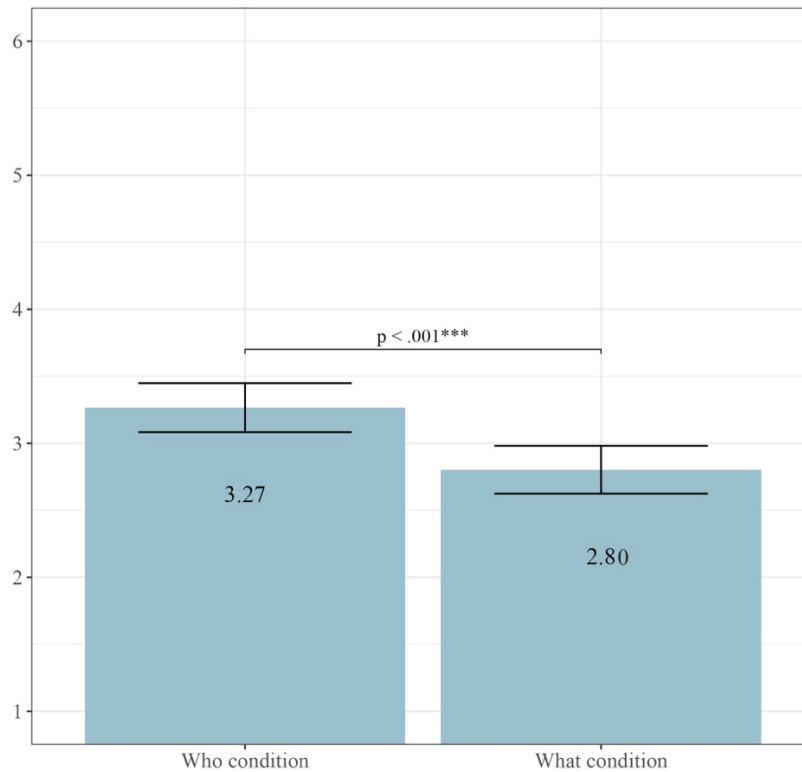
.001) in an OLS regression where we simultaneously controlled for an indicator for the Who (vs. What) condition. Using 5,000 bootstrapped samples, we estimated that the increase in choice avoidance in the Who (vs. What) condition was significantly mediated by the increase in decision discomfort (indirect effect = .050, 95% CI = [.021, .089]; see Figure 11).

We also obtained consistent results when using the preregistered measure of decision burden (which aggregated decision discomfort and cognitive decision difficulty). Specifically, decision burden was significantly higher in the Who condition than in the What condition ($p < .001$), and decision burden was a statistically significant mediator explaining the effect of the Who condition (vs. What condition) on choice avoidance.

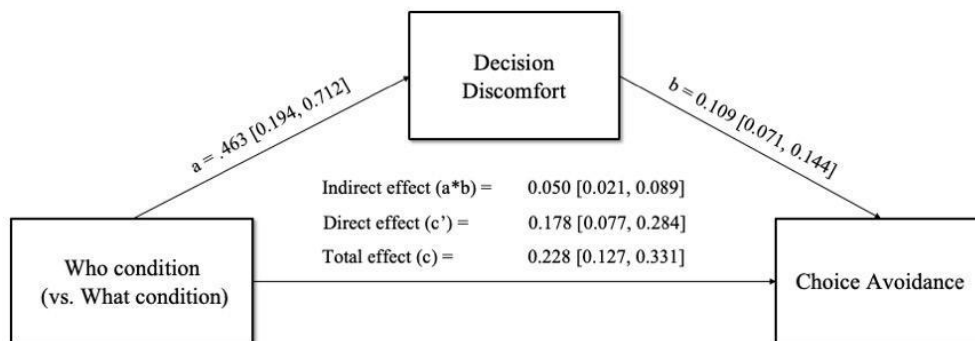
Figure 9. The rate of choice avoidance by condition (Study 3)



Notes. The figure reports the rate of choice avoidance by condition. Error bars represent 95% confidence intervals. *** $p < .001$

Figure 10. Decision discomfort by condition (Study 3)

Notes. The figure reports the ratings of decision discomfort by condition. Error bars represent 95% confidence intervals. *** $p < .001$

Figure 11. The effect of Who condition (vs. What condition) on choice avoidance via decision discomfort (Study 3)

Notes: The numbers in brackets after each estimate are the 95% CIs around the corresponding estimate. The 95% CI around the indirect effect in the mediation analysis is estimated using 5,000 bootstrapped samples (with replacement).

