The Bonus-Income Donation Norm*

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Abstract

To what extent does income increase giving? Research findings are mixed. We offer the explanation that a social norm imposes an expectation of greater giving when income is unearned. In one experiment, subjects are paid for performance in real-effort tasks and then asked if they would like to donate some of their earnings to a local charity. We induce random variation in both earned income and bonuses, and we find that only bonus income increases charitable giving. Our second experiment uses a coordination game to conduct an incentivized elicitation of social norms for donations made in the setting of the first experiment. Subjects convey how morally appropriate they think most people would consider an act, and perceived appropriateness increases with donation amount. The relationship between appropriateness and donation amount varies with the amount of bonus income and with subject demographics in ways that mirror giving behavior. *Keywords: charitable, donation, warm glow, social preferences, social influence, experiment. JEL: D01, D64, A13.*

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1 Introduction

Annual charitable giving is roughly equal to 2 percent of total income in the U.S. (Andreoni and Payne, 2013) and 0.5 percent of income in the UK (Almunia et al., 2018). To what extent, though, do increases in income causally increase giving? This longstanding question has implications for our understanding of social preferences and for policy. From a positive perspective, income effects can help to identify preference parameters such as the degree of altruism (Ottoni-Wilhelm et al., 2017). From a policy perspective, a large causal effect of income on charitable donations would imply that policies that increase incomes will induce large positive externalities. Numerous studies estimate the effect of income on giving, but results vary widely. We argue that divergent estimates of income effects can be reconciled by a norm for donations that depends on whether income was earned. We conduct one experiment to test this claim and another experiment to quantify the social norm for donating unearned income.

Our first experiment studies donations to a charitable organization. Subjects in the laboratory performed tasks for piece-rate compensation, were informed of their earnings, and then without any prior notice were given an opportunity to donate to a local charity. This structure mimics a number of donation opportunities that individuals face in daily life, such as those solicited in the workplace, online, and after purchases in retail stores. All subjects performed a language task and a math task, and then we randomized which of these tasks they performed again. This provided random variation in earnings, allowing us to measure the causal effect of earned income on donations. The estimated effect is statistically insignificant and implies an elasticity of less than 0.5.

In this same experiment, we then studied the effect of bonus income. We awarded a bonus of £1 to half of the subjects and a bonus of £3 to the other half. Subjects were informed that they had been randomly selected to receive this bonus, and they were asked if they would like to donate some of this income to the charity. On average, subjects donated £0.38 from the £1 bonus and £0.77 from the £3 bonus, both of which imply income elasticities greater than 1.5. This high propensity to donate unearned income holds across subject gender, nationality, and level of support for the recipient charity.

A second experiment sheds light on the motivation for donating unearned income. This experiment used a coordination game to elicit social norms, following Krupka and Weber (2013). Subjects read a description of the donation opportunity presented to participants in the donation experiment. Subjects in the norm experiment were then asked to indicate how morally appropriate most people would consider various donation amounts by a participant in the donations experiment. We pro-

vided a six point scale, ranging from "very morally inappropriate" to "very morally appropriate," and incentivized accurate indications of the social norm by informing subjects that each match to the modal response for a given donation would provide a chance to win £100. Subjects in this experiment expressed that most people would consider higher donation amounts more morally appropriate, with the slope of this relationship varying significantly with the amount of bonus income. For example, the average rating for a donation between £0.50 and £0.99 was below "somewhat morally appropriate," when the bonus was £3 but was close to "morally appropriate" when the bonus was £1. In addition, heterogeneity in beliefs about what most people consider appropriate is consistent with patterns in the donation experiment. Our experiments therefore provide evidence of a social norm to donate unearned income.

The extant literature provides a wide range of estimates of the income elasticity of giving. Observational research has used income tax data, including deductions for charitable donations, to estimate price and income elasticities. These papers generally use tax reforms to construct instruments for the tax price of giving and then include one or more functions of income as straightforward (uninstrumented) controls. Estimated income elasticities vary from around 0.2 (Randolph, 1995; Adena, 2014; Almunia et al., 2018) up to around 1.0 or greater (Randolph, 1995; Auten et al., 2002; Fack and Landais, 2010), with many values in between (both within the studies that also obtain the more extreme estimates, as well as in those of Slemrod, 1989; Bakija and Heim, 2011). Randolph (1995), Auten et al. (2002), and Bakija and Heim (2011) distinguish between transitory and permanent income, and all three papers find larger elasticities with respect to permanent income (ranging from 0.4 to 0.91) than with respect to transitory income (ranging from 0.09 to 0.58).[1] One would expect findings in experiments to match the smaller elasticities with respect to transitory income, and the elasticities of 0.32 and 0.41 obtained by Ottoni-Wilhelm et al. (2017) are indeed comparable. However, Erkal et al. (2011) find an earnings elasticity of 1.2 for giving to others in the laboratory, and Eckel and Grossman (2003) obtain elasticities between 0.82 and 1.03 for gifts to a charity.

There is also wide dispersion in estimates of the marginal propensity to donate. Figure 1 displays estimates from studies that incorporate variation in subject income. This figure shows a pattern by income type, and the pattern is similar whether subjects are giving to a charity or to other subjects. Among the studies in which subjects earn their income, none find giving that is significantly different from zero. This is in contrast to studies in which subjects receive their income as an endowment or windfall, all of which produce higher estimates of the marginal propensity to give. In between

[1]Transitory income would include both earned and unearned income; for example, an individual could increase transitory income either by working a temp job or by winning a lottery.

these sets of estimates lie those from an observational study of annual income. While this review of the literature may not be exhaustive, it is suggestive that the marginal propensity to donate is greater when income is unearned. A similar pattern arises in the raw donation share for each level of income, which we plot for these and other studies in Appendix Figure C.1.

Several papers test whether receiving income as a windfall affects behavior in public good games or dictator games. Among studies in which subjects play public goods games, most do not find that the nature of income affects generosity (Clark, 2002; List, 2004; Cherry et al., 2005; Kroll et al., 2007).[2] The lack of effect in public goods games may, however, reflect the strategic nature of such games. In studies employing dictator games, the nature of income appears to matter more. Cherry et al. (2002) find that dictators are less generous towards other subjects when the dictators have earned their endowments. As seen in Figure 1, the results of Cherry and Shogren (2008) and Oxoby and Spraggon (2008) show the same pattern at the margin when income varies, with lower marginal propensities to give from earned income. This pattern may not carry over to cases where the charity is the recipient, however, because Eckel and Grossman (1996) find that dictators are more generous toward a charity than toward other subjects.

The experiments most similar to ours study how the nature of income affects donations to a charitable organization. Reinstein and Riener (2012) find that subjects assigned to a treatment in which they earn their income donate a smaller share of it to charity, but the difference is not statistically significant, and differences in amounts earned within the earned-income treatment reflect differences in subjects effort or ability rather than randomization. Carlsson et al. (2013) find that subjects in both the lab and the field donate a smaller amount from an endowment of 50 Chinese Yuan when that endowment is earned. We find the same result as well as several others that provide an explanation and extend external validity: the nature of income affects behavior at the margin as well as on average, the results are consistent across subject nationalities, and they conform with the social norms that we elicit. Tonin and Vlassopoulos (2017) find that randomization of piece rates has no effect on average donations to a charity, though they find extensive-margin responses consistent with the framing of the solicitation as a request for a share of income, and they do not estimate the effect of unearned income. The experiment of Drouvelis and Marx (mimeo) indicates that unearned income has larger effects on donations than does earned income, but unearned income is varied within subject over a series of potential scenarios rather than between subjects as here.[3]

[2]Harrison (2007) finds evidence of effects when re-analyzing the data from Clark (2002) and incorporating within-subject correlations into inference.

[3]A number of papers study how playing with "house money" affects financial decisions (e.g., Thaler and Johnson 1990; Ackert et al. 2006; Davis et al. 2010; Rosenboim and Shavit 2012 ; Corgnet et al. 2014; Cárdenas et al. 2014). These papers examine risk aversion of private payoffs, whereas we study a donation to a charity that will be made

Our study follows a recent literature examining the role of social norms in explaining behavior. Social norms are collectively recognized rules of behavior that define which actions are viewed as appropriate within a specific social environment (see Elster (1989) and Ostrom (2000) for definitions). Social norms have been enlisted as explanations for sharing (Andreoni and Bernheim, 2009), and energy conservation (Allcott, 2011), and charitable giving (Krupka and Croson, 2016). Krupka and Weber (2013) show that individuals are more likely to take an action if this is action is perceived to be more socially appropriate. The incentive-compatible norm elicitation method of Krupka and Weber (2013) has been used to provide evidence of social norms' influence on behavior in a corporate hierarchy (Burks and Krupka, 2012), peer effects in gift-exchange experiments (Gächter et al., 2013), informal agreements (Krupka et al., 2017), and discrimination (Barr et al., 2018). Our study shows that unprompted subjects express strong normative preferences over donation amounts, that these norms depend on the circumstances of the potential donor, and that they vary across subject demographics in the same ways as independently observed donation choices.

The paper proceeds as follows. Section 2 describes the design of our donation experiment and then our norm-elicitation experiment. Section 3 presents the results of each experiment. Section 4 concludes.

2 Experimental Design

In this section, we outline the design we employed to assess the impact of earned and unearned income on charitable giving. All the subjects were recruited at the University of Birmingham, using the ORSEE software (Greiner, 2015) and were randomly selected from a large database of volunteers who had previously signed up to participate in economics experiments. The vast majority of participants were undergraduate students from various academic fields.

We conducted two experiments within a period of a few weeks in spring 2018. One was a laboratory experiment (the "donation experiment") in which subjects were randomly assigned to different levels of earned and unearned income, and we measured their donation responses to each. The other experiment (the "norm-elictation experiment" or "norms experiment") elicited subjects' beliefs about social norms (following techniques proposed by Krupka and Weber (2013) and refined by Krupka et al. (2017)) for the donations made in the donation experiment. Participants in the two experiments were recruited from two distinct, randomly selected pools of potential subjects so that those in one experiment provide a counterfactual for those in the other. Subjects could participate

with certainty.

in only one of the experiments.

