Common Identity and the Voluntary Provision of Public Goods: An Experimental Investigation

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Abstract
We conduct a framed field experiment in two Dallas neighborhoods to examine how common identity affects individual contributions to local public goods. The participants’ common identity is primed to make neighborhood membership salient before individuals make donations to local non-profit organizations. We find that the identity treatment is sensitive to community context. It decreases the likelihood of giving in the struggling, poor neighborhood, but its impact is positive, albeit statistically insignificant, in the low- to middle-income neighborhood. In addition, the identity treatment triggers participants’ perceptions or memories of experiences with their communities which in turn lead to the treatment differences across the two communities. Our findings reveal the limitations on the power of common group identity in influencing individual economic decision making, which has been largely overlooked in the literature.

Keywords: common identity, priming, public goods provision, experiment

JEL codes: H41, D64, C91

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Common Identity and the Voluntary Provision of Public Goods: An Experimental Investigation

Since Akerlof and Kranton (2000) first incorporated the concept of social identity into economic modeling, a growing volume of empirical and experimental research has investigated the impact of identity on behavior. This research has focused primarily either on artificially-created group identity in the laboratory (Eckel and Grossman 2005; Chen and Li 2009; Chen and Chen 2011), or on naturally-occurring aspects of identity; the latter can be further distinguished by whether identity is static – that is, tied to individual characteristics such as race (Benjamin et al. 2010), gender (Charness et al. 2007; Charness and Rustichini 2011) and caste (Hoff and Pandey 2006) or changeable, as is the case with membership in social groups. While considerable research has addressed artificially-induced or fixed identity, less attention has been given to the class of naturally existing identities associated with social groups such as corporations, churches or communities. Different from race, gender and caste groups, these social groups exist in large numbers in society, and their cultures and norms are more fluid and dynamic.

Within a group, cooperation can be promoted and the free rider problem mitigated by reinforcing a common identity. In corporations, for example, various team-building exercises are used to create a common identity among employees from different backgrounds, to promote more effective teamwork and higher overall productivity (e.g. Ball 1999). In religious environments strong group identity may lead to greater participation in religious activities and greater adherence to religious prescriptions in day-to-day life. For example, strong religious identity increases Protestants’ contributions to public goods (Benjamin et al. 2016).¹

¹ Even without self-selection of members, social groups can increase cooperation; for example, in a study using Swiss Army officer trainees, Goette et al. (2006) show that random assignment significantly increases willingness to cooperate with fellow platoon members.
However, common identities associated with social groups may not always carry positive connotations. Morale may be depressed after layoffs, and clashes of corporate cultures may make mergers ineffective (as demonstrated by Weber and Camerer 2003). Changes in religious leadership or changes in how services are conducted may alienate portions of the faithful. Communities may be high in crime or gang activity, alienating some group members. Sometimes individuals may choose to withdraw from these groups or communities, but in many cases they may have few alternatives. In poor economic conditions it is difficult to change jobs; family and social networks make it costly to change religious organizations; and those in unsavory neighborhoods may not have the resources necessary to move. Our society comprises many of these social groups, and their associated common identities carry widely different connotations. Moreover, the impact of negative connotations on individual economic decisions is understudied in the literature (with few exceptions such as Benjamin et al. 2016). While identities with negative connotations have been shown to harm education and productivity (as in stereotype threat, e.g., the seminal work by Steele and Aronson 1995, and the meta-analysis by Nguyen and Ryan 2008), this literature does not focus on giving or cooperation. Previous work examining identity and giving has ignored the possibility and has focused on the benefits of using identity to increase cooperation (e.g., Wit and Kerr 2002; Buchan et al. 2011). We bridge this gap.

Specifically, we investigate whether and how common community identity (being a member of their neighborhood) influences individual contributions to local charitable organizations that serve their communities. We focus on two neighborhoods in Dallas, TX: Fair Park, a low-income, predominantly African-American neighbourhood, and East Plano, a low- to middle-income neighbourhood with a more mixed ethnic representation. In each neighbourhood, we randomly select about half of our participants and introduce a common identity prime, a method widely used in psychology, which enhances the salience of these local
residents’ shared community identity. We then compare their choices in a series of real donation experiments with those in the control treatment from the same neighborhood. We study how the common identity treatment affects contributions to local public goods and how this impact of identity salience may depend upon the social image associated with the community identity of that neighborhood.