We conducted additional analyses to rule out the alternative explanation that Studies 1 and 2 were subject to: the “who to help” framing may have reduced the appeal of the donation options relative to the “what to give” framing. First, we examined if the “who to help” framing lowered the perceived importance of the donation options relative to the “what to give” framing. We found that participants in the Who condition actually rated the gifts as *more important* on average ($M = 4.85$, $SD = 1.05$) relative to the What condition ($M = 4.54$, $SD = 0.99$; $b = .302$, $SE = .108$, $p = .005$). Second, we examined if the avoidance behavior in the Who (vs. What) condition was driven by the selection of neither option, which would be indicative of a reduced appeal of donation options under the “who”-framed choice. In this multiple-selection choice setting, there was no detectable difference in the rate of opting not to donate between the Who condition (18.4%) and the What condition (14.9%; $b = .035$, $SE = .039$, $p = .372$). In contrast, we found that participants in the Who condition were significantly more likely to donate to *both* donation options (46.4%) than those in the What condition (27.1%; $b = .193$, $SE = .050$, $p < .001$). Collectively, this evidence suggests that the Who condition did not reduce the appeal of the donation options relative to the What condition, and supports our interpretation that the lower donation interest observed in the Who (vs. What) condition in the previous two studies reflected an aversion to engaging in the decision process.

Interestingly, the patterns reported above raise a new question regarding the theorized psychological mechanism: Did participants opt to donate to both options, not because the “who”-based choice framing elicited greater decision discomfort, but because it elevated perceived importance of the gift options? Using statistical mediation (see detailed statistics in Web Appendix C), we found that decision discomfort was a significant mediator explaining the effect

of the Who (vs. What) condition on interest in both options (indirect effect = .050, 95% CI = [.021, .089]), and that decision discomfort remained a significant mediator when controlling for the average perceived importance of the gift options in a parallel mediation model (decision discomfort indirect effect = .062, 95% CI: [.026, .103]; average perceived importance indirect effect = .029, 95% CI: [.010, .057]). These results suggest that decision discomfort was an active psychological process explaining the avoidance behaviors induced by a “who to help” framing in this multiple-selection choice setting.

Discussion

In a setting where donors facing a donation choice can opt to select multiple gift options, we found evidence for Hypotheses 1 and 2: Participants in the Who condition experienced more decision discomfort and were more likely to avoid making a tradeoff between gift options than those in the What condition. Further analyses revealed that the Who condition led to higher perceived importance of the donation options, and that choice avoidance primarily manifested as donating to both gifts (rather than opting out of donating altogether). This suggests that the “who to help” choice framing did not reduce the appeal of the donation options, but instead made the act of choosing between recipients to help more aversive than choosing between objects to give. We replicate these results in another scenario-based online experiment where we additionally manipulated the cost of each gift and found robust results across two cost levels (see Web Appendix D for details).

GENERAL DISCUSSION

While giving donors choice can provide them with a motivating sense of agency, the choice can also put them into an uncomfortable position, depending on its framing. Results from field and online studies suggest that relative to a choice over what to give, facing a choice over who to help increases feelings of discomfort over the decision process and causes potential

donors to avoid making a choice between the donation options, decreasing donation interest under identifiable conditions. Such feelings of discomfort counteract the positive effects of feeling a sense of agency in choosing how the donation will be used, when a “who”-framed choice is compared to no choice.