2.1 Donation Experiment

The donation experiment was conducted in the Birmingham Experimental Economics Laboratory (BEEL), and all treatments were computerized and programmed with the Multistage software from Caltech. The full set of instructions used in the donation experiment is provided in Appendix A. We conducted 14 sessions, with a total of 217 subjects participating in the donation experiment. At the end of a session, subjects were paid in private. They received a show-up fee of £2.50, plus their earnings from tasks, plus their bonus, less their donations. On average, total income was £11.82, and total donations were £1.39. Sessions lasted roughly 60 minutes.

This experiment consisted of two stages. In the first stage, subjects were asked to perform real-effort tasks, the purpose of which was to have subjects earn income during the experiment. Subjects were given an opportunity to donate earned income to a local charity. In the second stage, subjects were awarded a bonus of a randomly-assigned amount and allowed to donate bonus income to the charity.

Subjects performed two types of tasks: math and language tasks. All subjects first completed one of each type of task, which allowed for heterogeneity in ability across tasks (Niederle and Vesterlund, 2010). For both the math and the language task, items were presented to subjects on a computer screen. Subjects would type in an answer and click the "Submit" button, and after each submission, a new item was immediately shown. Subjects earned £0.25 for each correct response in each task. For the math task, subjects were asked to multiply two two-digit numbers. For the language task, each subject had to arrange four pairs of letters to form a word. Subjects were told that they must use all pairs of letters to form the correct word and can re-arrange the order of the pairs but not the order of the letters within each pair. Two sheets of scratch paper and a pen were provided, but no other form of assistance was available. To help with time management, subjects were continuously informed of the time remaining until the end of each task. Subjects were asked to perform three tasks. They completed the language task first and the math task second. Subjects were given two minutes and thirty seconds to perform each of these tasks.

The third and final task was structured to provide random variation in earned income. Subjects were randomly assigned to repeat either the language or math task. Task 3 was performed for five minutes, increasing the influence of the random assignment on earnings. Upon completion of this task, subjects were informed of the amount they had earned. They were then asked if they

would like to donate some of these earnings to a real-world charity, Acorns Children's Hospice of Birmingham.[4][5] Donations were also kept private so as to minimize complications related to social image (Ariely et al., 2009; Filiz-Ozbay and Ozbay, 2014).[6]

In the next stage, we induced random variation in unearned income by allocating subjects to one of two bonus conditions. Half of the subjects were told that they have received a bonus of £1 and were asked to indicate if they would like to donate some of the bonus income to the charity. The other half of subjects were asked the same question, but the bonus income was equal to £3. Motivated by the uncertainty of bonuses paid in certain professions, and wanting to avoid interactions between bonus- and earned-income effects, we did not inform subjects that there would be any bonuses until after they had made their initial donations.

After subjects had made their decisions for the bonus scenario, subjects were asked to respond to a short questionnaire. This questionnaire elicited several pieces of information, including gender and nationality. Subjects were asked to indicate by selecting one option on a 6-point scale ("Strongly disagree", "Disagree", "Somewhat disagree", "Somewhat agree", "Agree", "Strongly agree") the extent to which they agree with each of the following five statements: (1) "People should behave like others," (2) "People should help others," (3) "People who have been fortunate should help others," (4) "People should help people when there are others helping," and (5) "I approve of Acorns Children's Hospice." Appendix Table C.1 provides summary statistics from survey responses of participants in the donation experiment.

Finally, we elicited social norms and personal attitudes about the morality of charitable donations. Subjects were informed that a definition of the word "moral" appearing in the Oxford English Dictionary is "Concerned with or derived from the code of behavior that is considered right or appropriate in a particular society." They were then asked to evaluate the moral appropriateness of a person who has earned £13 from the experiment making donations falling within each of seven ranges: a) £0, b) £0.01-0.24, c) £0.25-0.49, d) £0.50-0.99, e) £1-1.49, f) £1.50-1.99, g) £2.00 or more. Subjects had to indicate a moral appropriateness score for each range by selecting

[4] Acorns which provides specialist care for babies, children and young people who are life-limited or life-threatened. More information about the charity can be found here: https://www.acorns.org.uk/.

[5] Subjects were also randomly assigned to receive additional information in two dimensions. In one dimension, half of subjects were informed were informed that they had been randomly selected to be paid a piece rate of £0.25 rather than £0.10. We implemented this without deception by giving each subject a 99.99% chance of assignment to £0.25, and in practice, all subjects were assigned to this piece rate. In the second dimension, subjects were informed on the donation screen (again without deception) that half of subjects in a past experiment had donated at least X, where $X \in \{\$0.25, \$1\}$ if this phrase was included. Due to a programming error, these treatments were assigned with nearly perfect negative correlation. We therefore do not examine the effects of these treatments. Controlling for these treatments does not change our results, suggesting that our findings are robust to the features of the information environment.

[6] We informed half of subjects, chosen at random, that "Your choice will not be shared with any other participants." This had no effect on either donations or the belief about whether the donation choice would be shared.

one option on a 6-point scale ("Very morally inappropriate," "Morally inappropriate," "Somewhat morally inappropriate," "Somewhat morally appropriate," "Morally appropriate," "Very morally appropriate"). We asked subjects how appropriate "most people" would rate each donation range, thus obtaining beliefs about the social norm, and then asked each subject how "you personally" would rate appropriateness. These questions on perceived appropriateness allow for estimates of within-subject correlations between beliefs and behavior, but they were not incentivised and could have been affected by the subjects' behavior itself, motivating our second experiment focusing on cleanly identifying beliefs about the social norm.

2.2 Norm-elicitation Experiment

We conducted the norms experiment online using the software at surveycto.com. We provided incentives in the form of drawings for monetary rewards. Participation in the experiment was incentivized with a prize of £50 that was awarded to a random individual who completed the questionnaire. Appendix B contains the text of our email inviting subjects to participate in a pilot version of the norms experiment, the invitation to participate in the experiment, and the instructions of the experiment itself.

Our norm-elicitation experiment employed the coordination-game method proposed by Krupka and Weber (2013). Subjects read a description of the decision making situation of a participant in the donation experiment who had earned £13. As in the donation experiment, subjects were asked to indicate the moral appropriateness of the seven donation ranges listed in the previous subsection. Unlike the donation experiment, these responses were incentivized by providing three prizes of £100 to randomly selected subjects who had provided the modal response on each of three randomly selected donation amounts.[7] This incentivized correct guessing of what most others thought, capturing the idea of social norms as collectively recognized rules of behavior (e.g., Elster, 1989; Ostrom, 2000).

Additionally, we elicited social norms on charitable giving when income is not earned (bonus). In particular, subjects were told that the participant in the laboratory experiment had been randomly selected to earn a bonus, and we varied whether the instructions state that this was a bonus of £1 or £3. Subjects were presented with a table listing possible ranges of donations that the participant could make. For the £1 bonus situation, the ranges were: a) £0, b) £0.01-0.24, c) £0.25-0.49, d) £0.50-0.74, e) £0.75-0.99, and f) £1.00. For the £1 bonus situation, the ranges were: a) £0, b)

[7]Subjects were given the date, time, and venue of the prize drawing and invited to attend. They were also told that the winners would be contacted by email if they did not attend, so that payment was not conditional on attendance.

£0.01-0.49, c) £0.50-0.99, d) £1-1.49, e) £1.50-1.99, f) £2.00-2.99 and g) £3.00. For each of these ranges, subjects were asked to indicate the moral appropriateness of a donation in the range by selecting one option on the 6-point scale explained above.

The use of an incentivized coordination game to elicit social norms was been introduced by Krupka and Weber (2013) and has been used by a number of experimental studies (e.g. Barr et al., 2018; Burks and Krupka, 2012; Gachter et al., 2013; Krupka et al., 2013). In addition to asking subjects what most people would choose, as in the existing literature, we also asked subjects what they personally felt about the moral appropriateness of a donation in each range. To our knowledge, personal moral views have not been compared to elicited social norms, and the two may be distinct and correlated. As with the social norm, we elicited personal views for donations from earned income as well as those from unearned income. Because such views are personal and subjective, they could not be incentivized as a coordination game. Responses may therefore reflect not only the subjects' true views but also what they wished to convey to the experimenters about these views. This response bias should be present in both of the experiments, however, and therefore the responses of subjects in norms experiment can be used as a counterfactual for those in the donations experiment to test whether that experiment further alterred responses to the questions of personal moral attitudes.

3 Results

3.1 Donation Experiment

Figure 2 displays the cumulative distribution function for donations made from earned income. The cdf is displayed separately for those assigned to repeat the math task and those assigned to repeat the language task. A Kruskal-Wallis equality-of-populations rank test fails to reject equality of the distributions at the 10 percent level. Regardless of their third task, we see that roughly 75 percent of subjects make a donation, and a majority of subjects donate £1 or less. Many subjects appear to have rounded off their incomes; for both tasks, roughly 60 percent of subjects chose a donation amount (including zero) that left them with an integer amount of net income.

Figure 3 provides intuition for how our experimental design provides predictable, random variation in earnings. In each panel, we order subjects by the difference between the number of correct responses they provided in task 1 vs. task 2, a measure of their relative performance in the language task. Subjects to the far left performed better at math, while those to the far right performed far

better in the language task. We then plot outcomes separately for subjects who were assigned to repeat the language task in task 3 and those assigned to repeat the math task. The outcome in Panel A is the number of correct responses provided in task 3, which can be multiplied by £0.25 to obtain the subject's earnings in this task. Subjects who performed noticeably better in language (math) among the first two tasks earned more when language (math) was assigned for task 3. We would expect a similar pattern for donations, the outcome in Panel B, if earnings have a strong causal effect on donations. Panel B admits no strong pattern, however, suggesting a weak causal effect. To quantify this effect, we estimate regressions that correspond to the mean differences of the distributions in Figure 2 and then a more flexible version of the patterns in Figure 3.

