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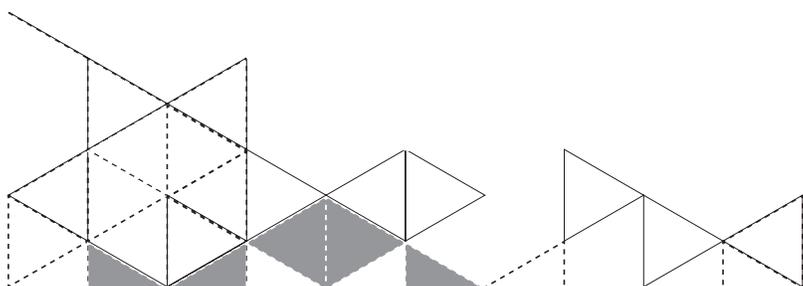
# Increasing Charitable Giving in the Developed World

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# Increasing Charitable Giving in the Developed World

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## **Abstract**

Charitable giving has continued to increase in economic importance in the developed world. For instance, in the United States, more than \$335 billion – over 2% of U.S. GDP, was contributed to philanthropic organizations in 2013 alone. According to the World Giving Index, around 50%-60% of households in the developed world give to charity. The supply of charitable dollars is met by a high demand - billions are spent on fundraising activities annually. Field experiments have allowed us to learn about the different motivations of potential donors, as well as to identify the best strategies that non-profits can use to attract funds. In this article, we discuss the work in this field to date. Then, we suggest using selection into ‘the ask’ as a promising new direction for future research. We discuss strategies that charities can use in practice to take advantage of new research findings. Finally, we complement our discussion by presenting new evidence on giving behavior in a door-to-door field experiment we conducted with over 1,000 households in a mid-sized city in the United States.

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## **1. Introduction**

Charitable giving has continued to increase in economic importance. For instance, in the United States, more than \$335 billion – over 2% of U.S. GDP - was contributed to American philanthropic organizations in 2013 (Giving USA, 2013). According to the World Giving Index (2013), around 50%-60% of households in the developed world choose to give to charity. At the same time, a large component of total contributions are spent by charities on fundraising and administration. Field experiments have allowed us to learn about the different motivations of potential donors, as well as to identify the best strategies that non-profits can use to attract funds.

In this article, we summarize the work in this field to date and suggest a promising new direction for future research and practice. Field experiments are ideal in the non-profit sector because they can be used with relative ease by charities to evaluate the efficacy of various fundraising techniques. The cornerstone of the field experiment methodology is randomization. Causal impact of different fundraising approaches is achieved by randomly assigning different households to receive each approach. Typical fundraising methods used by charities, such as phone, mail and face-to-face solicitation, and more recently solicitation over the web and e-mail, lend themselves well to randomization. For instance, a charity could randomly assign a sub-set of households to a treatment group and a sub-set to a control group and collect powerful evidence of the causal effect of treatment. Importantly, fundraising campaigns are large enough (often involving thousands of potential donors) that the sample sizes required for causal inference can be reached.<sup>1</sup>

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<sup>1</sup> For information on how to calculate power calculations to determine necessary sample sizes, we point the reader to List et al. (2011).

As described by Harrison and List (2004), field experiments are an empirical tool for applying and testing economic theories. Over the past 25 years, field experiments have been used to investigate the theories that explain charitable giving by systematically changing the messaging delivered to potential donors. Experiments have also allowed researchers to evaluate quantitatively the value of prominent fundraising approaches, for example donor gifts and matches. Much of this literature has focused on the role of social preferences on explaining giving.

The newest innovation in this literature explores what selection into *being asked* can teach us about the theory of charitable giving and about the welfare gains and losses imposed on society by the fundraising ‘ask.’ DellaVigna et al. (2012) conduct a field experiment exploring the effect of pre-notification on the decision to give, and present evidence for the social pressure motivation in giving behavior. We propose that the method discussed in DellaVigna et al. (2012) may not only be useful in learning about giving motivations, but that it will also provide charities with an important new screening tool for categorizing donor types in practice.

We complement our discussion by presenting new evidence on giving behavior in a field experiment that we implemented with over 1,000 households in a mid-sized city in the US. Our study provides the first replication of the results in DellaVigna et al. (2012). In partnership with two non-profits in Madison, Wisconsin, we conducted a door-to-door fundraising campaign exploring the impact of being notified of the solicitation in advance. We randomized households into three different treatments: (1) no pre-notification, (2) pre-notification via a door-hanger the day before, and (3) pre-notification with the option to opt out. Our results follow the results in DellaVigna et al. (2012) –

fewer donors come to the door when they are able to opt out. Our results provide additional evidence for a social pressure motivation for giving posited by DellaVigna et al. (2012), which is important since the topic of social pressure and ‘the ask’ is of great relevance to the field, yet there are few examples of this result in the literature.