We find that the common identity treatment influences participants’ likelihood of contributing to local public goods, but that the direction of the impact is sensitive to the community context. In particular, we demonstrate that when the primed common identity has positive connotations (confirmed via surveys), the likelihood of giving is increased, albeit insignificantly, compared to the control treatment in this neighborhood. However, if the primed common identity has negative connotations, the likelihood of contributing decreases compared to the control treatment in this neighborhood. In addition, a difference-in-difference approach indicates that the impact of the identity salience on participants’ likelihood of giving is significantly greater in the first neighborhood than in the second. Last but not the least, the identity treatment triggers participants’ perceptions or memories of experiences with their communities which in turn lead to the treatment differences across the two communities.

This study extends the literature by illustrating how common identity works in different social environments, presenting a direct contrast between one community with moderately positive connotations (a low- to middle-income but up-and-coming community) and another with negative connotations (a struggling lower-income community). Compared to other studies in economics and psychology which highlight the positive influence of common identity, this study provides a more balanced and comprehensive perspective to understanding the influence of common identity. It also underscores the importance of understanding the broader context before implementing a policy to enhance common identity in organizations or communities.
As part of a large-scale field study, this paper differs from the other four companion papers including Leonard et al. (2010), de Oliveira et al. (2011, 2012), Candelo-Londono et al. (2017). Leonard et al. (2010) focus on the impact of one’s connections in social network on self-reported charitable giving and trust; de Oliveira et al. (2011) on giving types; de Oliveira et al. (2012) on stability of preferences. None of these studies are related to social identity. This paper is one of the two studies (the other is Candelo-Londono et al. 2017) which investigate the impact of identity on giving, but the only one that uses the priming approach. Candelo-Londono et al. (2017) exclusively focuses on the impact of social exclusion on giving by low-income Hispanics from three neighborhoods (including a traditional Hispanic enclave), with individual identity as a control variable in the analysis. In their paper, identity is not primed. Instead, it is elicited through a post-experimental survey. In contrast, this paper includes all participants – primarily African Americans in the Fair Park and a diverse sample in East Plano, uses the variations in identity generated by the priming approach, and does not study social exclusion.2

We now turn to a discussion of the previous literature in Section I. Section II introduces a theoretical framework to demonstrate how the identity prime may affect behavior. Section III presents the experimental design. Section IV presents data analysis and the results. Section V summarizes the results and concludes with an emphasis on the implications of how a common social identity can be leveraged to increase the voluntary provision of public goods.

I. Literature

While a number of common identities exist and significantly impact economic

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2 Table A.1 in the Appendix outlines the main differences of these four papers including the main research questions, methodologies, findings and the dataset being used.
behavior, the full literature, intersecting economics and psychology, is too vast to survey here. We therefore focus on the subset of the literature related to how common identity – being part of a community – may affect an individual’s contributions to local charitable organizations. Broadly, we address charitable and public goods contributions, specifically focusing on the role of shared social identity on decisions in social dilemma situations.

A number of factors have been shown to impact voluntary contributions to individuals or organizations, or to the provision of public goods. Giving in these settings is partially determined by strategic considerations or monetary incentives (e.g., List and Lucking-Reiley 2002; Eckel and Grossman 2003; Karlan and List 2007 and many of the papers reviewed in Ledyard 1995). In addition several non-pecuniary factors also have been shown to influence giving, including: beliefs about others’ giving (e.g., de Oliveira et al. 2012; Fischbacher and Gächter 2010; Offerman et al. 1996), social preferences or value orientations (e.g., de Oliveira et al. 2015; Fischbacher and Gächter 2010; Offerman et al. 1996), social information (Croson and Shang 2008; Frey and Meier 2004; Shang and Croson 2009; Chen et al. 2010), and selection of group members (e.g., Page et al. 2005). Chaudhuri (2011) surveys many of these issues in laboratory public goods experiments post-Ledyard (1995).