Estimated effects of earnings on donations appear in Table 1. Column (1) shows that subjects earned £1.56 less on average if they were randomly assigned to repeat the math task, while column (2) shows that this assignment did not have a statistically significant effect on donations. Column (3) presents estimated effects on donations using assignment to the math task as an instrument for earnings, i.e. it rescales the estimate in column (2) by that in column (1). The effect is small and insignificant. Column (4) shows that adding controls for items completed in each of the first two tasks has little effect on this result. This analysis provides a simple comparison across treatment groups, but the exclusion restriction would fail if the experience of one of the tasks affected donations independently of the income it produced. Monotonicity also fails for this instrument because, as seen 3, some subjects earn more when assigned to math and some earn less. We next turn to our preferred instruments, which avoid these concerns.

We construct two instruments by interacting indicators for random assignment to either math or language with the number of correct responses that the subject provided when first engaged in the relevant task. Columns (5) and (6) of Table 1 show that these instruments strongly predict total earnings but not donations. In these regressions we control for uninteracted earnings in each of the first two tasks and for whether the third task is math or language. The first-stage prediction of earnings is strong, with an F statistic for the joint significance of the instruments that is close to 100. The second-stage effect on donations is not statistically significant, and this result persists in columns (7) and (8), where we have added quadratic and cubic functions of earnings in the first two tasks to the regressions. The largest point estimate, in column (8), indicates that a subject donates less than £0.07 for every additional £1 of income earned. This estimate is fairly precise, with a 95 percent confidence interval that excludes effect sizes larger than 0.18.

Following the initial opportunity to donate from earned income, subjects receive bonuses and the opportunity to donate from this unearned income. Figure 4 displays the cumulative distribu-

tion function for donations made from each bonus amount. The rank test rejects equality of the distributions with statistical significance at the 1 percent level. Among subjects receiving a £1 bonus, 54 percent make a donation, compared to 66 percent of the subjects receiving a £3 bonus. This extensive-margin difference is marginally statistically significant (p-value = 0.082). The gap between the cumulative probabilities then widens, with a difference of 22 percentage points (p-value = 0.001) in the probability of giving £0.75 or less and a difference of 20 percentage points (p-value < 0.001) in the probability of giving £1.00 or less. Subjects who received a bonus of £1 could not donate more £1, but there does not appear to be a large amount of censoring; if the distribution for the £1 bonus was simply a censored version of the distribution for the £3 bonus then the two groups' probabilities would be equal for amounts up to £0.75. If we censor the distribution for the £3 bonus to take values less than or equal to £1.00, the Kruskal-Wallis test again rejects at the 1 percent level.

Estimated effects of bonus income on donations appear in Table 1. Column (1) shows the main effect: the average donation for a £3 bonus is greater than the average of £0.382 for a £1 bonus by £0.392, i.e. more than twice as large. Both the £0.382 increase in donations due to the first £1 of bonus and the increase of £0.196 donated per £1 at the margin are more than 5 times larger than our estimated effect of earned income. Elasticities are also much larger, with values of 4.1 and 3.1, respectively, when we compare total donations after the £1 bonus or £3 bonus with the average donation from earned income. In columns (2) through (4), we test for heterogeneity in the responses to bonus income along the dimensions of nationality, gender, and degree of approval of the recipient charity. We interact each of these variables with indicators for both the £1 bonus and the £3 bonus. Point estimates indicate that donations from both bonus amounts are larger among Asian nationals, females, and subjects who strongly approve of Acorns, the recipient charity. However, none of the interactions are statistically significant at the 5 percent level.

The remaining columns of Table 1 examine responses on the extensive margin. In column (5), we see that the £3 bonus increases the 54.1 percent probability of donating by a marginally significant 11.6 percentage points. The pattern of heterogeneity is similar to that for the amount of donations, and most interactions are again not significant at the 5 percent level. The exception is that Asian nationals are 25.5 percentage points (56 percent) more likely to make a donation from the £1 bonus. That this does not translate to a significant increase in the amount donated implies a higher number of small donations. This pattern would be consistent with Asian nationals perceiving a relatively high degree of social acceptability of small donations relative to large donations or no donations, a form of heterogeneity for which we will test in the norm experiment that follows.

3.2 Norm-Elicitation Experiment

Figure 5 displays the elicited donation norms for earned income and bonuses of either £1 or £3. For all types of income, the appropriateness function is strictly increasing, with larger donation amounts believed to be considered more morally appropriate than smaller amounts. The functions are fairly similar for the £3 bonus and the £13 of earned income, despite the large difference in the amount of income, and consistent with the fact that subjects in the donation experiment donated close to £1 on average from both their earned income and from the £3 bonus. The perceived appropriateness of donating nothing is similar across all income types, but the functions diverge for positive donation amounts. When the bonus is £1, donating the full £1 is considered "Morally appropriate," while donating an amount between £1 and £1.49 from either earned income or the £3 bonus is scored closer to "Somewhat morally appropriate." To achieve a particular level of appropriateness, a subject would have to donate more when the bonus is £3 than when it is £1.

Table 3 presents regression results showing how perceived appropriateness of a donation depends on whether income was earned or unearned. In each column, we consider a range of donation amounts that appeared that was evaluated after income was earned and also after one type of bonus was received. We restrict the sample to subjects who considered that amount of bonus. The coefficient on an indicator for bonus income therefore gives the average difference between these subjects' perceived appropriateness of making such a donation out of bonus income compared to earned income. For the bonus of £1 (columns 1-4), perceived appropriateness of each donation is greater when income is unearned, as seen in Figure 5. The difference is only statistically significant for positive donation amounts, however. For the £3 bonus (columns 5-9), the appropriateness of giving zero is again greater when income is unearned, and the difference here is marginally statistically significant. The sign of the difference changes for positive donation amounts, with perceived appropriateness significantly lower when an amount is donated from bonus income. Thus, a subject would have to donate a larger amount from the £3 bonus than from the £13 of earned income to reach the same degree of perceived appropriateness. The elicited norms for donating from earned income lie below those for the £1 bonus and above those for the £3 bonus, suggesting that the perceived obligation to donate from £13 of earned income would similar to that for £2 of bonus income.

Figure 6 describes the variation in perceived norms for donating from bonus income. We describe perceptions at the subject level by regressing the numerical appropriateness rating on subject-specific intercepts and slopes in donation amount, where the amount is the minimum value for a range of

donations. The figure plots the distribution of subject-level slopes in these regressions, with one panel (A) for subjects considering a £1 bonus, and one panel (B) for subjects considering a £3 bonus. The frequency of positive coefficiencts in both panels indicates that most, but not all, subjects believe that most people consider larger donations to be more appropriate than smaller donations. Figure 5 showed that averaged slopes take higher values for a £1 bonus than for a £3 bonus, and Figure Figure 6 shows that the difference in means is due to a shift in the distribution rather than to outliers. The slope for most subjects considering a £1 bonus is greater than the maximum slope among subjects considering a £3 bonus. The dispersion in each distribution reveals that there is not exact agreement on how appropriate most people would consider each donation.

To explore the variation in perceived norms, Figure 7 displays the elicited norm for each bonus amount by groups of subject nationalities. UK nationals are most numerous, and there are enough subjects from other European countries and from Asian countries to observe patterns for each group. Norms elicited from UK nationals are indistinguishable from those elicited from other European nationals. In contrast, the function is noticeably flatter among Asian nationals, who give slighter higher appropriateness scores for donating zero and substantially lower scores for donating a larger percentage of the bonus. This cultural difference is apparent for both donations amounts and arises despite all subjects receiving incentives for matching their guesses to the same pool of experimental subjects. Appendix Figure C.2 shows that differences between subgroups are much smaller when splitting the sample by our other demographic characteristic, gender.

Regression results appear in Table 1. All regressions include subject fixed effects and examine the slope of subjects' appropriateness ratings as a function of donation amount. The regression in column (1) includes the donation amount and its interaction with an indicator for a bonus of £3. Results confirm that appropriateness is significantly increasing in the donation amount, and by a significantly lower rate for the £3 bonus than for the £1 bonus. The remaining regressions reveal how these beliefs vary across subject demographic types. The regression displayed in column (2) includes interactions with an indicator for Asian nationals, whose perceptions of appropriateness do not increase with donation amount by as much as those of other subjects. This regression shows that the differences in slopes seen in Figure 7 obtain statistical significance at the 0.01 level. Column (3) shows that there is not a significant difference between the norms perceived by male subjects and female subjects.

4 Conclusion

Our experiments provide evidence that some individuals donate a large share of unearned income because they feel it morally appropriate to do so. In the donation experiment, random variation in earned income did not significantly increase donations. In this same experiment, subjects increased their donations significantly when they received unearned bonus income, and a larger bonus more than doubled donations. These patterns held across gender, nationality, and level of support for the recipient charity. Our second experiment elicited the views of an independent set of subjects on the moral appropriateness of various donation amounts by a participant in the donation experiment. These beliefs indicate a social norm that one should donate a large share of unearned income.

These findings offer interesting implications for research on generosity. In experiments, researchers may wish to have subjects earn their endowments in order to better capture the way individuals give from their earnings. In contrast, fundraisers may wish to highlight windfalls to potential donors, such savings received during retail purchases prior to a checkout solicitation. In observational work, lotteries provide a source of random variation in the annual income that is observed in surveys and tax administration data. Lotteries have therefore been used to estimate income effects on behavioral choices including labor supply (Imbens et al., 2001; Cesarini et al., 2017), stock market participation (Briggs et al., 2015), health care utilization (Cesarini et al., 2016), and investment in sending children to college (Bulman et al., 2017). While the lottery design provides the internal validity of randomized variation, our study suggests that such income may not affect behavior in the same way as earned income. For example, social norms regarding the share of income that should be invested in the family may be differ depending on whether this income is received as a salary increase or as a pure windfall.