In what follows, Section 2 provides additional discussion of literature using field experiments in the fundraising industry. Section 3 discusses the use of pre-notification as a promising new direction for research. Sections 2 and 3 also propose strategies that charities can use in practice to take advantage of new research findings. Section 4 introduces our complementary field experiment design and results, and Section 5 concludes.

## **2. What Field Experiments in Charitable Giving Have Taught Us**

The positive giving rates observed in the laboratory and in naturally occurring environments have given rise to economic models that seek to provide ‘social preference’ explanations for giving behavior. Becker (1974) was one of the first to propose the importance of incorporating social environment and social interactions into models of economic decision-making. Since then, economists have proposed models of altruism, warm glow, inequality aversion, fairness preferences, and reciprocity. While purely altruistic individuals receive utility solely from increasing the welfare of others, individuals motivated by ‘warm glow’ receive utility from the act of giving itself (Andreoni, 1989; 1990; Korenok et al., 2013). Inequality averse and fairness-motivated individuals prefer to equalize payoffs (e.g., Fehr and Schmidt, 1999). Rabin’s model (1993) suggests intention-based fairness. Finally, Fehr and Gächter (1998) summarize the literature, pointing to a role for reciprocity.

The last decade has seen an increase and interest in using field experiments to investigate charitable giving. Table 1 summarizes the most significant field experiments published in the field in the last 12 years. As summarized in Table 1, researchers have focused on many different theoretical areas of interest, including the role of quality signaling through challenge gifts, price decreases operationalized in the form of matching grants, and image motivations as investigated through anonymity and public gift announcements. The primary methodologies employed in the field include door-to-door solicitations, mailing campaigns, phone-a-thons and radio station appeals.

Matching grants have been one of the most widely studied areas of interest in the literature, potentially due to their (often) large impacts and the prevalence of use in practice. Karlan and List (2007) and Meier (2007a) were the first to explore the role of matching grants. While Karlan and List (2007) found that matches are an effective way to increase charitable revenues, they did not find an added effect of larger match amounts. Meier (2007a) found that matches increased participation in the charitable campaign in the short run but not in the long run. Karlan et al. (2011) further found that warm list donors were most affected by small matches. Karlan et al. (2011) also cautioned that providing a large example donation amount, together with a low matching rate, was actually detrimental to the amount raised. Eckel and Grossman (2003) compared the use of matches versus rebates, finding that matches were more effective at raising charitable donations. In an interesting variation, Anik et al. (2014) recently investigated the use of contingent match incentives. Under contingent matching, matches are only generated if a certain proportion of potential donors choose to sign up to give. Anik et al. (2014) find a role for contingent match incentives in increasing the number of donors.

Matching grants not only decrease the cost of giving, but also provide a signal of charity quality to potential donors. Another way to signal quality is through providing a challenge gift or seed grant from a named or anonymous donor. List and Lucking-Reiley (2002) found that challenge gifts that make up a large proportion of the amount requested are a significant way to increase donations. When comparing challenge gifts to matching grants, List and Lucking-Reiley (2002), Rondeau and List (2008) and Huck and Rasul (2011) found that seed grants were more effective than matches.

Research has also found that potential donors are highly influenced by information about the giving behavior of peers. For instance, Frey and Meier (2004) conducted a field experiment with university students in which some students were randomized to receive information that a large proportion of other students had donated to the fund in the previous year, while others were randomized to receive information that a small proportion of other students had donated. Frey and Meier (2004) found that students receiving information that a large number of students had donated were more likely to donate themselves. Following Frey and Meier (2004), Croson and Shang (2008, 2013) and Shang and Croson (2009) conducted a field experiment as part of a radio fundraising campaign, alerting those who called in to the past donations of others. The researchers find that information about large gifts increases contribution amounts, while information about small gifts decreases contribution amounts. However, very large example amounts have no effect, suggesting a bound for the power of social information. More recently, Edwards and List (2014) investigated suggested amounts by conducting a field experiment on alumni giving. Working with a university phone campaign, Edwards and List (2014) randomized individuals to either receive suggestions about a gift amount

or not. They find that suggestions of \$20 both increased the likelihood of giving and the likelihood that the gift approached \$20.

Another fundraising strategy that has attracted researcher attention is donor gifts, which can take on several forms. Unconditional gifts, which are given to potential donors whether or not a donation is made, may increase donations through reciprocity. Conditional gifts, which are received by donors in response to a donation, may increase donations through giving donors a private benefit from donating. Falk (2007) reported the first evidence of reciprocity in the field by observing a large impact of unconditional gifts on charitable giving. Landry et al. (2010) find that unconditional gifts have a positive effect on ‘cold list’ donors (those who have not given to the charity before) but not on ‘warm list’ donors (those who have given to the charity before). Landry et al. (2010) also find that those donors initially attracted to the charity through conditional gifts are more loyal to the cause than those attracted by non-mechanism factors, such as the physical attractiveness of the solicitor. Similar to the use of gifts, Landry et al. (2006) have also explored the use of charitable lotteries. Charitable lotteries showed tremendous increases – in the order of 100% – in the likelihood of participation in the fundraising campaign.

