

Examining Donor Preference for Charity Religious Affiliation

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Abstract

This paper uses a laboratory experiment to determine how charity religious affiliation drives donor preference and giving. Subjects choose from one of eight charities, with each charity varying in religious affiliation. Masked and unmasked sessions differ in the knowledge of the religious affiliation of half the charities, with masked sessions omitting the religious affiliation of the aforementioned charities. My results show that adding additional religious language decreases donation frequency for Christian charities competing exclusively against other religious charities. Additionally, adding religious language increases the average donation size for secular charities competing against Christian charities, but decreases average donations for Christian charities competing exclusively against other religious charities. Subjects prefer charity religious affiliation to match their own religious identity; however, subject strength of religiosity is more predictive in charity choice than religious affiliation of the donor. My results indicate that religiously affiliated charities have financial incentive to selectively display their affiliation.

Keywords: Religious Affiliation, Charitable Giving, Laboratory Experiment

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1 Introduction

What is the value in having a religious affiliation as a charity? On the surface, a religious affiliation seems quite valuable for a charitable organization. Within the giving sector, 32% of charitable giving goes to religious organizations such as churches, mosques and synagogues (Giving USA, 2017). This simultaneously represents the largest subsector of charitable giving, as well as a drastic decline over 25 years. In 1992, giving to churches, mosques and synagogues made up 63% of charitable giving (Hoge, 1996). Additionally, the share of charitable donations received by direct religious organizations has shrunk, with the sector growing more slowly than any other charitable sector (Giving USA, 2017). However, looking at church giving does not encapsulate all religious giving. Expanding the definition to giving to all charities with a religious affiliation, the share of donation dollars jumps to nearly 75% (Giving USA, 2017).

Based on these numbers, it may be the case that donations leaving direct religious causes are being substituted into religiously affiliated charities. Schnabel and Bock (2017) show decreasing church attendance over the past 20 years, and church attendance and religious giving have been shown to be substitutes (Gruber, 2004). Additionally, there is a plethora of religious charity options from which to choose. Scheitle (2010) reports nine different types of religiously affiliated charity organizations he refers to as “para-church organizations.”¹ Of all listed “para-church” religiously affiliated charities, 22% do not have a religious keyword identifier on their Form 990, annually filed with the IRS. This number jumps to 45% for the second largest category, home to some of the largest charities in the United States, relief and development charities (Scheitle, 2010). It is possible that the intentional omission is done to appeal to a broader donor base, while maintaining some religious affiliation to attract religious donor substitutes (Smith et al., 2008).

As such, a natural question arises as to whether religiously affiliated charities have a financial incentive to selectively display their religious affiliation. This extends to how religious belief motivates a donor to select a charity and the donation amount they give to that charity. Additionally,

¹Scheitle (2010) sorts the entirety of religiously affiliated non-profits into the following categories: charismatic evangelism, relief and development, education and training, publishing and resources, radio and television, missions and missionary, fellowship and enrichment, activism and advocacy, and finally fundraising, grant making and other.

it is unclear if individuals lacking religious belief will identify a secularly affiliated charity as a worthy reason to donate in a manner similar to a religious person identifying with their donation to a religiously affiliated charity. Finally, it is unclear if these results will be dependent upon whether religious charities are religious majorities or minorities in the local culture.

If financial incentive exists to selectively display religious affiliation, charities with a religious affiliation may find it in their interest to distance themselves from their religious affiliation, as the Christian Child Fund did in 2009, becoming Child Fund International (Banks, 2009). Due to the nature of changing religious affiliation for an entire organization, it is not likely that many exogenous shocks from the charity perspective exist in the field. Therefore, I answer these questions via a laboratory experiment. In doing so, I contribute to the charitable giving literature by flipping the traditional focus of religious affiliation from the donor's affiliation, to the charity's affiliation. In the experiment, subjects select a charity, have the opportunity to donate earnings from a real effort task, and fill out a survey of demographic information to illicit religious beliefs. By exogenously shocking the information given for some of the charities, I can examine how a change in the charity's religious affiliation affects the donations it receives.

The second largest group of religiously affiliated charities are relief and development charities. This group also happens to have the highest rate of not reporting a religious affiliation. Therefore, all charities used in my experiment are relief and development organizations. To ensure that I do not pick up on location effects on donations (Eckel et al., 2018), all charities are international relief charities based outside of the state of Florida, with controls for subject familiarity with the charities.

Based on the experiment's location in the United States, for comparisons between religious and non-religious charities, I use Christian and secular charities, where I alter half the descriptions of charities in the experiment to either include or exclude religious language. However, as effects of adding religious language to a charity description may be different for majority and minority religious groups, I run an additional treatment substituting out secular charities for Islamic ones. This choice in particular was made to ensure that I had a religious "out-group" for the region of

my experiment, while simultaneously having enough international aid charities in operation within the United States to use my experimental design.

I find that adding religious language results in a reduces selection of previously masked Christian charities by an 11.0 percentage point likelihood when competing exclusively against Islamic organizations. Putting this result in context, there is a 25% baseline likelihood of these charities being selected at random. Additionally, adding religious language reduces average donations by \$1.667, or approximately 16.67% of subject income, for Christian charities competing for donations against Islamic charities. Conversely, donations to secular charity after adding lack of affiliation language increase by \$1.408, or approximately 14% of subject income.

In terms of overall donation patterns, my findings are consistent with other experimental papers finding no difference between religious and secular individuals in giving on the extensive or intensive margin when controlling for demographic factors. I do find that a connection between the religious identity of an individual and their preference for religious affiliation of a charity does exist; however, it seems to be driven by the strength of an individual's religiosity. I am able to build off previous findings in the literature to demonstrate differences in donation patterns based on strength of religiosity, rather than just affiliation alone. I find that individuals who have a higher overall strength of religiosity donate at a higher rate; however, only in situations where the entire charity menu is religious. When secular charity options replace the Islamic options, the difference in donation frequency associated with religiosity strength goes away. On the intensive margin, I find no differences in average donation size in relation to strength of religiosity when there are only religious charities; however, in situations with equal numbers of secular and religious charities, I do find a relationship between strength of religiosity and donating, with an increase in subject religiosity corresponding to a donation \$0.578 higher at the mean.

Due to the nature of my experiment, I cannot determine if religious charities have an incentive to increase their religious affiliation ties, for a specific religious audience, to potentially substitute for church giving. Additionally, I cannot determine if charity religious affiliation is a primary driver in the donation decision or a secondary driver. However, for general donation audiences,

my results show that a financial incentive to selectively display religious affiliation does exist for charities.

2 Literature Review

Evidence exists that organizational religious affiliation, or lack thereof, can inspire pro-social behavior. Chen et al. (2017), through a field experiment using the microfinance site Kiva.org, find that joining a team increases lending and that the most popular teams in Kiva.org were either outwardly Christian or Atheist in affiliation. The charitable giving literature does not have many studies focusing on the religious affiliation of charities themselves, as research on the impact of charitable organizational branding and affiliations is currently limited (Michel and Rieunier, 2012). However, there is evidence that religiously affiliated individuals are more likely to donate to religiously affiliated charities than non-religiously affiliated individuals (Chapman et. al., 2018).

In contrast, there is a vast amount of literature studying how religiously affiliated individuals donate. Bekkers and Wiepking (2011), in a two-part literature review of 550 publications on donor characteristics, consistently find religiosity as a positive indicator for higher charitable donations.² Additionally, the National Center for Charitable Statistics (2017) show that donations to religious organizations are at least double those of donations to secular organizations, in terms of both average donation and percent of income.³

Furthermore, religious charitable giving has been shown to be highly income inelastic, in terms of both church giving (Showers et. al., 2011) and giving overall (James and Jones, 2011). Low income religious individuals have been shown to donate large portions of their incomes towards religious giving (James and Sharpe, 2007). Furthermore, religious giving is highly price inelastic in reference to changes in tax prices for charitable giving (Helms and Thornton, 2012). For this reason, Showers et al. (2011) dubbed religious giving as a “necessity good.” Additionally, giving

²The positive relationship between religiously affiliated individuals and charitable giving extends to individuals with a higher level of religiosity (Reitsma et. al., 2006)

³\$1,703 versus \$863 and 1.8% versus 0.9% respectively.

towards a specific religious creed that one belongs to generally has spiritual incentives within the religion (McCleary, 2007). The community aspect of this creed can create a club good setting for religious participation (Iannaccone, 1992), which also can foster pro-social behaviors such as giving (Warner et al., 2015). As such, it has been argued that religious giving should be examined in a different context than secular giving (Hrung, 2004). The difference in giving rates between religious and secular individuals persists into the Millennial generation; however, the rate of giving difference between secular and religious individuals has decreased to roughly a 2% likelihood of donation (Koczanski and Rosen, 2019).

This has not been the case in experimental settings, where, in general, religious and secular individuals give at the same frequency and amount. Eckel and Grossman (2004), using a variety of national charities with different causes, find no statistical difference in giving, when responding to a subsidy. Religious affiliation has been found to have no effect in contribution levels in a public goods game (Anderson and Mellor, 2009) or in a bilateral trust game (Anderson et al., 2010). This may be due to conflicting effects, as Benjamin et al. (2016) found Protestants to give more in public goods games after a religious prime, while Catholics gave less. However, Benjamin et al. (2016) also find that religious primes have no effect on giving in the context of a dictator game. These lab findings imply that differences in religious and secular giving may not stem from differences in beliefs, but instead may be due to mechanisms such as a difference in opportunities to give. This theory was echoed by Bottan and Perez-Truglia (2015) when they saw donations drop from formally Catholic individuals who left the church. This explanation coincides with a decrease in religious attendance and moderate religiosity shown in Schnabel and Bock (2017), as well as the converging rates of giving demonstrated in Koczanski and Rosen (2019).

