Identity in Charitable Giving

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How does priming identity affect charitable giving? We show that individuals are more likely to donate when a facet of their identity associated with a norm of generosity is primed in an appeal. In large charitable giving field experiments run by the American Red Cross, appeals that prime an individual's identity as a previous donor to the charity or as a member of a local community generate more donations. The primes are more effective when they highlight a facet of the potential donor's identity that we hypothesize to be more relevant to his sense of self: priming identity as a previous donor is more effective for more regular donors and priming identity as a local community member is more effective for people in smaller communities. Together, these results elucidate the impact of identity on behavior and demonstrate how identity primes can be implemented in practice to encourage public good provision.

1. Introduction

The role *identity* plays in decision making has begun to receive significant attention within economics. Recent work has formalized the idea that there are *norms* or *prescriptions* associated with one's identity or "sense of self," and that people will adjust their behavior to more closely mirror these prescriptions, especially when reminded of their identity (Akerlof and Kranton 2000; Benjamin et al. 2010, 2013; Cohn et al. 2014).[1] This work in economics has built on a large literature in psychology demonstrating that identity is a malleable construct (see James 1890 and Turner 1985 on self-categorization theory). Specifically, past psychology research has argued and demonstrated that remarkably small forces (e.g., environmental cues or "primes") can alter which facet of an individual's identity (e.g., as a professor, as a parent, as a Caucasian) is salient at a given point in time (Steele 1997, Steele and Aronson 1995, Shih et al. 1999, Bargh 2006).[2] Further, priming identities

that individuals perceive as more self-relevant has been shown in past laboratory research to be more impactful (LeBoeuf et al. 2010). The malleability of identity, and the fact that different facets of identity can be brought to the surface by different cues, helps distinguish the effects of identity from underlying preferences.

the White–Black test score gap by triggering an association with the stereotype that Blacks underperform academically (Steele and Aronson 1995). Similarly, Asian-American females perform better than usual on math tests when their identity as Asian (a group stereotyped as strong in math, Steen 1987) is primed but worse than usual when their identity as female (a group stereotyped as weak in math, Hedges and Nowell 1995) is primed (Shih et al. 1999). Economists have demonstrated that similar racial identity primes can alter discount rates in stereotype-consistent directions (Benjamin et al. 2010). Moving away from stereotyping research to other classic priming studies, scholars have shown that merely exposing study participants to "kindness" related words under the cover story that the study was a "language study" led those same participants to rate the next person they interacted with as more kind (Srull and Wyer 1979). Further, products are chosen more frequently when the surrounding environment contains more perceptually or conceptually related cues (e.g., participants who use an orange pen in a task are more likely to subsequently select orange products than those who use a green pen, and vice versa; Berger and Fitzsimmons 2008). And mere exposure to objects commonly associated with business leads people to make less generous offers in an ultimatum game (Kay et al. 2004). These are just a few examples of a plethora of research studies showing the power of priming.

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[1] Psychologists have written extensively about the concept of self-identity, or the importance to a person's self-concept of belonging to a given social category (Hogg 2003, Reed 2004, Goldstein et al. 2008).

[2] For example, past research on stereotype threat has shown that the minimal racial identity prime of prompting students to indicate their race on a questionnaire before taking a test increases

While the concept of identity has begun to make its way into economics,[3] the role identity plays in a variety of economic domains is not yet well understood. In this paper, we work toward an understanding of how identity affects the private provision of public goods. We investigate identity primes outside of the laboratory, exploring whether such primes can be used as a lever to influence behavior in the field.[4] We also analyze how the impact of priming varies as a function of the strength of an individual's identification with the identity invoked. In particular, we investigate how priming different facets of an individual's identity in a direct mail appeal for a charitable organization affects his or her decision to donate to the charity.[5]

Private provision of public goods is both important—allowing public goods to be provided without the efficiency costs of taxation—and prevalent. Just one form of public good provision, charitable giving from individuals and households in the United States (the focus of this paper), totaled $242.2 billion in 2011 (Giving USA 2012). This giving is widespread, with approximately 90% of individuals in the United States making charitable donations (see Andreoni 2006, Vesterlund 2006). The scope of private provision of public goods cannot be explained by standard theories of selfishness and altruism alone (Becker 1974; see also Batson 1991).[6] Consequently, charitable giving is frequently used as a setting for exploring how behavioral forces can impact individual decision making.[7]

We analyze the results of two identity-priming field experiments run by the American Red Cross (ARC), a major national charity.[8] Both experiments find that priming a facet of identity associated with a norm of increased generosity (either as a previous donor to the charity or as a member of a local community) increases the likelihood of a donation. Specifically, we observe higher donation rates when the charity reminds a prospective donor of her previous support by listing the date of her last donation on the current appeal. We also observe more giving when a donation request primes a potential donor's identity as part of a city community (even though the funds requested are clearly labeled as going to support national programs).

In addition, consistent with laboratory studies by LeBouef et al. (2006), we find that the efficacy of these identity primes depends on the strength of the group association triggered by the prime. The effect of the prime as a previous donor is more pronounced the more gifts an individual has made to the Red Cross in the past; and the effect of the prime as a member of a local community is strongest in small cities (where one's local community affiliation should be strongest),[9] gets weaker in more populous cities, and is nonexistent when the donation request primes identity as part of a large city. We can most parsimoniously and elegantly explain this pattern of results with an identity priming theory.[10]

In addition to contributing to a growing literature on identity, our results add to a rich experimental literature on charitable giving that has already yielded a number of important results. Field experiments on

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[3] An additional, compelling set of field experiments in economics by Gneezy et al. (2012) offer insights into how identity concerns influence consumption decisions. These studies show that identity concerns lead people to forgo purchases when given the opportunity to name the price of a product because paying a price that feels too low produces self-image concerns.

[4] Laboratory studies on identity generally use established priming manipulations like having subjects answer questions about themselves and their family (e.g., the language they speak at home, as in Shih et al. 1999 and Benjamin et al. 2010, or their professional background, as in Cohn et al. 2014), or having subjects do an unrelated task that subtly primes identity (e.g., sentence unscrambling with or without religious words, as in Shariff and Norenzyan 2007 and Benjamin et al. 2013). These techniques are useful in the laboratory but unlikely to be implemented in the field, while the primes investigated in this paper were implemented naturally in the field by professional fundraisers.

[5] Akerlof and Kranton (2000) discuss "alumni giving" as an example of how identity may influence charitable giving behavior, noting that "graduates give to *their own* alma matter" rather than the "organization with the highest return." However, their discussion has caveats and does not provide empirical evidence on the role of identity in charitable giving (alumni or otherwise). Benjamin et al. (2013) investigate how priming religious identity affects a number of important economic behaviors, including public good provision.

[6] A popular alternative theory suggests that individuals get utility from making donations themselves (i.e., they get warm glow from giving, Andreoni 1989, 1990; see also Cialdini and Kenrick 1976).

[7] Charitable giving has been used as a lens to understand persuasion (see, e.g., Cialdini and Ascani 1976, Cialdini and Schroeder 1976) and marketing (Small and Loewenstein 2003, Small and Simonsohn 2008, Small 2011, Bendapudi et al. 1996).

[8] The experiments are large, including approximately 10,000 appeals in each condition. Across the experiments, we analyze responses to a total of 60,000 direct mail appeals that generated over $200,000 in donations.

[9] Our use of city size as a proxy is supported by evidence from the general social surveys, as discussed in Section 4.