A key motivator for giving is the visibility of the donation. In particular, individuals who are recognized for their efforts may be more likely to donate. As advanced by Vesterlund (2003), two theories underlie the effectiveness of this approach. First, donors may experience an increase in utility from an improved social image. Second, donors may wish to signal to others the importance of donating. Soetevent (2005) is the first to test anonymity or visibility in a field setting, randomly assigning churches to pass around open or closed collection baskets. Soetevent (2005) found that

open baskets increase contributions, but the positive effect declines over time. Karlan and McConnell (2012) conducted a field experiment with the intention of parsing out the two motivations presented in Vesterlund (2003), finding that social image may play a larger role. Along similar lines, Soetevent (2011) conducted a field experiment in which the author allowed potential donors to give using cash or debit card, where debit donations were more visible to the solicitor. Soetevent (2011) found that debit donations led to fewer, but larger gifts.

Researchers have also found that in face-to-face appeals, the characteristics of the solicitor also matter. For instance, several papers have pointed out that more attractive, female solicitors raise more money for the charity (Landry et al., 2006, 2010). List and Price (2009) also found a limited role for social similarities between the solicitor and solicitee, as well as a strong decrease in the amount of money raised by minority solicitors.

Fundraisers often make a decision about whether to fundraise for a broad fund, or to allow donors to direct their giving to a particular goal of the organization. In Aretz and Kube (2013), potential donors had the ability to choose a direct recipient or to give more broadly. Aretz and Kube (2013) did not find a significant difference in the two approaches, with some limited evidence that donors who choose a recipient give more.

Another common fundraising approach is the use of charitable lotteries. Carpenter et al. (2008) used a field experiment to explore which charitable lottery is most effective. The authors compared first price auctions, second price auctions, and all-pay auctions in the field, and found that first price auctions raised the most funds.

More recently, a few new approaches have also been investigated. For instance, Gneezy et al. (2010) evaluated a fundraising strategy that the authors call ‘shared social responsibility.’ This strategy entails offering customers pay-what-you-want products, with part of the proceeds going to charity. Gneezy et al. (2010) found that pay-what-you-want with a charity link resulted in greater revenues than more traditional pricing mechanisms. Breman (2011) used a strategy called “give more tomorrow,” and compared asking monthly donors to increase the size of their monthly gift now, or in the future. Breman (2011) found that donors were more likely to increase the size of their gift in the future. Finally, Castillo et al. (2014) used online social media and investigated the impact of incentivizing donors to post online about their donations. The authors found a positive impact of this strategy, whereby incentives increased the likelihood of posting, and resulted in increased new donations for the charity.

Overall, the field experiments that have been conducted to date have provided support for many theories of charitable giving that had not yet been tested in the real world. These include standard economic theories, such as responsiveness to price changes, but also include behavioral theories, such as altruism, warm glow and reciprocity. Importantly, the research points to the responsiveness of potential donors to small cues in the environment. Donors are highly responsive to social information, quality signals, and the interaction with the solicitor.

The research has also made inroads into investigating long-term impacts of charitable campaigns (e.g., Meier, 2007b; Landry et al., 2010). This research is of particular importance since the question of how to retain donors is highly relevant to

fundraisers in practice. Importantly, Landry et al. (2010) began the first steps toward learning whether how a donor is first solicited affects long-term donations.