3 Experiment Design

An outline of the overall experimental procedure is included in Figure 1. The experiment is conducted as follows: students are recruited via the Florida State University XS/FS on-line system

ORSEE, and all sessions take place in the Florida State University XS/FS lab (Greiner, 2004) using the computer software Z-tree (Fischbacher, 2007). Each subject is compensated with a \$7.00 show up-fee, with the potential to earn more in phase two. The experiment then goes into the three phased interactive program as indicated by Figure 1.

As in Brown et. al. (2017), phase one consists of a charity selection stage. Subjects are asked to select one charity for a potential donation from a list of eight.⁴ Subjects are told that they do not have to donate anything to the charity; however, they must select one, and only one. Each of these charities are focused on international poverty aid or disaster relief, based in locations outside of Florida, and have vague descriptions of international disaster or poverty relief efforts. These descriptions are constructed from materials that the organizations themselves have authored. Of the Islamic and Christian charities, no explicit denomination of the religion could be easily identified on their website or via extensive online search. Additionally, subjects were informed that all charity ratings are similar based on Better Business Bureau (or the United Kingdom government equivalent in one case) and Charity Navigator ratings, when applicable.⁵ Order of placement for charities is randomized for each session

The charities available, as well as their descriptions, vary depending upon the experiment treatment. As the main goal of my experiment is deriving the value in a religious affiliation, one experimental treatment used is the addition of religious affiliation information into a mission statement. However, a study on how donors react to changes to a religious affiliation requires nuance in terms of potential competition charities for the same donation dollars. The most obvious realm of competition is between religious charities and secular charities for a specific pool of donors, such as those individuals who give to international relief charities. For the purposes of my experiment, I define this competition as *extra-religious competition*.

Definition 1: *Extra-Religious Competition: A competition for donors between religious charities and secular charities.*

⁴The list of charities, along with a short description from their mission and value statements is included in Appendix A and Appendix B.

⁵Full summary provided in Appendix D

The effect of looking at religious charities a whole is an incomplete analysis as it assumes that the value of a religious affiliation in a charitable organization is homogeneous across religions. This likely is not the case as the value of a religious affiliation that is the same as the majority religion in a region is plausibly different than a religious affiliation of a minority religion. Thus, there is an element of competition for donors between religious organizations that I define as *intra-religious competition*.

Definition 2: *Intra-Religious Competition: A competition for donors within the sub-sector of religiously affiliated charities, among religious charities affiliated with differing faiths.*

Each type of competition for donation dollars, as well as the base idea of altering how a charity advertises its religious affiliation factors into the experiment design through charity choice. Table 1 lists each charity used in extra-religious and intra-religious competition, as well as their masking status in masked and unmasked sessions. In all sessions, the eight charity options consist of four charities with Christian affiliation and four of either Islamic or secular affiliation. Masked sessions omit the religious affiliation information of half the charities, specifically two Christian charities and two either Islamic or secular charities depending upon the realm of competition. Doing so effectively makes the charity descriptions read as “neutral” charities, impossible to tell what their religious affiliation is. These “neutral” charities define the difference between masked and unmasked sessions. Simulating the change in the way a charity highlights their religious affiliation, unmasked sessions provide religious affiliation information for all charities, including those previously masked.⁶

The same charities are masked in every masked session within both intra-religious and extra-religious competition. Thus, over my masked and unmasked sessions, I vary the summary of information content as opposed to the charities themselves. Additional variation comes in the form of religious competition. The intra-religious sessions show how specific religious in-grouping motivates charitable giving, while extra-religious competition show how charities with a religious affiliation motivates giving versus charities with a secular affiliation. Thus, the experiment has a

⁶Full comparison information is available in Appendices A, B and D.

2x2 design [half charities masked, fully identified charities] x [intra-religious competition, extra-religious competition]. Specific differences on intra-religious and extra-religious competition are both explained below.

As described above, intra-religious competition features four Christian and four Islamic charities. I chose these specific religions in order to have a clear majority and minority religious group for the region where I conducted the experiment. For each religion, I tried balancing the emphasis on religious affiliation within the charity, based on the descriptions on their websites and fundraising materials. This was done intentionally to match the varying levels of emphasis on religious affiliation used by all charities in fundraising materials. I followed a similar process for extra-religious competition.

Of the two realms of competition, extra-religious competition, featuring religious and secular charities competing for donations is what most people probably first think of in terms of the value of a charity's religious affiliation. As the majority religion in the United States is Christianity, I keep all four Christian charities from my intra-religious competition treatment as my religious charities. I then substitute out the four Islamic charities for four secular charities. The differences between masked and unmasked sessions are identical in extra-religious competition to those in intra-religious competition. Extra-religious competition only changes the charities used in the experiment. For the secular charities, I try to match the same level of variability in emphasis on lack of an affiliation as I do in the emphasis of religious affiliation for the religious charities used in this experiment.

In phase two, subjects have the opportunity to earn money through a real effort task. The real effort task is necessary in a charitable giving paper to counteract the "windfall effect" where subjects donate more often and more of their money in experiments with endowed charitable donation allowances (Reinstein and Riener, 2012). This is only important in the context of my analysis if the effect threatens to systematically disrupt the distribution of charity selection and donation dollars given to the charities. In my case, such a risk does exist. In addition to finding differing rates of donation with and without a real effort task, Reinstein and Riener (2012) find differing rates of

donation between men and women. Men and women additionally have differing rates of religious affiliation in the United States, particularly in when it comes to Christianity (Pew Research Center, 2016). Internationally, Christians are more likely to be women rather than men; conversely, non-affiliated individuals are more likely to be men than women (Pew Research Center, 2016). While interactions of these effects are not explored and I do control for gender differences in my analysis, in order to mitigate threats to external validity further, I include a real effort task to better simulate the charitable giving process.

Using the counting grid from Abeler et. al. (2011), subjects have 10 minutes to count as many 10x10 matrices of 1's and 0's as they possibly can. Each correct grid earns the subject completing it \$2.50. There is a \$10 earnings cap placed on the subjects, set at a low enough level to ensure that all subjects should hit the earnings cap. Establishing the earnings cap allows for donation amounts to be comparable across subjects, avoiding income effects. Over 99% of subjects achieved maximum earnings in the actual experiment, and those who did not complete four tables were dropped from analysis.

Prior to the 10 minute earning session, subjects complete a practice grid to make sure they understand the concept of the task. After the task is finished, subjects have the opportunity to donate as much or as little of their earnings as they wish to the charity they selected. They are not be allowed to donate their show up fee. In order to ensure that subjects believe that their donations will go to the charity that they select, they are informed explicitly that I will be writing a check to these charities for each of them. At the time of payment, I show the subjects their donation check and place it in a corresponding envelope, addressed to the selected charity with appropriate postage. Subjects are allowed to accompany me to the mailbox on Florida State's campus to witness me mail the checks personally if they wish.

Phase three consists of a demographic survey, used to elicit subject religious background, and other controlling factors for my analysis. Importantly, subjects are asked their familiarity with any of the charities listed.⁷ As I am trying to control for other identifying factors that could cause

⁷The full list of survey questions and answer possibilities is provided in Appendix C.

subjects to donate, it is important to know subject familiarity with the charities. If a subject has prior history to any of the charities listed, the role their religious identity plays in the charity choice and donation decisions is likely compromised. The survey questions are categorized by radio button in a manner consistent with racial, gender and religious belief categories used in the General Social Survey, and the Baylor Religion Survey. Finally, in order to obtain a measure of religiosity in addition to affiliation, I include all questions from the Duke University Religion Index, an index ranging from 5 to 27 used to measure intensity of religious belief (Koenig and Büssing, 2010).

4 Experiment Data and Baseline Analysis

The experiment consisted of 16 sessions with 4 masked and 4 unmasked sessions for extra-religious and intra-religious competition treatments respectively. Sessions had between 9 and 26 subjects, resulting in 164 observations for intra-religious competition and 157 observations for extra-religious competition. Three subjects failed to reach maximum earnings and were dropped to allow me to do data analysis without having to control for income effects. Those observations were not included in the total count of observations. Subjects earned on average \$16.51, including their show up fee. Sessions lasted 65 minutes on average.

Demographic balance tables across sessions are reported in Table 2. The dashed line separates the three religious variables used to measure subject religious identity, including indicator variables for secular and Christian affiliated individuals, as well as the composite score of the Duke University Religion Index (Koenig and Büssing, 2010), from other demographic control variables used in my experiment. The demographic controls include subject age as well as indicators for female subjects, subjects who are economic majors, black subjects, Latino subjects, subjects from states outside of Florida, subjects who indicated that they had either previous experience in either donating or volunteering for a charity listed in the experiment, or had previously been exposed to / heard of charities listed in the experiment, and subjects who answered “slightly conservative,” “conservative,” or “extremely conservative” when asked on their political beliefs. Sessions are

mostly balanced along these variables, with the exceptions of subjects in extra-religious unmasked sessions having an 11.8 percentage point higher level of prior exposure, with a calculated p-value of 0.037, compared to masked sessions, and a 13.4 percentage point higher rate of identifying as secular, with a calculated p-value of 0.068. Conversely, intra-religious sessions only differ with a difference in subject age of 0.853 years, with a calculated p-value of 0.070, between masked and unmasked sessions. Finally, there is a 19 percentage point difference in the differences at the means between previous exposure across all sessions, with a calculated p-value of 0.012.