[10] Our results on community size are related to, but different from, previous psychology research that finds people are more compelled to follow social norms established by members of identity groups they relate with more strongly (see Deshpande et al. 1986, Stayman and Deshpande 1989, Kleine et al. 1993, Terry and Hogg 1996, Terry et al. 1999, Reed 2004). In the charitable giving space, Shang et al. (2008) show that prospective donors make larger donations to a public radio station when they learn that a donor of the same gender (rather than the opposite gender) recently made a large donation. In our setting, however, simply priming the individual as being part of an identity-relevant community—rather than emphasizing that many people from the local community have given—leads to more donations.

charitable giving have identified a variety of forces that influence behavior, including the effect of social pressure (Landry et al. 2010, Meer 2011, Meer and Rosen 2011, Andreoni et al. 2012, DellaVigna et al. 2012; see also the related effect of attractive solicitors in Landry et al. 2006), the effect of information about the behavior of others (for results on seed money, see List and Lucking-Reiley 2002; on previous donations of others, see Frey and Meier 2004, Shang and Croson 2009; on announcements of support, see Kessler 2013), the effect of gift exchange (Falk 2007), the effect of lottery incentives (Landry et al. 2006), the effect of matching gifts (Karlan and List 2007), and the effect of shared social responsibility (Gneezy et al. 2010).

We add to this impressive literature by providing field evidence on the role played by identity in influencing charitable giving decisions. We also provide insight to policy makers about how to leverage identity primes to increase private contributions to public goods. Policy makers may want to remind previous donors of their support or invest in generating new donors with the plan to prime those donors' identities in later appeals.[11] In addition, policy makers may find it easier to encourage private provision of public goods when they prime prospective donors' identities as members of a community, particularly when they target those appeals at individuals in small communities, even if the public good being funded benefits a broader group. These findings line up nicely with previous work by Landry et al. (2010) showing that those who have donated in the past to an organization, and therefore likely identify with it, are more likely to give again and give more than other types of donors. We illustrate ways to bring that donor identity to the forefront in a given appeal.

This paper proceeds as follows. Section 2 outlines our theoretical framework. Section 3 describes the setting in which the experiments were conducted as well as the experimental methods and data that we analyze. Section 4 describes the results. Section 5 provides a summary and concludes.

2. Theoretical Framework

We present a toy model of the decision problem of the agent in a framework similar to that developed by Benjamin et al. (2010), making some simplifying assumptions motivated by psychological theory. We assume that an agent takes an action x to maximize

$$U(x) = -(1 - s \cdot 1_{a \in A})(x - x_0)^2 - (s \cdot 1_{a \in A})(x - x_C)^2,$$

where x_0 is the agent's ideal, "unmindful" action in the absence of an identity prime, and x_C is the prescribed behavior for those who belong to identity

group C. At the time of making the decision, the agent finds himself in a decision frame a, which may or may not induce him to think about his identity as a member of identity group C. If $a \in A$, the frame is such that the decision maker will attend to his membership in group C; otherwise, the decision maker will ignore this component of his identity. Finally, s captures the strength of an individual's association with group C where $0 \le s \le 1$. The first-order condition of this problem implies optimal action:

$$x^* = \begin{cases} x_0 & \text{if } a \notin A, \\ (1 - s)x_0 + sx_C & \text{if } a \in A. \end{cases}$$

If the individual makes the decision without considering his identity as a member of group C (i.e., if $a \notin A$), the individual will take his ideal "unmindful" action x_0, which is independent of identity concerns. A prime that makes an agent think about his identity as a member of group C induces a decision frame $a \in A$, in which case the individual will maximize his utility by taking a weighted average of the preferred action in the absence of a prime and the prescribed behavior of the identity group. We argue that the weight s the agent places on the prescribed behavior is increasing in the extent to which the group C is identity relevant to the agent.[12]

We examine the impact of priming facets of an individual's identity that are associated with a norm of increased generosity on charitable giving such that x_C is assumed to be taking a generous action and in particular that $x_C \ge x_0$ and that $x_C > x_0$ for at least some subjects. Specifically, we investigate the impact of priming an individual's identity as (i) a previous donor to a charity (for which the prescribed behavior of the identity group is to donate again) and (ii) a member of a local community (for which the prescribed behavior is to be "community minded" and help others).[13] These primes are achieved through

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[11] See Meer (2013) for evidence of individuals developing a habit for giving.

[12] This formulation is similar to the model in Benjamin et al. (2010), henceforth BCS. We highlight the key differences here. First, we assume that identity as a member of a group is ignored unless it has been primed to be considered at the time of the decision. This limits the scope for identity to affect behavior. For example, even if women are supposed to be more generous than men, we assume this fact only affects women who are thinking about their gender when taking an action. In contrast, BCS assume the optimal action is a function of a baseline weight agents place on their identity group, denoted $w(s)$ in BCS, even in the absence of a prime. Second, we assume that the effect of a prime will be moderated by the extent to which an individual feels the group association in question defines his identity, s. In contrast, BCS assume the extent to which a prime affects an agent depends on the shape of the function $w(s)$.

[13] Helping others is a common feature of a community (e.g., see the *Oxford English Dictionary*, which has as a definition of community, "Social cohesion; mutual support and affinity such as

content conveyed in the direct mail messages sent to prospective donors.[14, 15]

Further, we build on self-categorization theory and argue that s is larger for agents who care more about the given facet of their identity that is being primed.[16] Call Δx the difference in optimal action x^* for $a \in A$ rather than $a \notin A$, that is $\Delta x = x^*(a \in A) - x^*(a \notin A)$. Simple algebra shows that $\Delta x = s(x_C - x_0)$. Since we have assumed $x_C \geq x_0$ and that $x_C > x_0$ for at least some subjects, the effect of priming identity gets larger as s increases, generating comparative static $\partial(\Delta x)/\partial s \geq 0$ and $\partial(\Delta x)/\partial s > 0$ for at least some subjects.

Considering these comparative statics in our setting suggests that the effect of priming an individual's identity as a previous donor to a charitable organization should affect behavior more for individuals who view being a donor as a more important feature of their identity (e.g., more regular donors). Similarly, the effect of priming an individual's identity as a member of a local community should be larger for those who identify more strongly with their local communities (e.g., those who live in smaller towns).[17] We test these predictions by looking for heterogeneous treatment effects of the identity primes in two experiments conducted by the American Red Cross.

3. Experimental Setting and Methods

We analyze the results of two large-scale, direct-mail field experiments designed to solicit charitable donations that were conducted by the ARC. The American Red Cross was founded in 1881 and is one of the largest and most recognizable humanitarian charitable organizations in the world. The organization's stated mission is to "prevent and alleviate human suffering in the face of emergencies by mobilizing the power of volunteers and the generosity of donors."[18] Each year, the ARC responds to approximately 700,000 disasters in the United States, assists an average of 150,000 military families, provides more than 40% of the U.S. blood supply by collecting blood donations from approximately four million people, trains more than nine million Americans in health safety courses (including first aid, CPR, and lifeguarding), and reaches more than 100 million people across the world through its global humanitarian network.[19]

The ARC shared data with us on all pieces of direct mail sent between January 2006 and October 2011 to individuals who were not regular donors to the ARC but had directed a donation to the ARC's national headquarters following Hurricanes Katrina and Rita and the Southeast Asian Tsunami. We observe the responses by this population to each mailing as well as all unsolicited donations received from this donor universe.[20]

The two experiments that we analyze and report here are a subset of a larger group of experiments that the ARC shared with us. See Online Appendix B for details on how we selected these experiments to analyze. It is important to emphasize that the experiments selected for analysis and inclusion in this paper were chosen *before* any data analysis was conducted. The experiments were run on different populations on different dates: one on November 2, 2009 and one on January 4, 2010. They are described in detail below.[21]

3.1. Identity as a Previous Donor (Experiment 1)
On January 4, 2010, the ARC sent solicitation mailings to 17,061 previous donors who were selected for the experiment because of their classification as "lapsed" givers who had donated previously to the ARC but not in the previous 24 months, and whose records indeed confirmed this classification (no donations in

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is derived from living in a community"). In addition, previous research has shown that priming community mindedness in a prisoner's dilemma (by calling it "The Community Game" instead of "The Wall Street Game") dramatically increases cooperation (Liberman et al. 2004).