**Table 1: Summary of Field Experiments in Charitable Giving, 2002-2014**

<b>Authors</b>	<b>Year</b>	<b>Journal</b>	<b>Mechanism Tested</b>	<b>Findings</b>
<b>List and Lucking-Reiley</b>	2002	JPE	Increases in seed money from 10% to 67%, imposing refunds.	Refunds and seed money are effective at increasing contributions, seed money shows greatest improvements.
<b>Frey and Meier</b>	2004	AER	Social comparisons.	Contributions increase if people know that many others contribute.
<b>Soetevent</b>	2005	JPubE	Anonymity (closed or open collection baskets in churches)	Initial positive effects of reducing anonymity which decline over time.
<b>Landry et al.</b>	2006	QJE	Lotteries and seed money, solicitor attractiveness.	Lotteries increase the number of donors, attractive solicitors raise most money.
<b>Falk</b>	2007	Econometrica	Unconditional gifts.	Gifts increase donations, large gifts better than small gifts.
<b>Karlan and List</b>	2007	AER	Matching grants: \$3:\$1, \$2:\$1, \$1:\$1	Match offer increased revenues, with no additional impact of match amount.
<b>Meier</b>	2007	JEEA	Matching by an anonymous donor, short and long run.	Matching increases short run participation but decreases long run participation in giving.
<b>Carpenter et al.</b>	2008	EJ	Charitable auctions: all pay, first price, second price.	First price auctions most effective.
<b>Croson and Shang</b>	2008	EE	Upward and downward social information	Donors change contribution amount in response to information, decreasing amount if information is lower than their previous amount.
<b>Eckel and Grossman</b>	2008	EE	Matches and rebates.	Matches are more effective than rebates.
<b>Rondeau and List</b>	2008	EE	Matches and challenge gifts.	Challenge gifts are effective but matching gifts are not.
<b>Shang and Croson</b>	2009	EJ	Social comparisons.	Social information about high contributors increases contribution amounts.
<b>Gneezy et al.</b>	2010	Science	Shared social responsibility (pay-what-you-want pricing w/ charity)	Shared social responsibility more effective than pay-what-you-want alone or set prices.
<b>Landry et al.</b>	2010	AER	Small and large gifts, explore effect on warm and cold list donors.	Warm list donors give more, yet when gifts are provided they are indistinguishable from cold list donors.
<b>List and Price</b>	2010	JEBO	Role of social similarities between solicitor and solicitee.	Limited role for social similarities, but minority solicitors raise less overall.

<b>Authors</b>	<b>Year</b>	<b>Journal</b>	<b>Mechanism Tested</b>	<b>Findings</b>
<b>Breman</b>	2011	JPubE	Asking donors to increase monthly contributions now, or in the future.	Asking donors to make increases in the future most effective.
<b>Croson and Shang</b>	2013	EI	Social comparisons.	Information about past donations that is too high ceases to influence contributors.
<b>Huck and Rasul</b>	2011	JPubE	Matches and challenge gifts.	Challenge gifts more effective than matching gifts.
<b>Karlan et al.</b>	2011	JPubE	Small matches and example amounts, impact on warm and cold list donors.	Warm list donors affected by matches, cold list donors are not. Large example amounts combined with small matches have adverse effects.
<b>Soetevent</b>	2011	AEJ: Policy	Cash or debit donation opportunities.	Donors prefer cash, greater participation when cash is allowed, debit increases visibility of donation and amount paid (conditional on participating).
<b>Aretz and Kube</b>	2013	SJE	Ability to choose direct recipient (choice of target country).	No treatment effect, only small fraction choose the country.
<b>Anik et al.</b>	2014	JMR	Matches contingent on proportion of individuals who give (e.g., 75%)	Contingent match incentives increase people signing up for recurring donations.
<b>Castillo et al.</b>	2014	JPubE	Incentivizing donors to post about their giving online.	Incentives to post increase posts, results in increased new donations.
<b>Edwards and List</b>	2014	JPubE	Impact of suggested amount of \$20 on giving.	Suggested amount increased likelihood of giving and amount close to suggestion.
<b>Karlan and McConnell</b>	2012	JEBO	Public recognition in newsletter.	Recognition increases giving, primarily through social image concerns.

### **3. Latest Innovations in Charitable Giving: Research and Practice**

The research presented in Section 2 provides evidence for the different motivations for giving when asked. This research concludes that giving to charity increases individual utility through social preference channels such as pure altruism and warm glow (Andreoni, 1989; 1990). However, a new literature has emerged that provides experimental evidence for a welfare loss from ‘the ask.’ In a field experiment conducted by DellaVigna et al. (2012), households are pre-notified that a solicitor will come to their door. Households also have the option to opt out of ‘the ask’ in some treatments. DellaVigna et al. (2012) argue that if donors are motivated by feelings of altruism, the door opening rates should be greater in the condition when donors know to expect the solicitor. The authors find that the opposite is true: on average, donors prefer to avoid the solicitor, a finding that points to the relevance of a social pressure motivation for giving. Unlike altruism, the social pressure motivation is utility decreasing. Andreoni et al. (2012) observe a similar solicitor avoidance behavior in a field experiment on fundraising at a local grocery store.

Laboratory experiments using dictator games and public goods games have come to similar conclusions as the field experiments. As Levitt and List (2007) point out, the level of scrutiny in the laboratory results in decision-making that may be driven by the motivation to avoid incurring a moral cost from deviating from the social norm. In line with this, Dana et al. (2006) and Lazear et al. (2006) find that dictators prefer to exit the game rather than to give; and in Samek and Sheremeta (2014), the greatest reason for giving in a public goods game with recognition appears to be avoidance of shame from being recognized as the lowest donor.