Donation behavior across charity type in extra-religious and intra-religious competition is plotted in Figure 2 for changes in the extensive margin of donations, measuring donation frequency, and in Figure 3 for changes along the intensive margin of donations, measuring changes to average donation conditional upon having donated to that type of charity. Each plot contains 90% confidence intervals, robust to heteroskedasticity. Starting with the extensive margin changes in Figure 2, the only group of charities experiencing a statistical change in their donation behaviors were masked Christian charities in intra-religious competition, seeing donation frequencies decrease by 11.05 percentage points, with an estimated p-value of 0.014. The intensive margins changes in donations plotted in Figure 3 show that unmasking decreases average donations to previously masked Christian charities in intra-religious competition by \$1.667, with an estimated p-value of 0.042. Conversely, unmasking changes donations in previously masked secular charities saw an increase in average donation, conditional upon donating to a secular masked charity, of approximately \$1.408 after unmasking, with an estimated p-value of 0.081.

To determine how donation behavior changes across the four treatments, I run a regression design of the following form:

$$y_i = \alpha_i + \beta unmasked_i + \delta extra_i + \theta(unmasked * extra)_i + u_i$$

where: y_i represents donation frequency (measured as a linear probability model) and amount, $unmasked_i$ is an indicator for unmasked sessions, $extra$ indicates extra-religious competition

sessions, $(umasked * extra)_i$ is an interaction term of each indicator, and $u_i (0, V)$ represent idiosyncratic errors robust to heteroskedasticity. I run the analysis over donations to all charities, as well as a narrowing of analysis to donations to Christian charities and finally donations to Christian charities masked in the experiment. These restrictions of y_i are due to the fact that Christian charities are the only charities used in both extra-religious competition and intra-religious competition, and Christian masked charities are the only charities subject to unmasking used in both extra-religious competition and intra-religious competition.

The results from my regression are reported in Table 3. Donation frequency and amounts do not change across any of the four treatments when analysing donations to charity as a whole, or donations specifically to Christian charities. However, donation frequency does decrease by 11 percentage points in unmasked sessions, with an estimated p-value of 0.013. Additionally, unmasking decreased unconditional average donations to previously masked Christian charities by \$0.341, with an estimated p-value of 0.017. As shown in the previous figures, the majority of this effect is driven by changes in donor behavior in intra-religious competition.

5 Hurdle Model Analysis

5.1 Empirical Strategy

In addition to the baseline analysis in the preceding paragraphs, the data collected throughout this experiment allow me to do a regression analysis to determine donor preferences for charity religious affiliation over a variety of religious demographic factors, including strength of religiosity and affiliation of the donor. In my regression model, I utilize a hurdle model featuring a Probit selection model and a Tobit Model censored at \$0.00 to measure donation amount. The choice to censor the Tobit model only at \$0.00 is driven by the experimental data. Donation amount frequencies are provided in Table 4. Roughly 35.51% of subjects chose to not donate any of their income to charity, compared to only 1.25% of subjects who chose to donate the entirety of their earnings.

The choice to use a hurdle model as opposed to a separate Probit and Tobit models stem from the fact that the standard errors of the Probit selection model likely help identify the decision on how much to give to philanthropy. For analyses on specific types of charitable giving where I do not have enough donation observations for the hurdle model to converge, I run separate Probit and Tobit models of the same form as described below.⁸ Unlike the preceding analysis, I do not pool my extra-religious and intra-religious competition data for hurdle model analysis. This is because I am using a Probit selection equation, the marginal effects of interaction terms are not able to be computed, rendering it impossible for me to determine differences in behavior across intra-religious competition and extra-religious competition (Ai and Norton, 2003).

The selection model equation takes the following form:

$$P(Donated_i = 1|Z_i) = \Phi(\alpha_i + Rel_i\phi + \delta Duke_i + \gamma Unmk_i + X_i\beta)$$

where $Donated_i$ is a binary variable indicating that the charity received a donation from individual i , Z_i represents the total control vector with all the independent variables of interest and controls, Rel_i indicates religious affiliation as reported, $Duke_i$ is the composite Duke University Religion Index score measuring strength of religiosity, $Unmk_i$ is a binary indicating those in unmasked sessions, and X_i represents control demographic variables such as: major, age, gender, political beliefs, charity experience and exposure, whether the subject is from outside of Florida and racial background. Doing the above analysis answers how religious identity drives donations in terms of the donation decision. Thus, to see how the change in information alters donations, I repeat the analysis above with the sample restricted to individuals selecting specific types of charities. In intra-religious competition, these include selection of Christian or Islamic charities, as well as an examination specifically on the charities affected by unmasking. The same procedure is followed for extra-religious competition with restrictions to either religious or secular charities, as well as further restrictive analysis on the charities altered specifically by unmasking. The results of my

⁸This includes analysis with demographic controls over unmasked Christian charities in extra-religious competition, analysis with demographic controls over all Christian charities in intra-religious competition and all models analyzing unmasked Christian charities in intra-religious competition.

selection equation demonstrate how the probability of donation changes with a change in charity religious affiliation information.

From here, the Tobit model takes the following form:

$$Donation_i = \alpha_i + Rel_i\phi + \delta Duke_i + \gamma Unmk_i + X_i\beta + u_i$$

where: $Donation_i$ stands for donation amount, all other dependent variables being the same as above and finally $u_i \sim N(0, V)$ represents the idiosyncratic errors. As in the first stage of the selection equation, I rerun analysis over the specific affiliations in both intra-religious and extra-religious competition, along with an analysis directly on those charities altered by unmasking. The results of my Tobit model demonstrate how average donation amount changes with a change in charity religious affiliation information.

5.2 Hurdle Model Results

Results for the Hurdle Model analyzing Intra-Religious Competition are reported in Table 5 and Table 6, and for Extra-Religious Competition are reported in Table 7 and Table 8. In all cases, the dashed line separates the estimates on the unmasking impact on donations within the specific type of competition from a variety of religious demographic controls of interest. Each subset of charities examined is analyzed twice, once only with religious demographic controls and once with the full set of demographic controls reported in the balance table in Table 2.

5.2.1 Intra-Religious Competition

Beginning with the results of the Probit selection equation reported in Table 5, I find that unmasking does not impact donation rates within the experiment's charitable giving sector. The only subgroup reporting decreases in donation frequency were Christian charities who were unmasked, seeing a drop in donation rates along the extensive margin by 14.5 percentage points, with an estimated p-value of 0.003.

Additionally, the results reported in Table 5 demonstrate the importance of strength of religiosity in preference for donation, rather than donation affiliation alone. Individuals with a higher overall strength of religiosity are 3.2 percentage points more likely to make a donation at all for an additional point at the mean on their Duke University Religion Index Score, with an estimated p-value of 0.002. Furthermore, individuals with a higher Duke score are more likely to donate to a Christian charity, increasing likelihood of donation by 1.5 percentage points for an additional point at the mean on a respondent's Duke University Religion Index Score, with an estimated p-value of 0.090. Affiliation of the donor does not impact the likelihood of donating overall, but there are some differences across specific subgroups of charities. Christian affiliated individuals are more likely to donate to Christian charities overall at a rate of 17.8 percentage points higher than non-Christian subjects, with an estimated p-value of 0.087.

Turning to the Tobit model measuring changes in average donation amounts on the intensive margin reported in Table 6, and once again unmasking does not change donation behavior on the intensive margin in aggregate across all charities. Analysis over all subgroups shows that unmasking again only impacts Christian charities who were previously masked. The number of donations to this subgroup of charities was too small for the hurdle model to converge; however, analysis using a Tobit model over all observations shows a decrease in average donation received by \$3.720, with an estimated p-value of 0.008. Additionally, the results reported in Table 6 show that differences in donations received on the intensive margin are not driven by either the strength of religiosity or religious affiliation, with the exception of Christian affiliated individuals donating to Christian charities. In donations to Christian charities, Christian affiliated individuals donate \$1.750 more on average than non-Christian donors, with an estimated p-value of 0.095.

5.2.2 Extra-Religious Competition

Starting with the results of the Probit selection equation reported Table 7, I show that unmasking does not change donation behavior across all charities in extra-religious competition, nor among any specific subset of charities analyzed. Additionally, I find supporting evidence for the

experimental literature findings that religious and secular individuals do not donate at different rates along the extensive margin examining donation frequency, when all demographic controls are included. Furthermore, strength of religiosity is not a predictor for likelihood of making a donation. However, Table 7 provides compelling evidence that donors sort by their religious preference. Donors with higher Duke scores are less likely to donate to secular charities and are more likely to donate to religious ones. Additionally, secular individuals are 17.8 percentage points less likely to donate to any Christian charity with an estimated p-value of 0.028, and 11.9 percentage points less likely to donate to an unmasked Christian charity with an estimated p-value of 0.011.

Turning to the Tobit model for donation amounts in Table 8, I find that unmasking does not statistically change the amounts of an average donation received. This implies that earlier results indicating increases in average donations to secular unmasked charities along the intensive margin are largely explainable by the religious demographics of subjects. The significant predictor for donation amounts in both religious and secular unmasked charities, when the hurdle model converges, appear to be respondents who are secular. Finally, I also find that there is no significant difference between the giving patterns of Christian or secular individuals on the intensive margin. These results are in line with the majority of the experimental literature on religiously affiliated individuals and charitable giving. However, I do find a relationship between a higher religiosity score and average donation, with an increase of a point on the Duke University religion index at the mean corresponding to an increase in donations by \$0.578, with an estimated p-value of 0.071. This positive correlation extends to all Christian charities, including analysis over the unmasked charities, as well as secular unmasked charities. However, there is no relationship between average donation to secular charities as a whole and strength of religiosity.

