

Department of Economics  
ISSN number 1441-5429

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## **Demanding the Morally Demanding: Experimental Evidence on the Effects of Moral Arguments and Moral Demandingness on Charitable Giving**

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Discussion Paper no. [2022-03](#)

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**Abstract:**

What are the effects of confronting people with moral arguments and morally demanding statements to perform certain actions, such as donating to charity? To investigate this question, we conduct an online randomized experiment via Prolific (n=2500) where participants can donate to charity. Using a between-subject design, we provide some participants with a moral argument as to why they should donate. We then add a single sentence on top of the moral argument that expresses and varies moral demandingness at different levels. In a follow-up experiment (n=1200) we provide the moral argument and demandingness via an external party's website—the non-profit Giving What We Can. In both experiments, we find that moral arguments significantly increase both the frequency and amount of donations compared to the control. However, we fail to find evidence that increasing the level of the moral demandingness affects donation behavior in either experiment. Our findings suggest that charities should employ moral arguments to increase giving, but not morally demanding statements.

**Keywords:** Charitable Giving, Experiment, Morality, Obligation, Pro-Social Behavior

**JEL Classification:** D64, D91, H41, C90

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# **Demanding the Morally Demanding: Experimental Evidence on the Effects of Moral Arguments and Moral Demandingness on Charitable Giving**

*Ben Grodeck and Philipp Schoenegger\*<sup>1</sup>*

What are the effects of confronting people with moral arguments and morally demanding statements to perform certain actions, such as donating to charity? To investigate this question, we conduct an online randomized experiment via Prolific (n=2500) where participants can donate to charity. Using a between-subject design, we provide some participants with a moral argument as to why they should donate. We then add a single sentence on top of the moral argument that expresses and varies moral demandingness at different levels. In a follow-up experiment (n=1200) we provide the moral argument and demandingness via an external party's website—the non-profit Giving What We Can. In both experiments, we find that moral arguments significantly increase both the frequency and amount of donations compared to the control. However, we fail to find evidence that increasing the level of the moral demandingness affects donation behavior in either experiment. Our findings suggest that charities should employ moral arguments to increase giving, but not morally demanding statements.

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We want to thank Philip Grossman, Benjamin Sachs, Zach Freitas-Groff, Theron Pummer, Lata Ganghadaran, Erte Xiao, Brian Jabarian, Kirby Nielsen, David Rhys Bernard, Joshua Miller, Hayden Wilkinson, Tyler John, Miguel Costa-Gomes, Peter Singer, Toby Handfield, and Nina Xue for helpful comments and suggestions.

This work was supported by a grant from the Forethought Foundation and the Centre for Effective Altruism as well as additional research funding from Giving What We Can.

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## 1. Introduction

Charitable giving has been studied from the perspectives of various disciplines, among them economics (Andreoni, 1989; 1990; Crumpler and Grossman, 2008; Vesterlund, 2016; Ottoni-Wilhelm et al., 2017), psychology (Bloom, 2016; Lee and Feeley, 2016; Perrine and Heather, 2000; Bergh and Reinstein, 2020), and philosophy (e.g., Singer, 1972; MacAskill, 2015; Pummer, 2016; Berkey, 2020). Philosophers have been especially concerned with the appropriate level of charitable giving and our duties to those in need. Many philosophers argue that we have a moral obligation to donate to charity and that giving is not simply an act of good will. However, little empirical research has been conducted into how communicating this moral obligation and demand affects donor behavior.

This question is important because moral arguments that also state morally demanding obligations are central to many domains of behavior, among them charitable giving, climate change activism, and social justice movements. They all share the underlying structure that a fundamental moral claim directly leads to a moral obligation relating to a certain type of behavior, be it donating a portion of one's income to charity, reducing one's greenhouse gas emissions, becoming vegetarian, or adopting new phrases in everyday speech. A common approach here is to tell people why they should perform these actions and subsequently state how obligated they are to act this way. For example, after providing the argument for an action X, one can tell a person that they can do a lot of good by doing X, that they should do X, that one is morally obligated to do X, or that it is immoral for them not to do X. It is far from clear what the optimal communication strategy is with regard to these moral arguments and demands. In other words, how should one communicate this moral obligation to perform an action with the aim to elicit the

highest possible compliance? Plausibly, not engaging in morally demanding language at all might leave behavior change untapped as the normative force of the obligation might go unappreciated. On the other hand, drawing on too morally demanding phrases might in turn lead to a backfire effect. These questions have direct implications for communication strategies that employ moral arguments in a wide variety of contexts and as such ought to be studied carefully.

Consider the following specific case study: As Ben Sachs remarks in recent work in the context of charitable giving (Sachs, 2019), even (meta-)charitable organizations aligned with the Effective Altruism movement<sup>2</sup> do not communicate high levels of moral demandingness in their public facing materials. For example, Giving What We Can, a non-profit founded to motivate individuals to donate to highly effective charities, shies away from explicitly moral language across all communication channels. As Sachs speculates, this proclivity for non-moral language might be due to a concern about the counterproductivity of communicating high moral demandingness (Sachs, 2019, 2).

Plausibly, the best explanation for the communication strategy observed above is the underlying assumption that expressing strong moral demandingness may backfire and lead to lower, not higher, donations. Some philosophers working on charitable giving have raised this specific concern (e.g. Kagan, 1989; Unger, 1996; De Lazari-Radek and Singer, 2010). For example, Kagan worries that strong moral demands will lead to lower compliance that might in turn result in a blame game that could further reduce compliance (Kagan, 1989, 387), while De Lazari-Radek and Singer stress the possibility of people becoming cynical if they confronted with stringent moral demands (De Lazari-Radek and Singer, 2010, 37). These examples

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<sup>2</sup> Effective Altruism is a social movement focused on using evidence to do the most good given the available resources. This includes researching and donating to the highest cost-effective charitable interventions such as malaria bed nets to researching global catastrophic risks like those posed by artificial intelligence or nuclear war. At the core of its mission is the claim that we all ought to do more than we already are doing, and that our contributions ought to be effective.

suggest that confronting people with morally demanding requirements might be counterproductive to the goal of maximizing donations. However, this is an empirical question that has not yet been answered directly. In this paper, we aim to provide such an answer to this question of the effect of moral arguments and moral demands on charitable giving behavior.

To do this, we conduct two online experiments on Prolific. In our first experiment, participants can choose to donate some, none, or all of their endowment to the charity GiveDirectly. Using a between-subject design, we randomly assign participants either into a control group, a moral argument treatment, or one of three moral demandingness treatments. We give the control group paragraphs about UK parliamentary procedure, while all other groups receive a moral argument concerning the situation of global poverty as well as an argument for how they can help those living in extreme poverty due to their relative affluence. In our three moral demandingness treatments, we add an additional sentence that varies the moral demandingness of the argument across conditions.<sup>3</sup> By adding just a single sentence, our experimental design allows us to cleanly identify the effect that moral demandingness has on donation behavior.

In a follow-up experiment, we focus on differences between the control, the moral argument, and the strong demandingness conditions. The main difference compared to the first experiment is that we provide participants with the treatment text via a third-party website, the organization Giving What We Can<sup>4</sup>. This was done to mitigate possible experimenter demand effects that might arise from us—the experimenters—providing the moral argument and moral demandingness statements to participants.

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<sup>3</sup> We validate the normative differences between the three statements in an ancillary experiment.

<sup>4</sup> For the control treatment, we used the website that the control paragraph was originally taken from.

In both experiments, we find that providing people with moral arguments significantly increases the frequency of donations made by 22.4% and 27.8% respectively. We also find that moral arguments significantly increase the amount donated in both experiments by 51.7% and 42.9% compared to the Control. However, the addition of a single sentence, changing the moral demandingness between treatments (ranging from Inspiration with the lowest moral demandingness to Strong Demandingness with the highest moral demandingness) does not increase the frequency or the amount donated. In our second experiment, we replicate this result with the Strong Demandingness treatment having no impact on the frequency or amount of donations made.

This present paper is best understood as contributing to the general literature on charitable solicitation and pro-social behavior more broadly. Most of charitable giving happens in response to a solicitation attempt of one kind or another (Bekkers and Wiepking, 2010; Bryant et al., 2003; Bekkers, 2005). Their effectiveness may depend on variables such as frequency (Meer, 2011; Meer and Rosen, 2012), transaction costs (Rasul and Huck, 2010), matching rates (Eckel and Grossman, 2003; Karlan and List, 2007), type of appeals (List et al., 2019), or the amount either directly requested or suggested (Shang and Croson, 2009; Edwards and List, 2014; Adena et al., 2014; Reily and Samek 2019; Altmann et al., 2020; Ekström, 2021). In simple terms, the central take-away from this substantial literature is that the way donations are solicited matters.

Investigating a specific phenomenon related to solicitations that is adjacent to our research question, Van Diepen et al., (2009), Wiepking (2008), and Awadari (2020), have provided evidence for the concept of donor fatigue. Similarly, Damgaard and Gravert (2016) find that while reminders to give may increase donations in the short term, they result in donors unsubscribing from the mailing list in the long term. However, the effect of donor fatigue is different from a potential backfire effect of morally demanding communication studied here. The

former is an effect of the number of solicitations, and the latter of the kind of solicitation.

Previous work has also examined the effect of moral language more generally. Bursztyn et al. (2019) show that communicating a moral appeal to (in-)justice is associated with reduced delinquency and default rates in debt repayment. This result suggests that there is some underlying relationship between moral claims such as those relating to justice and monetary decisions that may generalize outside of their context. Similarly, Dal Bo and Dal Bo (2014) show that moral suasion increases contributions in a series of voluntary contribution game laboratory experiments. However, field experiments that attempt to implement the same mechanism in the context of tax payments show mixed results (Torgler, 2004; Blumenthal et al., 2001). Moral suasion interventions differ from the moral demandingness studied here because most moral suasion interventions, which include statements like ‘Don’t lie,’ ‘It is wrong to steal,’ or ‘Be a team player’ among others, do not make explicit the moral demandingness underlying the claim. Specifically manipulating this level of demandingness has not been done before in the way presented here. The moral suasion literature also differs from our moral argument in that suasion often involves statements and proclamations, while we present participants with background information and a moral argument based on the evidence, rather than making a simple normative claim.