Our results also have implications for government policy and the funding of public goods and transfers. For one, economic policy that promotes earnings growth for some groups appears unlikely to generate large externalities on other groups through charitable giving. Donation effects may be stronger for policies, such as a Universal Basic Income, that provide income that is unearned. Our results also suggest that the marginal propensity to donate may be malleable. A shift in beliefs about the degree of luck involved in one's financial standing, such as a shift from American beliefs to European beliefs, could have a large effect on the amount that people donate to charity.

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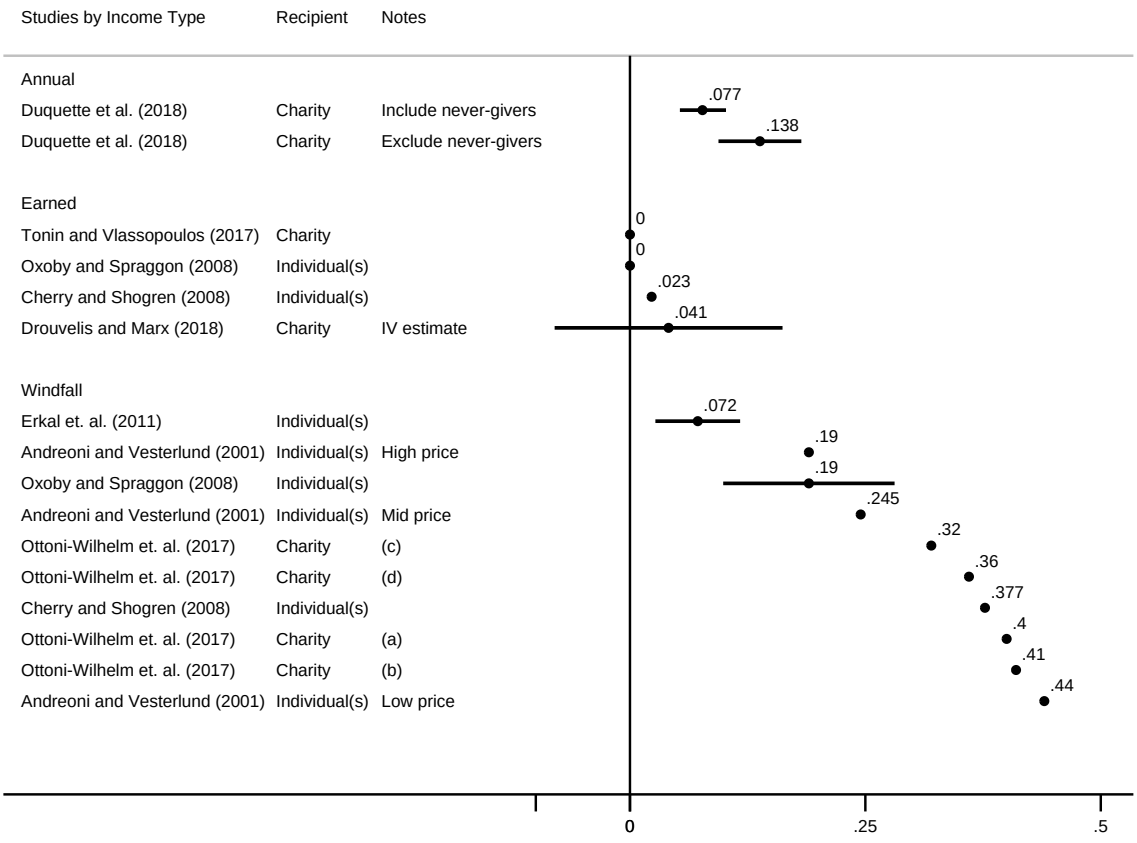
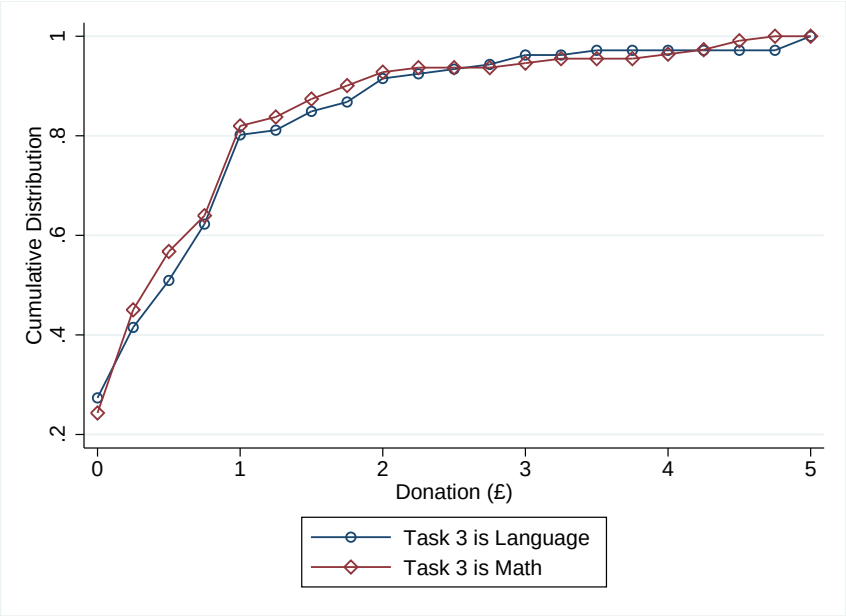
Figures and Tables

Figure 1: Extant Estimates of Income Effects on Giving



Notes: The figure summarizes estimated effects of income, per additional dollar, on giving. Where available, 95% confidence intervals are plotted with the point estimates. For example, Drouvelis and Marx (mimeo) and Duquette et al. (2018) provide both point estimates and standard errors, while Tonin and Vlassopoulos (2017) report only point estimtates. For studies that report the amount donated for multiple income levels (Andreoni and Vesterlund, 2001; Cherry and Shogren, 2008; Oxoby and Spraggon, 2008; Erkal et al. (2011) and Tonin and Vlassopoulos, 2017), we derive the income effect as a slope. The estimates are categorized by whether subjects are giving to charities or to other individuals and according to whether there is variation annual, earned, or windfall income. For studies that provide multiple estimates, we include all of the estimates and explain the differences between these in the "Notes" column. Results provided by Ottoni-Wilhelm et al. (2017) provide four estimates: (a) Individual fixed effects estimator, low giving by others; (b) Individual fixed effects estimator, high giving by others; (c) Two-sided individual FEs censored estimator, low giving by others; (d) Two-sided individual FEs censored estimator, high giving by others.

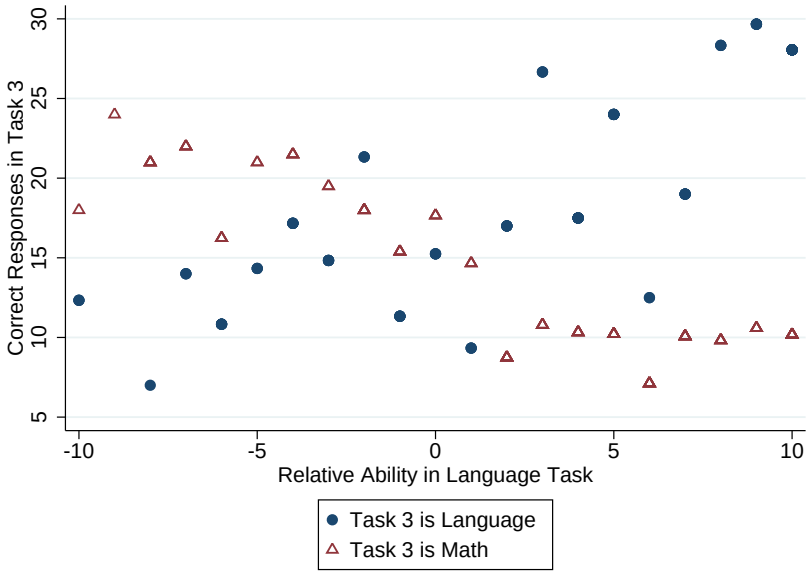
Figure 2: Cumulative Distributions of Donations from Earned Income



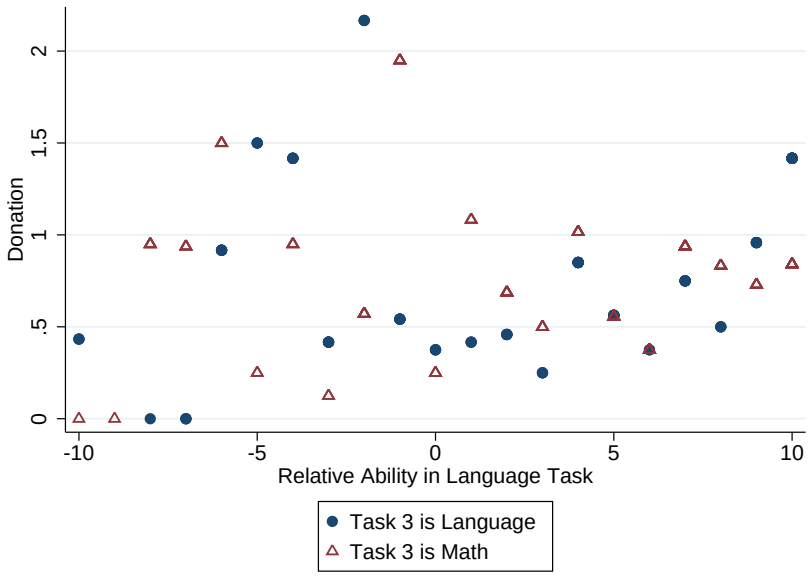
Notes: The figure shows the cumulative distribution functions of donations from bonus income. Treatment groups defined by nature of the third earnings task. N=150.