6 Discussion

Taken as a whole, the results from my experiment indicate that religious charities have a financial incentive to selectively display their religious affiliation in certain situations. The financial

incentive is strongest when appealing to a donor pool with a sizeable portion of secular individuals when the charity competition is more intra-religious in nature. The incentive to mask religious affiliation in my experiment is strongest for the cultural majority religion. Financial incentives could explain why 45% of religious relief service organizations, as well as 22% of other religious charity organizations choose not to report at least one religious keyword in their description to the IRS on their Form 990 (Scheitle, 2010).

Additionally, my results provide corroborating evidence to Eckel and Grossman's (2004) results indicating that non-religious individuals were as likely to make a charitable donation compared to religiously affiliated ones. Building off their research, I am able to show that strength of religiosity helps determine donation behavior in situations of intra-religious competition, where no secular charity option exists. However, in extra-religious competition, strength of religiosity does not help predict the likelihood of donation. The results reverse when looking at donations on the intensive margin. In situations where charity competition is intra-religious, strength of religiosity has no relationship with average donation. However, in extra-religious competition, with many secular options, strength of religiosity is correlated with higher donations.

My experiment is unable to identify if religious affiliation is a primary or secondary driver to the donation decision. Based on the construction of the charity descriptions and the donation patterns of each subject, the data from my experiment suggest that donors may react differently to a religious affiliation in intra-religious and extra-religious competition, thus changing the driving factor of the donation decision and necessarily the financial incentive for religious affiliation emphasis. However, as my experiment is not designed to test any hypotheses based on the donation decision driver, the hypothesis is left for future research.

Furthermore, my experiment is not able to answer whether additional donation dollars are coming into the distribution of international charity relief dollars via religious individuals substituting out their giving from direct religious giving to indirect religious giving. The experiment instead focuses on appealing to donors in an overall general context, as if they were selecting from a menu of charities to potentially donate to in a workplace charity drive. Some external validity concerns

exist due to the age of the subjects. Being college students, these subjects are likely young in their religion and charitable giving life cycles. It is possible that the results would change with a different experimental population, which is a topic that I plan to explore in future research.

7 Conclusion

My research demonstrates that increasing information on religious affiliation results in decreasing charitable donations for Christian charities, both on the extensive margin in terms of frequency, as well as the intensive margin in regards to total dollars received within the donation dollar distribution, when competing in intra-religious competition. Regression analysis shows that the decrease appears to be caused by an increase in average donation received by the charities for reasons outside of religious affiliation or strength of religiosity. Additionally, I also demonstrate that donations increase for secular charities adding lack of religious affiliation information to their affiliation information, appearing to largely be driven by donor religious affiliation. Finally, I also demonstrate that religiosity strength does predict preference for charity religious affiliation.

My results indicate that religious charities would be better served to not acknowledge their religious affiliation when fund raising from a general audience and competing in a market for donations primarily with other religious charities. Increased information on religious affiliation appears to decrease a charity's desirability to the overall donor pool, particularly among the majority religion within the region. Still, maintaining enough of a religious affiliation to keep their church networks available may be in a charity's financial interest, as indicated in Bottan and Perez-Truglia (2015). The maintenance and selective display of affiliation mirrors the unmasking process of religious affiliation described in the discussion section of the paper and is consistent with 45% of religious relief service agencies not reporting a religious connection (Scheitle, 2010).

The outcomes of my experiment, as well as the questions raised in my experiment's shortcomings, have real world implications for charities trying to maximize their appeal to donors. My findings tell a story consistent with current charity behavior and provoke interesting questions for

the future. Ideally, future research will take my experiment to a “lab in the field” setting, to see if the results hold up with subjects further into their religious life cycle, or subjects who have a distribution of religious beliefs that are not as heavily Christian. Additionally, a field setting could provide me an opportunity to further test if individuals are reporting shifting their donations from direct religious giving into more indirect measures such as international relief charities. Finally, I would also have the opportunity to discuss the driving decisions in charity selection in reference to charity emphasis on religious affiliation.

References

- [1] Ai, C., & Norton, E. C. (2003). Interaction terms in logit and probit models. *Economics letters*, 80(1), 123-129.
- [2] Anderson, L. R., & Mellor, J. M. (2009). Religion and cooperation in a public goods experiment. *Economics Letters*, 105(1), 58-60.
- [3] Anderson, L., Mellor, J., & Milyo, J. (2010). Did the devil make them do it? The effects of religion in public goods and trust games. *Kyklos*, 63(2), 163-175.
- [4] Abeler, J., Falk, A., Goette, L., & Huffman, D. (2011). Reference Points and Effort Provision. *The American Economic Review*, 101(2), 470-492
- [5] Banks, A. M. (2009) Christian Children's Fund Drops 'Christian' from Name. *Christianity Today*.
- [6] Bekkers, R., and Wiepking, P. (2011). Who gives? A Literature Review of Predictors of Charitable Giving Part One: Religion, Education, Age and Socialisation. *Voluntary Sector Review*, 2(3), 337-365.
- [7] Benjamin, D. J., Choi, J. J., & Fisher, G. (2016). Religious identity and economic behavior. *Review of Economics and Statistics*, 98(4), 617-637.

- [8] Bottan, N. L., & Perez-Truglia, R. (2015). Losing my religion: The effects of religious scandals on religious participation and charitable giving. *Journal of Public Economics*, 129, 106-119.
- [9] Brown, A. L., Meer, J., & Williams, J. F. (2017). Social distance and quality ratings in charity choice. *Journal of Behavioral and Experimental Economics*, 66, 9-15.
- [10] Chapman, C. M., Louis, W. R., & Masser, B. M. (2018). Identifying (our) donors: Toward a social psychological understanding of charity selection in Australia. *Psychology & marketing*, 35(12), 980-989.
- [11] Chen, R., Chen, Y., Liu, Y., & Mei, Q. (2017). Does team competition increase pro-social lending? Evidence from online microfinance. *Games and Economic Behavior*, 101, 311-333.
- [12] Eckel, C. C., & Grossman, P. J. (2004). Giving to secular causes by the religious and nonreligious: An experimental test of the responsiveness of giving to subsidies. *Nonprofit and Voluntary Sector Quarterly*, 33(2), 271-289.
- [13] Eckel, C. C., Priday, B. A., & Wilson, R. K. (2018). Charity Begins at Home: A Lab-in-the-Field Experiment on Charitable Giving. *Games*, 9(4), 95.
- [14] Fischbacher, U. (2007). Z-tree: Zurich toolbox for ready-made economic experiments. *Experimental Economics*,
- [15] Greiner, B. (2004). An online recruitment system for economic experiments. In K. Kremer & V. Macho (Eds.), *GWDG Bericht: Vol. 63. Forschung und wissenschaftliches Rechnen 2003* (pp. 79–93). Göttingen: Ges. für Wiss. Datenverarbeitung
- [16] Gruber, J. (2004). Pay or pray? The impact of charitable subsidies on religious attendance. *Journal of Public Economics*, 88(12), 2635-2655.

- [17] Giving USA, (2017). See the numbers - Giving USA 2017 Infographic. The Giving Institute.
- [18] Helms, S. E., & Thornton, J. P. (2012). The influence of religiosity on charitable behavior: A COPPS investigation. *The Journal of Socio-Economics*, 41(4), 373-383.
- [19] Hoge, D. R. (Ed.). (1996). *Money matters: Personal giving in American churches*. Westminster John Knox Press.
- [20] Hrung, W. B. (2004). After-Life Consumption and Charitable Giving. *American Journal of Economics and Sociology*, 63(3), 731-745.
- [21] Iannaccone, L. R. (1992). Sacrifice and stigma: Reducing free-riding in cults, communes, and other collectives. *Journal of political economy*, 100(2), 271-291.
- [22] James III, R. N., & Jones, K. S. (2011). Tithing and religious charitable giving in America. *Applied Economics*, 43(19), 2441-2450.
- [23] James, R., & Sharpe, D. (2007). The "Sect Effect" in Charitable Giving: Distinctive Realities of Exclusively Religious Charitable Givers. *The American Journal of Economics and Sociology*, 66
- [24] Koczanski, P., & Rosen, H. S. (2019). Are Millennials Really Particularly Selfish? Preliminary Evidence From a Cross-Sectional Sample in the Philanthropy Panel Study. *American Behavioral Scientist*, 0002764219850871.
- [25] Koenig, H. G., & Büssing, A. (2010). The Duke University Religion Index (DUREL): A five-item measure for use in epidemiological studies. *Religions*, 1(1), 78-85.
- [26] McCleary, R. M. (2007). Salvation, damnation, and economic incentives. *Journal of Contemporary Religion*, 22(1), 49-74.
- [27] Michel, G., & Rieunier, S. (2012). Nonprofit brand image and typicality influences on charitable giving. *Journal of Business Research*, 65(5), 701-707.