Relating to the effectiveness of moral suasions, Ito et al., (2018) find that economic incentives outperform moral suasion both in the short-term effect sizes and longer-term persistence of effects (cf. also Björn et al., 2020).<sup>5</sup> While some studies have looked at how moral suasion and moral arguments affect behavior, explicitly varying the levels of the moral demandingness has been neglected in the literature. Our study contributes to this literature by looking at the impact of moral

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<sup>5</sup> For further recent usage of moral nudges, see Capraro et al. (2019), Böhm et al. (2020) and Bos et al. (2020).



arguments on behavior in detail, but also investigating how different levels of morally demanding appeals impact charitable giving behavior.

The results from our experiments show the importance of language and communication on charitable giving. Moral arguments—specifically related to relative affluence—are an effective tool in changing donation behavior. However, there is surprisingly little to no robust effect of morally demanding language across both experiments. This may imply that we overestimate the effects of this type of language on behavior, or that when the moral argument is powerful enough, it waters down effects of morally demanding communication. This paper opens space for future research on the impact of language and communication on charitable giving behavior.

## **2. Experiment 1**

For a graphical overview of all experimental conditions and the additional sentences that distinguish the treatments (in both Experiment 1 and 2), see Figure 1.

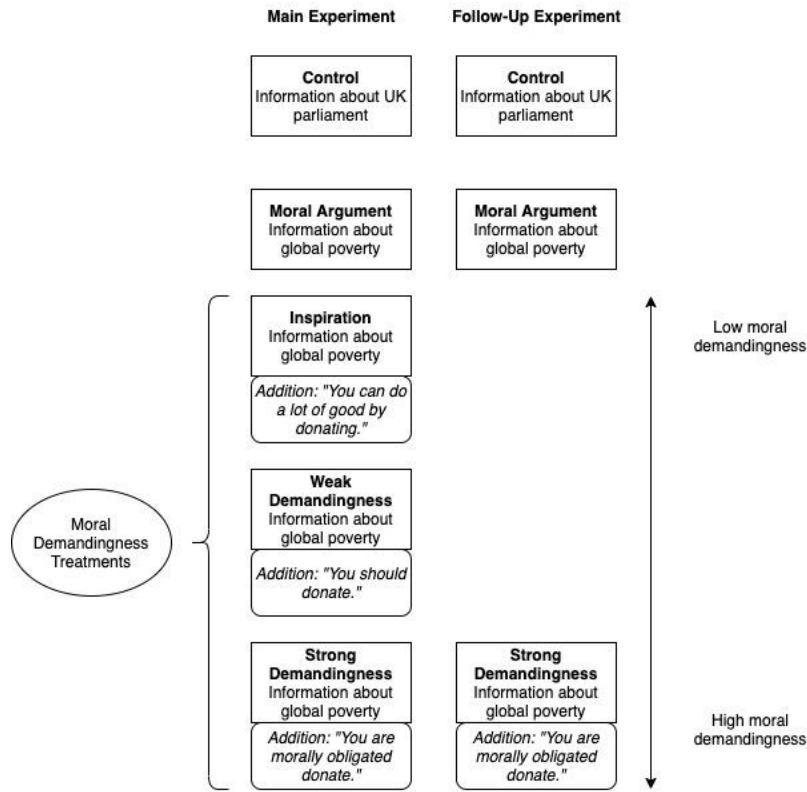


Figure 1. EXPERIMENTAL CONDITIONS

## 2.1 Participants

For our first experiment, we collected our sample via Prolific, an online participant recruitment platform.<sup>6</sup> We advertised the study as a time-sensitive puzzle-solving task to mask the main purpose of investigation to reduce potential self-selection into a charity-focused study. We informed participants in our study that their task was to solve Raven's matrices and that they would be paid according to their

<sup>6</sup> The use of platforms like Prolific (or MTurk) has already received significant uptake in experimental/behavioral economics (e.g., Hauser and Schwarz, 2016; Gandullia and Lezzi, 2018; Palan and Schnitter, 2018); Gandullia, 2019; Giamattei et al., 2020). As Gandullia et al. (2020, 2) have argued, moving from a university student sample to an online sample may also reduce experimenter demand effects as the experimenters are not physically present at the time of data collection thus further making plausible this choice of participant recruitment.

performance on them. We portrayed the full accurate payment structure on Prolific before participation. If they agreed to partake in this study, we gave participants a link to the experiment on Qualtrics. We recruited participants exclusively from the United Kingdom and provided a base pay of £1 for participation. In addition, we gave participants the opportunity to earn an additional £1 bonus endowment for completing the Raven's matrices. We recruited 2500 subjects to participate in the study. We used G\*Power (Faul et al., 2007) to conduct an a priori power analysis to arrive at this sample size. Our goal was to obtain .80 power to detect an effect size of .18 (Cohen's  $d$ ) at a standard .05 alpha error probability. This necessitated 486 participants in each group for a two-sided t-test. This was to account for eliminated participants across our five conditions based on the attention check. Overall, 270 participants across all conditions failed the main attention check. We dropped them from the final data set and excluded them from all analyses: All analyses reported in this paper exclude these data points. Before data collection, we preregistered the study's design and aims on the Open Science Framework.<sup>7,8,9</sup>

## 2.2 Experimental Design

The study consisted of three parts<sup>10</sup>: (1) A real-effort puzzle-solving task portrayed as the main part of the study, (2) a donation task, (3) and a final questionnaire. The real effort task included six Raven's matrices, the first of which functioned as a demonstration and attention check. We timed all the Raven's matrix tasks and informed participants that they had 30 seconds to complete each problem. After

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<sup>7</sup> [https://osf.io/82mz4/?view\\_only=61b0a1c22cb54256a621ca335f05ca96](https://osf.io/82mz4/?view_only=61b0a1c22cb54256a621ca335f05ca96).

<sup>8</sup> We report the following deviations from the preregistration: First, we preregistered a base pay of £0.90 but ended up paying £1 to ensure a fairer pay in case participants took longer than anticipated. Second, we designated 'gender' as a variable used for secondary analyses. In this paper we report the gender results alongside the primary results. Third, we stated that we would run ANOVAs to test for group differences. Because of the disciplinary background of this paper, we decided not to do this.

<sup>9</sup> We received ethics approval for this study from the University Teaching and Research Ethics Committee (UTREC) at the University of St Andrews: SA15064.

<sup>10</sup> See Appendix A for screenshots of the instructions.

these 30 seconds, the next problem automatically appeared in place of the previous one. We also incentivized participants to complete the matrices as quickly and accurately as possible by offering an additional bonus of £5 for the individual who completed the most problems correctly in the shortest time.

All participants received their advertised bonus endowment after completing the matrices task and we paid the additional £5 bonus after 24 hours. Throughout the experiment, we portrayed the bonus endowments in experimental currency units (ECUs). We rewarded participants with 20 ECUs for completing the matrices irrespective of performance and informed them that the exchange rate was 1 ECU = £0.05.

In the second part of the experiment, following the paragraphs about GiveDirectly, we randomly assigned participants into one of five conditions (see Figure 1).<sup>11</sup> In the first condition, ‘Control’, we presented participants with two paragraphs on parliamentary procedure in the UK. These paragraphs were roughly equal in word count and paragraph structure to all other treatments. This condition functioned as a content control condition against which we could compare to the Moral Argument treatment. After reading the paragraphs, we asked participants to answer two comprehension questions. If at least one of their answers was incorrect, we once again showed them the paragraphs and asked them to answer the comprehension questions again. If, on this second attempt, they again failed at least one of the comprehension questions, we informed them of the correct answers. They then proceeded in the experiment.

In the second condition, ‘Moral Argument’, participants received the following two paragraphs constituting the basic moral argument, see Figure 2. As before, they had to answer two comprehension questions following the same mechanism as in the Control condition. This condition functioned as the control

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<sup>11</sup> Because we randomly assigned participants into their respective conditions and exclusions were not evenly distributed, sample sizes between conditions, while not identical, are comparable in size.

condition against which we compare all the moral demandingness treatments that vary the level of demandingness. It also allowed us to observe the effect of moral arguments on donation behavior by comparing it to the control.

*In 2020 about 683 million people are estimated to be living under the international poverty line, according to the World Bank. This has a huge negative impact on health - each year, millions of these people die from preventable diseases such as malaria, tuberculosis, and diarrhea. This immense suffering is easily preventable but is nevertheless neglected. One way to help solve this problem is by donating to charities that focus on poverty alleviation, such as GiveDirectly.*

*People living in Western countries—like you—are, on average, much wealthier than people living in developing countries. Compared to those living in extreme poverty, you have a much greater capacity to help those who are living in extreme poverty.*

Figure 2. Moral Argument paragraphs

The third, fourth, and fifth treatments all included the same paragraphs as the Moral Argument condition. The comprehension questions' structure was also the same. Crucially, all three moral demandingness conditions included an additional bolded sentence varying the moral demandingness statement to act. The extra sentence appeared at the bottom of the text in Figure 2. Specifically, the difference in the intervention sentences were:

**Inspiration Treatment:** “For these reasons, you can do a lot of good if you give money to charities—such as Give Directly—to alleviate the suffering of people in developing countries at a minimal cost to yourself”

**Weak Demandingness Treatment:** “For these reasons, you should give money to charities—such as Give Directly—to alleviate the suffering of people in developing countries at a minimal cost to yourself”

**Strong Demandingness Treatment:** “For these reasons, you are morally obligated to give money to charities—such as Give Directly—to alleviate the suffering of people in developing countries at a minimal cost to yourself.”

The three moral demandingness conditions represent different levels of moral demandingness, ranging from a purely inspiring message to one that explicitly highlights everyone’s moral obligation to donate. We ran a pre-experimental study and found that participants independently evaluated these three statements to have different levels of moral demandingness—with inspiration being the lowest and strong demandingness being the highest as outlined in Figure 1 (see Appendix B for experimental details and results of this pre-experimental study). Figure 3 outlines the experimental procedure including final sample sizes for each condition.