In psychology, social identity theory was developed by Tajfel and Turner (1979) to understand the psychological basis for intergroup discrimination (also see reviews in Brewer, 1991). More recent studies show that activating the salience of shared common social identity among individuals can reduce intergroup bias (Gaertner and Dovidio 2000; Dovidio et al. 2009), increase cooperative behavior in prisoner’s dilemma games (e.g., Miller et al. 1998) and public goods games (e.g., de Cremer and van Vugt 1999; Wit and Kerr 2002; Buchan et al. 2011). Levels of cooperation are significantly higher when a shared group identity is made salient than when there is no shared identity.
Economics studies find that a shared group identity increases cooperation in public goods games (Eckel and Grossman 2005) and prisoner’s dilemma games (Goette et al. 2006), even though the dominant strategy is to free ride or to defect. A shared group identity also improves coordination in the battle of sexes game (Charness et al. 2007), and the minimum-effort game (Chen and Chen 2011), suggesting that a salient common identity leads to the selection of a more efficient equilibrium. Chen et al. (2015) investigate how group identity based on university affiliation influences competitive behavior. Lane (2015) provides an excellent survey and meta-analysis on many of these studies during the past decade.

One’s social identity is multi-dimensional, and is attached to a whole host of associated traits, stereotypes, social expectations and schemas (Deaux 1996). Therefore, to study the impact of a specific aspect of social identity, a method called priming is commonly used in social psychology to expose participants to certain stimuli (called “primes” which can be text, image or audio) in order to exogenously and temporarily activate the social knowledge structures associated with the identity of research interest (Bargh 2006). Studies show that priming social identities may temporarily induce study participants to act consistently with the stereotypes associated with the primed identity. For example, Shih et al. (1999), Asian-American female students perform better on a mathematics test when their ethnic identity is primed, but perform worse when their gender identity is primed, consistent with stereotypes that women have inferior and Asians superior quantitative skills. Further, they show that the impact of identity priming exhibits the reverse pattern for Asian American female students in a verbal test, which is again consistent with stereotypes that women are verbally talented while Asians are not. Further, priming may activate intergroup bias (e.g. Perdue et al. 1990).³

³ See Bargh (2006) for surveys of the psychological literature on the priming method. See also Kahneman’s call on psychologists who work on social priming to check the robustness of their findings (Nature 2012), and responses from the
Priming techniques have been adopted in economics research to study the impact of social identity on economic decision making. Some studies investigate how institutionally-imposed identities influence individual responses to incentives under different payment regimes (e.g., caste identity in Hoff and Pandey 2006, 2012, and migrant identity in Afridi et al. 2015), and affect dishonest behaviors (e.g., professional identity as bank employees in Cohn et al. 2014, and criminal identity in Cohn et al. 2015). Some other research studies how racial and gender identities affect time and risk preferences (Benjamin et al. 2010), how gender identity influences generosity towards others (Boschini et al. 2012) and response to female leadership (Gangadharan et al. 2016), how racial identity affects trust (Burns 2012), how gender/family and professional identities influence men and women’s preferences for competition (Cadsby et al. 2013). Additional studies have focused on how religious identity affects economic decisions such as contribution to public goods, financial risk taking and capital accumulation (Benjamin et al. 2016), and how race and organizational identities affect cooperation and coordination (Chen et al. 2014). Chowdhury et al. (2016) investigate different impact of real and minimal identities on group conflict.

One of the few studies to show a differential impact of an identity prime is Liu et al. (2014). They conduct a battery of lab experiments, and show that Chinese and Taiwanese subjects respond differently to a Confucianism prime. They find that when being primed with Confucianism, Chinese subjects make more risk seeking and more impatient choices while Taiwanese subjects made choices that showed more patience and more trustworthiness.

psychology community that appeared in a special section on “Behavioral Priming and its Replication” in Perspectives on Psychological Science in January 2014.
II. Incorporating Priming into an Economic Framework

We now turn to the theoretical framework, which extends the model of Benjamin et al. (2010, henceforth BCS), and builds on Akerlof and Kranton (2000). Following BCS, we consider the identity prime as a temporary, exogenous perturbation of the strength of one’s identity. Our framework departs from BCS by relaxing their assumption that a category prime always increases the strength of an individual’s identification. Rather, our model allows the change of identity strength to be contingent upon the associated identity-membership esteem (Tajfel and Turner 1986; Snyder et al. 1986; Luhtanen and Crocker 1992; Shang et al. 2008; discussions are deferred below when we introduce the model).