Theoretical Implications

Given the importance of donation appeals, the last three decades have seen significant advancements in the study of charitable giving across disciplines such as management, marketing, economics, and psychology (e.g., Adena & Huck, 2020; Altmann et al., 2019; Berman et al., 2018; Berman & Small, 2012; Exley, 2020; Feiler et al., 2012; Goswami & Urminsky, 2016; Hafenbrack et al., 2020; Munz et al., 2020; Xu et al., 2020; Zlatev & Miller, 2016). This literature has provided robust evidence that offering choice can enhance donations and elicit positive emotional responses in donors (Aknin et al., 2022; Fuchs et al., 2020; Özer et al., 2024). Our work provides a more nuanced understanding of choice in donation appeals by demonstrating when choice over donation outcomes is beneficial versus when an aversion to donation choices arises. Thus, this research responds to the call for a deeper understanding of when and why people may forgo opportunities to choose their impact (Fuchs et al., 2020).

The literature about charitable giving has suggested that prospective donors prioritize information about the beneficiaries of a charity over other types of information when deciding whether to donate (Bachke et al., 2014; Metzger & Günther, 2019). Offering tangible details about one’s potential impact has been found to increase giving (Cryder et al., 2013; Kogut & Ritov, 2005a, 2005b; Wald et al., 2021). However, when impact information about donation recipients is presented as a choice set, donors are also exposed to details about the potential recipients that they would choose *not* to help. Our research suggests that providing information

about recipient options in a choice set may create discomfort for prospective donors and ultimately reduce donations. Moreover, our documented difference between a “who to help” choice and an objectively equivalent “what to give” choice provides another example of how slight changes in the framing of donation appeals can significantly alter donor psychology and behavior (Epperson et al., 2024; Kessler & Milkman, 2018; Schulz et al., 2018).

The theoretical implications of this research extend beyond donation behavior, to the psychological and behavioral reactions to choice. Prior research has posited that people value opportunities with choice because choice caters to the desire for certainty and control over one’s environment (deCharms, 1968; Deci & Ryan, 1985; Deci & Ryan, 2000; Leotti et al., 2010; Ryan & Deci, 2006). While much of this literature tends to find that, “giving more choice is always better” (as summarized by Chua & Iyengar, 2006, p. 43), research in the field of judgment and decision making has introduced several factors that make offering choice undesirable. For example, when the choice options are unattractive, the act of choosing reduces anticipated and experienced satisfaction, which leads people to avoid the choice altogether (Beattie et al., 1994; Botti & Iyengar, 2004; Dhar, 1997). When choice sets are extensive, people may be less likely to make a choice due to either limited cognitive capacity to process all of the information, or stronger anticipated regret from the prospect of making an inferior choice (“choice overload”; Gourville & Soman, 2005; Iyengar & Lepper, 2000; Jacoby et al., 1974; Levav et al., 2010; Long et al., 2024; Schwartz et al., 2002). We introduce a novel factor contributing to the negative reactions to choice, namely, whether the choice involves a tradeoff about *humans* rather than *objects*. We show that choices introducing tradeoffs about humans uniquely incite negative feelings of discomfort, which in turn reduce individuals’ likelihood of

acting on the opportunity to feel greater control. Our research thus sheds light on a new factor that may systematically predict choice avoidance.

Practical Implications

In 2021 alone, over 325 billion dollars in charitable giving in the U.S. came from individual contributions (Giving USA, 2022). It is critical for organizations and for society at large to understand how to motivate charitable giving and maximize the psychological benefits for donors. Coming back to the opening question: When practitioners ask whether their organization can increase donations by letting people choose their impact, the answer depends on the type of choice they offer. Many organizations that depend on the success of donation campaigns, like charitable organizations, colleges, alumni centers, and other not-for-profit entities, seem to follow the dictum that offering choice in charitable giving opportunities increases donation behavior (Nunnenkamp & Öhler, 2012; Samek & Longfield, 2023). The results of our work, however, suggest that practitioners should be mindful of the type of choice they offer, and consider its likely psychological and behavioral effects.

Based on our research, including donation options that target different recipient populations (e.g., “Educate a girl” and “Educate a refugee child” in Save the Children’s gift catalog) may not increase donations and it even risks backfiring. A change in the framing to emphasize the different objects one can contribute (e.g., books or calculators) may help avoid instilling discomfort among potential donors and can thus present a better way of providing choice. Also, when organizations present donors with a “who”-framed choice (e.g., “Educate a girl” or “Educate a refugee child”), they can consider highlighting an option to choose both gift options (e.g., “Educate a girl and a refugee child”), which would allow donors to act on their

prosocial intentions while avoiding the discomfort that arises from facing a tradeoff about who to help.