We then told participants that they could donate none, some, or all of their earnings to the charity GiveDirectly. To ensure that the donation was credible, we informed participants that we would email them within 24 hours of completing the study a link to a website containing a receipt with the total amount from the study donated to Give Directly. See Figure 3 for an overview of the experimental procedure including final sample sizes per condition.

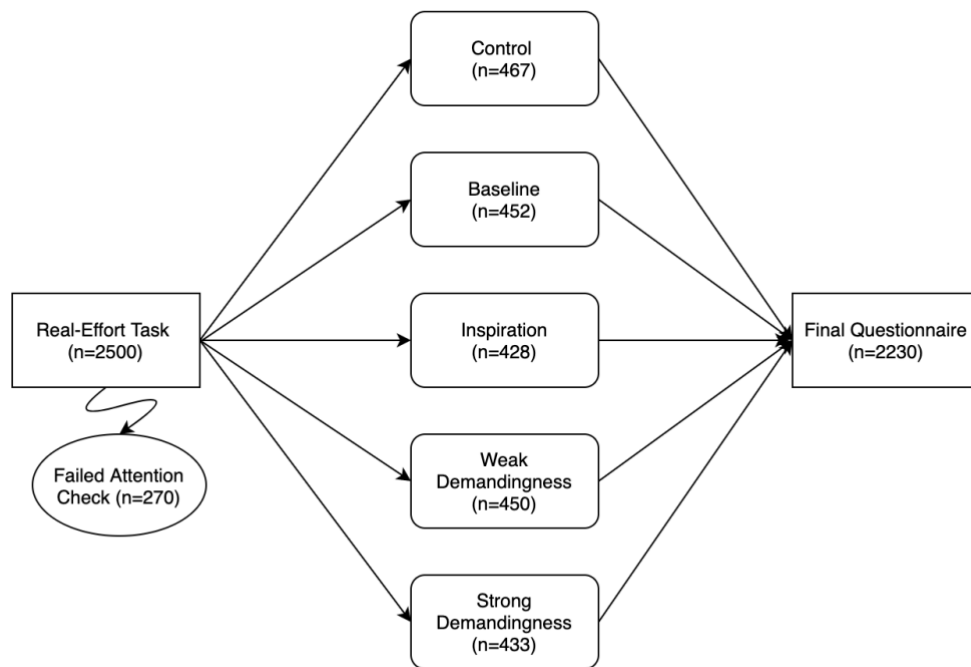


Figure 3. EXPERIMENTAL PROCEDURE

We also preregistered secondary analyses based on demographics and further variables collected in the last part of the main study. Specifically, these are the effects of moral demandingness on donation behavior conditional on gender, altruistic type, and utilitarian attitudes, as well as self-reported feelings of obligation. We asked participants to complete the Oxford Utilitarian Scale (OUS) (Kahane et al., 2018)<sup>12</sup>, Carpenter’s (2021) altruism categorization survey, and a few more questions about GiveDirectly and charitable giving more generally. Demographic information for each participant was provided by a presurvey that all Prolific participants undertook before completing any activities on Prolific. These demographics included age, gender, country of birth, student status, among others.

<sup>12</sup>This is a 10-item questionnaire aimed to capture utilitarian reasoning with the ability to discriminate between individual differences in permissive attitudes towards instrumental harm and impartial concern for the greater good.

Participants earned an average of £1.62 and in total donated £843.15 to GiveDirectly.

### *2.3 Hypotheses*

We investigated two main hypotheses for primary analysis:

**Null Hypothesis I.** Increasing levels of moral demandingness has no effect on the frequency of giving.

**Null Hypothesis II.** Increasing levels of moral demandingness has no effect on the total amount of giving.

Given uncertainty about the direction of the effect that moral demandingness may have on donation behavior and because we did not have reason a priori to expect it to increase or decrease giving behavior, the null hypotheses are two-sided, as are our tests.

### *2.4 Results<sup>13</sup>*

#### *2.4.1 Average Donation Behavior*

The main outcome of interest relating to the two null hypotheses is donation behavior, i.e., how many participants made a donation (frequency), and if they did, how much of their endowment they donated (amount).

Table 1 reports the frequency of donations and the mean amount donated in each treatment. In order to test the effect of the moral argument, we test whether participants in the Moral Argument treatment donated more than in the Control. We find that there is a significant increase in donation frequency (22.4%) in the Moral Argument treatment compared to the Control (60.0% vs 49.0%,  $\chi^2$  test,  $p < 0.001$ ).

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<sup>13</sup> We present the results from self-reported data on obligation, Altruistic type, and the OUS scale in Appendix C.



Comparing the Moral Argument treatment to each of the three moral demandingness treatments, we find no statistically significant difference in the frequency of donations (Inspiration vs Moral Argument: 63.3% vs 60.0%,  $\chi^2$  test,  $p=0.317$ ; Weak Demand vs Moral Argument: 59.8% vs 60.0%,  $\chi^2$  test,  $p=0.945$ ; Strong Demand vs MA: 62.8% vs 60.0%,  $\chi^2$  test,  $p=0.395$ ).

TABLE 1—DESCRIPTIVE STATISTICS

	<i>Obs.</i>	<i>Mean Donation</i>	<i>SD</i>	<i>Donation</i>
Control	467	5.42	7.43	49.0%
Moral Argument	452	8.22	8.66	60.0%
Inspiration	428	8.56	8.56	63.1%
Weak Demandingness	450	8.17	8.17	60.0%
Strong Demandingness	433	7.86	7.86	62.6%

*Notes:* Observations per group, mean donation, standard deviation, and share of participants donating at least 1 ECU.

The mean donation amount in the Control treatment is 5.42 ECUs, which amounts to 27.1% of participants' endowments. This amount is similar to the percentage of the endowment donated found in similar experimental contexts (Eckel and Grossman, 1996; Small and Lowenstein, 2003; van Rijn et al., 2017).

We find that participants donate 51.7% more to GiveDirectly in the Moral Argument compared to the Control treatment (8.23 vs. 5.42, two-tailed t-test,  $p<0.001$ ). While donations in our three moral demandingness treatments are also significantly greater than the Control<sup>14</sup>, we only find minor and insignificant differences between these treatments (Inspiration vs Moral Argument: 8.57 vs 8.23, t-test,  $p=0.562$ ; Weak Demand vs Moral Argument: 8.13 vs 8.23, t-test,  $p=0.868$ ; Strong Demand vs Moral Argument: 7.87 vs 8.23, t-test,  $p=0.516$ ).

Table 2 reports regressions of the effect of morally demandingness statements on donation behavior compared to the Moral Argument. We fail to find

<sup>14</sup> Compared to the Control all treatments are significantly greater with  $p<0.001$  (two-tailed t-tests).

significant effects regarding the frequency of donations in regression 1 (LPM model), or the total amount donated in regression 2 (OLS). However, only considering participants who made a donation, we find that participants in the strong demandingness treatment donate significantly less ECUs (1.196) than in the Moral Argument (regression 3). Further, using a tobit model censored at the most that can be donated (20), we find that for participants that did donate, those in the strong demandingness treatment gave 2.429 less ECUs.

TABLE 2—EFFECT OF MORAL DEMANDINGNESS ON DONATION BEHAVIOR

VARIABLES	(1) Freq.	(2) Amount	(3) Amount>0	(4) Amount>0 (tobit)
Inspiration	0.0329 (0.0329)	0.341 (0.577)	-0.176 (0.605)	-0.232 (1.156)
Weak Demandingness	-0.00225 (0.0326)	-0.0963 (0.570)	-0.109 (0.607)	-0.172 (1.160)
Strong Demandingness	0.0279 (0.0328)	-0.368 (0.575)	-1.196* (0.605)	-2.429* (1.141)
Constant	0.600*** (0.0230)	8.233*** (0.402)	13.72*** (0.428)	18.39*** (0.843)
Observations	1,750	1,750	1,075	1,075
R-squared	0.001	0.001	0.005	

Note: The Constant refers to the Moral Argument. Standard errors in parentheses \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. Regression (1) uses a LPM (no difference in results with a probit regression). Regressions (2) and (3) use OLS and regression (4) uses a Tobit model with an upper limit of 20.

These results suggest that moral arguments explaining why one should donate to charity increases the frequency and amount of donations compared to the Control condition. On the other hand, manipulating the level of demandingness in addition to the moral argument does not affect the frequency of donations. While on average, it also does not affect the total amount donated, we do find that conditional on participants donating, they give less in the Strong Demandingness treatment.

### 2.4.2 Gender Differences

We preregistered ‘gender’ as a variable for secondary analyses. We hypothesized that a gender difference may exist, as females have higher empathic concern than males (Van Rijn et al., 2017) and a higher sense of moral obligation (Einolf, 2011). The following results are as such to be understood as testing this secondary hypothesis. Figure 4 plots the mean amount donated by men and women in each treatment. Firstly, we find that compared to the Control treatment, both women and men give significantly more in the Moral Argument treatment (Women: 8.73 vs. 5.58, two-tailed t-test,  $p < 0.001$ ; Men: 7.21 vs. 5.05, two-tailed t-test,  $p < 0.001$ ). Secondly, we fail to find a difference between Moral Argument and Inspiration and Weak Demandingness for men (Inspiration vs Moral Argument: 7.40 vs 7.21, two-tailed t-test,  $p = 0.85$ ; Weak Demand vs Moral Argument: 7.49 vs 7.21, two-tailed t-test,  $p = 0.77$ ) or women (Inspiration vs Moral Argument: 9.13 vs 8.73, two-tailed t-test,  $p = 0.59$ ; Weak demand vs Moral Argument: 8.68 vs 8.73, two-tailed t-test,  $p = 0.95$ ).