Figure 3: Earnings and Donations by Assigned Task and Relative Ability

A. Earnings

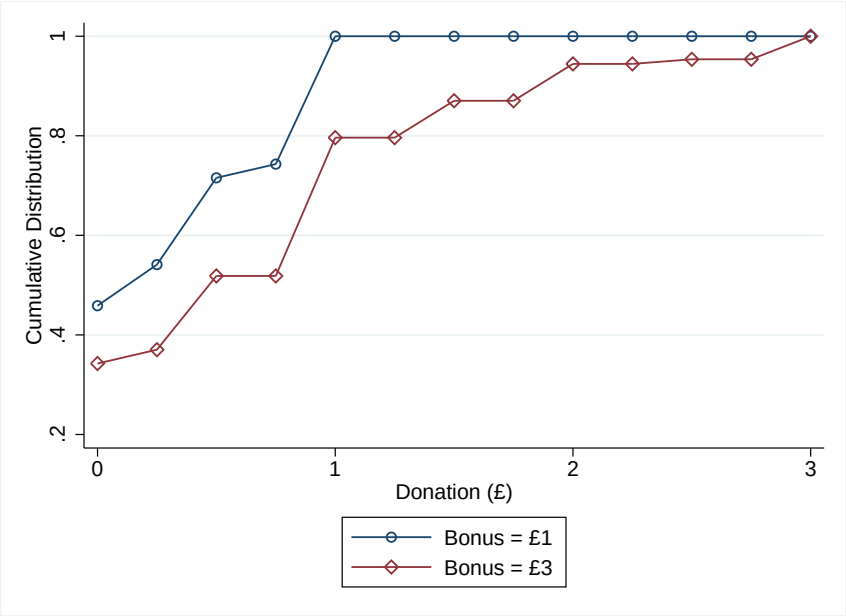


B. Donations



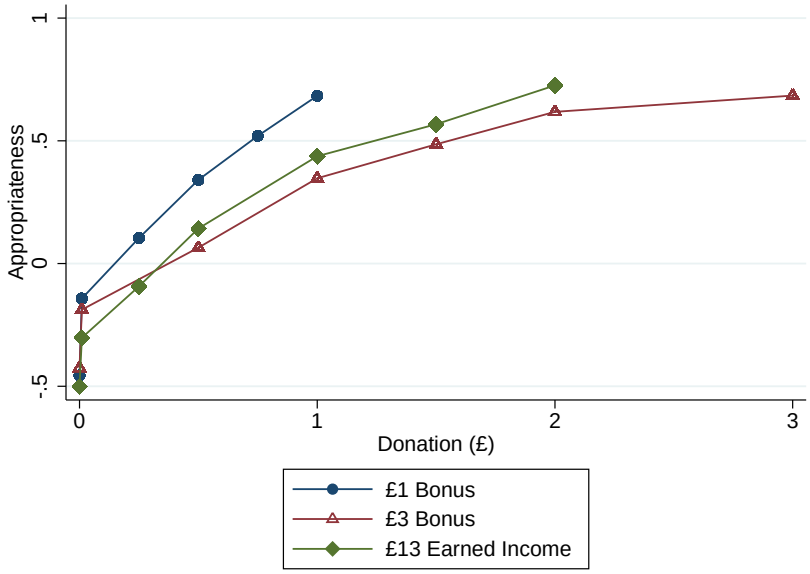
Notes: The figure shows earnings and donations by relative ability and task. In both panels, the x axis is relative earnings in the language task, which is the number of correct responses in the language task minus the number of correct responses in the math task. The outcome in Panel A is correct responses provided in task 3, which can be multiplied by 0.25 to obtain earnings. Panel A shows that subjects earn more when assigned to repeat the task in which they performed better. Panel B shows that the same pattern does not hold for donations. N=150.

Figure 4: Cumulative Distributions of Donations from Bonus Income



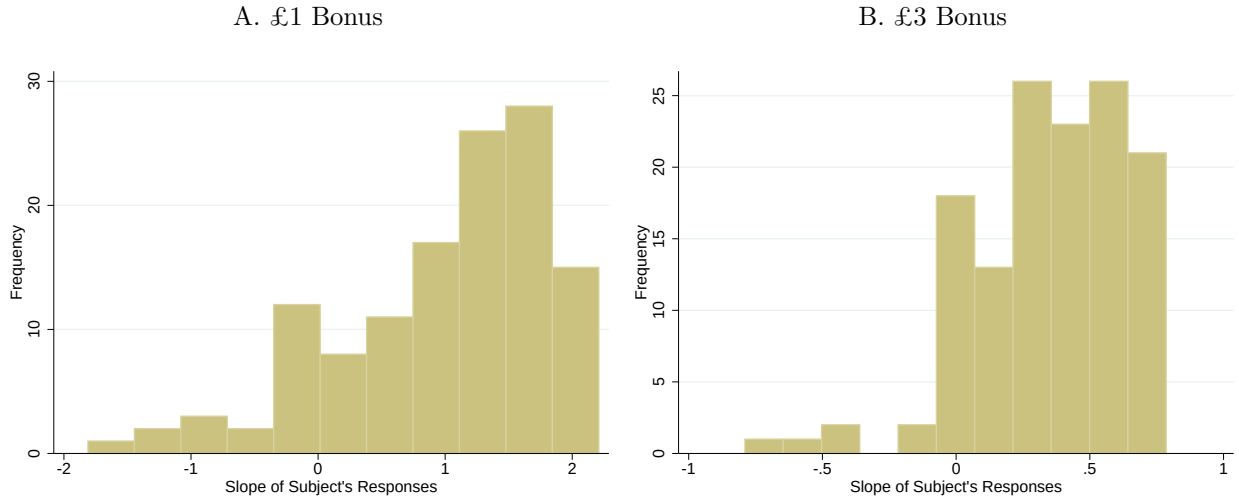
Notes: The figure shows the cumulative distribution functions of donations from bonus income. N=150.

Figure 5: Norms for Donating Bonus Income



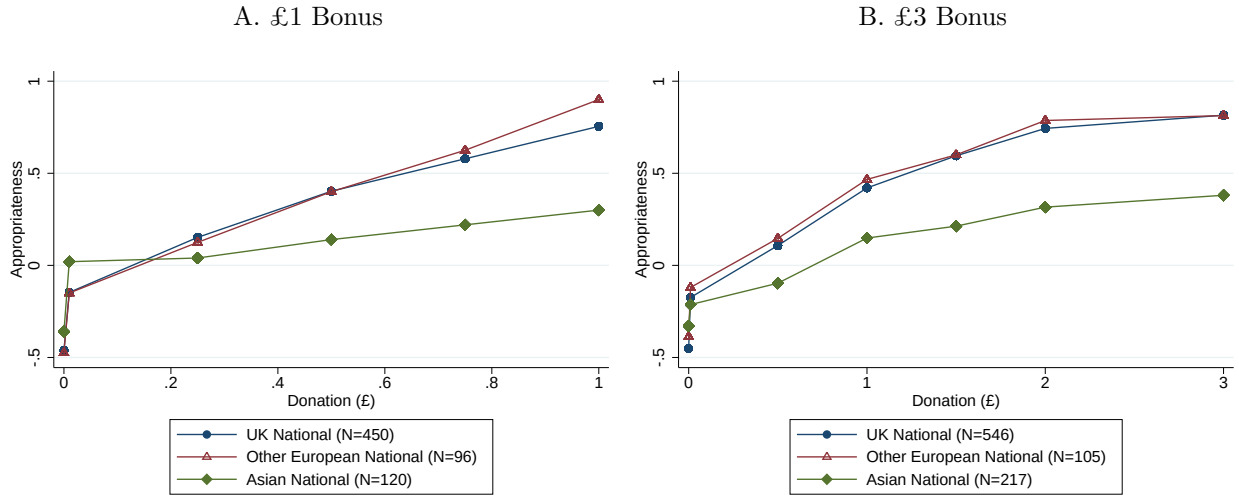
Notes: The figure shows elicited norms for donations of bonus income. Points placed at the minimum value of each range of donations. Y-axis gives mean values of numerical moral appropriateness ratings for ranges of donation amounts: "Very morally inappropriate" = -1, "Morally inappropriate" = -0.6, "Somewhat morally inappropriate" = -0.2, "Somewhat morally appropriate" = 0.2, "Morally appropriate" = 0.6, "Very morally appropriate" = 1.

Figure 6: Variation of Perceived Norms for Donating Bonus Income



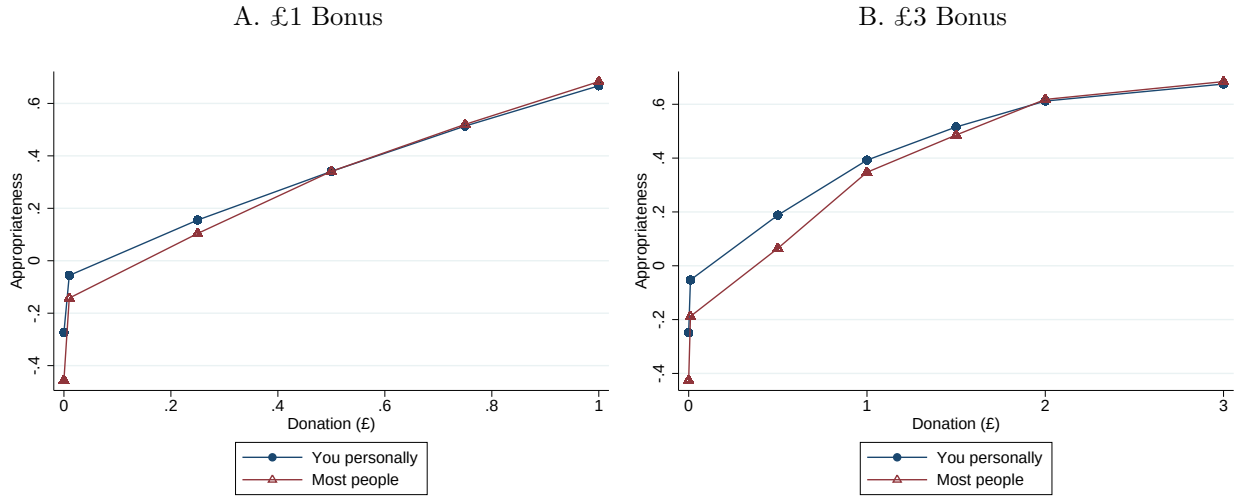
Notes: The figure shows elicited norms for donations of bonus income. Numerical value of appropriateness rating regressed on smallest value in range of donation amounts. Figures plot distributions of slope coefficients in regressions with a slope and intercept for each subject.