Using BCS’s notation, let $C$ denote a social category, $s$ the strength of the individual’s identification with $C$, and $x$ the individual’s action, e.g., voluntary contribution to a local public good. Let $x_0$ be the utility-maximizing choice in the absence of identity considerations, and $x_C$ the social norm prescribed for the members of social category $C$. Since the BCS model considers individuals trying to minimize the negative impact of deviating both from their own preferred choice and from the social norm, the individual’s decision in the presence of identity considerations is to choose $x$ to minimize her disutility, which is now the weighted average of disutility due to deviations from $x_0$ and $x_C$:

$$
\text{Max}_{x_0 \leq x \leq x_C} U = -(1 - w(s))(x - x_0)^2 - w(s)(x - x_C)^2
$$

The term $w(s)$ is the weight placed on social norm. It depends on the strength of individual’s identification $s$ with $C$. We assume that the stronger her identification is with $C$, the higher the weight $w$, i.e., $\frac{\partial w}{\partial s} \geq 0$. In addition, we assume that the failure to identify with $C$ results in a zero weight on $x_C$, i.e., $w(0) = 0$.

The first order condition produces the following condition:
That is, $x^*$ is a weighted average of the preferred action in the absence of identity considerations and the norm-prescribed action for the social category $C$. The logistic model for the likelihood of contributing is given by:

$$\text{Prob}(x^*(s) > 0) = \frac{e^{x^*(s)}}{1 + e^{x^*(s)}}$$

In BCS an identity prime (denoted by $\varepsilon$) is modeled as a temporary perturbation of identity strength (i.e., $s' = s + \varepsilon$), and it is assumed that $\varepsilon > 0$. Our model extends BCS by considering two social categories ($C = \{\text{Positive, Negative}\}$) in a hierarchical society, where the $P$ category is associated with moderate or high social status and hence positive social identity esteem, while the $N$ category with low status and hence negative social identity esteem. This extension incorporates both positive and negative identity posited by Tajfel and Turner (1986) in social identity theory. They argue that collective identity may be positive or negative according to the evaluations of one’s social groups – a concept that is later formalized as collective identity esteem in Luhtanen and Crocker (1992).

To differentiate the asymmetric impact of positive versus negative identity primes, our model allows the sign of $\varepsilon_C$ to depend on $C$: a category prime increases the identity strength $s$ for $P$ but decreases $s$ for $N$, i.e., $s'_i = s_i + \varepsilon_C$ where $\varepsilon_P > 0$ and $\varepsilon_N < 0$. These assumptions are consistent with early findings in the social

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4 Collective identity esteem is defined as “individual’s judgment of how good or worthy they are as members of their social groups” (Luhtanen and Crocker 1992, p. 305).
psychology literature. For example, Snyder et al. (1986) show in a lab experiment that, compared to those who are given no feedback, participants are more inclined to associate with their group after being told that their group has succeeded in a group task (i.e., a “basking in reflected glory” phenomenon); they are more prone to distance themselves from their group after being told that their group has failed (i.e., a “cutting off reflected failure” phenomenon).

The comparative statics of Equations (2) and (3) then become:

\[ \Delta x^* = x^*(s_i') - x^*(s_i) \approx \frac{\partial w}{\partial s} \cdot (x_C - x_0) \varepsilon_C \]

\[ \Delta \text{Prob}(x^*(s_i) > 0) = \frac{\Delta x^*}{(2 + e^{x^*(s_i)} + e^{-x^*(s_i)})} \]

Equations (4) and (5) indicate that the prime may affect the contribution level \( x^* \) and the likelihood of contributing \( \text{Prob}(x^*(s_i) > 0) \). For pro-social behaviors such as voluntary contributions to public goods, it is reasonable to assume \( x_C \geq x_0 \): The behavior prescribed by the social norm \( x_C \) does not fall below the private-utility-maximizing level \( x_0 \). Therefore, if \( \frac{\partial w}{\partial s} > 0, \Delta x^* \) and \( \Delta \text{Prob}(x^*(s_i) > 0) \) as the result of the category prime depends on the sign of \( \varepsilon_C \). If the primed social category is associated with positive social esteem \( (C = P \text{ and } \varepsilon_P > 0) \) then \( x^* \) increases. If it is associated with negative social esteem \( (C = N \text{ and } \varepsilon_N < 0) \), then \( x^* \) decreases, as the individual moves to distance herself from the low-esteem behavior.

III. Design and Implementation

We designed and conducted a framed field experiment (Harrison and List 2004) or a lab-in-the-field experiment (Morton and Williams 2010, p. 296) in two neighborhoods in the Dallas, TX, metroplex: one in the Fair Park neighborhood in
South Dallas in June 2007; and the other in East Plano in June-August 2008.