[14] To the best of our knowledge, this paper is the first to analyze the effect of priming facets of identity associated with giving money to charity (e.g., as a previous donor), though a concurrent paper describing an artefactual field experiment explored what happened when participants' identity as neighborhood residents was made salient before they participated in a charity donation game (Li et al. 2014). Previous research has focused on priming race (e.g., Steele and Aronson 1995) as well as other facets of identity (e.g., scientist, student (Reicher and Levine 1994); socialite, scholar, family member, professional (LeBoeuf et al. 2010); banker (Cohn et al. 2014)).

[15] See Online Appendix A (available as supplemental material at https://doi.org/10.1287/mnsc.2016.2582) for a simple extension to binary decision problems that generates the same comparative statics.

[16] This is consistent with past psychology research in the laboratory showing that identity primes are more powerful when people more strongly identify with the evoked identity (e.g., LeBoeuf et al. 2010).

[17] Past psychology research suggests that individuals identify more strongly with more "provincial" group associations, or smaller, more immediately relevant groups (Goldstein et al. 2008).

[18] http://www.redcross.org/about-us/mission (accessed April 2, 2013).

[19] http://www.redcross.org/what-we-do (accessed April 2, 2013).

[20] We received data on all appeals from the Red Cross received by these individuals and all donations these individuals made between 2006 and 2011, but we only saw creative materials for a subset of the appeals: those sent between 2009 and 2011. In particular, a total of 20,211,794 solicitation mailings were sent out to 1,261,980 unique prospective donors in the relevant population. These mailings generated a total of 819,444 donations from 366,469 unique donors, generating $49,135,034 in funds for the ARC.

[21] In describing the experiments, we provide names for each experimental condition that highlight the behavioral theory the experiment tests. These names are our creation (the Red Cross typically labels different experimental treatment groups with different letters).

the last 24 months, but at least one donation since 2006).[22] These donors were randomly assigned to one of two conditions: a *control* condition ($N = 8{,}528$) or a *donor identity* condition ($N = 8{,}532$). The mailings were identical to one another except that the *donor identity* mailing primed donor identity by reminding a donor of his or her most recent contribution to the ARC, while the control mailing included no such prime. Specifically, one additional line of personalized text appeared atop the letterhead of the solicitation message in the *donor identity* condition that was absent from the *control* condition. In the space on the letterhead between the recipient's return address and the letter's greeting ("Dear Friend and Supporter"), a bolded line of text declared: "Previous Gift: ⟨date⟩" (where the date of the recipient's last gift to the Red Cross replaced "⟨date⟩"). Figure 1 presents variable components of these solicitation materials.

3.2. Identity as a Community Member (Experiment 2)

On November 2, 2009, the Red Cross sent direct mail solicitations to a completely separate set of 41,104 prospective donors. Prospective donors were randomly assigned to one of four experimental conditions: the *annual drive* ($N = 10{,}355$), the *winter drive* ($N = 10{,}373$), the *state drive* ($N = 10{,}269$), or the *city community drive* ($N = 10{,}404$).[23] All mailings were identical except for the precise wording used to describe the fundraising drive referenced in the solicitation, which we refer to as the "fundraising drive title." The fundraising drive title varied in the extent to which it primed a donor's identity as a member of a community, and it appeared in three locations on each piece of direct mail: (1) above the return address

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[22] Note that the ARC sent mailings to a total of 19,374 individuals as part of this experiment, but in our data 2,313 of these individuals had either donated in the 24 months leading up to the experiment or had not previously donated to the ARC in our data (contrary to the ARC's stated selection criteria), and we thus do not include these unintended mailing recipients in our analyses, focusing on the 17,061 participants in the intended target population. That said, repeating our analyses with these additional 2,313 observations produces nearly identical results, except when analyzing the frequency of past donations, which of course poses challenges for this small subpopulation including those who have never given.

[23] Additional individuals were simultaneously assigned to two other experimental conditions of no theoretical interest, as described in Table A1. In these two additional conditions that we do not analyze, individuals either received (a) a shortened version of the appeal letter or (b) a mailing in an envelope with a design that differed in several ways from other conditions, including revealing the recipient's address through a die-cut window (rather than printing it on the outer envelope). These two conditions had the *state drive condition* messaging and performed directionally or marginally statistically significantly worse than the *state drive condition*. All results are the same if we treat these recipients as being part of the *state drive condition* in the data analysis.

Figure 1 (Color online) Variable Components of the *Identity as a Previous Donor* Mailings (Experiment 1)

	Top of solicitation letter
Donor identity condition	**American Red Cross** 2025 E Street, NW • Washington, DC 20006 • RedCross.org ⟨Name⟩ ⟨City, State Zip⟩ **Previous Gift**: ⟨date⟩ Dear Friend and Supporter,
Control condition	**American Red Cross** 2025 E Street, NW • Washington, DC 20006 • RedCross.org ⟨Name⟩ ⟨City, State Zip⟩ Dear Friend and Supporter,

printed on the mailing, (2) on the top, right-hand corner of the solicitation's letterhead, and (3) at the top of the enclosed solicitation card. The fundraising drive titles were experimentally varied as follows: in the *annual drive*, the title was "Annual Fund Drive"; in the *winter drive*, the title was "Winter 2009 Drive"; in the *state drive*, the title was "Winter 2009 ⟨State⟩ State Drive" (where the state of the recipient's mailing address replaced "⟨State⟩"); and in the *city community drive*, the title was "Winter 2009 ⟨City⟩ Community Drive" (where the city of the recipient's mailing address replaced "⟨City⟩"). Figure 2 presents the variable components of these solicitation materials.

It is worth pointing out the subtlety of this treatment given that the letter emphasized that any donations received in response to this mailing would be used to fund general ARC activities[24] (rather than provide local services) and that the return address on the original mailing and the reply envelope for all donations corresponded to the address of the national American Red Cross office in Washington, D.C.

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[24] For example, the letter reads, "Please do your part by donating to the ⟨Variable Text⟩ Drive to sustain the Red Cross as America's relief agency."