Limitations and Future Directions

Future research can build on and extend our work. First, we examined donation choice settings with two options. This is an externally valid approach used in the email campaign of our charity partner and has also been used in relevant research (e.g., Ein-Gar et al., 2021; Esterzon et al., 2023; Rifkin et al., 2021). We expect the effect to hold when more options are presented, since the desire to avoid creating unfair outcomes exists for two or more targets (Choshen-Hillel et al., 2015; Sharps & Schroeder, 2019; Shaw, 2013), and the head-to-head comparison of more than two recipient groups may make the taboo tradeoffs even more salient. Second, the donation amount in the studies was fixed, as it often is with charities who offer a set of directed donation options, like in our field partner's gift catalog. We expect our results to hold when donors decide how much money to donate to each option, because the choice set framing may first impact the initial decision to give. This variation can be explored in future work. Third, all our studies were conducted in the United States. In places where individual autonomy is less important (e.g., Singapore; Fuchs et al., 2020), tradeoffs about who to help may *decrease* donations compared to not presenting a choice at all, since the negative discomfort mechanism may be more likely to outweigh the positive agency mechanism.

Going beyond our focus on donations, future research can explore whether the theoretical framework extends to other opportunities to act prosocially, such as decisions to volunteer time for community service, or to engage in organizational citizenship behavior at work. For example, is it more effective to give prospective volunteers a choice over the service they can provide ("provide meals at a food kitchen or provide tutoring at a local school"), or over the people they

can help (“help homeless neighbors or help low-income students”)? Is framing an appeal to mentor co-workers more effective when it is presented as a choice over “what skills or advice you can give” versus “who you can help”? In these volunteering scenarios, our theory suggests that the “what”-framed choice may be more effective by solely activating the benefits of agency, whereas the “who”-framed choice may instill discomfort and inhibit volunteering efforts by having people decide between different groups or individuals to help.

CONCLUSION

The role of choice in charitable giving is more nuanced than previous work suggests. Our research demonstrates that both the presence and framing of choice affect prospective donors’ psychological experiences and donation behavior. While offering choice in donation contexts can motivate prosocial behavior by enhancing a sense of agency, we show that providing donation opportunities framed as tradeoffs about humans also fosters an aversive feeling of discomfort, which counteracts the benefits of choice. Although donation opportunities can yield a “warm glow” (Andreoni, 1990), introducing choice about recipient populations can stunt charitable decision making by inducing a “cold chill” in the giving process.

REFERENCES

- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology*, vol. 2: 267–299. Elsevier.
- Adena, M., & Hager, A. (2025). Does Online Fundraising Increase Charitable Giving? A Nationwide Field Experiment on Facebook. *Management Science*, 71(4), 3216–3231.
- Adena, M., & Huck, S. (2020). Online fundraising, self-image, and the long-term impact of ask avoidance. *Management Science*, 66(2), 722–743.
- Aflaki, A., & Pedraza-Martinez, A. J. (2023). Competition and collaboration on fundraising for short-term disaster response: The impact on earmarking and performance. *Manufacturing & Service Operations Management*, 25(4): 1451–1470.
- Aknin, L. B., Dunn, E. W., & Whillans, A. V. (2022). The emotional rewards of prosocial spending are robust and replicable in large samples. *Current Directions in Psychological Science*, 31(6): 536–545.
- Altmann, S., Falk, A., Heidhues, P., Jayaraman, R., & Teirlinck, M. (2019). Defaults and donations: Evidence from a field experiment. *The Review of Economics and Statistics*, 101(5), 808–826.
- Anderson, C. J. (2003). The psychology of doing nothing: Forms of decision avoidance result from reason and emotion. *Psychological Bulletin*, 129(1): 139.
- Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm-glow giving. *The Economic Journal*, 100(401): 464–477.
- Andreoni, J., & Bernheim, B. D. (2009). Social image and the 50–50 norm: A theoretical and experimental analysis of audience effects. *Econometrica*, 77(5): 1607–1636.
- Bachke, M. E., Alfnes, F., & Wik, M. (2014). Eliciting Donor Preferences. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 25(2), 465–486. <https://doi.org/10.1007/s11266-012-9347-0>
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9): 1175–1184.
- Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, 1(2), 164–180.
- Baron, J. (1986). Tradeoffs among reasons for action. *Journal for the Theory of Social Behaviour*, 16(2): 173–195.
- Baron, J., & Spranca, M. (1997). Protected values. *Organizational Behavior and Human Decision Processes*, 70(1): 1–16.
- Beattie, J., Baron, J., Hershey, J. C., & Spranca, M. D. (1994). Psychological determinants of decision attitude. *Journal of Behavioral Decision Making*, 7(2): 129–144.
- Bénabou, R., & Tirole, J. (2006). *A cognitive theory of identity, dignity, and taboos*. Princeton, New Jersey: Princeton University.