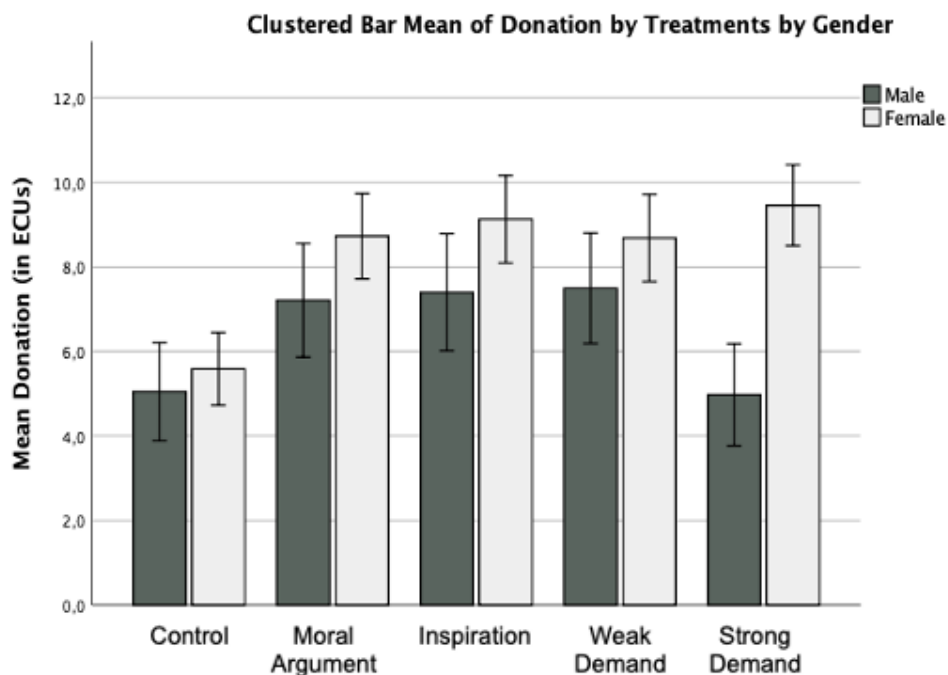


Figure 4. MEAN DONATION AMOUNT BY TREATMENT BY GENDER  
 Notes: Mean donations in ECUs by treatment by gender, error bars represent 95% CI.

However, when comparing the Strong Demandingness and the Moral Argument treatment, there is a positive—but non-significant increase in giving for women (Strong Demandingness vs Moral Argument: 9.46 vs 8.73, two-tailed t-test,  $p=0.300$ ), but men give significantly less, at around 31% (Strong Demandingness vs Moral Argument: 4.97 vs 7.21, two-tailed t-test,  $p=0.02$ )<sup>15</sup>.

This pattern also appears in Figure 5 which reports frequency of giving. We find that more women donate to charity in the Strong Demandingness treatment compared to the Moral Argument treatment (72.4% vs. 63.1%,  $\chi^2$  test,  $p=0.02$ ) and

<sup>15</sup> Men also donate significantly less in Strong Demandingness treatment compared to Inspiration (4.97 vs 7.49, two-tailed t-test,  $p<0.010$ ) and Weak Demandingness treatments (4.97 vs 7.40, two-tailed t-test,  $p=0.006$ ).

around 17% less men donate, although this is not significant (43.9% vs. 53.2%,  $\chi^2$  test,  $p=0.11$ )<sup>16</sup>.

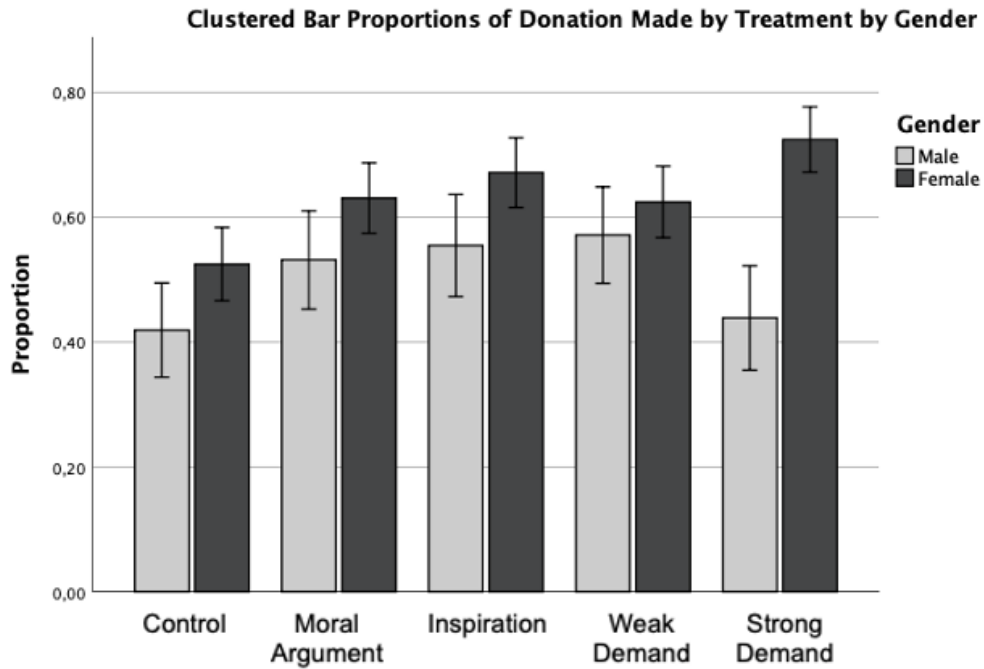


Figure 5. PROPORTION OF DONATIONS BY TREATMENT BY GENDER  
 Notes: *Frequency of donations is in % by treatment by gender.*

## 2.5 Discussion

To summarize the findings from the first experiment, we observe that moral arguments increase donations (frequency and amount) and for the most part, varying demandingness does not affect donation behavior. However, we do find

<sup>16</sup> However, less men decide to give to charity in Strong Demandingness treatment compared to Inspiration (43.9% vs. 55.5%,  $\chi^2$  test,  $p=0.050$ ) and significantly less than Weak Demandingness (43.9% vs. 57.1%,  $\chi^2$  test,  $p=0.022$ ).

that participants in the Strong Moral Demandingness treatment, conditional on donating, give less. As a result, we fail to reject Null Hypothesis I and only have weak evidence to reject Null Hypothesis II, as we do not find a statistically significant change in donor behavior within the moral demandingness treatments in the aggregate.

We also observe substantial heterogeneity between men and women in the responses to strongly morally demanding appeals. In the strong demandingness treatment, we find that men donate significantly less, and women are more likely to donate compared to the Moral Argument.

### **3. Experiment 2**

Given the above findings, we decided to conduct a follow-up experiment to further investigate our research question in a different context. In this new context, a third-party administers the moral argument and demandingness treatments. We use this different context to mitigate possible experimenter demand effects that may arise from us—the experimenters—being the one to provide these arguments to participants in the previous experiment<sup>17</sup>. The organization that hosts our treatments is the third-party non-profit Giving What We Can (GWWC). GWWC aims to establish a community of effective givers, inspiring donations to the world's most effective organizations. They launched in 2009 and people can sign the GWWC pledge to give 10% of their income to the most effective charities in the world.<sup>18</sup>

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<sup>17</sup> One might argue this does not eliminate experimenter demand effects completely, as we still showing GWWC's information, which may be seen as an implicit endorsement. However, it is plausible to argue that the experimenter demand effects are substantially lower in Experiment 2 compared to Experiment 1, which gives us necessary variation to see if experimenter demand was driving the results in Experiment 1.

<sup>18</sup> <https://www.givingwhatwecan.org/>

We investigate (a) whether the effect of moral arguments on donation behavior from experiment 1 is robust, (b) whether we continue to fail to find a difference in donation behavior between the Moral Argument and Strong Moral Demandingness in this next context, and (c) to further investigate the gender effect we found, since it was a secondary hypothesis in the original experiment. As such, we preregistered the following null hypotheses on OSF.<sup>19</sup> Our null hypotheses are as follows:

**Null Hypothesis III.** There is no difference in donation behavior between the Control and the Moral Argument treatments.

**Null Hypothesis IV.** There is no difference in donation behavior between the Moral Argument and the Strong Demandingness treatment.

**Null Hypothesis V.** There is no difference in donation behavior between men and women within and between the treatments.

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<sup>19</sup> [https://osf.io/hra8w/?view\\_only=83dfc9832bea421884e29056aa5feb6a](https://osf.io/hra8w/?view_only=83dfc9832bea421884e29056aa5feb6a).

### *3.1 Participants*

In the same manner as Experiment 1, we recruited our sample via Prolific. Participants who completed Experiment 1 (and the ancillary experiment) were excluded from participating in this study. In total, n=1200 participants completed the study. Using G\*power, (Faul et al., 2007) our power analysis indicated a required sample of 400 participants in each treatment, which gave us .8 power to detect an effect as small as .2 (Cohen's d) at a standard .05 alpha error probability. In the experiment, 10.3% of participants failed the attention check and their observations were excluded from all analyses.

### *3.2 Experimental Design*

Compared to Experiment 1, the experimental procedure differed on two accounts. First, we only randomly assigned participants into one of three treatments: the Control, Moral Argument, or Strong Demandingness. Second, instead of presenting the texts to participants within Qualtrics, we provided screenshots from a third-party non-profit (Giving What We Can) with the same texts (see Figure 6)<sup>20</sup>.

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<sup>20</sup> In the Control treatment, we used a screenshot (and link) of the UK government website, where the original Control text was taken from.



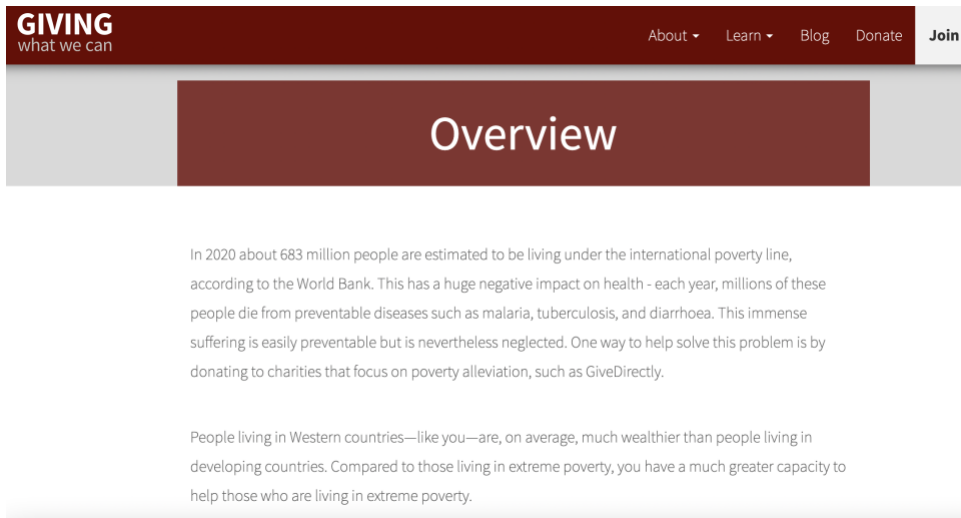


Figure 6. MORAL DEMANDINGNESS TREATMENT ON GWWC

Participants were also provided with links to a website displaying these same texts on Givingwhatwecan.org to further clarify that the moral argument and moral demands themselves were not coming from us, the experimenters. To ensure this was the case we explicitly stated that the screenshots were from GWWC’s website, and they could check by clicking the link themselves.