What can this new innovation in field experimentation teach us about increasing charitable giving in the developed world? First, we learn that the welfare-enhancing motivation is not the only one present in the decision to give. We learn that people are reactive to their environments, and can anticipate this reaction and seek to avoid it if the experience proves to be utility decreasing. Importantly, we learn about the distribution of donor types in the population. In DellaVigna et al. (2012), structural modeling is used to estimate underlying altruism and social pressure parameters and measure the welfare reduction caused by fundraising campaigns. Similar data generation strategies could be used to find out whether welfare-enhancing or welfare-decreasing motivations are the source of higher levels of giving during other different charity appeals.

Second, the method discussed in DellaVigna et al. (2012) can be extended to provide charities with an important new screening tool for categorizing donor types in practice. Most fundraisers are familiar with segmentation as a tool for categorizing donors as part of a fundraising strategy. For instance, ‘how-to’ guides advise fundraisers to segment donors by demographics: income, home ownership status, age, gender, ethnicity, and location are some of the key demographic characteristics that are mentioned.<sup>2</sup> Recently, segmentation based on behavior has become equally important. Many charities invest in data analytics tools that give them insights into their own donors’ historic giving amount and rates, and also purchase data on their donors’ giving to other causes.<sup>3</sup> As pointed out on a blog at *philanthropy.com*, ‘just because

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<sup>2</sup> For instance, see <http://www.stepbystepfundraising.com/three-ways-to-define-your-target-audience/> and Neighbor and Ulrich (2010).

<sup>3</sup> Examples are Blackbaud [www.blackbaud.com/analytics/](http://www.blackbaud.com/analytics/) and DonorTrends, [donortrends.com/](http://donortrends.com/)

demographic traits are easier to observe than someone's motivations, does not mean it is impossible to determine into which . . . behavioral segments a donor fits.'<sup>4</sup>

DellaVigna et al. (2012) find that although fewer people open the door in 'opt out' conditions, average donations are higher in conditions with 'opt out' than in conditions without pre-notification. The authors suggest that their findings point to a behavioral result that those donors who are normally motivated to give due to social pressure 'sort out' under pre-notification and never open the door, while donors normally motivated by altruism 'sort in.' We propose that using strategies such as pre-notification could allow charities to better screen donors based on motivation, and call this the *donor screening method* throughout the remainder of our discussion.

While typical fundraiser strategy would be to consider all contributors as 'warm list' donors if they ever gave, the type of solicitation to which they gave matters. For example, door-to-door solicitations may be considered a 'high pressure' ask, since the interaction is at one's home one-on-one with a solicitor. On the other hand, mailing solicitations may be considered a 'low pressure' ask, since donors do not interact with a solicitor and can more easily ignore the letter without guilt. The research discussed here suggests that a donor motivated by social pressure may give once in a door-to-door campaign, but may never give in a subsequent mailing campaign, no matter how many letters he receives. However, a donor motivated by altruism will seek out giving opportunities and also give in response to a low social pressure solicitation like the letter. This result may explain why charities find themselves in a position where one fundraising

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<sup>4</sup> See blog by Greg Ulrich at [philanthropy.com/article/Swaying-Donors-to-Give-More/123812/](http://philanthropy.com/article/Swaying-Donors-to-Give-More/123812/)

campaign works and another unexpectedly fails, and will allow charities to better streamline their ‘ask’ to different groups of potential donors.

Fundraisers using the *donor screening method* who want to maximize long-term donations from altruistically minded donors should use pre-notification in high pressure campaigns to allow those types to ‘sort in.’ In addition, if high pressure campaigns are used without pre-notification, charities should place less weight on their ‘warm list’ of donors recruited from this type of campaign, when choosing a recipient list for subsequent ‘low pressure’ asks.

#### **4. Complementary Field Experiment: Replication of DellaVigna et al. (2012)**

DellaVigna et al.’s results were an innovation in the field and were published in the *Quarterly Journal of Economics* in 2012. The authors’ important conclusion was that a large proportion of donors actually give due to social pressure concerns, which cause solicitees to ‘sort out’ of being asked. DellaVigna’s (2012) findings have not been replicated to date.

In our replication of DellaVigna et al. (2012), our goals were: 1) to see if the authors’ general result continues to hold in another city and with different charities, i.e., that social pressure is a major motivator for giving, causing greater rates of opt out of ‘the ask’ and 2) that what we refer to as the *donor screening method* can easily be carried out by a different group of researchers and practitioners, providing practical evidence for the usability of this tool for increasing charitable giving.

#### ***4.1 Experimental Setup and Design***

Our field experiment consisted of a door-to-door fundraising campaign conducted in Madison, Wisconsin. The two non-profit organizations we collaborated with in this field experiment are the Melorheostosis Association and University of Wisconsin-Madison's Family Voices. The two charities have different goals: Melhoreostosis Association is a nation-wide organization that raises funding for research on the cures for the melhoreostosis disease, and Family Voices is a local charity that works to bring volunteer tutors to low-income primary and secondary students in the Madison area.