- Berman, J. Z., Barasch, A., Levine, E. E., & Small, D. A. (2018). Impediments to effective altruism: The role of subjective preferences in charitable giving. *Psychological Science*, 29(5), 834–844.
- Berman, J. Z., & Small, D. A. (2012). Self-interest without selfishness: The hedonic benefit of imposed self-interest. *Psychological Science*, 23(10), 1193–1199.
- Botti, S. & Iyengar, S. (2004). The psychological pleasure and pain of choosing: when people prefer choosing at the cost of subsequent outcome satisfaction. *Journal of Personality and Social Psychology*, 87(3), 312.
- Choshen-Hillel, S., Shaw, A., & Caruso, E. M. (2015). Waste management: How reducing partiality can promote efficient resource allocation. *Journal of Personality and Social Psychology*, 109(2): 210–231.
- Choshen-Hillel, S., & Yaniv, I. (2012). Social preferences shaped by conflicting motives: When enhancing social welfare creates unfavorable comparisons for the self. *Judgment and Decision Making*, 7(5): 618–627.
- Chua, R. Y.-J., & Iyengar, S. S. (2006). Empowerment through choice? A critical analysis of the effects of choice in organizations. *Research in Organizational Behavior*, 27: 41–79.
- Costello, J. P., & Malkoc, S. A. (2022). Why are donors more generous with time than money? The role of perceived control over donations on charitable giving. *Journal of Consumer Research*, 49(4), 678–696.
- Cryder, C., Botti, S., & Simonyan, Y. (2017). The Charity Beauty Premium: Satisfying Donors' "Want" versus "Should" Desires. *Journal of Marketing Research*, 54(4), 605–618.
- Cryder, C. E., Loewenstein, G., & Scheines, R. (2013). The donor is in the details. *Organizational Behavior and Human Decision Processes*, 120(1): 15–23.
- deCharms, R. (1968). *Personal Causation: The internal affective determinants of behavior*. Academic Press.
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2): 109–134.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4): 227–268.
- Development Initiatives. (2021). Global humanitarian assistance report. <https://devinit.org/resources/global-humanitarian-assistance-report-2021/executive-summary/>
- Dhar, R. (1997). Consumer preference for a no-choice option. *Journal of Consumer Research*, 24(2), 215–231.
- Dhar, R., & Simonson, I. (2003). The Effect of Forced Choice on Choice. *Journal of Marketing Research*, 40(2), 146–160. <https://doi.org/10.1509/jmkr.40.2.146.19229>
- Eckel, C. C., Herberich, D. H., & Meer, J. (2017). A field experiment on directed giving at a public university. *Journal of Behavioral and Experimental Economics*, 66: 66–71.
- Ein-Gar, D., Levontin, L., & Kogut, T. (2021). The adverse effect of choice in donation decisions. *Journal of Consumer Psychology*, 31(3): 570–586.