- [28] National Center for Charitable Statistics. (2017). "Charitable Giving in America: Some Facts and Figures."
- [29] Pew Research Center. (2016). The Gender Gap in Religion Around the World.
- [30] Reinstein, D., & Riener, G. (2012). Decomposing desert and tangibility effects in a charitable giving experiment. *Experimental Economics*, 15(1), 229-240.
- [31] Reitsma, J., Scheepers, P., & Grotenhuis, M. T. (2006). Dimensions of individual religiosity and charity: cross-national effect differences in European countries?. *Review of religious research*, 347-362.
- [32] Scheitle, C. P. (2010). *Beyond the congregation: The world of Christian nonprofits*. Oxford University Press.
- [33] Schnabel, L., & Bock, S. (2017). The Persistent and Exceptional Intensity of American Religion: A Response to Recent Research. *Sociological Science*, 4, 686-700.
- [34] Showers, V., Showers, L., Beggs, J., & Cox, J. (2011). Charitable Giving Expenditures and the Faith Factor. *American Journal of Economics and Sociology*, 70(1), 152-186.
- [35] Smith, C., Emerson, M. O., & Snell, P. (2008). *Passing the plate: Why American Christians don't give away more money*. Oxford University Press.
- [36] Warner, C. M., Kılınç, R., Hale, C. W., Cohen, A. B., & Johnson, K. A. (2015). Religion and public goods provision: Experimental and interview evidence from Catholicism and Islam in Europe. *Comparative Politics*, 47(2), 189-209.

8 Figures

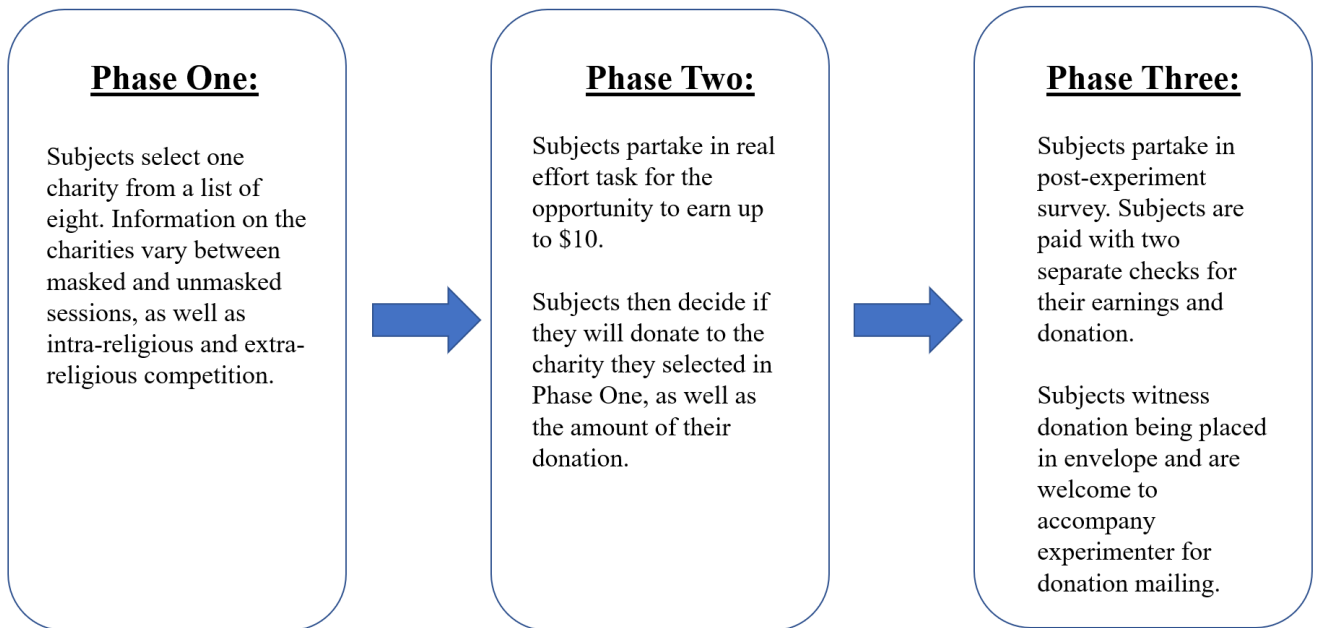


Figure 1: Experimental Design

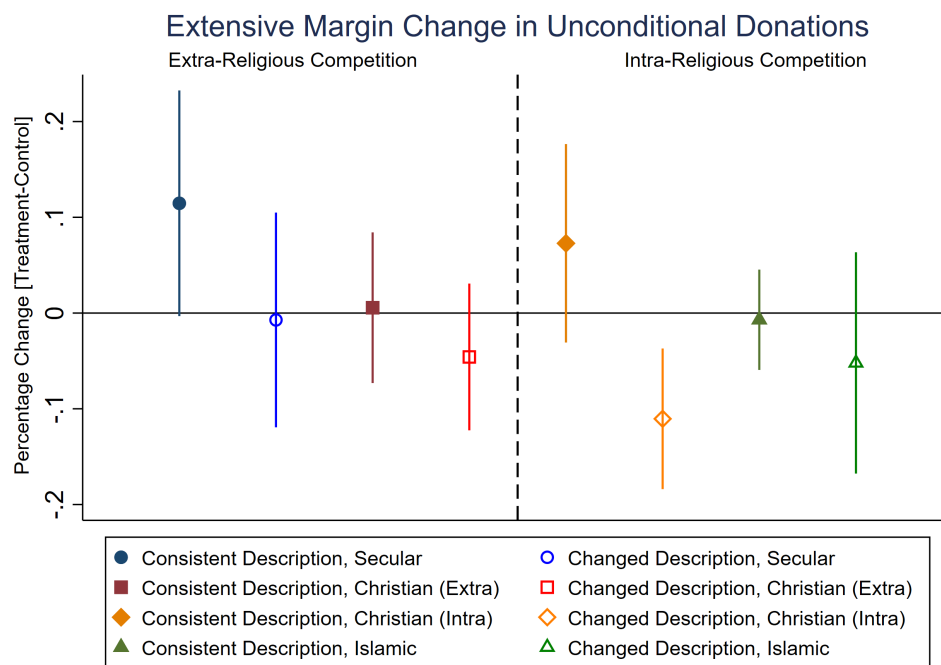


Figure 2: Mean Changes in Donations with Unmasking, Extensive Margin

Notes: Plots include 90% confidence intervals robust to heteroskedasticity

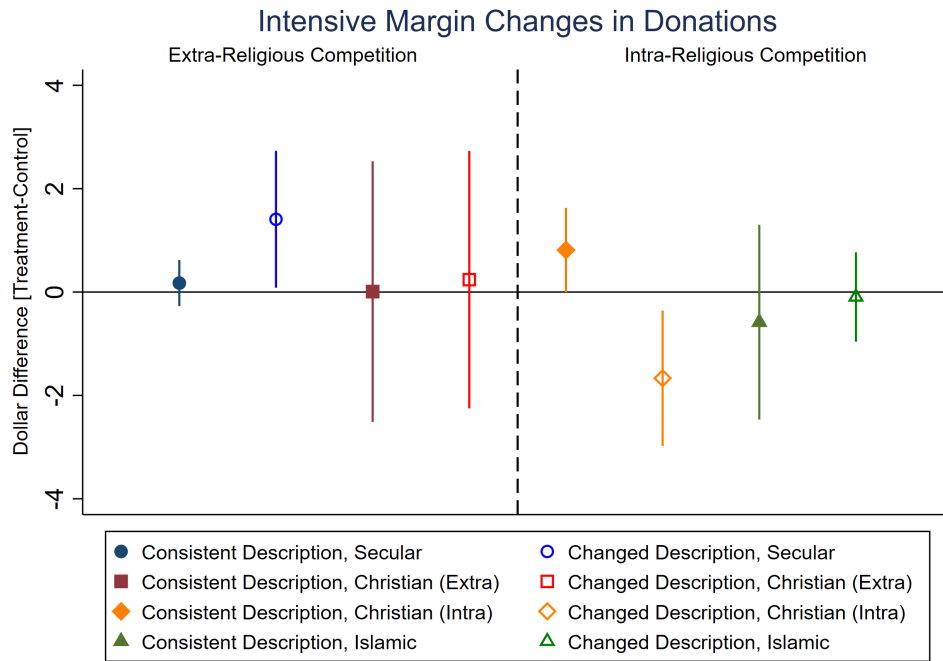


Figure 3: Mean Changes in Donations with Unmasking, Intensive Margin
Notes: Plots include 90% confidence intervals robust to heteroskedasticity

9 Tables

Table 1: Experiment Design

	Charity Name	Intra-Religious Competition		Extra-Religious Competition	
		Masked Sessions	Unmasked Sessions	Masked Sessions	Unmasked Sessions
Christian 1	World Vision	Unmasked	Unmasked	Unmasked	Unmasked
Christian 2	World Hope International	Unmasked	Unmasked	Unmasked	Unmasked
Christian 3	Opportunity International	Masked	Unmasked	Masked	Unmasked
Christian 4	World Concern	Masked	Unmasked	Masked	Unmasked
Islamic 1	Islamic Aid	Unmasked	Unmasked		
Islamic 2	Islamic Relief USA	Unmasked	Unmasked		
Islamic 3	Life for Relief & Development	Masked	Unmasked		
Islamic 4	Mercy-USA	Masked	Unmasked		
Secular 1	S.H.A.R.E. through C.F.I.			Unmasked	Unmasked
Secular 2	Direct Relief International			Unmasked	Unmasked
Secular 3	Oxfam			Masked	Unmasked
Secular 4	Mercy Corps			Masked	Unmasked

Notes: Placement of each charity is randomly determined before each session.