We also elicited personal norms, added measures of guilt proneness, agreeableness, feelings of manipulation, as well as further control variables such as subjective financial well-being, religious affiliation, and religious participation to further understand donor behavior and control for potential confounds.

Participants earned an average of £1.67 and in total donated £394.3 to GiveDirectly. We donated this amount to GiveDirectly and emailed all participants a link to a website displaying the full receipt of this donation, as was promised in the experiment.

### 3.3 Results<sup>21</sup>

Table 4 reports the frequency and mean amount donated in each treatment. We find the same pattern in this experiment as in Experiment 1. When comparing the Control condition to the Moral Argument treatment, we find that people are significantly more likely to donate in the Moral Argument treatment (56.6% vs 44.3%,  $\chi^2$  test,  $p < 0.001$ ) and donate more on average (7.49 vs 5.24, t-test,  $p < 0.001$ ). As a result, we can reject Null Hypothesis III.

Next, we test Null Hypothesis IV. Once again, we find the same pattern as in Experiment 1. We fail to detect a difference between the Moral Argument and the Strong Demandingness treatments in the frequency of donations (56.6% vs 55.2%,  $\chi^2$  test,  $p = 0.669$ ) or the average amount donated (7.49 vs 7.00, t-test,  $p < 0.406$ ).

TABLE 4—DONATION BEHAVIOR

	<i>Obs.</i>	<i>Mean Donation</i>	<i>SD</i>	<i>Donation</i>
Control	386	5.24	7.47	44%
Moral Argument	417	7.49	8.45	57%
Strong Demandingness	391	7.00	8.26	55%

*Notes:* Observations per group, mean donation, standard deviation, and share of participants donating at least 1 ECU.

Table 5 reports regressions, comparing the effects of the Strong Demandingness statement on donation behavior compared to the Moral Argument. Our results differ from experiment 1. We fail to find significant differences in any of the regressions. These include the frequency of donations in regression 1 (LPM model), the amount donated in regression 2 (OLS), the amount donated conditional on those who donated in regression 3 (OLS), and the amount donated conditional on those who

<sup>21</sup> We report the results of personal norms, guilt proneness, agreeableness, feelings of manipulation, as well as regressions with demographic controls in Appendix D.

donated in regression 4 (tobit model with upper limit of 20). As a result, we fail to find any evidence that people donate less in the Strong Demandingness treatment and cannot reject Null Hypothesis IV.

TABLE 5—EFFECTS OF STRONG DEMANDINGNESS ON DONATION BEHAVIOR

VARIABLES	(1) Freq	(2) amount	(3) amount>0	(4) amount>0 tobit
Strong Demand	-0.0135 (0.0350)	-0.489 (0.588)	-0.561 (0.670)	-0.311 (0.377)
Constant	0.566*** (0.0243)	7.492*** (0.409)	13.24*** (0.463)	5.288*** (0.675)
Observations	808	808	452	452
R-squared	0.000	0.001	0.002	

Note: The Constant refers to the Moral Argument. Standard errors in parentheses \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. Regression (1) uses a LPM (no difference in results with a probit regression). Regressions (2) and (3) use OLS and regression (4) uses a Tobit model with an upper limit of 20.

Lastly, we test Null Hypothesis V to see if there is a difference in donation behavior between men and women. Table 6 below reports the donation frequency and amount for men and women in each treatment. When comparing the Moral Argument to the strong demandingness treatment, we fail to find a difference in the frequency of donations for men (58.9% vs 56.6%,  $\chi^2$  test, p=0.839) or women (56.6% vs 44.3%,  $\chi^2$  test, p=0.641). Furthermore, when we compare these two treatments for the total amount donated, we once again find fail to find a significant difference for men (7.04 vs 6.94, t-test, p=0.901) or women (8.00 vs 7.06, t-test, p=0.294). These results suggest that unlike Experiment 1, here we fail to find a difference in donation behavior for men and women when we compare the Moral Argument to the Strong Demandingness treatment. As a result, we cannot reject Null Hypothesis V.

TABLE 6—DONATION BEHAVIOR BY GENDER

	<i>Obs.</i>	<i>Mean Donation</i>	<i>SD</i>	<i>Donation</i>
<i>Men</i>				
Control	172	4.47	7.05	38%
Moral Argument	208	7.04	8.32	54%
Strong Demandingness	210	6.94	8.24	53%
<i>Women</i>				
Control	213	5.89	7.75	50%
Moral Argument	207	8.01	8.58	59%
Strong Demandingness	175	7.06	8.41	57%

*Notes:* Observations, mean donation, standard deviation, and share of participants donating at least 1 ECU per gender and per group.

#### 4. General Discussion

In this paper, we investigate how moral arguments and variations in the level of moral demandingness affect donation behavior. Our experimental design allows us to distinguish the impact that different levels of moral demandingness have on donations.

We find that moral arguments in general increase both the frequency of donations and the average amount donated compared to the Control. We also replicate this finding in our follow-up experiment. This is in line with previous literature on moral nudges that finds that moral interventions of various kinds, such as teaching moral arguments (Schwitzgebel, Cokélet and Singer 2020), or presenting participants with statements of moral theories (Dal Bo and Dal Bo, 2014) affect behavior. Our findings further contribute to this literature by specifically showing how moral arguments can impact behavior in the context of charitable giving.

Our Moral Argument treatment focusses on the participant's relative affluence. Previous studies that simply focus on people's relative rank in the global income distribution are mixed. Fehr et al, (2021) find that correcting people about their estimations of their respective global income ranking does not lead to an increase support for global redistribution. However, Nair (2018) finds that people guessing their relative rank and then providing them with information on their true rank can make the information salient, leading to an increase in giving to global charities. Our results suggest that the standard moral argument that informs participants of facts relating to global poverty and points to the outsized impact that those from wealthier countries can have on this poverty is effective at increasing donations. This is similar to the saliency effect that Nair (2018) finds and supports the hypothesis that moral arguments focusing on relative affluence can increase donations to global charities.

On the other hand, we fail to find differences in charitable giving behavior between the treatments that add and vary the levels of moral demandingness. We also replicate this null result in our follow-up. This result does not support the worries of philosophers who are concerned about a broad backfire effect stemming from high claims of moral demandingness if we were to communicate these moral obligations (Kagan, 1989; Unger, 1996; De Lazari-Radek and Singer, 2010). While we find that a communication strategy of telling people that they are morally obligated to donate may not increase the total amount given to charity or the frequency of giving, we are unable to say that it decreases the frequency or amount of giving either.

Our secondary analyses in the main experiment show that there are behavioral differences between men and women's response to high levels of moral demandingness. However, we fail to find this gender difference in our follow-up study. Both within Strong Demandingness and between the Moral Argument and Strong Demandingness, we fail to replicate this stark gender difference. As such,

our data provide mixed evidence, though given the fact that the gender result was only preregistered as a main analysis in the follow-up (which also consisted of a sample evenly split by gender), we conclude that our data do not provide robust evidence in favor of a gender result in response to morally demanding charitable solicitations.

Returning to the initial question raised by Ben Sachs (2019), whether we “should demand the demanding”, our results indicate that it ultimately depends. Policy makers and charitable organizations more specifically need to consider who their target population is in order to make predictions about the effects of appeals in an accurate and effective manner. Doing this might allow them to design communication strategies aimed at optimizing donations received. The results from the main experiment suggest that no single message will do, and that communicating the wrong type of appeal to the wrong audience might have substantial consequences on fundraising potential, though our failure to replicate this should reduce our credence in this suggestion.

A better supported conclusion that we can draw from our findings is that when it comes to demanding the morally demanding, one should express these demands in moderation when they are attached to a moral argument. This is because we have found robust effects of moral arguments. Thus, while communicating the full extent of the moral demand may lead to a backfire effect in some populations and contexts, expressing moderately demanding demands, inspiring to do good instead of pointing to one’s obligation to do good may simply result in same (but differently distributed) result and be associated with better compliance overall as well. We do note that it is possible that the effects of our morally demanding statements were watered down by the moral argument itself. People may respond differently to morally demanding statements when it is decoupled from the argument.

A different way to look at our results is to see our Moral Argument condition as providing participants with context for their donation decision, which provides information as to the need and allows them to make an informed decision as to their ability to help. The moral demandingness conditions, though, may make the demander themselves seem morally superior to the potential donor, which may explain the results presented in this paper.

These findings also have broader potential applicability beyond the context of charitable giving. This is because the general structure of a moral obligation that can be communicated in varying levels of demandingness is present in many domains in the social and political realm, among them climate change activism, the social justice movement, vegetarianism advocacy, or health-related behavior messaging in a pandemic. In all of those, the worry of a backfire effect is present and finding that, on average, increasing levels of moral demandingness does not impact behavior is worth pointing out. We are excited by the prospect of future research on the impact of moral demandingness in these other contexts. We hope that our results add some insight into how to approach these challenges of communicative strategy.

## **5. Conclusion**

In this paper, we have presented first evidence on the impact that morally demanding charity appeals have. We studied this by presenting participants with a moral argument for donating to a charity aimed at reducing global poverty. In our treatments, we varied one sentence that expressed the moral demandingness of the argument. We find that, overall, increasingly morally demanding communication has no effect on donation behavior but that moral arguments significantly increase donations. This is replicated in a follow-up study.