Nine undergraduate students were recruited and trained to go door to door and raise money for these charities. Because solicitors must follow a script and faithfully implement the treatments, solicitors were paid \$12 per hour and worked directly for the researchers. Each solicitor participated in fundraising for both the Melorheostosis Association and Family Voices at different times. We used a computer to pre-generate routes with 25-35 households per route and randomized households to treatment and charity by route. We then randomly assigned solicitors to a route for each hour that they worked (over-sampling some treatments). Fundraising was conducted on Saturdays and weekday evenings in July-September 2013. The research was approved by the University of Wisconsin-Madison Institutional Review Board (IRB).

We used the *donor screening method* and conducted three treatments as in DellaVigna et al. (2012). In all treatments, solicitors were instructed to knock on the door, deliver the solicitation message about the charity (either Melorheostosis or Family Voices), and ask for a donation. The treatments only differed in the amount of information potential donors had prior to the arrival of the solicitors. Table 2 summarizes

the three different treatments, as well as the number of households approached per treatment. In NONE, we did not alert households that solicitors were coming. In FLYER and OPT-OUT, we placed flyers in the form of door-hangers on doors 1 day in advance, notifying households about the 2-hour time period during which the solicitors would be coming. Additionally, in OPT-OUT, households could check a box on the flyer asking not to be disturbed, and solicitors would honor this request. Figure 1 provides examples of flyers used in the Family Voices campaign; the Melhoreostosis campaign flyers were similar.

The FLYER and OPT-OUT treatments allow households to respond to the information about the solicitor by ‘sorting in’ or ‘sorting out’ of opening the door. DellaVigna et al. (2012) predict that households with a sufficiently large altruism motivation will ‘sort in’ while those with a low altruism motivation but a high social pressure concern will ‘sort out.’ DellaVigna et al. (2012) further predict that in treatments with pre-notification, the giving rate and amount will be higher than in treatments with no pre-notification (since highly altruistic individuals ‘sort in’ and low or non-altruists ‘sort out’).

In the FLYER treatment, households wishing to ‘sort out’ of being asked had to make some effort, choosing either to leave the home during the time specified on the flyer, or choosing to actively avoid the solicitor while at home. On the other hand, in the OPT-OUT treatment, households could check a box marked, ‘Check this box if you do not wish to be disturbed,’ hang the flyer back on their door, and solicitors would not knock on their door. As proposed by DellaVigna et al. (2012), ‘sorting out’ is costly in the FLYER condition but does not carry a cost in the OPT-OUT condition. Thus, we may

expect more individuals to ‘sort out’ in OPT-OUT relative to FLYER. Households can also ‘sort in’ if they are motivated by altruism, and should do so at equal rates in FLYER and OPT-OUT. Note that charities utilizing the *donor screening method* in practice should use the OPT-OUT flyers to maximize the amount of sorting out.

**Table 2: Summary of Treatments and Households Approached**

	<b>Family Voices</b>	<b>Melorheostosis</b>	<b>Total</b>
<b>No Pre-Notification (NONE)</b>	220	225	445
<b>Flyer Pre-Notification (FLYER)</b>	89	141	230
<b>Flyer Opt-Out (OPT-OUT)</b>	196	190	386
<i>Total</i>	505	556	1,061

*Note: This table summarizes the treatments and lists the number of households approached for each treatment cell, and the number of households approached in total. Households with a “No soliciting” sign or with obstacles in the yard were not approached for any treatment and are not included in the analysis.*