Table 2: Demographic Control Balance Tables

	Intra-Religious Competition				Extra-Religious Competition				Diff-in-Diff (Extra - Intra)
	Pooled	Masked	Unmasked	Difference	Pooled	Masked	Unmasked	Difference	
Secular	0.268 (0.444)	0.230 (0.423)	0.312 (0.466)	0.082 (0.069)	0.293 (0.457)	0.233 (0.425)	0.366 (0.485)	0.134 [‡] (0.073)	0.052 (0.100)
Christian	0.530 (0.501)	0.540 (0.501)	0.519 (0.503)	-0.021 (0.079)	0.452 (0.499)	0.453 (0.501)	0.451 (0.501)	-0.003 (0.080)	0.018 (0.112)
Duke	13.409 (6.073)	13.701 (6.075)	13.078 (6.093)	-0.623 (0.952)	12.764 (5.850)	12.988 (5.779)	12.493 (5.964)	-0.495 (0.940)	0.128 (1.339)
Female	0.646 (0.480)	0.678 (0.470)	0.610 (0.491)	-0.068 (0.075)	0.585 (0.494)	0.581 (0.496)	0.591 (0.495)	0.010 (0.079)	0.078 (0.109)
Age	19.664 (3.006)	19.264 (1.505)	20.117 (4.052)	0.853 [‡] (0.467)	20.299 (4.510)	20.384 (4.875)	20.197 (4.055)	-0.187 (0.725)	-1.039 (0.855)
Economics Major	0.061 (0.240)	0.069 (0.255)	0.052 (0.223)	-0.018 (0.038)	0.051 (0.221)	0.035 (0.185)	0.070 (0.258)	0.036 (0.035)	0.053 (0.052)
Conservative	0.177 (0.383)	0.195 (0.255)	0.156 (0.365)	-0.040 (0.060)	0.261 (0.441)	0.244 (0.432)	0.282 (0.453)	0.038 (0.071)	0.077 (0.093)
Black	0.165 (0.372)	0.161 (0.370)	0.169 (0.377)	0.008 (0.058)	0.153 (0.361)	0.128 (0.336)	0.183 (0.390)	0.055 (0.058)	0.047 (0.082)
Latino	0.244 (0.431)	0.218 (0.416)	0.273 (0.448)	0.054 (0.067)	0.172 (0.379)	0.174 (0.382)	0.169 (0.377)	-0.005 (0.061)	-0.060 (0.091)
Not from Florida	0.226 (0.419)	0.253 (0.437)	0.195 (0.399)	-0.058 (0.066)	0.204 (0.404)	0.209 (0.409)	0.197 (0.401)	-0.012 (0.065)	0.046 (0.092)
Previous Experience	0.250 (0.434)	0.264 (0.444)	0.234 (0.426)	-0.031 (0.068)	0.172 (0.379)	0.151 (0.360)	0.197 (0.401)	0.046 (0.061)	0.077 (0.092)
Previous Exposure	0.116 (0.321)	0.149 (0.359)	0.078 (0.270)	-0.072 (0.050)	0.146 (0.355)	0.093 (0.292)	0.211 (0.411)	0.118* (0.056)	0.190*** (0.075)
N	164	87	77	164	157	86	71	157	321

[‡] $p < 0.10$ * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Columns 2-4, 6-8 standard deviation in parentheses. Columns 5, 9 and 10 standard errors in parentheses.

Table 3: Differences in Donor Behavior Across Specific Charities

	<u>All Charities</u>		<u>All Christian</u>		<u>Christian Unmasked</u>	
	Donated	Donation	Donated	Donation	Donated	Donation
Unmasked	-0.097 (0.077)	-0.218 (0.268)	-0.038 (0.071)	-0.031 (0.214)	-0.110* (0.044)	-0.341* (0.142)
Extra-Rel. Comp	-0.004 (0.073)	-0.182 (0.270)	-0.101 (0.067)	-0.125 (0.232)	-0.033 (0.052)	-0.099 (0.190)
(Extra-Rel*Unmk.)	0.164 (0.107)	0.675 (0.414)	-0.003 (0.095)	-0.045 (0.319)	0.065 (0.064)	0.250 (0.219)
<i>N</i>	321	321	321	321	321	321

‡ $p < 0.10$ * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Standard errors robust to heteroskedasticity in parentheses.

Table 4: Donation Frequency by Amount

Donation	Frequency	Percent of Donations
0.00	114	35.51%
0.10	1	0.31%
0.25	1	0.31%
0.40	1	0.31%
0.50	6	1.87%
0.75	1	0.31%
1.00	82	25.55%
1.25	1	0.31%
1.50	5	1.56%
1.80	1	0.31%
2.00	57	17.76%
2.25	1	0.31%
2.34	1	0.31%
2.50	3	0.93%
3.00	12	3.74%
3.40	1	0.31%
3.50	2	0.62%
4.00	6	1.87%
5.00	14	4.36%
6.30	1	0.31%
7.00	4	1.25%
8.00	2	0.62%
10.00	4	1.25%
<i>N</i>	321	100%

9.1 Intra-Religious Competition

Table 5: Probit Selection Equation Marginal Effects, Intra-Religious Competition

	<u>All Charities</u>		<u>All Christian</u>		<u>Christian Unmasked</u>		<u>All Islamic</u>		<u>Islamic Unmasked</u>	
Unmasked	-0.094 (0.078)	-0.098 (0.082)	-0.036 (0.072)	-0.045 (0.073)	-0.114** (0.043)	-0.145** (0.483)	-0.053 (0.073)	-0.075 (0.073)	-0.050 (0.070)	-0.065 (0.069)
Duke Score	0.022* (0.009)	0.032** (0.010)	0.013 (0.008)	0.015† (0.009)	-0.006 (0.005)	-0.006 (0.006)	0.006 (0.008)	0.010 (0.009)	0.002 (0.008)	0.008 (0.008)
Christian	0.031 (0.102)	0.055 (0.115)	0.201* (0.305)	0.178† (0.104)	0.075 (0.055)	0.078 (0.068)	-0.151 (0.099)	-0.160 (0.103)	-0.082 (0.097)	-0.070 (0.100)
Secular	0.065 (0.121)	0.126 (0.118)	0.157 (0.144)	0.163 (0.140)	0.067 (0.089)	0.063 (0.091)	-0.074 (0.109)	-0.076 (0.111)	-0.037 (0.329)	-0.025 (0.110)
Full Demographic Controls	✓		✓		✓		✓		✓	
N	164	164	164	164	164	136†	164	164	164	164

† $p < 0.10$ * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Standard errors robust to heteroskedasticity in parentheses. Controls include those for gender, ethnicity, political beliefs, charity exposure and experience, economics majors, out of state subjects and age.

Regressions with N denoted by † represent models where certain observations are dropped as they predict failure with certainty, and the hurdle model does not converge.

Table 6: Tobit Model for Donors, Intra-Religious Competition

	All Charities		All Christian		Christian Unmasked		All Islamic		Islamic Unmasked	
Unmasked	0.009 (1.015)	-0.002 (0.881)	0.322 (2.090)	-0.285 (0.670)	-3.865* (1.776)	-3.720** (1.384)	-0.411 (1.110)	0.076 (1.023)	-0.260 (1.289)	0.192 (1.194)
Duke Score	-0.058 (-0.101)	-0.086 (0.089)	-0.240 (0.299)	0.090 (0.081)	-0.220 (0.139)	-0.199 (0.14)	0.071 (0.132)	0.029 (0.117)	0.057 (0.147)	0.003 (0.130)
Christian	0.199 (1.314)	0.790 (1.119)	1.010 (2.769)	1.750† (1.040)	2.161 (1.605)	1.862 (1.593)	0.432 (1.249)	1.056 (1.329)	0.348 (1.566)	1.002 (1.722)
Secular	-0.873 (1.896)	-0.864 (1.519)	-1.073 (4.152)	1.161 (1.296)	1.639 (2.234)	1.281 (1.868)	0.166 (1.776)	0.016 (1.780)	0.012 (2.040)	-0.216 (2.135)
Full Demographic Controls	✓		✓		✓		✓		✓	
N	100	100	48	164†	164†	164†	52	52	45	45

† $p < 0.10$ * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Standard errors robust to heteroskedasticity in parentheses. Controls include those for gender, ethnicity, political beliefs, charity exposure and experience, economics majors, out of state subjects and age.

Regressions with N denoted by † are Tobit regressions used because the number of subjects donating to this charity type are too small for the hurdle model to converge.

9.2 Extra-Religious Competition

Table 7: Probit Selection Equation Marginal Effects, Extra-Religious Competition

	All Charities		All Christian		Christian Unmasked		All Secular		Secular Unmasked	
Unmasked	0.095 (0.075)	0.082 (0.080)	-0.039 (0.249)	0.013 (0.068)	-0.039 (0.040)	-0.016 (0.042)	0.126 (0.083)	0.073 (0.094)	0.007 (0.069)	-0.009 (0.067)
Duke Score	-0.003 (0.008)	0.003 (0.008)	0.017** (0.006)	0.029*** (0.008)	0.005 (0.005)	0.008† (0.005)	-0.027** (0.009)	-0.032** (0.010)	0.001 (0.007)	0.001 (0.007)
Christian	-0.036 (0.103)	-0.031 (0.107)	0.035 (0.068)	-0.058 (0.093)	-0.009 (0.049)	-0.066 (0.060)	-0.081 (0.107)	-0.005 (0.120)	-0.170* (0.081)	-0.145 (0.076)
Secular	-0.230* (0.116)	-0.191 (0.126)	-0.123† (0.074)	-0.178** (0.081)	-0.079† (0.048)	-0.119** (0.047)	-0.187 (0.116)	-0.123 (0.133)	-0.109 (0.084)	-0.067 (0.080)
Full Demographic Controls	✓		✓		✓		✓		✓	
N	157	157	157	157	157	126†	157	157	157	157

† $p < 0.10$ * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Standard errors robust to heteroskedasticity in parentheses. Controls include those for gender, ethnicity, political beliefs, charity exposure and experience, economics majors, out of state subjects and age.