Figure 2 (Color online) Variable Components of the *Identity as a Community Member* Mailings (Experiment 2)

Outer Envelope Return Address			
Annual Fund	Winter 2009	Winter 2009 ⟨State⟩ State	Winter 2009 ⟨City⟩ Community
American Red Cross Annual Fund Drive 2025 E Street, NW Washington, DC 20006	American Red Cross Winter 2009 Drive 2025 E Street, NW Washington, DC 20006	American Red Cross Winter 2009 ⟨State⟩ State Drive 2025 E Street, NW Washington, DC 20006	American Red Cross Winter 2009 ⟨City⟩ Community Drive 2025 E Street, NW Washington, DC 20006

Headline Atop Reply Card	
Annual Fund	Annual Fund Drive for the American Red Cross
Winter 2009	Winter 2009 Drive for the American Red Cross
Winter 2009 ⟨State⟩ State	Winter 2009 ⟨State⟩ State Drive for the American Red Cross
Winter 2009 ⟨City⟩ Community	Winter 2009 ⟨City⟩ Community Drive for the American Red Cross

Return Address on Solicitation Letter Stationary		
Annual Fund	**American Red Cross** 2025 E Street, NW • Washington, DC 20006 • RedCross.org	Annual Fund Drive
Winter 2009	**American Red Cross** 2025 E Street, NW • Washington, DC 20006 • RedCross.org	Winter 2009 Drive
Winter 2009 ⟨State⟩ State	**American Red Cross** 2025 E Street, NW • Washington, DC 20006 • RedCross.org	Winter 2009 ⟨State⟩ State Drive
Winter 2009 ⟨City⟩ Community	**American Red Cross** 2025 E Street, NW • Washington, DC 20006 • RedCross.org	Winter 2009 ⟨City⟩ Community Drive

Statement Embedded in Solicitation Letter Text	
Annual Fund and Winter 2009	Right now people everwhere are bending together to support the American Red Cross. Won't you join them by sending your contribution today?
Winter 2009 ⟨State⟩ State	Right now people throughout ⟨State⟩ are banding together in a statewide drive to support the American Red Cross. Won't you join them by sending your contribution today?
Winter 2009 ⟨City⟩ Community	Right now people throughout ⟨City⟩ are banding together in a community drive to support the American Red Cross. Won't you join them by sending your contribution today?

4. Experimental Results

4.1. Randomization Checks

While our data provider assured us that both ARC experiments relied on random number generators for random assignment, we still confirmed that balanced randomization was successfully achieved. We conducted randomization checks by testing whether the variables we created based on study participants' previous interactions with the Red Cross and based on study participants' available demographic characteristics were balanced across experimental groups.[25] For

Experiment 1, which included just two experimental conditions, we used *t*-tests to compare the *control* treatment to the *donor identity* treatment (see Table 1) and for Experiment 2, which included four experimental conditions, we regressed conditions on each variable and report whether the joint *F*-test is significantly different from zero (see Table 2). Across the two experiments—and 13 total tests—one variable is significantly different from zero (the number of previous solicitations a prospective donor has received),[26] as would be expected by chance, and the imbalance is very slight. Our randomization checks reassuringly indicate that randomization was effective at generating samples that were balanced on participants' observable characteristics, and we always

[25] Variables that we tested for balance include all the history and demographic data that were made available to us by the Red Cross. We constructed a variable for the log number of previous solicitations by counting the number of times a given donor's Red Cross ID was listed as receiving a solicitation in the data. We constructed a variable for the number of previous gifts by counting the number of gifts that were associated with each Red Cross ID. We constructed a variable for the log sum of total gifts by summing the amount of each of the previous gifts associated with each Red Cross ID, adding one, and performing a log transformation (to address outliers). For Experiment 1, we constructed a variable for the date of the last donation by identifying the date of the last gift listed in the data for each Red Cross ID before the experiment.

For Experiment 2, we constructed a variable for whether each Red Cross ID had made a gift before the experiment. We merged the zip code of each participant to the median household income in that zip code from the 2010 census. We also merged the city and state name to a variety of city population size data sources as described in the text.

[26] Previous solicitations were counted going back to 2006, which is when the data provided to us by the Red Cross began (and we were told that we had complete data for everyone in our sample).

Table 1   Balance Across Treatments (Experiment 1)

Variable	Control ($n = 8,529$)	Donor identity ($n = 8,532$)	t-test p-value
No. of previous gifts	1.20 (0.55)	1.20 (0.55)	0.58
No. of previous solicitations	22.79 (8.74)	22.78 (8.73)	0.96
log(*sum of previous gifts* $+1$)	3.541 (0.81)	3.523 (0.80)	0.15
Days since last gift	1,180.76 (159.45)	1,181.22 (159.57)	0.85
For participants whose data was matched to other sources			
Median household income	$67,156.05 ($25,883.86)	$66,892.29 ($26,274.45)	0.51
Population of city	237,831 (570,528)	236,957 (573,263)	0.92

Notes. Standard errors are in parentheses. Stars reflect whether the difference between the groups is significantly different from 0.

Figure 3   Probability of Donation in Each Condition of the *Identity as a Previous Donor* Experiment

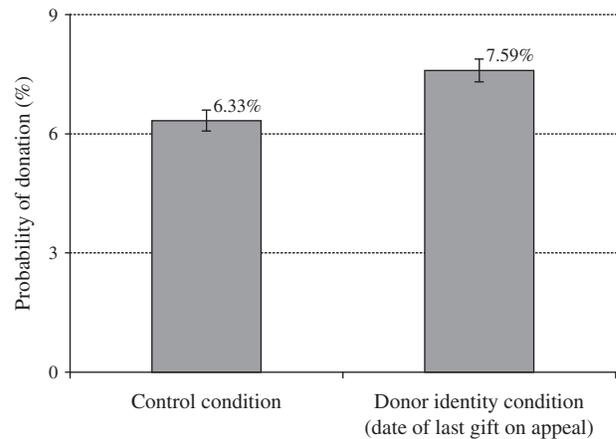*Note.* Standard error bars are shown around each mean.

present analyses with controls for the one variable that is slightly imbalanced in our regression tables.

4.2. Main Results Overview

For each experiment, we are interested in the effect of the treatment on charitable donation decisions. In particular, we investigate the probability that the recipient of an appeal made a gift to the American Red Cross and the amount donated.

One issue with examining amount donated as a dependent variable is that a few outliers can move the average donation dramatically and increase the variance of donations. To address this issue (i.e., to mitigate the effect of outliers) we report results on log

donations, namely, log(1 + donation amount), which also allows treatment effects to be interpreted as percentage changes in donation. All regressions and comparisons of means presented in this paper report robust standard errors.

4.3. Identity as a Previous Donor (Experiment 1) Results

As described above, the *identity as a previous donor* experiment randomized whether the date of a donor's most recent gift to the ARC was listed atop an appeal letter. Figure 3 shows the probability of donation by experimental condition. As hypothesized, priming identity as a previous donor to the ARC increased donations.

Table 2   Balance Across Treatments (Experiment 2)

Variable	Annual fund ($n = 10,355$)	Winter 2009 ($n = 10,373$)	Winter 2009 state ($n = 10,269$)	Winter 2009 city community ($n = 10,404$)	F-test p-value
No. of previous gifts	0.024 (0.193)	0.026 (0.187)	0.027 (0.211)	0.029 (0.305)	0.49
No. of previous solicitations	10.87 (6.54)	10.82 (6.65)	10.70 (6.60)	10.64 (6.58)	0.046**
log(*sum of previous gifts* $+1$)	0.077 (0.539)	0.082 (0.566)	0.088 (0.582)	0.080 (0.567)	0.54
Ever gave	0.022	0.023	0.024	0.021	0.47
Match to city data	0.940	0.938	0.937	0.934	0.31
For participants whose data matched to other sources					
Median household income	$73,689.14 ($29,230.33)	$73,123.38 ($28,983.66)	$73,222.71 ($29,220.65)	$73,373.95 ($29,154.20)	0.54
Population of city	252,451 (600,303)	248,821 (589,119)	248,043 (600,365)	239,409 (575,099)	0.45

Notes. Standard errors for continuous variables are in parentheses. The stars reflect whether the difference between the groups is significantly different from 0.
  **$p < 0.05$.