**Figure 1: Pre-Notification Flyers (Regular on left and Opt-Out on Right)**

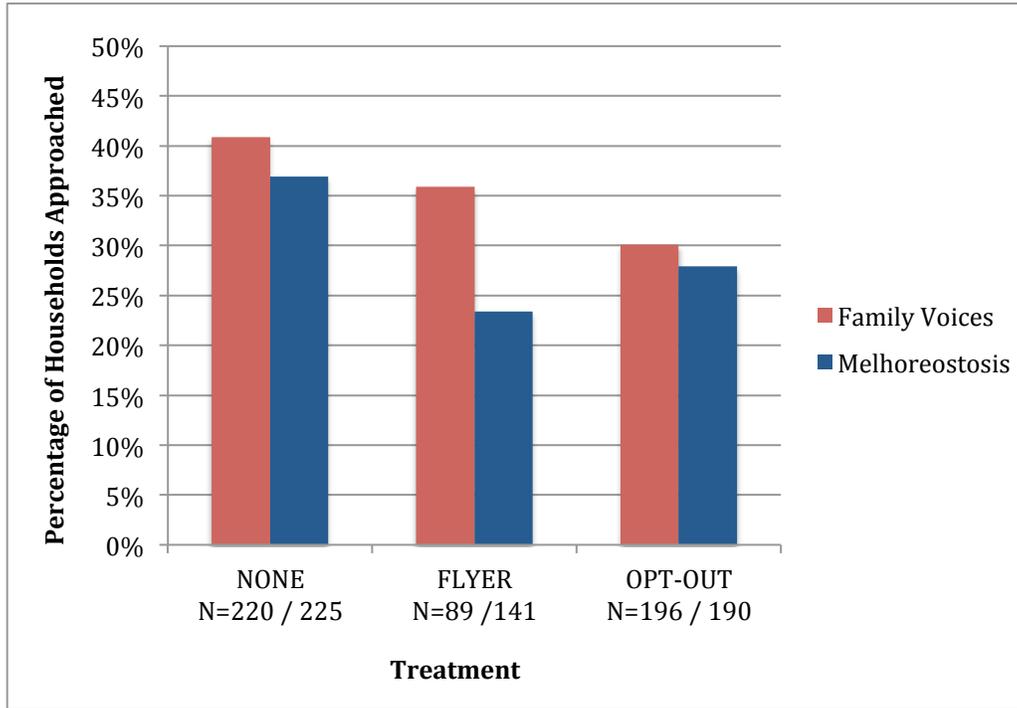


*Note: The flyer on the left was used in the FLYER treatment, while the flyer on the right was used in the OPT-OUT treatment.*

## **4.2 Experimental Results**

Our main outcome measure is the door-opening rate, since it tells us whether individuals choose to sort in or sort out of the solicitation, overall. Figure 2 provides an overview of the proportion of households who open the door in response to the solicitation, conditional on being approached, by treatment and organization. As expected, under no pre-notification (NONE treatment) when individuals did not know who was coming to their door, we find no significant differences in the door opening rates for Family Voices and Melhoreostosis. The average door opening rates are 40.9% and 36.9%, respectively (using test of proportions,  $p$ -value = 0.38).

**Figure 2: Overview of Door Opening Rates**



*Note: This figure provides an overview of the percentage of households answering the door in each treatment, relative to total number approached (Family Voices in blue and Melhoreostosis in red). The number of households approached for each organization is listed below each treatment label, Family Voices listed first and Melhoreostosis listed second.*

Door-opening rates decline significantly relative to no notification when households are informed of the solicitation in advance, and even more when given the explicit option to opt out. In the FLYER treatment, door-opening rates are 35.9% and 23.4%, while in the OPT-OUT treatment, door-opening rates are 30.1% and 27.9%, for Family Voices and Melhoreostosis, respectively. The rates of door opening are significantly different comparing OPT-OUT and NONE for each organization (using test of proportions,  $p$ -value = 0.03 for Family Voices and  $p$ -value = 0.052 for Melhoreostosis;  $p$ -value = 0.002 pooled). When comparing FLYER to NONE or to OPT-OUT, we do not observe significant differences by organization. However, pooling the data from both

organizations we do observe significant differences between FLYER and NONE ( $p$ -value = 0.006) but not between FLYER and OPT-OUT.

We follow DellaVigna et al. (2012) and interpret this finding as suggestive of social pressure. Overall, households who can avoid a solicitor do so, especially when it takes little effort as in the OPT-OUT treatment. Our results very similar in this regard to those of DellaVigna et al. (2012), who find a door-opening rate of 41% in their NONE treatment, a door-opening rate of 38% in their FLYER treatment, and a door-opening rate of 33% in their OPT-OUT treatment.

Since the above analysis does not control for differences in solicitors, which could affect door opening rates, in specification 1 of Table 3 we estimate a logit regression using solicitor fixed effects and including dummies for treatment, organization, and treatment\*organization interaction effects. In support of the conclusions from the non-parametric tests, we find negative and significant effects of both the FLYER (coefficient: -0.589) and OPT-OUT (coefficient: -0.436) treatments, significant at the 5% level.

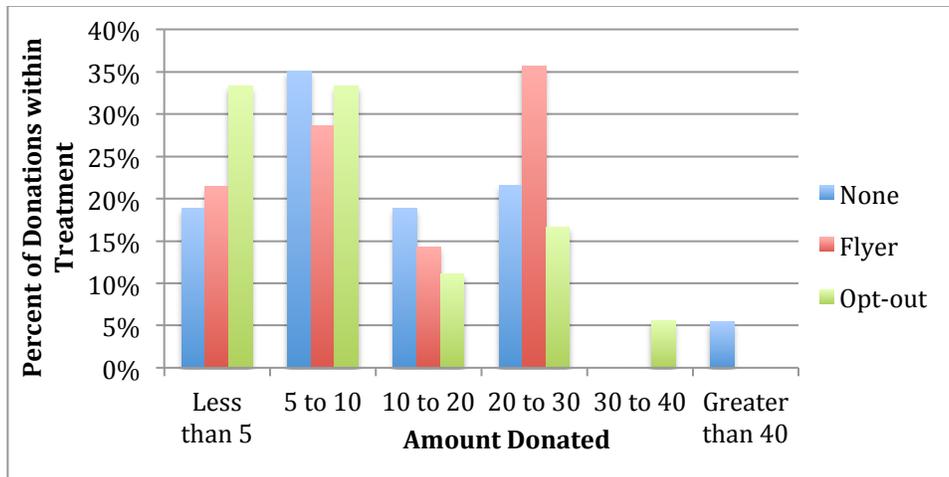
Our results are in line with DellaVigna et al. (2012), though our smaller sample size does not allow us to make inferences about statistical significance for decision to donate or amount donated (sample sizes of 349 households and 71 households, respectively). We turn our attention to summarizing the types of people, as evidenced by donation amount, who choose to opt in to donating. Figure 3 provides a histogram of donation amounts, by treatment. We observe that, in our experiment, we have a greater number of donors who give low amounts in the opt out treatment relative to no opt out. However, we believe that our results are spurious and due to low sample sizes.