## **Declaration of Interest**

Both authors received grant funding from the Forethought Foundation and the Centre for Effective Altruism. Further, both authors hold fellowships also funded by the Forethought Foundation and the Centre for Effective Altruism. The charity used in this research (GiveDirectly) is recommended as a high-impact non-profit organization by Effective Altruism Funds, which is administered by the Centre for Effective Altruism.

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## Appendix A. Experimental Instructions (Screenshots)

Thank you for participating in this survey. The survey will last approximately 10 minutes. You will receive a fixed payment of £1 for completing this survey

In this survey, you will have the opportunity to earn some extra money. Monetary amounts are not quoted in British Pounds (£), but in Experimental Currency Units (ECUs). Eventually, the amount of money earned during the experiment will be converted into pounds (£), where: 1 ECU= £0.05

You will have the opportunity to earn an extra 20 ECUs by completing a short task.

After you have completed the survey, you will be given the opportunity to donate none, some, or all of the 20 ECUS to the charity **GiveDirectly**.

Extra earnings will be paid to you via the Prolific Bonus Function, and a receipt with the total donations to GiveDirectly, will be messaged to you upon completion of the survey—to verify that we made the donation to GiveDirectly.

You will now receive 20 ECUs for completing the following task. Remember, 1 ECU= £0.05.

You will be presented with 5 problems, each showing a pattern with a bit cut out of it. Look at the pattern, think what piece is needed to complete the pattern correctly both along the rows and down the columns, BUT NOT ALONG THE DIAGONALS.

You will have a maximum 30 seconds to complete each problem.

Note: The person who solves the most problems correctly in the shortest amount of time will receive a bonus of 100 ECUs.

For example, in the picture below, the answer to the problem is number 4. Please enter this answer below to continue.

1 2 3 4

5 6 7 8

▼

**Problem 1:**

1 2 3 4

5 6 7 8

▼

Thank you for completing the survey task. **Congratulations, you have earned 20 ECUs.** In a moment you will be given the opportunity to **donate none, some, or all** of your earnings to **GiveDirectly**. If you decide against donating, you will receive the full 20 ECUs.

**GiveDirectly** is a charity that enables donors to send money directly to the world's poorest. Their ultimate goal is to end poverty. Since 2009, GiveDirectly has sent more than \$160 million to about 170,000 households in rural Africa.

Cash allows recipients to make their own investment choices, instead of relying on aid organizations and donors thousands of miles away to choose for them. GiveDirectly's research finds that recipients use cash donations in impactful and creative ways, spending the money on medicine, livestock, school fees, water, dwelling repairs, and business investments that generate further income. These donations help reduce the suffering of people living in extreme poverty.

---

I have read this information. I understand that I earned an extra 20 ECUs for completing the puzzles and I can donate none, some, or all of the 20 ECUs to Give Directly (tick box).

Yes (continue).

---



**Please read the following paragraph closely:**

In 2020 about 683 million people are estimated to be living under the international poverty line, according to the World Bank. This has a huge negative impact on health - each year, millions of these people die from preventable diseases such as malaria, tuberculosis, and diarrhea. This immense suffering is easily preventable but is nevertheless neglected. One way to help solve this problem is by donating to charities that focus on poverty alleviation, such as GiveDirectly.

People living in Western countries—like you—are, on average, much wealthier than people living in developing countries. Compared to those living in extreme poverty, you have a much greater capacity to help those who are living in extreme poverty. **For these reasons, you can do a lot of good if you give money to charities—such as GiveDirectly—to alleviate the suffering of people in developing countries at a minimal cost to yourself.**

---

**According to the paragraph you just read, please answer the following comprehension questions:**

---

What is not a preventable disease that millions of people die from each year?

- Malaria
- Diarrhea
- Cancer
- Tuberculosis

---

Who has the greatest capacity to help those living in extreme poverty?

- Fellow countrymen of the person living in extreme poverty
  - The person living in extreme poverty
  - Those living in much wealthier countries
  - Friends and Family of the person living in extreme poverty
-

You earned 20 ECUs for completing the puzzle task.

**How many of the 20 ECUs do you want to donate to GiveDirectly (between 1-20)?**  
(If you do not want to donate, please enter 0).

Remember 1 ECU= £0.05

## Appendix B. Ancillary Experiment

In order to cross-validate our ordinal ranking of these three treatments (Inspiration, Weak Demandingness, and Strong Demandingness) as increasing in moral demandingness, we ran an ancillary treatment on Prolific in which 52 participants received a base payment of £0.45 for their participation and a potential bonus of £0.10 for accurate estimations of others' answers. Participants were first asked to rate rephrased statements of the treatment sentences distinguishing the three conditions on a 7-point Likert scale according to their demandingness, from 1 (Strongly morally undemanding) to 7 (Strongly morally demanding). To elicit second-order beliefs in an incentivized way, participants were then asked to estimate on a 7-point Likert scale what the most frequently chosen level of demandingness was in their own sample. We paid a bonus of £0.1 to participants who correctly estimated the most frequent response.

TABLE B1—DESCRIPTIVE STATISTICS – ANCILLARY TREATMENT

	<i>Obs.</i>	<i>Mean</i>	<i>SD</i>	<i>Median</i>
<u>1<sup>st</sup> Order Beliefs</u>				
Inspiration	52	4.08	1.40	4
Weak Demandingness	52	5.02	1.78	5
Strong Demandingness	52	5.39	1.71	6
<u>2<sup>nd</sup> Order Beliefs</u>				
Inspiration	52	4.25	1.47	5
Weak Demandingness	52	5.06	1.79	5
Strong Demandingness	52	5.52	1.60	6

*Notes:* Observations per group, mean demandingness score, standard deviation, and median

Paired sample t-tests indicated that for 1<sup>st</sup> order beliefs, Strong Demandingness was significantly more demanding than Inspiration,  $t(51)=-4.09$ ,  $p<.001$ , as was Weak Demandingness,  $t(51)=-2.95$ ,  $p=.005$ . Weak Demandingness and Strong

Demandingness were not statistically different,  $t(51)=-1.51$ ,  $p=.138$ , however this may simply be a function of our small sample size.

In terms of 2<sup>nd</sup> order beliefs, Strong Demandingness was significantly higher than Inspiration,  $t(51)=-4.27$ ,  $p<.001$ , as was Weak Demandingness,  $t(51)=-2.40$ ,  $p=.020$ . Further, Weak Demandingness was significantly different from Strong Demandingness,  $t(51)=-2.11$ ,  $p=.040$ .

The data of this treatment suggests that our usage of Inspiration, Weak Demandingness, and Strong Demandingness as expressing an ordering of moral demandingness was largely justified as participants understand these terms ordered in the same way in both first-order and second-order views.

## Appendix C: Other Regression Tables

TABLE C1—DIFFERENCES IN GENDER: BETWEEN TREATMENTS (INSPIRATION & WEAK DEMAND VS MORAL ARGUMENT).

VARIABLES	(1)	(2)	(3)	(4)	(6)	(7)	(8)	(9)
	Amount	Fr eq	Obligation	Amount.Tobit	Amount	Fr eq	Obligation	Amount.Tobit
men_inspiration	0.00720 (1.339)	0 (0)	-0.180 (0.307)	-0.167 (2.650)				
men_dummy	-0.244 (0.942)	0 (0)	-0.0687 (0.216)	-0.457 (1.869)	-0.244 (0.931)	0 (0)	-0.0687 (0.218)	-0.455 (1.850)
inspiration	-0.233 (0.744)	0 (0)	0.159 (0.170)	-0.318 (1.480)				
men_weak					-0.527 (1.303)	0 (0)	0.0608 (0.305)	-1.108 (2.581)
weakdemand					0.0760 (0.748)	0 (0)	-0.152 (0.175)	0.204 (1.494)
Constant	13.80*** (0.529)	1 (0)	4.497*** (0.121)	18.89*** (1.100)	13.80*** (0.522)	1 (0)	4.497*** (0.122)	18.83*** (1.089)
Observations	534	53 4	534	534	533	53 3	533	533
R-squared	0.000		0.004		0.002		0.002	

Notes: Standard errors in parentheses. In regression 1-6 the Constant is the Moral Argument for Women.

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05.

TABLE C2— DIFFERENCES IN GENDER: BETWEEN TREATMENTS (MORAL ARGUMENT VS CONTROL & STRONG DEMAND VS MORAL ARGUMENT)).