- Epperson, R., Diederich, J., & Goeschl, T. (2024). How to design the ask? Funding units vs. giving money. *Management Science*, 0(0).
- Esterzon, E., Lemmens, A., & Van Den Bergh, B. (2023). Enhancing donor agency to improve charitable giving: Strategies and heterogeneity. *Journal of Marketing*, 87(4): 636–655.
- Exley, C. L. (2020). Using charity performance metrics as an excuse not to give. *Management Science*, 66(2): 553–563.
- Exley, C. L., & Petrie, R. (2018). The impact of a surprise donation ask. *Journal of Public Economics*, 158, 152–167.
- Fehr, E., & Schmidt, K. M. (1999). A theory of fairness, competition, and cooperation. *The Quarterly Journal of Economics*, 114(3): 817–868.
- Feiler, D. C., Tost, L. P., & Grant, A. M. (2012). Mixed reasons, missed givings: The costs of blending egoistic and altruistic reasons in donation requests. *Journal of Experimental Social Psychology*, 48(6), 1322–1328.
- Fiedler, K., Schott, M., & Meiser, T. (2011). What mediation analysis can (not) do. *Journal of Experimental Social Psychology*, 47(6), 1231–1236.
- Fiske, A. P. (1992). The four elementary forms of sociality: Framework for a unified theory of social relations. *Psychological Review*, 99(4): 689.
- Fiske, A. P., & Tetlock, P. E. (1997). Taboo trade-offs: Reactions to transactions that transgress the spheres of justice. *Political Psychology*, 18(2): 255–297.
- Fuchs, C., de Jong, M. G., & Schreier, M. (2020). Earmarking donations to charity: Cross-cultural evidence on its appeal to donors across 25 countries. *Management Science*, 66(10): 4820–4842.
- Gallagher, S. (2000). Philosophical conceptions of the self: Implications for cognitive science. *Trends in Cognitive Sciences*, 4(1): 14–21.
- Gallus, J., Reiff, J., Kamenica, E., & Fiske, A. P. (2022). Relational incentives theory. *Psychological Review*, 129(3): 586–602.
- Giving USA. (2022). The annual report on philanthropy for the year 2021. Research report. www.givingusa.org.
- Graham, J., & Haidt, J. (2012). Sacred values and evil adversaries: A moral foundations approach. In M. Mikulincer & P. R. Shaver (Eds.), *The social psychology of morality: Exploring the causes of good and evil*: 11–31. American Psychological Association.
- Gomila, R. (2021). Logistic or linear? Estimating causal effects of experimental treatments on binary outcomes using regression analysis. *Journal of Experimental Psychology: General*, 150(4): 700–709.
- Gordon-Hecker, T., Choshen-Hillel, S., Shalvi, S., & Bereby-Meyer, Y. (2017). Resource allocation decisions: When do we sacrifice efficiency in the name of equity? In M. Li & D. P. Tracer (Eds.), *Interdisciplinary perspectives on fairness, equity, and justice*: 93–105. Springer.
- Goswami, I., & Urminsky, O. (2016). When should the ask be a nudge? The effect of default amounts on charitable donations. *Journal of Marketing Research*, 53(5), 829–846.