**Table 4: Regressions of Giving Behavior**

	(1) Door Opening (1=open)	(2) Choice to Donate Cond. opening (1=donate)	(3) Amount donated, Cond. giving in USD
Flyer Dummy (=1 if flyer treatment)	-0.589** (0.252)	-0.132 (0.638)	-5.121 (3.460)
Opt-Out Dummy (=1 if opt-out treatment)	-0.436** (0.222)	0.001 (0.489)	-1.364 (2.980)
FV Dummy (=1 if Family Voices)	0.025 (0.209)	0.726* (0.412)	2.790 (2.545)
Flyer*FV (=1 if flyer and FV)	0.389 (0.389)	0.621 (0.440)	
Opt-Out * FV (=1 if opt-out and FV)	0.074 (0.310)	-0.676 (0.672)	
Constant			10.65*** (2.384)
Solicitor Fixed Effects	YES	YES	YES
Observations	1,061	349	71
R-squared			0.053
Number of solicitor_id	9	8	8

Note: Specifications (1) and (2) provide logit regressions for door opening and choice to donate, conditional on opening, respectively. Specification (3) provides a regression of amount donated, conditional on a donation. All regressions use solicitor fixed effects. Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Figure 3: Amount Donated Conditional on Giving, by Treatment**



Note: the histogram provides the percent of donations within each treatment for each range of amounts. Due to small sample sizes, we do not conduct statistical analysis on donation amounts, but do report them here for the interest of the reader.

In total, \$895.80 was raised for both charities, with a total of \$430 given in NONE, \$293.30 given in FLYER and \$172.00 given in OPT-OUT. We use the total given in each treatment, divided by the total of households approached, to calculate the campaign efficiency rate. Efficiency rate is \$0.96 in NONE, \$0.82 in FLYER, and \$0.44 in OPT-OUT.<sup>5</sup> That is, we observe a 14% lower efficiency rate in FLYER relative to NONE, and a 54% lower efficiency rate in OPT-OUT relative to NONE. These results are driven partly by differences in door opening rates across the notification treatments, which are at 39% without pre-notification but drop to 34% and 29% with pre-notification and opt-out, respectively, and partly by differences in giving rates.

#### **4. Conclusion**

Some of the most influential field experiments in the literature have focused on the motivation to give to charity. Through field experiments in charitable giving, academics can learn about the underlying motivations to give and the role of social preferences in society. Practitioners can also learn about best strategies for fundraising campaigns.

In this paper, we have summarized the different field experiments that have provided insights into social preferences. More recently, researchers have used field experiments to provide evidence of the substantial role that social pressure plays in charitable giving. Both DellaVigna et al. (2012) and Andreoni et al. (2012) reported on data suggestive of the social pressure motivation. The replication experiment we

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<sup>5</sup> These numbers should not be used by practitioners to infer the effectiveness of door-to-door campaigns, because our specialized experimental training emphasizes following the script, whereas many fundraisers are trained to be more aggressive in soliciting giving in practice.

conducted in Madison, Wisconsin broadly confirmed the results in DellaVigna et al. (2012).

Field experiments conducted by academics are an ideal source of knowledge for fundraisers in practice, most notably because these types of experiments are often conducted in partnership with practitioners and therefore are straightforward to translate into practice. For instance, while the rule of thumb for fundraisers regarding matching rates was to increase the match rate to increase giving, Karlan and List (2007) found that matching works, but that higher match rates do not produce significantly better giving rates. Importantly, the idea that we could categorize potential donors by their actions in different charitable campaigns, rather than by their demographic characteristics, is one that merits greater attention by academics and practitioners alike.

More work is needed to learn about the underlying preference for giving to charity, and field experiments are an ideal method in this field. Researchers should investigate using the *donor screening method* for other types of high pressure appeals, including those that incorporate seed money or matching gifts. Practitioners should become more involved in using the experimental approach to test different appeals.

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