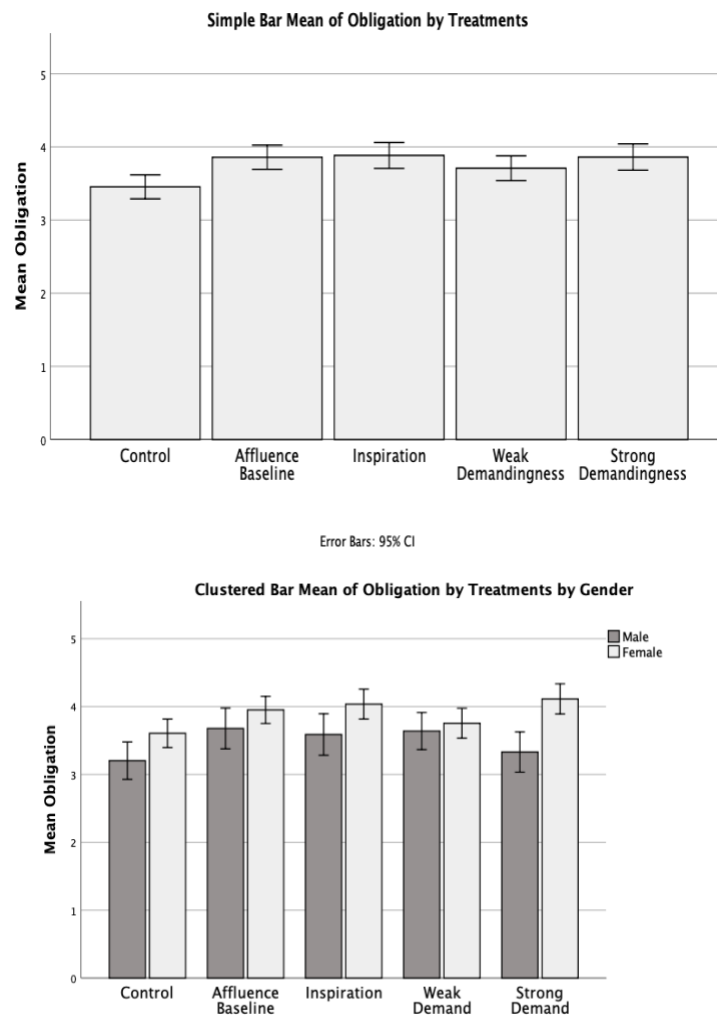
VARIABLES	(1) Amount	(2) Freq.	(3) Obligation	(4) Amount Tobit	(5) Amount	(6) Freq.	(7) Obligation	(8) Amount Tobit
Male*Moral Argumment	0.938 (1.119)	- 0.00685 (0.068 5)	-0.0980 (0.249)	1.750 (3.544)				
Male_dummy	-1.532 (0.799)	- 0.102* (0.048 9)	-0.264 (0.177)	-4.994* (2.505)	-1.532 (0.820)	-0.102* (0.0473)	-0.264 (0.181)	-4.893* (2.438)
Moral Argument	3.099*** (0.671)	0.106* (0.041 0)	0.376* (0.149)	8.776*** (2.112)				
Male*Strong Demand					-2.837* (1.185)	-0.182** (0.0683)	-0.527* (0.261)	-9.023* (3.553)
Strong Demandingness					0.600 (0.690)	0.0890* (0.0398)	0.180 (0.152)	2.093 (2.008)
Constant	5.641*** (0.474)	0.528* ** (0.029 0)	3.566*** (0.105)	-1.093 (1.531)	8.740*** (0.487)	0.633*** (0.0281)	3.941*** (0.107)	7.711*** (1.431)
Observations	904	904	904	904	874	874	874	874
R-squared	0.033	0.022	0.020		0.033	0.043	0.022	

Notes: Standard errors in parentheses. In regression 1-3 the Constant is the Control Treatment for Women, while in regression 4-6 the Constant is the Moral Argument for Women. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05.

## Appendix D: Other Data Experiment 1

### D1. Ratings of Obligation

We also collected self-reported measures of how obligated participants felt to donate on a 7-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree).



Appendix Figure D1. MEAN LEVEL OF OBLIGATION BY TREATMENT AND BY GENDER  
Notes: Mean self-reported levels of obligation by treatment, error bars represent 95% CI.

Table D1 shows a set of regressions with the decision to make a donation (Linear Probability Model regressions), and the amount donated (OLS regressions) as the key dependent variables. We observe that there is a strong correlation between how obligated one feels to donate, and donation decisions. For every 1 additional unit of obligation (on a 7-point Likert scale), we predict that participants will be 12.8% more likely to donate, and on average give an extra 1.40 ECUs.



TABLE D1—CORRELATION BETWEEN OBLIGATION AND DONATIONS (OLS)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Amount	Freq	Amount (Control)	Freq (Control)	Amount (Moral Argument )	Freq (Moral argument)	Amount (Insp)	Freq (Insp)	Amount (Weak)	Freq (Weak)	Amount (Strong)	Freq (Strong)
Moral Argument	2.262*** (0.524)	0.0574* (0.0285)										
inspiration	2.565*** (0.532)	0.0869** (0.0289)										
Weak Demand	2.391*** (0.524)	0.0758** (0.0285)										
Stron Demand	1.884*** (0.530)	0.0844** (0.0288)										
obligation	1.398*** (0.0915)	0.128*** (0.00498)	1.371*** (0.180)	0.144*** (0.0110)	1.311*** (0.220)	0.118*** (0.0117)	1.464*** (0.214)	0.126*** (0.0110)	1.387*** (0.214)	0.116** (0.0115)	1.454*** (0.195)	0.136*** (0.0104)
Constant	0.576 (0.483)	0.0487 (0.0263)	0.671 (0.700)	-0.00624 (0.0429)	3.174*** (0.937)	0.146** (0.0497)	2.886** (0.924)	0.142** (0.0472)	3.009*** (0.881)	0.171** (0.0474)	2.245** (0.838)	0.104* (0.0449)
Observations	2,215	2,215	465	465	450	450	425	425	445	445	430	430
R-squared	0.113	0.239	0.111	0.269	0.073	0.185	0.099	0.239	0.087	0.185	0.115	0.283

Standard errors in parentheses \*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Figure D2 presents the level of obligation that participants report in each treatment. We find a significant difference between the level of obligation between the Control and Moral Argument (3.45 vs. 3.86, two-sided Mann-Whitney test,  $p < 0.001$ ). However, fail to find a difference between the Moral Argument and the three moral demandingness treatments (Inspiration vs Moral Argument: 3.88 vs. 3.86, two-sided Mann-Whitney test,  $p = 0.83$ ; Weak Demandingness vs Moral Argument: 3.70 vs. 3.86, two-sided Mann-Whitney test,  $p = 0.17$ ; Strong Demandingness vs Moral Argument: 3.87 vs. 3.86, two-sided Mann-Whitney test,  $p = 0.91$ ).

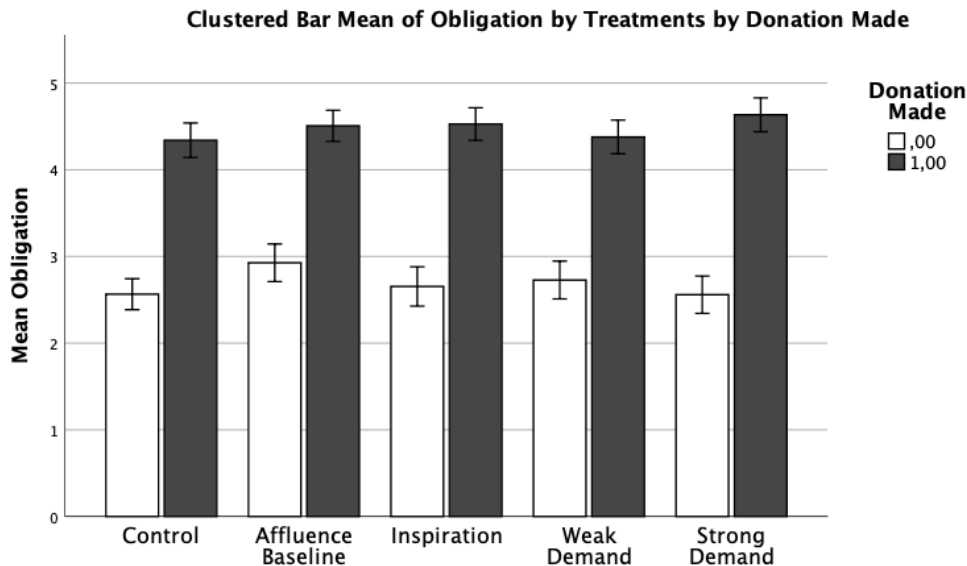


Figure D2. MEAN LEVEL OF OBLIGATION BY TREATMENT AND BY WHETHER A DONATION WAS MADE  
 Notes: Mean self-reported levels of obligation by treatment, error bars represent 95% CI.

### D2: Type of Donors

Using Carpenter's (2021) survey question, we are able to categorize participants as Pure Altruists, Warm Glow Types, or Other Types. We are able to categorize 20.6%

of our Participants as Pure Altruists (n=456), 25.6% as Warm Glow (n=568) 50.6% as Other Types (n=1,121) and 3.2% as never having given to charity before (n=70).

APPENDIX TABLE D2—DONATION TYPE

	<i>Pure Altruists</i>			<i>Warm Glow</i>		
	Donation (amount)	Donation (%)	Obs.	Donation (amount)	Donation (%)	Obs.
Control	6.32 (7.25)	58.8	97	5.00 (7.23)	43.4	106
Moral Argument	8.66 (8.85)	60.0	90	8.46 (8.25)	66.4	128
Inspiration	10.10 (8.63)	74.2	89	8.85 (8.56)	70.1	117
Weak Demandingness	7.42 (8.24)	57.1	105	9.64 (8.71)	67.3	104
Strong Demandingness	9.54 (8.27)	71.8	78	7.64 (8.00)	62.6	115

Notes: Mean donation (SD) and share of participants donating at least 1 ECU by condition by donation type.

For Pure Altruists, we find a positive, but not statistically significant difference in the amount donated between the Control and Moral Argument (6.32 vs. 8.66, two-tailed t-test,  $p=0.05$ ). We find a similar result in the strong demanding treatment compared Moral Argument treatment (9.7 vs. 8.66, two-tailed t-test,  $p=0.40$ ).

For Warm Glow types we also find they give significantly more in the Moral Argument treatment compared to the Control (8.46 vs. 5.00, two-tailed t-test,  $p<0.001$ ). We also find a negative but not significantly different effect on giving between the Strong Demandingness and the Moral Argument treatments (7.63 vs. 8.46, two-tailed t-test,  $p<0.001$ ).

### *D3: Utilitarianism (Oxford Utilitarianism Scale)*

Using the 10-item survey of (Kahane et al., 2018), we were able to measure the level of utilitarian inclinations of participants. The mean score on the Impartial Beneficence scale (out of 35) was 18.6 and the mean score on the Instrumental Harm scale (out of 35) was 14.9. Pooling these 2 scales together, we create a Total Utilitarianism scale. The mean score on this scale (out of 70) was 37.2.

Table D3 reports regressions predicting the amount donated. We fail to find significant correlations between IB or IH and the amount donated, and we find no relationship between utilitarianism and the amount donated in the Control or Moral Argument treatments. However, in the Strong Demanding treatment, for each unit higher participants score on the utilitarianism scale, we predict that they will donate 0.09 less ECUs.