Fair Park is a struggling, low-income urban neighborhood with its population predominately being African American (77%). Being largely characterized by poverty, this area has about 39% of families living below the poverty level. East Plano is a low- to middle-income, up-and-coming suburban area with diverse ethnic representation in north Dallas. The median per capita income in the Fair Park neighborhood is approximately $10,700 and median household income is approximately $19,600 (Williams Institute 2006), compared to $23,040 and $54,000 in East Plano. More comparisons and contrasts in the characteristics between these two neighborhoods will be detailed in our discussions on the participants’ demographics and self-reported community connections in this section, and their experiences living in their neighborhoods in Section IV.

Participants were recruited via flyers distributed to homes and local stores. Half of the sessions were randomly selected to receive the control treatment, and the other half were selected to receive the identity treatment in which participants’ identity as part of the neighborhood was made salient. In both treatments, participants worked through an activity booklet containing a number of incentivized tasks including elicitations of risk and time preferences, a laboratory public goods game (VCM), and three versions of a charity donation game.5

**Common Identity Priming.** We implemented a between-subject design within each neighborhood. Our identity manipulation consisted of a short questionnaire (which we termed the “Community Connection Questionnaire”) that was designed to make participants’ common identity salient before they started the VCM and donation games. The questionnaire was inspired by the Multigroup Ethnic Identity

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5 One research question that the research team tried to investigate in this large-scale field study was the stability of social preferences, in particular the preference to contribute to public goods, across contexts. This question was addressed by examining the relationship between a general willingness to cooperate with members of the community (in the lab VCM task) and a willingness to provide support to real local public goods (in the charity donation game). This is discussed in more detail in de Oliveira et al. (2012).
Measure (MEIM, Phinney 1992). The original MEIM opened with a general statement on ethnicity (“In this country, people come from a lot of different cultures …”), followed by a self-identification question on one’s ethnicity (e.g., white, black, Hispanic, Asian and etc.) and a series of items for subjects to rate regarding their behaviors (or practices, also called identity search) and affirmation (or belonging) with their ethnic groups.6

We closely followed the MEIM, modifying it to focus on community characteristics rather than characteristics of an ethnic group. Specifically, our community identity questionnaire began with a paragraph that stated the shared commonality of the lives of residents in their neighborhood, and was read aloud to the participants. It read, “In the South Dallas/Fair Park (or East Plano) area, people come from many different places. However, you have all chosen to live in the South Dallas/Fair Park (East Plano) neighborhood. As members of the same neighborhood, you share many public facilities: for example, parks, schools, public libraries, museums, roads, public transportation, local stores, and many others. These questions are about how strongly you identify with being a resident of the South Dallas/Fair Park (East Plano) area.” Participants then answered questions individually and in private about how long they had lived in the area, and how strongly they identified themselves as residents of the neighborhood. They were then asked to rate nine statements on a 1-5 scale about their experience in local activities, interactions with other residents, personal attachment, sense of belonging, and pride in being part of their community. A sample questionnaire is

6 The affirmation (or belonging) items were included in MEIM since the “[k]ey aspects of ethnic identity that have been included in most previous studies are a feeling of belonging to an ethnic group and attitudes toward the group” (Phinney, 1992, p. 159). This conclusion was drawn based on an earlier study by Phinney (1990) which had reviewed 70 studies on ethnic identity in psychology from 1972 to 1990. Therefore, Phinney (1992) proposed MEIM to include attitude measures in order to assess “ethnic pride, feeling good about one’s background, and being happy with one’s group membership, as well as feelings of belonging and attachment to the group” (Phinney, 1992, p. 159). Other studies have adopted an alternative identity priming approach that asks subjects to answer questions such as what language is spoken at home (e.g., Shih et al. 1999; Chen et al. 2014). Although MEIM may be perceived as somewhat stronger than this alternative approach, an assessment of the impact of this interesting difference in methodology on results is beyond the scope of this study.
included in the online Appendix A with accompanying descriptive statistics in the online Appendix B.