Table 3 **Effect of *Donor Identity* Treatment in the *Identity as a Previous Donor* Experiment (Experiment 1)**

	Donation to Red Cross = 1 (linear probability model)		
	(1)	(2)	(3)
Donor Identity	0.013 (0.0039)***	0.013 (0.0039)***	−0.0058 (0.0099)
Donor Identity × *Previous Gifts*			0.015 (0.0077)**
Previous Gifts		0.0084 (0.0039)**	0.00057 (0.0045)
Previous Solicitations		−0.00093 (0.00024)***	−0.00093 (0.00024)***
Constant	0.063 (0.0026)***	0.075 (0.0073)***	0.084 (0.0078)***
Observations	17,061	17,061	17,061

Notes. This table shows linear probability model (OLS) regression results showing whether subjects make a donation to the Red Cross as part of the appeal. *Previous Gifts* is the number of gifts the individual made to the Red Cross between 2006 and the time of the experiment. *Previous Solicitations* is the number of solicitations the individual received from the Red Cross between 2006 and the time of the experiment. Robust standard errors are in parentheses.

** and *** indicate significance at the 5% and 1% levels, respectively.

Specifically, priming donor identity by listing the date of a donor's most recent gift to the ARC on the appeal letter increased the probability of a donation to the ARC by 20% (6.33% in *control* condition versus 7.59% in *donor identity* condition, $N = 17,061$; test of proportions, $p = 0.001$). In addition, the average donation collected per solicitation increases along with the donation rate. Specifically, the average donation received per solicitation increases by about 4.1% in the *donor identity* condition (logged: 0.228 in *control* condition versus 0.269 in *donor identity* condition, $N = 17,601$; t-test, $p = 0.004$).[27]

Our data from the ARC include information about the history of appeals sent to, and donations received from, each subject between 2006 and 2011. This allows us to estimate the comparative static of our model, which predicts that priming identity should be more effective when the prime is more relevant to the individual's sense of self. In this setting, we predict that reminding a donor of the date of her last donation should generate a larger response from more regular donors, who are likely to consider their status as an ARC donor as a larger part of their identity.

Table 3 shows regression results examining the impact of the *donor identity* condition on the decision to donate and analyzing how the number of past gifts from a donor impacts the strength of this treatment. First, we see a significant impact of priming *donor identity* by listing the date of the previous gift (column (1)) regardless of whether we control for individual-level characteristics pertaining to previous appeals received from the ARC and previous gifts made to the ARC (column (2)). Further, as predicted, we observe a significant interaction effect such that individuals who have given more frequently to the Red Cross—and so are expected to treat being an ARC donor as a larger part of their identity—show a larger positive response to the *donor identity* treatment (column (3)).

One potential alternative explanation for our findings here is that rather than priming a donor's identity, the *donor identity* treatment reminds forgetful donors of how much they like to donate. This is consistent with a model proposed by Gilboa and Schmeidler's (1995) in which economic agents use past decisions to help choose a "best" act in the similar cases. For the Gilboa and Schmeidler (1995) model to predict higher giving in the *donor identity* treatment condition, it should be the case that the giving action is more likely to be in the memory set when the subject sees the date listed than when it is not listed. Such a pattern requires that there is forgetting of past actions. If forgetting were the mechanism responsible for our finding, we would expect the treatment effect to be larger for donations in the more distant past,

[27] To interpret these changes in dollar terms while still controlling for outliers, here we present average donations winsorized at the 99.9th percentile of all donations (including donations of zero dollars). In particular, for any donation amount above the 99.9th percentile of donations in a given experiment, we replace the donation amount with the donation corresponding to the 99.9th percentile in the relevant experiment. By this measure average donation per solicitation increased from $3.41 in the *control* condition to $3.83 in *donor identity* condition. (Note that we use the same standard for each experiment. For the *Identity as Previous Donor* experiment, we winsorize at $300, the 99.9th percentile of all donations in that experiment; and for the *Identity as Community Member experiment,* we winsorize at $500, the 99.9th percentile of all donations in that experiment.)

Table 4   Effect of *Donor Identity* Interacted with Time Since Last Donation (Experiment 1)

	Donation to Red Cross = 1 (linear probability model)					
	(1)	(2)	(3)	(4)	(5)	(6)
Donor Identity	0.046 (0.030)	0.047 (0.030)	0.019 (0.0084)**	0.019 (0.0084)**	0.023 (0.024)	0.023 (0.024)
Donor Identity × *Days Since Last Gift*	−0.000016 (0.000017)	−0.0000025 (0.000018)				
Days Since Last Gift	−0.000028 (0.000025)	−0.000029 (0.000025)				
Donor Identity × 3–4 *Years Since*			−0.0085 (0.0094)	−0.0085 (0.0094)		
3–4 *Years Since*			−0.014 (0.0063)**	−0.010 (0.0065)		
Donor Identity × 2.5–3 *Years Since*					−0.0044 (0.026)	−0.0042 (0.026)
Donor Identity × 3–3.5 *Years Since*					−0.0085 (0.025)	−0.0082 (0.025)
Donor Identity × 3.5–4 *Years Since*					−0.017 (0.025)	−0.017 (0.025)
2.5–3 *Years Since*					0.0028 (0.017)	0.0047 (0.017)
3–3.5 *Years Since*					−0.017 (0.017)	−0.012 (0.017)
3.5–4 *Years Since*					−0.0064 (0.017)	0.00056 (0.017)
Gift controls	No	Yes	No	Yes	No	Yes
Constant	0.083 (0.021)***	0.077 (0.022)***	0.074 (0.0056)***	0.081 (0.0086)***	0.071 (0.016)***	0.076 (0.017)***
Observations	17,061	17,061	17,061	17,061	17,061	17,061

Notes. This table shows linear probability model (OLS) regression results showing whether subjects make a donation to the Red Cross as part of the appeal. The *Donor Identity* effect is interacted with a number of measures of time since last donation. For regressions (3) and (4), the omitted group is subjects whose last gift was 2–3 years ago. For regressions (5) and (6), the omitted group is subjects whose last gift was 2–2.5 years ago. Gift controls include the number of donations made and solicitations received between 2006 and the time of the experiment. Robust standard errors are in parentheses.
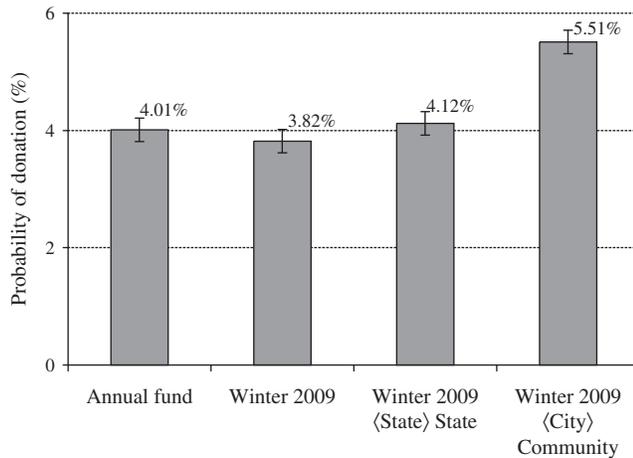   ** and *** indicate significance at the 5% and 1% levels, respectively.

since forgetfulness should be a greater issue for these more distant donations.