Regressions with N denoted by † represent models where certain observations are dropped as they predict failure with certainty, and the hurdle model does not converge.

Table 8: Tobit Model for Donors, Extra-Religious Competition

	<u>All Charities</u>		<u>All Christian</u>		<u>Christian Unmasked</u>		<u>All Secular</u>		<u>Secular Unmasked</u>	
Unmasked	1.824 (2.268)	2.293 (1.844)	1.137 (2.669)	3.081 (2.080)	4.762 (5.696)	-0.509 (1.319)	1.718 (1.760)	1.292 (1.191)	3.894 (2.804)	1.039 (1.066)
Duke Score	0.615 (0.437)	0.578 [†] (0.320)	0.751 (0.512)	0.641* (0.270)	-0.133 (0.266)	0.231 [†] (0.121)	0.229 (0.225)	0.295 (0.197)	0.347 (0.339)	0.474** (0.181)
Christian	-3.375 (3.458)	-2.997 (2.737)	1.552 (3.146)	0.122 (2.471)	-2.346 (2.676)	-2.023 (1.565)	-3.024 (2.956)	-3.236 (2.467)	-3.212 (4.109)	-2.408 (1.922)
Secular	6.287 (4.630)	4.227 (2.908)	22.629* (9.674)	16.113*** (3.965)	8.743*** (1.333)	-3.446 [†] (1.980)	1.397 (1.446)	1.095 (1.223)	4.201 (2.162)	3.436** (1.086)
Full Demographic Controls	✓		✓		✓		✓		✓	
<i>N</i>	107	107	30	30	15	157 [†]	77	77	36	36

[†] $p < 0.10$ * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Standard errors robust to heteroskedasticity in parentheses. Controls include those for gender, ethnicity, political beliefs, charity exposure and experience, economics majors, out of state subjects and age.

Regressions with *N* denoted by [†] are Tobit regressions used because the number of subjects donating to this charity type are too small for the hurdle model to converge.

10 Appendix

10.1 Appendix A - Charity Names and Description, Masked Sessions

All of the charity information comes directly from each charity's website or promotional materials.

Christian Charities:

- World Vision
 - World Vision is an international partnership of Christians whose mission is to follow our Lord and Savior Jesus Christ in working with the poor and oppressed.
- World Hope International
 - World Hope International is a Christian relief and development organizations working with all people, regardless of ethnicity, gender, race or religion, to help alleviate poverty and suffering.
- Opportunity International
 - Our vision is a world in which all people have the opportunity to achieve a life free from poverty, with dignity and purpose.
- World Concern
 - World Concern is a global relief and development agency extending opportunity and hope to people facing extreme poverty.

Islamic Charities:

- Islamic Aid
 - Islamic Aid is a Muslim relief and development charity. Islamic Aid's work is founded on the Muslim faith, inspired by hope and acts to help end poverty.

- Islamic Relief USA
 - Islamic Relief USA provides relief and development in a dignified manner, regardless of gender, race or religion, and works to empower individuals in their communities.
- Life for Relief and Development
 - Life for Relief and Development is a global humanitarian relief and development organization, dedicated to providing humanitarian aid to people regardless of race, gender, religion and cultural background.
- Mercy-USA for Aid and Development
 - Mercy-USA for Aid and Development is dedicated to alleviating human suffering, and supporting individuals and their communities in their efforts to become self-sufficient.

Secular Charities:

- Skeptics and Humanist Aid and Relief Effort through the Center for Inquiry
 - SHARE allows for donations to relief efforts without the intermediary of a religious organization. The money collected through SHARE goes directly to secular relief effort in nations and areas effected.
- Direct Relief International
 - Direct Relief is a humanitarian aid organization with a mission to improve the lives of people affected by poverty. Nonsectarian, Direct Relief provides assistance without regard to politics, religious beliefs or ethnic identities.
- Oxfam
 - Oxfam is a global organization working to end poverty. We help people build better futures for themselves and save lives in disasters.

- Mercy Corps
 - Mercy Corps seeks to alleviate suffering and poverty by helping people build secure, productive communities.

10.2 Appendix B - Charity Names and Description, Unmasked Sessions

All of the charity information comes directly from each charity's website or promotional materials.

Christian Charities:

- World Vision
 - World Vision is an international partnership of Christians whose mission is to follow our Lord and Savior Jesus Christ in working with the poor and oppressed.
- World Hope International
 - World Hope International is a Christian relief and development organizations working with all people, regardless of ethnicity, gender, race or religion, to help alleviate poverty and suffering.
- Opportunity International
 - Our vision is a world in which all people have the opportunity to achieve a life free from poverty, with dignity and purpose. We respond to Jesus Christ's call to love and serve the poor by emulating the Good Samaritan, whose compassion crossed ethnic groups and religions.
- World Concern
 - World Concern is a global Christian relief and development agency extending opportunity and hope to people facing extreme poverty.

Islamic Charities:

- Islamic Aid
 - Islamic Aid is a Muslim relief and development charity. Islamic Aid's work is founded on the Muslim faith, inspired by hope and acts to help end poverty.
- Islamic Relief USA
 - Islamic Relief USA provides relief and development in a dignified manner, regardless of gender, race or religion, and works to empower individuals in their communities.
- Life for Relief and Development
 - Life for Relief and Development is a global humanitarian relief and development organization, dedicated to providing humanitarian aid to people regardless of race, gender, religion and cultural background. In doing so, Life has become the largest U.S.-founded Muslim American humanitarian relief and development organization.
- Mercy-USA for Aid and Development
 - Mercy-USA for Aid and Development is dedicated to alleviating human suffering, and supporting individuals and their communities in their efforts to become self-sufficient. At Mercy-USA, your zakat [obligatory charitable payment under Islamic Law] goes directly where it's needed most.

Secular Charities:

- Skeptics and Humanist Aid and Relief Effort through the Center for Inquiry
 - SHARE allows for donations to relief efforts without the intermediary of a religious organization. The money collected through SHARE goes directly to secular relief effort in nations and areas effected.
- Direct Relief International

- Direct Relief is a humanitarian aid organization with a mission to improve the lives of people affected by poverty. Nonsectarian, Direct Relief provides assistance without regard to politics, religious beliefs or ethnic identities.
- Oxfam
 - Oxfam is a global organization working to end poverty. We help people build better futures for themselves and save lives in disasters. We are secular, open-minded and pluralistic.
- Mercy Corps
 - Mercy Corps seek to alleviate suffering and poverty by helping people build secure, productive communities. Mercy Corps is a nonsectarian organization, unaffiliated or restricted to any religious group.

10.3 Appendix C - Subject Questionnaire

1. How Old Are You? [Open Response]
2. What gender do you identify as?
 - (a) Male
 - (b) Female
 - (c) Other
 - (d) Prefer to not answer
3. Are you currently, married, widowed, divorced, separated, or have you never been married?
 - (a) Married
 - (b) Widowed
 - (c) Divorced

- (d) Separated
 - (e) Never Married
 - (f) Prefer to not answer
4. On a 7 point scale of political beliefs, arranged from extremely liberal to extremely conservative, where would you place yourself on this scale?
- (a) Extremely Liberal
 - (b) Liberal
 - (c) Slightly Liberal
 - (d) Moderate, Middle of the Road
 - (e) Slightly Conservative
 - (f) Conservative
 - (g) Extremely Conservative
 - (h) Unsure
 - (i) Prefer to not answer
5. What is your religious preference?
- (a) None
 - (b) Protestant
 - (c) Catholic
 - (d) Christian
 - (e) Orthodox Christian
 - (f) Jewish
 - (g) Buddhism

- (h) Hinduism
- (i) Other Eastern Religion
- (j) Muslim/Islam
- (k) Native American
- (l) Inter-/non-denominational
- (m) Other
- (n) Unsure
- (o) Prefer to not answer

6. In what religion were you raised?

- (a) None
- (b) Protestant
- (c) Catholic
- (d) Christian
- (e) Orthodox Christian
- (f) Jewish
- (g) Buddhism
- (h) Hinduism
- (i) Other Eastern Religion
- (j) Muslim/Islam
- (k) Native American
- (l) Inter-/non-denominational
- (m) Other
- (n) Unsure

- (o) Prefer to not answer
7. Would you call your religious preference strong, or not a very strong preference?
- (a) Inapplicable
 - (b) Strong
 - (c) Somewhat Strong
 - (d) Not very strong
 - (e) No Religion
 - (f) Unsure
 - (g) Prefer to not answer
8. Which Statement comes closest to expressing what you believe about God?
- (a) I don't believe in God
 - (b) I don't know whether there is a God, and I don't believe there is any way to find out
 - (c) I don't believe in a personal God, but I do believe in a higher power of some kind
 - (d) I find myself believing in God some of the time, but not at others
 - (e) While I have doubts, I feel that I do believe in God
 - (f) I know God exists and I have no doubts about it
 - (g) Unsure
 - (h) Prefer to not answer
9. How often do you take part in activities and organizations of a church or place of worship other than attending services?
- (a) Never
 - (b) Once a year or less

- (c) A few times a year
 - (d) A few times a month
 - (e) Once a week
 - (f) More than once a week
10. Which of these categories comes closest to the type of place you were living in when you were 16 years old?
- (a) In open country, but not on a farm
 - (b) On a farm
 - (c) In a small city or town (under 50,000 people)
 - (d) In a medium-sized city (50,000-250,000)
 - (e) In a suburb near a large city
 - (f) In a large city (Over 250,000 people)
 - (g) Don't know
 - (h) Prefer to not answer
11. In what state, region of the United States, or foreign country were you living in when you were 16 years old?
- (a) Florida
 - (b) Georgia
 - (c) Alabama
 - (d) Elsewhere in the Southeast United States
 - (e) Middle Atlantic
 - (f) New England
 - (g) East North Central

- (h) West North Central
- (i) East South Central
- (j) West South Central
- (k) Mountain
- (l) Pacific
- (m) Foreign Country
- (n) Prefer to not answer

12. What race do you consider yourself?

- (a) White
- (b) Black/African American
- (c) American Indian or Alaska Native
- (d) Asian
- (e) Native Hawaiian or other Pacific Islander
- (f) Hispanic or Latino
- (g) Other
- (h) Prefer to not answer

13. Have you heard of any of the charities used today prior to this experiment?

- (a) Yes
- (b) No

14. Did you have any previous experience with the charities prior to today's experiment? (Experience includes donating time or money, or having someone within your social circle who donated their time or money to the organization.)