Figure 7: International Norms for Donating Bonus Income



Notes: The figure shows elicited norms for donations of bonus income. Points placed at the minimum value of each range of donations. Y-axis gives mean values of numerical moral appropriateness ratings for ranges of donation amounts: "Very morally inappropriate" = -1, "Morally inappropriate" = -0.6, "Somewhat morally inappropriate" = -0.2, "Somewhat morally appropriate" = 0.2, "Morally appropriate" = 0.6, "Very morally appropriate" = 1.

Figure 8: Social Norms vs. Personal Attitudes



Notes: The figure shows elicited norms for donations of bonus income. Points placed at the minimum value of each range of donations. Y-axis gives mean values of numerical moral appropriateness ratings for ranges of donation amounts: "Very morally inappropriate" = -1, "Morally inappropriate" = -0.6, "Somewhat morally inappropriate" = -0.2, "Somewhat morally appropriate" = 0.2, "Morally appropriate" = 0.6, "Very morally appropriate" = 1.

Table 1: Donations of Earned Income

	(1) Earnings	(2) Gift	(3) Gift (IV)	(4) Gift (IV)	(5) Earnings	(6) Gift (IV)	(7) Gift (IV)	(8) Gift (IV)
Earnings			0.032	0.032		0.038	0.055	0.067
			(0.089)	(0.084)		(0.078)	(0.061)	(0.058)
Task 3 is Math	-1.559***	-0.049			-0.739	0.010	0.056	0.065
	(0.410)	(0.140)			(0.501)	(0.175)	(0.168)	(0.165)
Task 3 is Math * # Correct in Task 2					0.367***			
					(0.052)			
Task 3 is Lang * # Correct in Task 1					0.350***			
					(0.039)			
N	217	217	217	217	217	217	217	217
Adj. R-Squared	0.059	-0.004	0.022	0.026	0.809	0.022	0.090	0.086
1st stage F stat.			14.4	44.8		97.4	95.3	98.5
Controls:								
# Correct in Tasks 1,2				Y	Y	Y	Y	Y
# Correct in Tasks 1,2 Squared							Y	Y
# Correct in Tasks 1,2 Cubed								Y

Notes: Regressions with outcome of earnings or donations from earnings, as labeled by column. In columns (3), (6), and (9), the first control in the preceding column is used as an instrument for earnings. "Earnings in the Relevant Task" are earnings in either Task 1 or Task 2, depending on which is randomly assigned to be repeated in Task 3. Across specifications, earnings do not significantly increase donations. Robust standard errors.

Table 2: Donations of Bonus Income

	(1) Amount	(2) Amount	(3) Amount	(4) Any	(5) Any	(6) Any
(Bonus=3)	0.392***	0.354***	0.427***	0.116*	0.170**	0.136
	(0.088)	(0.109)	(0.110)	(0.066)	(0.085)	(0.083)
Asian * (Bonus=1)		0.130			0.255***	
		(0.084)			(0.097)	
Asian * (Bonus=3)		0.189			0.067	
		(0.160)			(0.092)	
Male * (Bonus=1)			-0.045			-0.031
			(0.081)			(0.098)
Male * (Bonus=3)			-0.154			-0.096
			(0.164)			(0.099)
Constant	0.382***	0.340***	0.400***	0.541***	0.459***	0.554***
	(0.040)	(0.049)	(0.053)	(0.048)	(0.058)	(0.062)
N	217	217	217	217	217	217
Adj. R-Squared	0.081	0.087	0.079	0.009	0.032	0.005

Notes: Regressions with outcome of donations from bonus income. "Approves of Charity" is numerical value of response, from "Strongly Disagree" (-1) to "Strongly Agree" (+1), to the statement "I approve of Acorns Children's Hospice." "Asian" is an indicator for subjects listing Asian nationalities. Robust standard errors.

Table 3: Perceived Appropriateness by Donation and Type of Income

	(1) 0	(2) .01-.24	(3) .25-.49	(4) Pooled	(5) 0	(6) .50-.99	(7) 1-1.49	(8) 1.5-1.99	(9) Pooled
Bonus Income (1)	0.045	0.160***	0.197***	0.134***					
	(0.050)	(0.049)	(0.045)	(0.042)					
Bonus Income (3)					0.075*	-0.078*	-0.090**	-0.082**	-0.044
					(0.040)	(0.041)	(0.038)	(0.035)	(0.029)
N	383	383	383	1,149	391	391	391	391	1,564
Adj. R-Squared	-0.001	0.018	0.031	0.127	0.002	0.003	0.007	0.005	0.402

Notes: Regressions with outcome of numerical moral appropriateness ratings: "Very morally inappropriate" = -1, "Morally inappropriate" = -0.6, "Somewhat morally inappropriate" = -0.2, "Somewhat morally appropriate" = 0.2, "Morally appropriate" = 0.6, "Very morally appropriate" = 1. Estimate coefficients on "Bonus Income" indicators for each of the £1 and £3 bonuses give the difference between the mean rating for donating an amount from this bonus vs. from earned income. Column headings list the donation amount or range considered, and "Pooled" includes all ranges that were listed for both earned income and the respective bonus. Sample restricted to subjects asked about the £1 (£3) bonus in columns 1-4 (5-9).

Table 4: Norms for Donating Bonus Income

	(1)	(2)	(3)
Donation Amt * (Bonus=3)	-0.653***	-0.717***	-0.602***
	(0.077)	(0.078)	(0.105)
Donation Amt	1.005***	1.105***	0.954***
	(0.073)	(0.073)	(0.101)
Asian * Donation Amt * (Bonus=1)		-0.627***	
		(0.224)	
Asian * Donation Amt * (Bonus=3)		-0.154***	
		(0.055)	
Male * Donation Amt * (Bonus=1)			0.137
			(0.140)
Male * Donation Amt * (Bonus=3)			-0.002
			(0.052)
N	1,681	1,681	1,681
Adj. R-Squared	0.471	0.491	0.472

Notes: Subject-fixed-effect regressions with outcome of numerical moral appropriateness ratings for ranges of donation amounts: "Very morally inappropriate" = -1, "Morally inappropriate" = -0.6, "Somewhat morally inappropriate" = -0.2, "Somewhat morally appropriate" = 0.2, "Morally appropriate" = 0.6, "Very morally appropriate" = 1. "Donation Amt" is the minimum value of a range of donation amounts. "Supports Charity" is numerical value of response, from "Strongly Disagree" (-1) to "Strongly Agree" (+1), to the statement "I approve of Acorns Children's Hospice." "Asian" is an indicator for subjects listing Asian nationalities. Standard errors clustered by subject.

Appendix A: Donation Experiment Instructions

Welcome! You are about to take part in an experiment. This experiment is run by the "Birmingham Experimental Economics Laboratory" and has been financed by various research foundations. Just for showing up you have already earned £2.50. You can earn additional money depending on the decisions made by you and other participants. It is therefore very important that you read these instructions with care.

It is important that you remain silent and do not look at other people's work. If you have any questions, or need assistance of any kind, please raise your hand and an experimenter will come to you. You may use the provided scrap paper but no phones, calculators, or other devices. If you use a device, talk, laugh, exclaim out loud, etc., you will be asked to leave and you will not be paid. We expect and appreciate your following of these rules.

We will first jointly go over the instructions. After we have read the instructions, you will have time to ask clarifying questions. Please do not touch the computer or its mouse until you are instructed to do so. Thank you.

This experiment consists of three different timed tasks. You will be paid a fixed amount of money for each correct answer you provide in each task. The total amount of money you will earn from this experiment will be £2.50 for showing up plus the sum of your earnings from each task of the experiment.

After Task 3 you will be told how many correct responses you gave in each of the tasks. After this you will collect your earnings.

Following these instructions you will find the instructions for Task 1 of the experiment. You will receive new instructions for the other tasks once everyone in the room has completed Task 1.

Task 1

Task 1 consists of arranging pairs of letters to form words like the following examples:

TR, EA, TS, RE = RETREATS. CU, FF, LI, NK = CUFFLINK.

You must use all the letters. You can change the order of the pairs but you cannot change the order of the two letters within each pair. You will have 2.5 minutes to provide answers.

You will be paid for each correct answer provided during the 2.5 minute time limit.

another problem will appear. You can choose not to answer a question by pressing the OK button. The answer will then be recorded as being incorrect and you will be moved to the next problem. To help with time management, there will be a clock counting down the seconds for the 2.5 minute duration.

Task 2

Task 2 consists of solving 2-number multiplication problems like the following example:

10 x 97 = 970. 20 x 30 = 600.

You will have 2.5 minutes to provide answers.

You will be paid for each correct answer provided during the 2.5 minute time limit.

To answer a problem, you will simply type the numbers on the keyboard, then press OK and another problem will appear. You can choose not to answer a question by pressing the OK button. The answer will then be recorded as being incorrect and you will be moved to the next problem. To help with time management, there will be a clock counting down the seconds for the 2.5 minute duration.

Task 3

Subjects receive instructions only for the task they have been randomly assigned to perform on their screens.

Experimenter's announcement: You will now have an additional 5 minutes to perform one of the tasks. The rules and payment rate will be the same as when you performed the task before.

At the end of Task 3, subjects will get the following instructions:

Experimenter's announcement: You can now see the number of correct answers you gave in each of the tasks. Please give me a moment to print the results.

You will now be given an opportunity to donate some of your income from the experiment to a charity, and last, you will be asked to complete a survey.