To test this possibility, we present a series of regressions in Table 4 that include a measure of the time since a donor's last donation as a main effect and an interaction of this term with our *donor identity* treatment indicator. Our first set of results—shown as regressions (1) and (2) in Table 4—use a linear measure of the number of days since the last donation. The interaction effect *Donor Identity* × *Days Since Last Gift* is insignificant and directionally negative, contradicting the alternative hypothesis that the donors were simply reminded of how much they liked to donate. To ensure these directionally negative null results are not due to the choice of a linear specification, we ran a number of different specifications. Regressions (3) and (4) in Table 4 investigate whether the treatment effect is larger for people who had made their last gift less than three years ago or more than three years ago. We find the interaction term *Donor Identity* × 3 + *Years Since Last Gift* is insignificant and

negative, again going against the reminder hypothesis. Regressions (5) and (6) in Table 4 include dummies for each six-month window since a donor's last gift and interact those dummies with the *donor identity* treatment indicator. This exercise reveals that the treatment is monotonically directionally less effective as the last donation moves further back in time. While not shown in Table 4, we also observe that including dummies for each quarter since a donor's last gift and interacting those dummies with the *donor identity* treatment reveals a similar pattern. Of course, these analyses test only one theory of forgetting, but the model we test seems to be the most natural way of getting at a forgetting mechanism and does not provide evidence to support this explanation.

Importantly, all of the findings we present involving data from this experiment are robust to numerous alternative specifications (see Online Appendix C). They are robust to probit specifications (with the Ai-Norton correction for the interaction, Ai and Norton 2003) and to including a variety of different controls

Figure 4 **Probability of Donation in Each of the Conditions of the** ***Identity as a Community Member*** **Experiment**

Note. Standard error bars are shown around each mean.

Table 5 **Number of Mailings, Probability of Donation, Average Donation, and Average Donation Conditional on Giving for the Four Treatments in the** ***Identity as a Community Member*** **Experiment (Experiment 2)**

Treatment	Number of mailings	Donation rate (%)	Avg. donation ($)	Avg. donation by donors ($)
Annual drive	10,355	4.01	2.23	55.73
Winter drive	10,373	3.82	2.02	52.82
State drive	10,269	4.12	2.08	50.60
City community drive	10,404	5.51	2.48	44.79

Note. Donations are winsorized at $500, the 99.9th percentile of donations made in response to this appeal (the cutoff used throughout this paper to address outliers).

4.4. Identity as a Community Member (Experiment 2) Results

The experiment examining the effect of priming a prospective donor's identity as a community member varied whether the donation drive referenced in the Red Cross solicitation mailing specified the donor's city community, specified the donor's state, merely indicated the season and year of the drive, or did none of the above. We observe a large, positive increase in the likelihood of donation when the appeal refers to a community drive in the donor's home city. Figure 4 shows the probability of donation across all four conditions. The *city community drive* generated a significantly higher donation rate than each of the other experimental conditions (5.51% for *city community drive* condition versus 4.12% for *state drive* condition, 4.01% for *annual drive* condition, 3.82% for *winter drive* condition; tests of proportions: $p < 0.001$ for all two-way comparisons with the *city community drive* condition). Meanwhile, the probabilities of donation do not differ significantly in the other three experimental conditions.

Priming prospective donors' identity as part of a local community also affects the average donation collected per solicitation. Table 5 shows the average donation collected by the ARC in each experimental condition. The average amount donated per mailing in the *city community drive* condition is 4.8% larger than in the other three conditions (logged: 0.192 in *city community drive* condition verus 0.144 in the other three, $N = 41,401$; t-test, $p < 0.001$). The increase in

the average donation produced by the *city community drive* mailing is not as dramatic as the increase in the rate of donation because the extra donations collected in the *city community drive* are relatively small. The average donation conditional on a gift is actually 13% lower in the *city community drive* condition than in the other three conditions (logged: 3.48 in *city community drive* condition versus 3.61 in the other three, $N = 1,807$; t-test, $p = 0.003$).

We argue that the *city community drive* condition increases a prospective donor's likelihood of donation by priming that donor's identity as a community-minded person rather than through some other channel.[28] To bolster our claim that the effect is working through our hypothesized channel, we first rule out a potential alternative mechanism for the effect of the *city community drive* condition on charitable giving and then emphasize the distinct impact of the word "community" in our treatment using donations from New York City as a special case.

A potential alternative mechanism through which the *city community drive* might have affected giving is worth addressing and ruling out here; the argument is as follows. Prospective donors exposed to the *city community drive* condition might have incorrectly inferred that donations were going to fund local services rather than the national American Red Cross. While this incorrect inference could have generated more giving to the *city community drive* appeal (assuming subjects preferred to give funds to their

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[28] Unlike priming instruments in the laboratory (e.g., having subjects unscramble religious or nonreligious sentences as in Shariff and Norenzyan 2007 or by having subjects complete a background questionnaire that includes or does not include questions about languages spoken at home as in Shih et al. 1999), our community prime is implemented naturally through a slight change in a standard direct mail solicitation. While this allows us to study a priming implementation that is scalable and can be used in practice, our community prime is less "clean" in an experimental sense and it puts the onus on us to rule out the possibility that calling the drive a community drive affects behavior in some way other than through priming identity.

local community than to broader priorities), there are a number of reasons why it is unlikely to be driving the observed effects.

First, the appeal letters clearly state that all donations will go to support the national American Red Cross rather than specifically to the local community.[29] This point is highlighted by the fact that the return address on the outside of the solicitation mailing, as well as the reply envelope for all donations, is the Washington D.C. address of the national American Red Cross headquarters. Second, local chapters are mentioned as potential recipients of some donated funds in all versions of the letter.[30] Third, if participants in the *city community drive* condition mistakenly believed that their money was being funneled back into their local community, we might expect an impact throughout the distribution of donations (i.e., if donations in the community drive generated a higher marginal utility per dollar, we should expect to observe more large donors in the *city community drive*). Instead, however, the *city community drive* induces more small gifts (of less than $50) and *no change* in the distribution of gifts above $50.[31] The identity model allows the most generous subjects (e.g., those with $x_0 = x_C$) to be unaffected by the priming treatment, which would result in exactly the pattern we observe; alternatively, if each dollar given generated higher marginal utility in the *city community drive*, we would expect to see larger donations throughout the distribution. Fourth, a test of the ARC mailing materials conducted with 328 previous ARC donors revealed no differences in the perception that donations would be used to support their local chapter (see Online Appendix D for more details on this test).[32]

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[29] For example, the letter reads, "Please do your part by donating to the ⟨Variable Text⟩ Drive to sustain the Red Cross as America's relief agency."

[30] One paragraph that is common to all the letters reads, "You can trust the Red Cross to be a good steward of your money. An average of 90 cents of every dollar we spend is invested in humanitarian programs and services—including those in your local community—not fundraising and administration."

[31] The CDF of gifts in the *city community drive* condition and the CDF of gifts in the other three conditions are shown in Figure E1 in Online Appendix E.