- (a) Yes
- (b) No
- (c) Unsure

15. What year in school are you?

- (a) Freshman
- (b) Sophomore
- (c) Junior
- (d) Senior
- (e) Graduate Student

16. Which of the following is closest to your major or field of study?

- (a) Economics
- (b) Political Science
- (c) Sociology
- (d) Other Social Science
- (e) Business Administration
- (f) Accounting
- (g) Finance
- (h) Other Business
- (i) Foreign Language (Spanish, German, etc.)
- (j) Biology
- (k) Chemistry
- (l) Physics

(m) Other Physical Science

(n) Elementary Education

(o) Secondary Education

(p) Other Education

(q) Other Not Listed

17. Do you plan to donate your earnings today to a different charity or cause, not included in the experiment?

(a) Yes

(b) No

(c) Unsure

18. If so, is the cause related to your religious beliefs?

(a) Yes

(b) No

(c) Unsure

19. In the past 12 months, how frequently did you make monetary donations towards religious and charitable purposes?

(a) More than once a week

(b) Once a month

(c) At least two to three times in the past year

(d) Once in the past year

(e) Not at all in the past year

(f) Unsure

(g) Prefer to not answer

20. In the past 12 months, how frequently did you do volunteer work for religious and charitable purposes?

(a) More than once a week

(b) Once a month

(c) At least two to three times in the past year

(d) Once in the past year

(e) Not at all in the past year

(f) Unsure

(g) Prefer to not answer

Duke University Religion Index (DUREL)

1. How Often do you attend church or other religious meetings?

(a) Never

(b) Once a year or less

(c) A few times a year

(d) A few times a month

(e) Once a week

(f) More than once a week

2. How often do you spend in private religious activities, such as prayer, meditation, or scripture study?

(a) Rarely or never

(b) A few times a month

- (c) Once a week
- (d) Two or more times per week
- (e) Daily
- (f) More than once a day

3. In my life, I experience the presence of the Divine

- (a) Definitely not true
- (b) Tends not to be true
- (c) Unsure
- (d) Tends to be true
- (e) Definitely true

4. My religious beliefs are what really lie behind my whole approach to life

- (a) Definitely not true
- (b) Tends not to be true
- (c) Unsure
- (d) Tends to be true
- (e) Definitely true

5. I try hard to carry my religion over into all other dealings in life

- (a) Definitely not true
- (b) Tends not to be true
- (c) Unsure
- (d) Tends to be true
- (e) Definitely true

10.4 Appendix D - Charity Quality Information

Table 9: Charity Quality Information

Charity	BBB Accreditation	Charity Navigator Star Rating
World Vision	Yes	3
World Hope International	Yes	4
Opportunity International	Yes	3
CRISTA Ministries (World Concern)	No	4
Islamic Aid	UK - FRSB	N/A, 990N
Islamic Relief USA	Yes	4
Life for Relief and Development	Yes	3
Mercy for Relief and Development USA	Yes	4
Center for Inquiry (SHARE)	No	3
Direct Relief International	Yes	4
Oxfam	Yes	3
Mercy Corps	Yes	3

10.5 Appendix E - Charity Selection Location

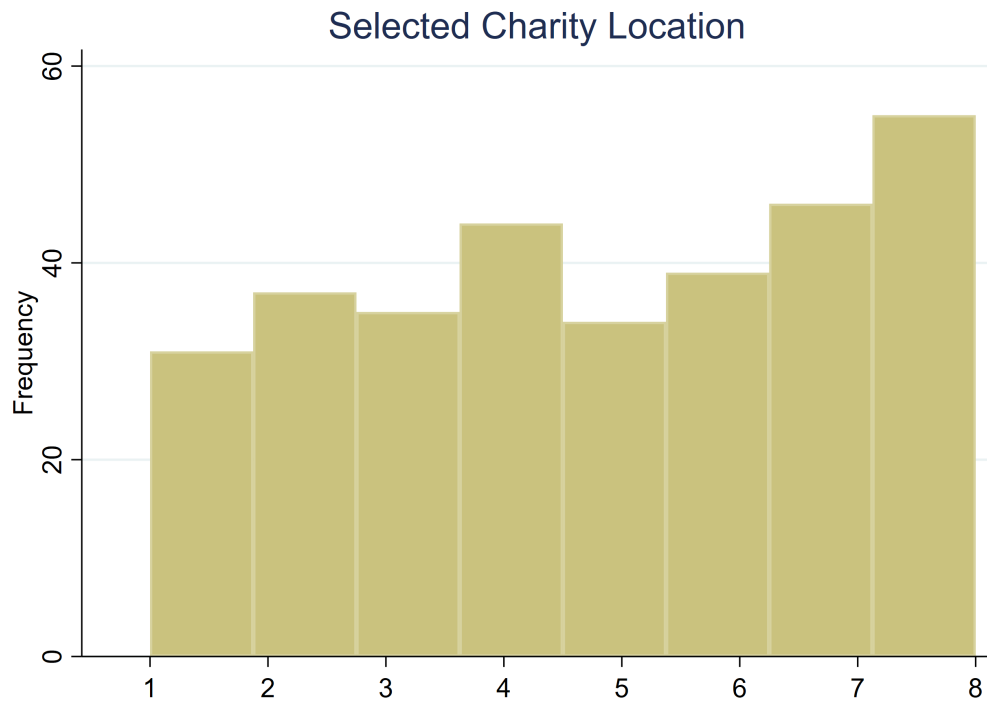


Figure 4: Selection Location for Charities on Experiment Menu

10.6 Appendix F - Experiment Instructions

Instructions

Hello! And welcome to my experiment! Your work here today will help me examine economic decision making, and I thank you for your participation. Before formally introducing the experiment, please note the following rules in the lab:

1. Please do not use your cell phone throughout the experiment. Our experiment relies on individual decision making; as such, we have to make sure your decisions are not being driven by outside influences. Anyone caught on their cell phone will be dismissed from the experiment **without pay**.
2. Please no talking during the experiment. It is important for our experiment that your decisions are, just that, your decision.

3. We want you to ask questions! But we request that you raise your hand and let one of the experimenters come to you before asking your question.
4. On screens that say "Please wait for experiment instructions", please do not click continue until instructed to do so.

Today you will be simulating the role of a worker selecting a charity to donate to and the portion of your earnings that you would like to donate to said charity. This will be accomplished across three phases.

Phase One:

In Phase One, you will select one and only one charity from a list of eight to potentially donate to. Please note that you do not have to donate any of your earnings from this experiment to the charity; however, you must select one charity on the list to continue the experiment. The selection screen will have some general information about the charities you may select from. These charities are all similar in quality based on their ratings from independent monitoring agencies, and all focus on international poverty or disaster relief. Finally, the charities are all based in locations outside of the state of Florida. You will have four minutes to make your selection

Phase Two:

Phase Two consists of multiple tasks for you to earn money in this experiment. The first task is counting the number of 0's on a 10x10 matrix of 1's and 0's. You will have 10 minutes to complete as many screens as you possibly can, with an untimed practice grid to show you the mechanics of the task. You have 10 chances to get each grid correct, and will not be penalized for wrong answers. You will earn \$2.50 per correctly counted grid, with a maximum earnings of \$10.00. After the 10 minute task is completed, you will have an opportunity to donate any portion of your earnings that you like to the charity you selected in phase one. When you have completed your donation decision, you will have the opportunity to earn an additional amount up to \$1.00 for answering a

question about the experiment. Your payment will be determined based on the following equation: $\$[1 - \frac{(Yourresponse - AverageSessionResponse)^2}{100}]$. It is in your best interest, and is your highest paying strategy, to answer this question with your honest opinion.

Phase Three:

Phase Three consists of a demographic survey. You will be asked a series of questions relating to your own demographics and association with charities listed in the experiment. It is imperative for the experiment that you answer these questions honestly to the best of your ability.

After completing Phase Three, you will be paid for your efforts in the experiment. You will receive a \$7.00 show up fee in addition to the earnings you received in Phase Two. When you are being paid, you will receive two checks - one for your earnings and one for your charitable donation. You will be able to leave the experiment with the check from your earnings; however, the check for the charitable donation will be deposited in an envelope addressed to the charity you selected. After the experiment concludes, I will be mailing each of the eight charities checks from the donations in this experiment. You may accompany me to witness this donation if you wish; however, you will not be paid to do so.