Written onscreen: Thank you, you have completed the tasks. Your total earnings from today's experiment (including your £2.50 show-up fee) sum to £[***Autofill***].

Appendix B: Norm-Elicitation Experiment Instructions

Text of pilot invitation email

Email subject line: BEEL Survey Experiment

Dear #fname# #lname#,

You registered with BEEL to participate in experiments. We are planning to conduct a web based experiment, in which you need to answer a questionnaire. If you would like to take part, please click on the link below to participate in this experiment. It will likely take less than 10 minutes to complete the questionnaire. You can participate any time you would like until this Friday, April 27, at 5pm. You cannot use a phone, but you can use a computer or tablet.

https://beel2018.surveycto.com/collect/dm_experiment?caseid=

As long as you answer all the questions, you will be eligible to take part in two draws, one for a £50 prize and one for a £100 prize. The £50 prize will be awarded to a randomly selected participant who completed the questionnaire. The £100 prize will be awarded based on the responses to the questionnaire, as will be described in the instructions. After surveys are completed we will inform you of the time and location of the random draw for the prizes. Note that you can win the prize even if you are not able to attend the public draw (in which case we will contact you by email if you are a winner). However, if you can attend, you are very welcome.

This experiment is named DM Experiment. Please include "DM Experiment" in the subject field of any email you send us regarding this survey experiment.

Best regards,

The BEEL team.

Text of experiment invitation email

Email subject line: BEEL Survey Experiment

Dear #fname# #lname#,

Our first web-based experiment was a success. We have collected the email addresses of everyone who completed the questionnaire and will draw prizes on Friday, June 15.

Here is another short questionnaire that we invite you to complete.

https://beel2018.surveycto.com/collect/web_survey_2018?caseid=

If you answer all the questions, you will be eligible to take part in three additional draws on June 15, one for

a £50 prize and two for £100 prizes. The £50 prize will be awarded to a randomly selected participant who completes this questionnaire. The £100 prizes will be awarded based solely on the responses to this questionnaire, as will be described in the instructions.

You can participate any time you would like until Friday, June 1, at 5pm. You cannot use a phone, but you can use a computer or tablet. Note that you can win the prizes even if you are not able to attend the public draw (in which case we will contact you by email if you are a winner). However, if you can attend, you are very welcome.

This experiment is named Web Survey 2018. Please include "Survey Experiment 2018" in the subject field of any email you send us regarding this survey experiment.

Best regards,

The BEEL team.

Text for the survey

Thanks for deciding to participate. This is a web based experiment and you will need to answer all questions in the form and then click on the Submit button at the end. Please read the instructions carefully as you can earn additional money depending on the answers you provide to each of the questions.

Your responses will be completely confidential. Your answers will be of immense value for our scientific investigation. If you are unclear about the instructions, you can email BEEL using subject "Survey Experiment 2018." Thank you in advance for your participation.

#separate screen#

On the following screens, you will read descriptions of situations. In each situation, a person must make a decision. You will be given a description of the decision faced. This description will include several possible choices available to the person.

After you read the description of the decision, you will be asked to evaluate, for each of the possible choices available to the person, whether that choice is "morally appropriate" or "morally inappropriate." One definition of "moral" appearing in the Oxford English Dictionary is "Concerned with or derived from the code of behaviour that is considered right or acceptable in a particular society." In each scenario, you will be asked both how morally appropriate *you personally* feel each choice is and how morally appropriate *most people* would feel each choice is.

#separate screen#

Your eligibility for the £100 prizes will depend on your answers to the questions of how morally appropriate *most people* would consider a choice. At the end of the experiment, we will randomly select of the choices from these questions. For each choice selected, we will determine which response was selected by the most people who completed the questionnaire. **If you give the same response as that most frequently given by other people, then you will be entered into the draw for £100.** For instance, if one of the randomly-selected choices is one for which the most common answer was "somewhat morally inappropriate," then you will be entered into one of the draws for £100 if you answered "somewhat morally inappropriate."

#separate screen#

Here is the first scenario. A participant in a laboratory experiment completes 3 tasks. In each task, the participant earns a certain amount for each item completed correctly. The participant then sees the following…

_____

Thank you, you have completed the tasks.

Your earnings from today's experiment (including your £2.50 show-up fee) sum to £13.00.

#separate screen#

The participant then sees the text below and is able to type in a donation amount.

Would you like to donate some of your earnings to Acorn's Children's Hospice of Birmingham?

In last year's sessions, 50% of participants gave £0.25 or more.

If you'd like to make a donation, please enter the amount (between £0 and £13.00) in the box provided.

#separate screen#

Please select how *you personally* feel about each of these choices the participant could make.

Donation	Very morally inappropriate	Morally inappropriate	Somewhat morally inappropriate	Somewhat morally appropriate	Morally appropriate	Very morally appropriate
£0	○	○	○	○	○	○
£0.01-.24	○	○	○	○	○	○
£0.25-.49	○	○	○	○	○	○
£0.50-.99	○	○	○	○	○	○
£1.00-1.49	○	○	○	○	○	○
£1.50-1.99	○	○	○	○	○	○
£2 or more	○	○	○	○	○	○

#separate screen#

Please select how *most people* feel about each of these choices the participant could make.

Donation	Very morally inappropriate	Morally inappropriate	Somewhat morally inappropriate	Somewhat morally appropriate	Morally appropriate	Very morally appropriate
£0	○	○	○	○	○	○
£0.01-.24	○	○	○	○	○	○
£0.25-.49	○	○	○	○	○	○
£0.50-.99	○	○	○	○	○	○
£1.00-1.49	○	○	○	○	○	○
£1.50-1.99	○	○	○	○	○	○
£2 or more	○	○	○	○	○	○

#separate screen#

- Between 0% and 100%, what percentage of participants in the laboratory experiment do you think will donate part of their earnings from the tasks? ___%
- Among participants who donate part of their earnings from the tasks, what do you think will be the average donation amount? £_____

#separate screen#

After making the donation choice, the participant in the experiment then sees the following.

Congratulations, you have been randomly selected to receive a bonus of £3.

Would you like to donate some of your bonus to Acorn's Children's Hospice of Birmingham?

If you'd like to donate some of your bonus, please enter the amount (between £0 and £3.00) in the box provided.

#separate screen#

Please select how *you personally* feel about each of these choices the participant could make.

Donation	Very morally inappropriate	Morally inappropriate	Somewhat morally inappropriate	Somewhat morally appropriate	Morally appropriate	Very morally appropriate
£0	○	○	○	○	○	○
£0.01-.49	○	○	○	○	○	○
£0.50-.99	○	○	○	○	○	○
£1.00-1.49	○	○	○	○	○	○
£1.50-1.99	○	○	○	○	○	○
£2-2.99	○	○	○	○	○	○
£3.00	○	○	○	○	○	○

#separate screen#

Please select how *most people* feel about each of these choices the participant could make.

Donation	Very morally inappropriate	Morally inappropriate	Somewhat morally inappropriate	Somewhat morally appropriate	Morally appropriate	Very morally appropriate
£0	○	○	○	○	○	○
£0.01-.49	○	○	○	○	○	○
£0.50-.99	○	○	○	○	○	○
£1.00-1.49	○	○	○	○	○	○
£1.50-1.99	○	○	○	○	○	○
£2-2.99	○	○	○	○	○	○
£3.00	○	○	○	○	○	○

#separate screen#

To what extent do you agree with the following:

Statement	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
People should behave like others.	○	○	○	○	○	○
People should help others.	○	○	○	○	○	○
People who have been fortunate should help others.	○	○	○	○	○	○
People should help people when there are others helping.	○	○	○	○	○	○
I approve of Acorns Children's Hospice.	○	○	○	○	○	○

#separate screen#

To complete the questionnaire, please respond to each of the questions below.

1. What is your gender? _____

2. What is your nationality? _____

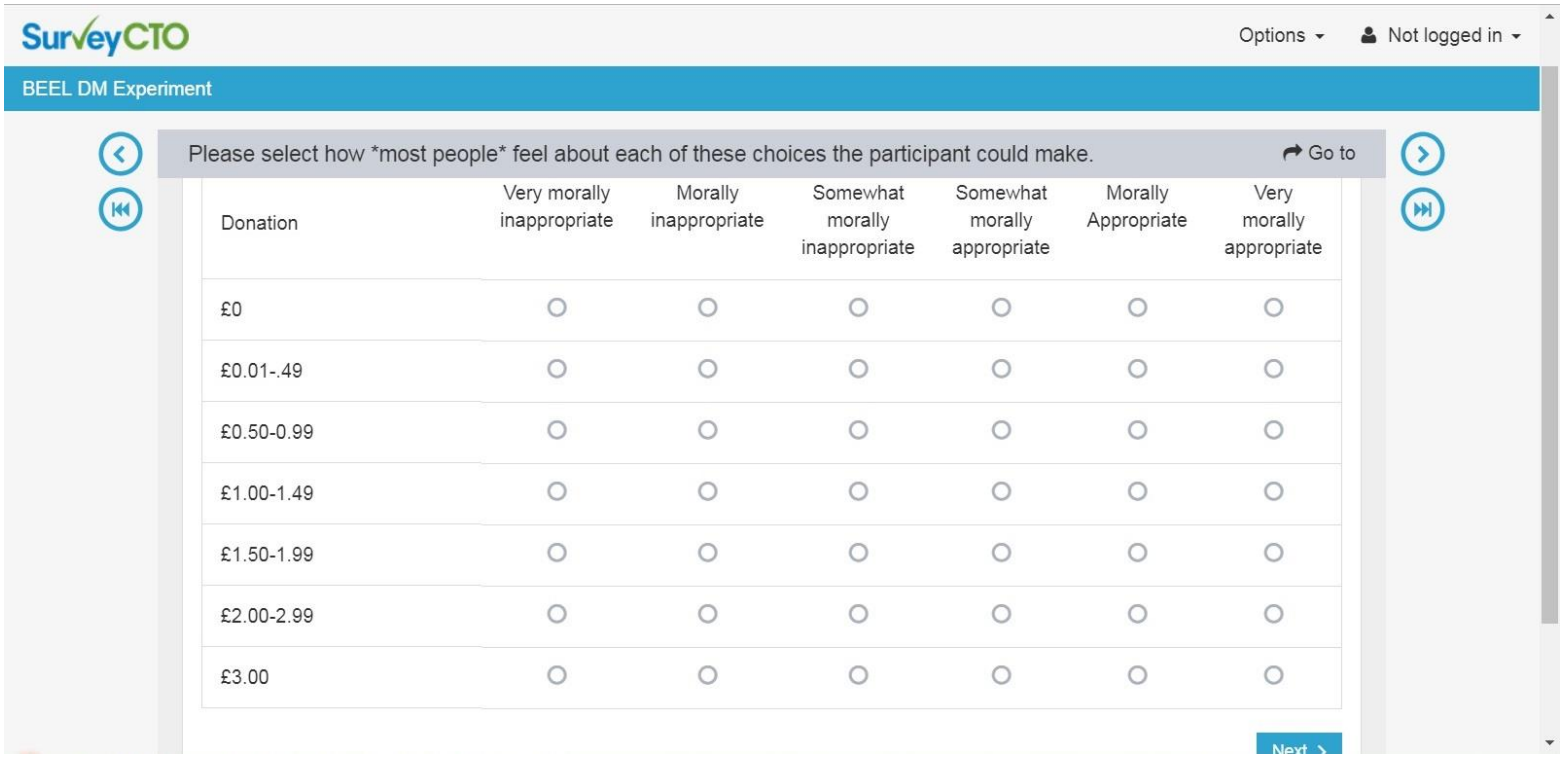
3. In a typical week, what amount (£) do you have available for discretionary spending (i.e. not including necessary things like food, tuition fees, and accommodation)? _____