- Gourville, J. T., & Soman, D. (2005). Overchoice and assortment type: When and why variety backfires. *Marketing Science*, 24(3), 382–395.
- Haidt, J., & Joseph, C. (2004). Intuitive ethics: How innately prepared intuitions generate culturally variable virtues. *Daedalus*, 133(4): 55–66.
- Hafenbrack, A. C., Cameron, L. D., Spreitzer, G. M., Zhang, C., Noval, L. J., & Shaffakat, S. (2020). Helping people by being in the present: Mindfulness increases prosocial behavior. *Organizational Behavior and Human Decision Processes*, 159: 21–38.
- Iyengar, S. S., & Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of Personality and Social Psychology*, 79(6), 995.
- Jacoby, J., Speller, D. E., & Kohn, C. A. (1974). Brand choice behavior as a function of information load. *Journal of Marketing Research*, 11(1), 63–69.
- Kessler, J. B., & Milkman, K. L. (2018). Identity in charitable giving. *Management Science*, 64(2): 845–859.
- Kessler, J. B., Milkman, K. L., & Zhang, C. Y. (2019). Getting the rich and powerful to give. *Management Science*, 65(9): 4049–4062.
- Kimbrough, E. O., Sheremeta, R. M., & Shields, T. W. (2014). When parity promotes peace: Resolving conflict between asymmetric agents. *Journal of Economic Behavior & Organization*, 99: 96–108.
- Kogut, T., & Ritov, I. (2005a). The “identified victim” effect: An identified group, or just a single individual? *Journal of Behavioral Decision Making*, 18(3): 157–167.
- Kogut, T., & Ritov, I. (2005b). The singularity effect of identified victims in separate and joint evaluations. *Organizational Behavior and Human Decision Processes*, 97(2): 106–116.
- Lanteri, A., Chelini, C., & Rizzello, S. (2008). An experimental investigation of emotions and reasoning in the trolley problem. *Journal of Business Ethics*, 83: 789–804.
- Leotti, L. A., Iyengar, S. S., & Ochsner, K. N. (2010). Born to choose: The origins and value of the need for control. *Trends in Cognitive Sciences*, 14(10): 457–463.
- Levav, J., Heitmann, M., Herrmann, A., & Iyengar, S. S. (2010). Order in product customization decisions: Evidence from field experiments. *Journal of Political Economy*, 118(2), 274–299.
- Li, S. X., Eckel, C., Grossman, P. J., & Brown, T. L. (2015). Directed giving enhances voluntary giving to government. *Economics Letters*, 133: 51–54.
- Long, X., Sun, J., Dai, H., Zhang, D., Zhang, J., Chen, Y., Hu, H., & Zhao, B. (2024). The choice overload effect in online recommender systems. *Manufacturing & Service Operations Management*, 0(0).
- Luce, M. F. (1998). Choosing to avoid: Coping with negatively emotion-laden consumer decisions. *Journal of Consumer Research*, 24(4): 409–433.
- Luce, M. F., Bettman, J. R., & Payne, J. W. (1997). Choice processing in emotionally difficult decisions. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 23(2): 384.

- Luce, M. F., Bettman, J. R., & Payne, J. W. (2001). Emotional decisions: Tradeoff difficulty and coping in consumer choice. *Monographs of the Journal of Consumer Research*, 1: 1–209.
- Luce, M. F., Payne, J. W., & Bettman, J. R. (1999). Emotional trade-off difficulty and choice. *Journal of Marketing Research*, 36(2): 143–159.
- Metzger, L., & Günther, I. (2019). Making an impact? The relevance of information on aid effectiveness for charitable giving. A laboratory experiment. *Journal of Development Economics*, 136, 18–33.
- Munz, K. P., Jung, M. H., & Alter, A. L. (2020). Name Similarity Encourages Generosity: A Field Experiment in Email Personalization. *Marketing Science*, 39(6), 1071–1091.
- Nickerson, D. W., & Rogers, T. (2010). Do You Have a Voting Plan?: Implementation Intentions, Voter Turnout, and Organic Plan Making. *Psychological Science*, 21(2), 194–199.
- Nai, J., Kotha, R., Narayanan, J., & Puranam, P. (2020). Transparency and fairness in organizational decisions: An experimental investigation using the paired ultimatum game. *Strategy Science*, 5(1): 55–70.
- Nunnenkamp, P., & Öhler, H. (2012). How to attract donations: The case of US NGOs in international development. *The Journal of Development Studies*, 48(10): 1522–1535.
- Özer, Ö., Urrea, G., & Villa, S. (2024). To earmark or to non-earmark? The role of control, transparency, salience and warm-glow. *Manufacturing & Service Operations Management*, 26(2), 739–757.
- Rai, T. S., & Fiske, A. P. (2011). Moral psychology is relationship regulation: Moral motives for unity, hierarchy, equality, and proportionality. *Psychological Review*, 118(1): 57.
- Rifkin, J. R., Du, K. M., & Berger, J. (2021). Penny for Your Preferences: Leveraging Self-Expression to Encourage Small Prosocial Gifts. *Journal of Marketing*, 85(3), 204–219.
- Ritov, I., & Baron, J. (1992). Status-quo and omission biases. *Journal of Risk and Uncertainty*, 5(1), 49–61. <https://doi.org/10.1007/BF00208786>
- Rustichini, A., & Villeval, M. C. (2014). Moral hypocrisy, power and social preferences. *Journal of Economic Behavior & Organization*, 107: 10–24.
- Ryan, R. M., & Deci, E. L. (2006). Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will? *Journal of Personality*, 74(6): 1557–1586.
- Samek, A., & Longfield, C. (2023). Do thank-you calls increase charitable giving? Expert forecasts and field experimental evidence. *American Economic Journal: Applied Economics*, 15(2): 103–124.
- Sato, A., & Yasuda, A. (2005). Illusion of sense of self-agency: Discrepancy between the predicted and actual sensory consequences of actions modulates the sense of self-agency, but not the sense of self-ownership. *Cognition*, 94(3): 241–255.
- Schulz, J. F., Thiemann, P., & Thöni, C. (2018). Nudging generosity: Choice architecture and cognitive factors in charitable giving. *Journal of Behavioral and Experimental Economics*, 74, 139–145.

- Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. R. (2002). Maximizing versus satisficing: Happiness is a matter of choice. *Journal of Personality and Social Psychology*, 83(5), 1178–1197.
- Sebanz, N. (2007). The emergence of self: Sensing agency through joint action. *Journal of Consciousness Studies*, 14(1–2): 234–251.
- Sharps, D. L., & Schroeder, J. (2019). The preference for distributed helping. *Journal of Personality and Social Psychology*, 117(5): 954–977.
- Shaw, A. (2013). Beyond “to share or not to share”: The impartiality account of fairness. *Current Directions in Psychological Science*, 22(5): 413–417.
- Shaw, A., & Knobe, J. (2013). Not all mutualism is fair, and not all fairness is mutualistic. *Behavioral and Brain Sciences*, 36(1): 100.
- Shaw, A., & Olson, K. (2014). Fairness as partiality aversion: The development of procedural justice. *Journal of Experimental Child Psychology*, 119: 40–53.
- Shaw, A., & Olson, K. R. (2012). Children discard a resource to avoid inequity. *Journal of Experimental Psychology: General*, 141(2): 382–395.
- Silver, I., & Small, D. A. (2024). Put Your Mouth Where Your Money Is: A Field Experiment Encouraging Donors to Share About Charity. *Marketing Science*, 43(2), 392–406.
- Sloman, S. A. (1996). The empirical case for two systems of reasoning. *Psychological Bulletin*, 119(1), 3.
- Small, D. A., & Loewenstein, G. (2003). Helping a victim or helping the victim: Altruism and identifiability. *Journal of Risk and Uncertainty*, 26(1): 5–16.
- Tetlock, P. E., Kristel, O. V., Elson, S. B., Green, M. C., & Lerner, J. S. (2000). The psychology of the unthinkable: Taboo trade-offs, forbidden base rates, and heretical counterfactuals. *Journal of Personality and Social Psychology*, 78(5): 853.
- Tversky, A., & Shafir, E. (1992). Choice under conflict: The dynamics of deferred decision. *Psychological Science*, 3(6): 358–361.
- Wald, D. M., Johnston, E. W., Wellman, N., & Harlow, J. (2021). How does personalization in news stories influence intentions to help with drought? Assessing the influence of state empathy and its antecedents. *Frontiers in Communication*, 5: 588978.
- Wegner, D. M., Sparrow, B., & Winerman, L. (2004). Vicarious agency: Experiencing control over the movements of others. *Journal of Personality and Social Psychology*, 86(6): 838.
- Xu, A. J., Rodas, M. A., & Torelli, C. J. (2020). Generosity without borders: The interactive effect of spatial distance and donation goals on charitable giving. *Organizational Behavior and Human Decision Processes*, 161: 65–78.
- Zlatev, J. J., & Miller, D. T. (2016). Selfishly benevolent or benevolently selfish: When self-interest undermines versus promotes prosocial behavior. *Organizational Behavior and Human Decision Processes*, 137: 112–122.