TABLE D3—UTILITARIANISM REGRESSIONS: AMOUNT DONATED

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Control	Moral Argument	Strong Demand	Control	Moral Argument	Strong Demand
OUS_IB	-0.0837 (0.0840)	0.00383 (0.0962)	-0.124 (0.0985)			
OUS_IH	-0.125 (0.0931)	0.0103 (0.112)	-0.148 (0.108)			
OUS_Total				-0.0688 (0.0369)	0.00382 (0.0434)	-0.0902* (0.0449)
Constant	8.793*** (1.542)	8.008*** (1.901)	12.36*** (1.900)	7.948*** (1.408)	8.091*** (1.670)	11.20*** (1.704)
Observations	465	450	430	465	450	430
R-squared	0.011	0.000	0.014	0.007	0.000	0.009

*Notes:* Standard errors in parentheses. The dependent variable is the amount donated to charity (in ECUs).

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05.

The results from Table D3 suggest that the more utilitarian a person is, the less likely we would expect them to respond positively to strong demanding claims compared to people who are less utilitarian. One possible reason for this is that utilitarians are already aware of their obligations and are thus less likely to be positively affected by external manipulations of strong demandingness than those who are less utilitarian.

TABLE D4—UTILITARIANISM REGRESSIONS: DONATION FREQUENCY

VARIABLES	(1) Control	(2) Moral Argument	(3) Strong Demand	(4) Control	(5) Moral Argument	(6) Strong Demand
OUS_IB	-0.00840 (0.00566)	-0.00289 (0.00544)	-0.0117* (0.00582)			
OUS_IH	-0.00722 (0.00628)	0.000209 (0.00632)	-0.0118 (0.00636)			
OUS_Total				-0.00576* (0.00249)	-0.00141 (0.00245)	-0.00807** (0.00266)
Constant	0.752*** (0.104)	0.651*** (0.107)	1.019*** (0.112)	0.704*** (0.0948)	0.652*** (0.0944)	0.926*** (0.101)
Observations	465	450	430	465	450	430
R-squared	0.014	0.001	0.029	0.011	0.001	0.021

*Notes:* Standard errors in parentheses. The dependent variable is the frequency of donations

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05.

## Appendix E: Other Data Experiment 2

### E1: Guilt

APPENDIX TABLE E1 – GUILT SCALE REGRESSIONS

VARIABLES	(1) Freq(Moral Argument)	(2) Freq(Strong Demand)	(3) Amount(Moral Argument)	(4) Amount(Strong Demand)
Guilt*Moral Argument	0.00245 (0.00437)		0.0492 (0.0700)	
guilt	0.0107*** (0.00319)	0.0131*** (0.00297)	0.181*** (0.0512)	0.230*** (0.0498)
Moral Argument	0.0167 (0.195)		0.108 (3.129)	
Guilt*Strong Demand		-0.000283 (0.00421)		-0.000588 (0.0706)
Strong Demand		0.00317 (0.187)		-0.387 (3.140)
Constant	-0.0272 (0.143)	-0.0106 (0.132)	-2.718 (2.290)	-2.611 (2.222)
Observations	803	808	803	808
R-squared	0.051	0.045	0.061	0.051

Standard errors in parentheses \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. The dependent variables are frequency of donations (Regressions 1-2) and donation amount (Regression 3-4). Regressions 1 (LPM) and 3 (OLS) have the Control treatment as the constant. Regressions 2 (LPM) and 4 (OLS) have the Moral Argument treatment as the constant.

## E2: Agreeableness

TABLE E2 – AGREEABLENESS SCALE REGRESSIONS

VARIABLES	(1) Freq(Moral Argument)	(2) Freq(Stong Demand)	(3) Amount(Moral Argument)	(4) Amount(Strong Demand)
Agreeableness*Moral Argument	0.000582 (0.00635)		0.0882 (0.102)	
Agreeableness	0.0138** (0.00449)	0.0144** (0.00445)	0.176* (0.0723)	0.264*** (0.0750)
Moral Argument	0.106 (0.215)		-0.654 (3.458)	
Agreeableness*Strong Demand		0.00855 (0.00635)		0.0665 (0.107)
Strong Demand		-0.296 (0.214)		-2.671 (3.606)
Constant	-0.0186 (0.153)	0.0878 (0.150)	-0.653 (2.454)	-1.307 (2.530)
Observations	803	808	803	808
R-squared	0.039	0.043	0.043	0.038

Standard errors in parentheses \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. The dependent variables are frequency of donations (Regressions 1-2) and donation amount (Regression 3-4). Regressions 1 (LPM) and 3 (OLS) have the Control treatment as the constant. Regressions 2 (LPM) and 4 (OLS) have the Moral Argument treatment as the constant.



## E3: Manipulation

TABLE E3 – MANIPULATION SCALE REGRESSIONS

VARIABLES	(1) Freq(Moral Argument)	(2) Freq(Strong Demand)	(3) Amount(Moral Argument)	(4) Amount(Strong Demand)
Manipulation*Moral Argument	-0.0346 (0.0330)		-0.573 (0.529)	
Manipulation	-0.0135 (0.0257)	-0.0481* (0.0206)	-0.361 (0.413)	-0.934** (0.345)
Moral Argument	0.203** (0.0743)		3.603** (1.193)	
Manipulation*Strong Demand		0.0119 (0.0278)		0.248 (0.466)
Strong Demand		-0.0254 (0.0744)		-0.751 (1.247)
Constant	0.467*** (0.0537)	0.670*** (0.0513)	5.910*** (0.862)	9.512*** (0.860)
Observations	800	807	800	807
R-squared	0.022	0.012	0.030	0.016

Standard errors in parentheses \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. The dependent variables are frequency of donations (Regressions 1-2) and donation amount (Regression 3-4). Regressions 1 (LPM) and 3 (OLS) have the Control treatment as the constant. Regressions 2 (LPM) and 4 (OLS) have the Moral Argument treatment as the constant.

## E4: Obligation

APPENDIX TABLE E4 – OBLIGATION SCALE REGRESSIONS

VARIABLES	(1) Freq(Moral Argument)	(2) Freq(Strong Demand)	(3) Amount(Moral Argument)	(4) Amount(Strong Demand)
Obligation*Moral Argument	0.0196 (0.0176)		0.351 (0.304)	
Obligation	0.113*** (0.0129)	0.132*** (0.0114)	1.032*** (0.222)	1.383*** (0.209)
Moral Argument	0.0320 (0.0684)		0.809 (1.181)	
Obligation*Strong Demand		0.0169 (0.0157)		0.533 (0.290)
Strong Demand		-0.0819 (0.0635)		-2.487* (1.170)
Constant	0.0652 (0.0488)	0.0972* (0.0452)	1.778* (0.842)	2.586** (0.833)
Observations	803	808	803	808
R-squared	0.210	0.287	0.094	0.145

Standard errors in parentheses \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. The dependent variables are frequency of donations (Regressions 1-2) and donation amount (Regression 3-4). Regressions 1 (LPM) and 3 (OLS) have the Control treatment as the constant. Regressions 2 (LPM) and 4 (OLS) have the Moral Argument treatment as the constant.

### E5: Personal Norms

Participants were asked to evaluate how socially appropriate each action was on a 6-point Likert scale. We converted the scale to [-1,1] with a distance of 0.4 between each point on the Likert scale. Below is a table reporting the mean norm rating for each action where -1 is very socially inappropriate and 1 is very socially appropriate

TABLE E5– PERSONAL NORMS DESCRIPTIVES

	Control	Moral Argument	Strong Demand
Donate	0.52	0.54	0.51
Not Donate	0.16	0.06	0.09

We find a significant difference between the Control and Moral Argument treatments for the personal norm of not donating (Mann-Whitney test,  $p=0.003$ ). All other tests are not significantly different.

## E6: Moral Argument Regressions

TABLE E6– MORAL ARGUMENT REGRESSIONS WITH CONTROLS

VARIABLES	(1)	(2)	(3)	(4)
	Frequency	Frequency	Amount	Amount
Moral Argument	0.123*** (0.0351)	0.126*** (0.0352)	2.248*** (0.564)	2.239*** (0.557)
age		0.00358* (0.00153)		0.107*** (0.0242)
Male Dummy		-0.0985** (0.0355)		-1.567** (0.563)
Undergrad		-0.0493 (0.0401)		0.101 (0.635)
Postgrad		0.0117 (0.0469)		1.470* (0.744)
Financial Situation		0.0112 (0.0162)		0.241 (0.258)
Catholicism		0.0179 (0.0636)		0.432 (1.008)
Potestant		-0.00708 (0.0628)		0.611 (0.996)
Islam		0.181 (0.101)		3.387* (1.603)
Other Religion		0.144 (0.151)		5.574* (2.386)
Constant	0.443*** (0.0253)	0.335*** (0.0761)	5.244*** (0.407)	0.804 (1.207)
Observations	803	800	803	800
R-squared	0.015	0.036	0.019	0.070

Standard errors in parentheses \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. The dependent variable in Regressions 1-2 (LPM) is the frequency of donations, and the amount donated in regressions 3-4 (OLS). Constant is the Control Treatment

D7: Moral Demandingess Regression with Controls

## E7: Strong Demand Regressions

TABLE E7– STRONG DEMAND REGRESSIONS WITH CONTROLS

VARIABLES	(1) Frequency	(2) Frequency	(3) Amount	(4) Amount
Strong Demand	-0.0135 (0.0350)	-0.0152 (0.0352)	-0.489 (0.588)	-0.366 (0.588)
Age		0.00245 (0.00151)		0.0917*** (0.0252)
Male Dummy		-0.0496 (0.0354)		-0.764 (0.591)
Undergrad		-0.0278 (0.0399)		-0.285 (0.666)
Postgrad		-0.0618 (0.0499)		0.267 (0.833)
Financial Situation		0.0168 (0.0162)		0.488 (0.271)
Catholicism		0.0264 (0.0597)		0.937 (0.996)
Potestant		0.122 (0.0628)		2.312* (1.049)
Islam		0.169 (0.116)		3.167 (1.936)
Other Religion		0.202 (0.135)		2.932 (2.249)
Constant	0.566*** (0.0243)	0.453*** (0.0789)	7.492*** (0.409)	2.666* (1.318)
Observations	808	800	808	800
R-squared	0.000	0.017	0.001	0.037

Standard errors in parentheses \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. The dependent variable in Regressions 1-2 (LPM) is the frequency of donations, and the amount donated in regressions 3-4 (OLS). Constant is the Moral Argument Treatment