[32] Details are described in Online Appendix E, but we provide an overview of the test here. We presented participants with the exact materials that were sent to ARC donors in our study (randomly assigning respondents to either view the *annual drive* or *city community drive* mailing). These participants were then asked what they thought received donations would be used for. Two coders who were blind to our hypotheses (and to participants' experimental conditions) read and coded respondents' assessments of "what donations received by the American Red Cross in response to this mailing would be used for." Our coders assessed whether each response said or implied that the money was going to "my city" or

We can also use prospective donors from New York, New York (i.e., the borough of Manhattan) to show the special effect of the word "community." For this set of mailing recipients, the city and state where they reside share the same name and so the *state drive* and *city community drive* appeals look identical except that "New York" is followed by the word "State" in the *state drive* condition and "Community" in the *city community drive* condition. Focusing on this subgroup allows us to examine the effect of switching the word State to Community in the appeal (albeit with a fairly small sample). We see a higher likelihood of contribution to the "New York Community Drive" than the "New York State Drive" (1.12% in *state drive* versus 3.65% in *community drive*, 365 observations; *t*-test, $p = 0.116$ without controls, $p = 0.095$ controlling for number of previous appeals received and the number of previous gifts made).

We now turn to the comparative static of our model to see if the prime is again more effective when it is relevant to the individual's sense of self. In this setting, we predict that the *city community drive* should have a larger effect on the behavior of individuals whose local community membership is a larger part of their sense of self. In other words, we predict an interaction effect whereby the impact of the *city community drive* treatment is magnified for those who identify more with their local communities. Unfortunately, we do not have a direct measure of individuals' attitudes toward community membership. However, we do have a proxy for the extent to which an individual's community membership plays into his sense of self, namely, the size of the individual's community.

Using community size as a proxy for the importance of community to residents' identities is supported by evidence from the General Social Survey, a multiyear survey about attitudes in American society.[33] In 1996 only, the survey asked respondents about the strength of their attachment to their neighborhood and willingness to leave it. In particular, it asked, "How close do you feel to…your neighborhood (or village)" on a four-point scale from "very close" to "not close at all." It also asked, "If you could

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'my local community' or "our town" etc. (i.e., their local community specifically). Our coders achieved a 100% agreement rate and they classified just 1% of responses in the *city community drive* condition and 1% of responses in the *annual drive* condition as implying that donations would go to the respondent's local community, rates that did not differ significantly across conditions.

[33] From the general social survey website: "The General Social Survey (GSS) conducts basic scientific research on the structure and development of American society with a data-collection program designed to both monitor societal change within the United States and to compare the United States to other nations" (http://www3.norc.org/GSS+Website/, accessed July 9, 2014).

Table 6   Effect of the *City Community Drive* Condition in the *Identity as a Community Member* Experiment (Experiment 2)

	Donation to Red Cross = 1 (linear probability model)					
	All data		City population available			
	(1)	(2)	(3)	(4)	(5)	(6)
City Community	0.015	0.014	0.014	0.013	0.041	0.039
	(0.002)***	(0.002)***	(0.002)***	(0.002)***	(0.013)***	(0.013)***
log(*City Population*)					−0.001	−0.002
					(0.001)**	(0.001)***
City Community ×					−0.003	−0.002
log(*City Population*)					(0.001)**	(0.001)**
Previous Gifts		0.031		0.026		0.025
		(0.010)***		(0.009)***		(0.009)***
Previous Solicitations		−0.006		−0.006		−0.006
		(0.000)***		(0.000)***		(0.000)***
Constant	0.040	0.100	0.040	0.100	0.056	0.117
	(0.001)***	(0.003)***	(0.001)***	(0.003)***	(0.007)***	(0.007)***
Clusters	8,855	8,855	7,685	7,685	7,685	7,685
Observations	41,401	41,401	38,811	38,811	38,811	38,811

Notes. This table shows linear probability model (OLS) regression results showing whether subjects make a donation to the Red Cross as part of the appeal. "City population available" includes individuals for whom city population data is available. *Previous Gifts* is the number of gifts the individual made to the Red Cross between 2006 and the time of the experiment. *Previous Solicitations* is the number of solicitations the individual received from the Red Cross between 2006 and the time of the experiment. Robust standard errors clustered by city are in parentheses.
     ** and *** indicate significance at the 5% and 1% levels, respectively.

improve your work or living conditions, how willing or unwilling would you be to…move to another neighborhood (or village)" on a five-point scale from "very willing" to "very unwilling." The survey also measured the population of "the smallest civil division listed by the U.S. Census (city, town, other incorporated area over 1,000 in population, township, division, etc.)" where each respondent lived.

This survey provides evidence in line with our supposition that people from smaller cities feel closer to their communities. We regress the neighborhood closeness measures described above on the log of city population (population is logged to reduce the scope of this wide-ranging variable) and find that individuals from smaller cities feel significantly closer to their neighborhoods—a one-logarithm increase in population is associated with subjects reporting they feel 0.041 points less close to their communities on the four-point scale (ordinary least squares (OLS) with robust standard errors, $N = 1{,}326$, $p < 0.001$). And individuals from smaller cities are less willing to leave—a one-logarithm increase in population is associated with subjects reporting they are 0.073 points more willing to move on the five-point scale (OLS with robust standard errors, $N = 1{,}320$, $p < 0.001$).

Consequently, we hypothesize that potential donors who live in smaller cities care more about their community membership and find it more identity relevant. For example, we expect the effect of referencing

a community city drive to be larger among individuals living in a small city (e.g., Clifton, Tennessee, population 2,694) than among those living in a large city (e.g., Chicago, Illinois, population 2.696 million). In other words, we predict an interaction such that the *city community drive* treatment effect will be larger in smaller communities. To test this hypothesis, we collected city population data from the U.S. Census (17,348 cities), city-data.com (352 cities that were not in the U.S. Census data), and neighborhood population measures for New York and Los Angeles.[34]

Table 6 presents the results of a regression analysis examining whether the *city community drive* treatment effect varies as a function of the log of a city's population.[35] As shown in Table 6, we find a significant interaction between the *city community drive* treatment and the log of a city's population ($p = 0.035$). Specifically, for every one-logarithm decrease in the population of a prospective donor's home city, the *city community*

[34] Both New York and Los Angeles are major metropolitan areas with city names that are actually neighborhood designations, so we gathered data on the populations of those neighborhoods: for New York, https://data.cityofnewyork.us/City-Government/New-York-City-Population-By-Neighborhood-Tabulatio/swpk-hqdp; for Los Angeles, http://www.laalmanac.com/population/po24la.htm (both accessed October 12, 2013).

[35] 2,590 nondonors and 117 donors from this experiment (approximately 6% of each) are not included in this analysis because they live in cities with populations that were not available from the U.S. Census Bureau or city-data.com.