#separate screen#

If you would like to be considered for the prizes, please enter your *University of Birmingham* email address below. Make sure that you type in your email address correctly, as we will use this one to contact you.

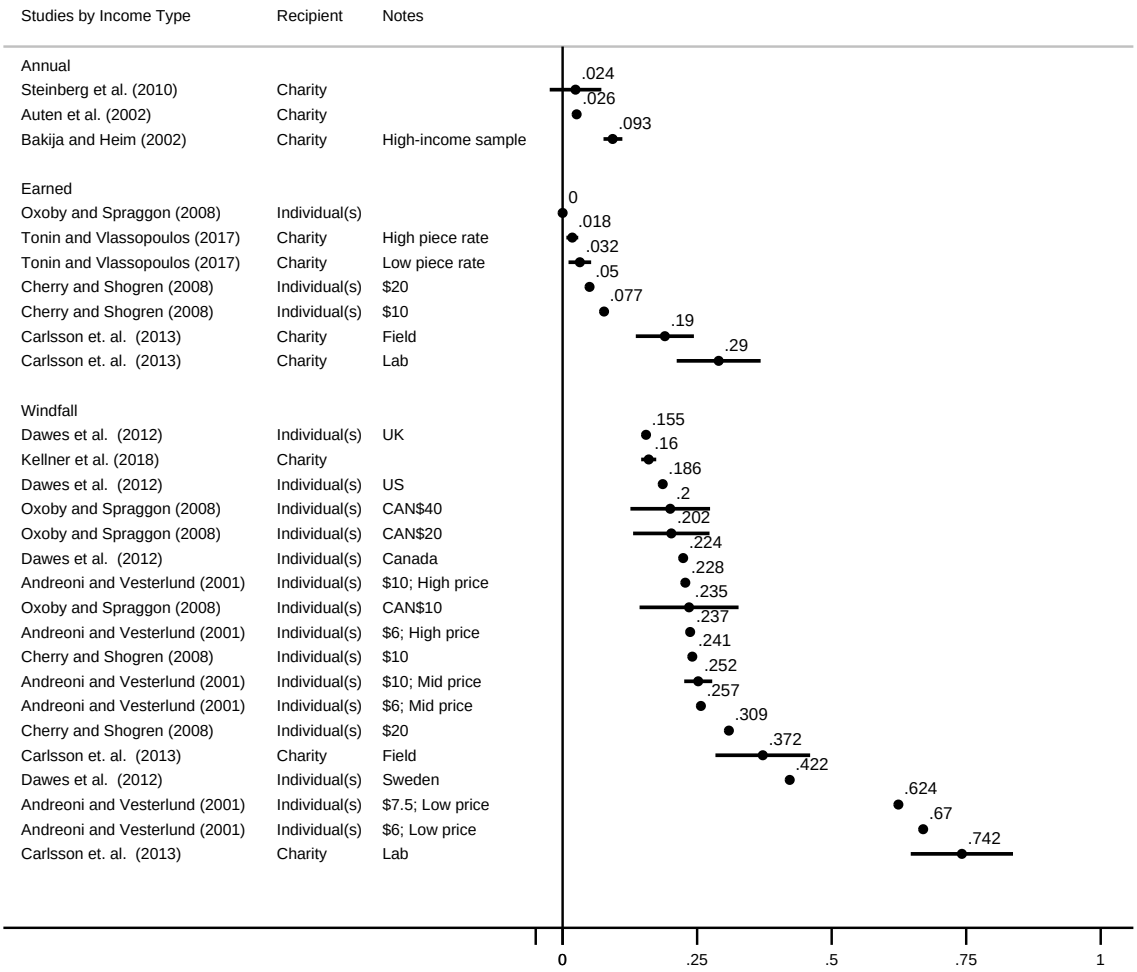
Your UoB email address: _____

Figure B.1: Screen Shot of Choices in Norm-Elicitation Experiment



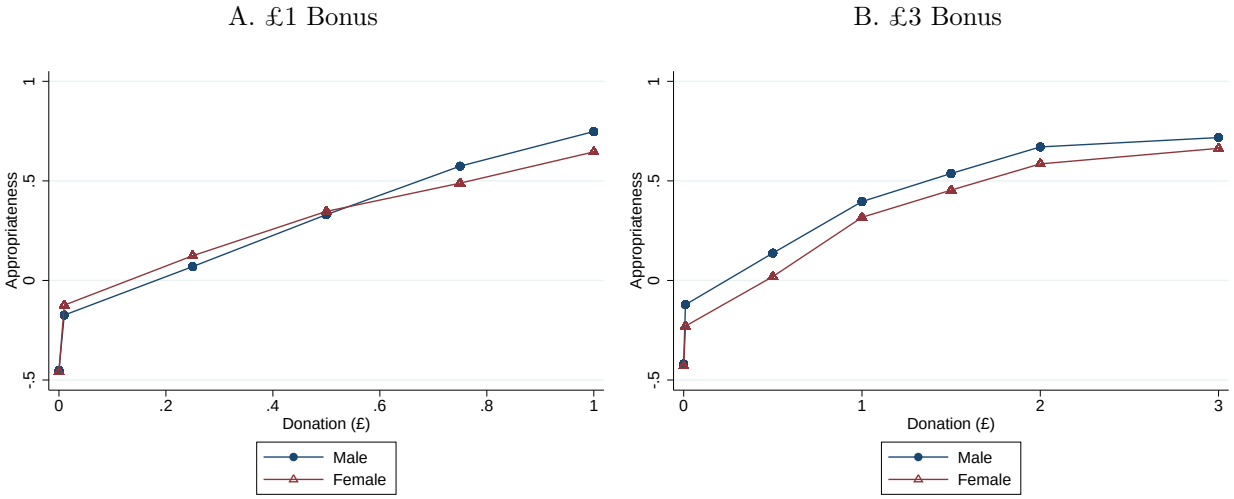
Appendix C: Additional Figures and Tables

Figure C.1: Extant Estimates of the Share of Income Given Away



Notes: This figure summarizes the share of income donated across studies. Where available, 95% confidence intervals are plotted with the point estimate (Oxoby and Spraggon, 2008). When only standard deviations are reported, we derive standard errors from the standard deviations: Andreoni and Vesterlund (2001) (estimate for $10 endowment and mid-level price of giving), Carlsson et al. (2013), Tonin and Vlassopoulos (2017), and Kellner et al. (2019). For Steinberg et al. (2010) and Bakija and Heim (2011), we use the Delta Method to calculate the standard error for the share. When neither standard deviations nor standard errors is reported, we suppress the confidence interval: Auten et al. (2002), Cherry and Shogren (2008), and Dawes et al. (2012). The estimates are categorized by type of income and type of recipient of giving. For studies that provide multiple estimates, we include all of the estimates and explain the differences between these in the "Notes" column.

Figure C.2: Gender-Specific Perceptions of Norms for Donating Bonus Income



Notes: The figure shows elicited norms for donations of bonus income. Points placed at the minimum value of each range of donations. Y-axis gives mean values of numerical moral appropriateness ratings for ranges of donation amounts: "Very morally inappropriate" = -1, "Morally inappropriate" = -0.6, "Somewhat morally inappropriate" = -0.2, "Somewhat morally appropriate" = 0.2, "Morally appropriate" = 0.6, "Very morally appropriate" = 1.

Table C.1: Summary Statistics from Donation Experiment

	Mean	Std. Dev.
Enjoyed experience (1 to 9)	6.84	2.0
Feel happy today (1 to 9)	6.70	2.0
Felt pressured to give (1 to 9)	4.95	2.6
Felt obligated to give (1 to 9)	4.84	2.6
Discretionary spending per week	50.35	67.9
People should behave like others (-1 to 1)	-0.23	0.5
People should help others. (-1 to 1)	0.65	0.4
People who have been fortunate should help others. (-1 to 1)	0.58	0.4
People should help people when there are others helping. (-1 to 1)	0.25	0.5
I approve of Acorns Children's Hospice. (-1 to 1)	0.49	0.4
Female	0.63	0.5
UK national	0.41	0.5
Asian national	0.37	0.5

Notes: N=150.