Figure 5   Estimated Treatment Effect of the City Community Drive Condition as a Function of the Log(Population) in a Prospective Donor's City in the *Identity as a Community Member* Experiment
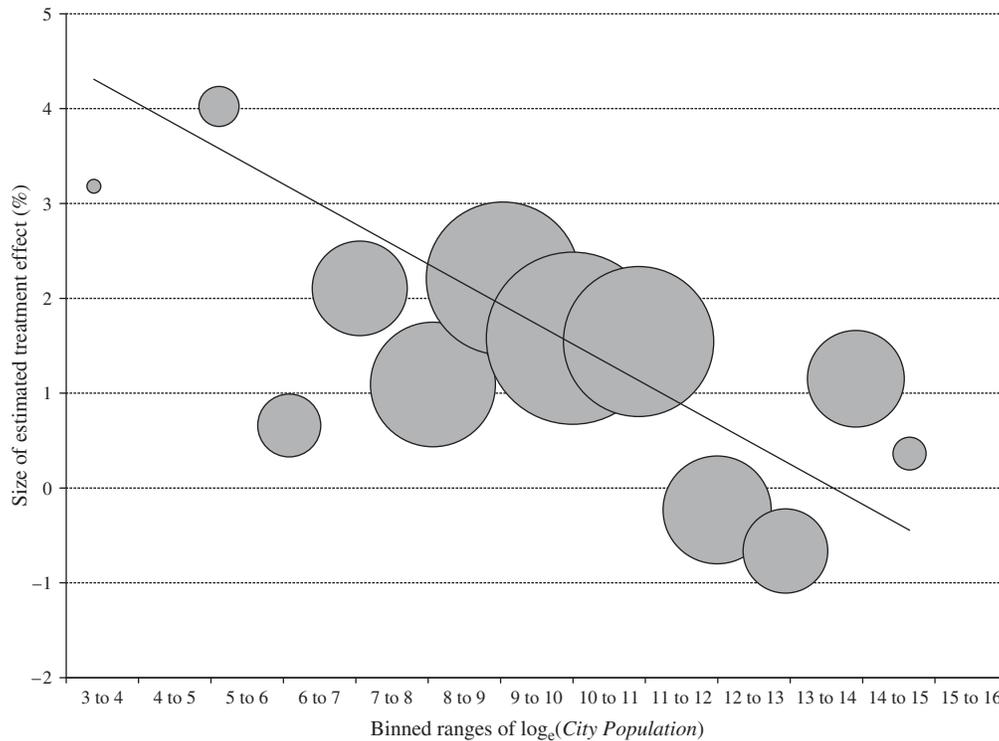
Notes. To produce regression estimates, donors are binned into cities with log populations within a one-unit range (e.g., 12 to 13, which corresponds to cities with a population of 162,755 to 442,413 people). Each bubble represents the treatment effect for one donor bin, and bubble sizes are proportional to the number of donors in a given bin. A linear trend line is plotted through the bubbles highlighting that as the city population increases, the estimated treatment effect of the city community drive condition declines.

drive's effect on the likelihood of donation increases by 0.26 percentage points. This interaction result is visually illustrated in Figure 5, which bins prospective donors by the size of their home city's population and highlights that the estimated treatment effect of the *city community drive* condition is larger in smaller cities. In short, we find that the positive effect of priming community membership on donations is larger among individuals from smaller cities, who survey evidence suggests are more likely to treat being a member of a community as a substantive part of their identity.

The findings from this experiment are robust to a number of alternative specifications. First, our findings are robust to probit specifications (with the Ai-Norton correction for the interaction); second, they are robust to clustering standard errors by state rather than by city; and, finally, they are robust to controlling for a city's income, population density, and degree of racial segregation using 2010 U.S. Census data. These robustness checks are presented in Online Appendix E.

5.   Conclusion

By examining the results of two large field experiments conducted by the American Red Cross, we

offer suggestive evidence regarding the power of identity primes as motivators of public good provision. We build on a growing economics literature highlighting the importance of identity to preferences and choice (Akerlof and Kranton 2000; Benjamin et al. 2010, 2013; Cohn et al. 2014) and demonstrate that strategically selected identity primes are capable of increasing public goods provision like giving to a charitable organization.

First, we find that priming a prospective donor's identity as a previous donor by reminding that prospective donor of her last donation to an organization increases giving. Consistent with the comparative static of our model, this effect is larger among individuals who historically have been more regular donors to the charity. Second, we find that providing fundraising campaigns with names that prime an aspect of a donor's identity associated with generosity (e.g., community membership) can increase donation rates. Again consistent with our comparative static, we find that this effect is particularly strong when the donor's identity group is likely to be personally relevant (i.e., when the donor lives in a smaller city).

Table 7 presents a comparison of the treatment effects detected across the two experiments. It highlights that the effects induced by the treatment con-

Table 7   Comparisons Across Experiments

Experiment	Condition	Obs.	Donor rate (%)	Avg. donation ($)	Avg. donation by donors ($)	% change in donation rate	% change in avg. donation	% change in avg. donation by donors
Identity as a previous donor (Experiment 1)	Donor identity	8,532	7.59	3.83	50.42	20.00***	4.09***	−6.06
	Control	8,529	6.33	3.41	53.92			
Identity as a community member (Experiment 2)	City community drive	10,404	5.51	2.47	44.79	38.34***	4.80***	−12.97***
	All other conditions	30,997	3.98	2.11	53.04			

Notes. The table compares the effect sizes across the two experiments analyzed in this paper. Although the populations in the two direct mailing experiments described here differ, there is still value in comparing effect sizes across relatively similar groups treated with different behavioral messaging interventions. Donations are winsorized at $300 (Experiment 1) and $500 (Experiment 2), the 99.9th percentile of donations made in response to appeals in each experiment, respectively. The % change measures reflect the coefficient from a regression of treatment on log(1+donation). The stars reflect whether the difference between the groups is significantly different from 0.

***$p < 0$.

ditions presented here are quite large in magnitude. Specifically, the treatment in Experiment 1 produces a 1.26 percentage point boost in giving, or a 20% increase over baseline, while the treatment in Experiment 2 produces a 1.53 percentage point boost in giving, or a 38% increase over baseline. As Table 7 shows, we also find that the marginal donations induced by the treatment conditions in both experiments are smaller, on average, than typical donations. This pattern is consistent with results from some past research exploring strategies for promoting increased giving. For example, Falk (2007) finds that giving gifts to potential donors induces donations that are smaller than average.

We rule out a number of the most prominent alternative explanations for the results detected and conclude that the treatments we study most likely affect giving by priming identity rather than through some other mechanism. While it may be impossible to rule out every alternative explanation, we believe that Occam's razor supports our preferred theory—the elegance and simplicity of a single, identity-priming explanation for both sets of experimental findings adds credence to it as the explanation.[36]

The experiments we present were practitioner inspired and were run without researcher intervention.[37] A direct benefit of examining practitioner-inspired experiments is that the results have clear policy relevance, since they explore approaches that a charity would (and did) implement in fundraising campaigns.[38]

These results provide insights into individual motivations for charitable giving and private provision of public goods as well as the role that identity plays in influencing economic choices.

Supplemental Material

Supplemental material to this paper is available at https://doi.org/10.1287/mnsc.2016.2582.

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[36] Formally, Occam's razor is a principle that "gives precedence to simplicity: of two competing theories, the simpler explanation of an entity is to be preferred" (*Encyclopædia Britannica* 2015).

[37] See Elfenbein et al. (2012) for an example of a similar approach using eBay sellers experimenting with donating money from products they sell. Focusing on practitioner-run experiments has costs as well. Many of the experiments that practitioners run are designed to answer very specific questions for the charity that are not of theoretical interest. For example, many of the experiments the Red Cross ran in the data we received were tests comparing completely different appeal letters to see which was most effective. Such an experiment may help the charity raise more money but is unlikely to provide deep insights to behavioral scientists. As is described in online appendix, to conduct this research, we had to identify which Red Cross solicitations were sent as part of experiments, and we then used the creative materials from those experiments to determine whether each experiment conducted was of theoretical interest. We took both of these steps before looking at any data to avoid introducing bias into the reporting of results.

[38] Consequently, results are useful for practitioners who can learn from these experiments run by the American Red Cross to encourage giving to their own organizations.

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