In the identity treatment participants completed the identity priming questionnaire after the risk and time preferences task and before the VCM and donation games. In the control treatment no neutral priming was conducted before the VCM and donation games. Instead, the Community Connection Questionnaire was administered at the end of the experiment, after all decisions were made. Omitting the neutral priming in the control treatment, however, may lead to a caveat. That is, the mere act of administering the Questionnaire before the decisions in the identity treatment might have impact on the participants that was unrelated to the community identity salience. For example, since the amount of time between the start of the experiment and the VCM and donation games was different between the identity and the control treatments, the participants’ attention span might differ across the two treatments. These factors, albeit unrelated to the identity salience, may be incorrectly attributed to the impact of community identity if we only focus on the treatment effect (by comparing giving between the control and the identity treatments) within a neighborhood. We tackle this issue by using a difference-in-difference empirical strategy to cancel out the potential confounds. As will be detailed in Section IV, we compare the treatment effects of identity across the two neighborhoods and measure the causal impact of the identity salience based on the

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7 The control treatment did not contain a neutral priming due to the practical constraints. As discussed in the introduction, the large-scale field study consisted of five companion projects (including ours) with each project focusing on distinct research questions (see Table A.1 in the appendix). Since our participants were local residents in these communities the biggest challenge was subject recruiting. It took the research team enormous amount of time and effort to gather this novel dataset. In order to accommodate different needs in all the projects and best utilize this precious sample, one compromise that we had to make was not to include the neutral priming in the control treatment in order to avoid any potential confounds (caused by the neutral priming) in other companion papers that used the non-priming data. Ideally, a validation check would be conducted following the identity priming to assess the effectiveness of the priming instruments. However, as a result of omitting the neutral priming in the control treatment, we were unable to conduct a validation check on the strength of the community identity between the control and the identity treatments. Therefore, one direction for improvement in future field research on identity priming is to include a neutral framing in the control treatment and a validation check of identity.
difference-in-difference estimate.

Incentivized Tasks. In the VCM, participants were randomly assigned into anonymous groups of three, and each individual was given an endowment of $60. They were told that they each could allocate their endowment between their individual account (called their “wallet”) and a group account. To avoid confusion, we described participants’ decisions as choosing how much they wanted to “put in their wallet” and how much they wanted to “put in the group account,” rather than using the more abstract language such as “allocate.”

To accommodate the low-education and low-literacy participants in the Fair Park study, all tasks were presented in pictorial form with minimal text in both experiments. Specifically, participants were given four discrete options. They could choose to: (1) keep all $60 in their wallet, (2) keep $40 and put $20 in the group account, (3) keep $20 and put $40 in the group account, or (4) put all $60 in the group account. This allowed us to depict the choices in $20 bills since we displayed the games and decision forms in a visual manner. (We intentionally excluded the option to contribute half of the endowment; this design moves people away from the focal 50/50 split, minimizing the effect of the focal point on decisions.) Money in the individual account was kept by the individual. Money placed in the group account was doubled by the experimenter, and then split evenly between all group members.

For the local charity donation game, the same protocol was followed, except that money placed in the group account was doubled and then donated to a specified

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8 The “wallet” framing served two main purposes. First, it was more concrete, relative to the more neutral terminology that has been used in other laboratory experiments, for many of our participants given their level of education and literacy, especially in the poor neighborhood. Second, since our participants may not have had experiences of getting paid for participating in a research study before, this framing was to further ensure them of payment based on their chosen amount for their “wallet.” In addition, the average amount contributed to the VCM public account in our control treatment is 43.13% in the poor neighborhood and 49.30% in the low- to middle income neighborhood. They are consistent with early findings in the literature on public goods that shows the average contributions are between 40% and 60% of the optimal level (Ledyard, 1995). More importantly for this study, since this framing is held constant across the treatments and our analysis focuses on the treatment effect and the difference-in-difference comparison across the two neighborhoods, it is unlikely that the “wallet” framing would lead to any biases in our results.
organization providing public goods for their neighborhood.

In the Fair Park neighborhood, the three organizations were the Martin Luther King, Jr. Family Clinic (health services), the Dallas Bethlehem Center (educational services for children), and the Inner-City Community Development Corporation (job training services). In the East Plano neighborhood, the three organizations were the Collin County Adult Clinic (medical care for adult residents who have no access to traditional health insurance), Head Start (educational services to preschool children from low-income families), and Practical Parenting Education (professional training to parent educators). Every effort was made to match the organizations as closely as possible across neighborhoods. An information sheet was provided to the participants on the organizations, as shown in the online Appendix C. Experimental instructions are available in the online Appendix D.

Each participant made three separate allocation decisions, one for each of the organizations; the order of decisions was randomized. Beliefs about others’ contributions were elicited after the donation decisions were made. Individuals were asked how much they thought each of the other two individuals in their group contributed to the group account in each of the activities, thereby measuring both the average belief and the distribution of beliefs.

Before the donation games (and before the identity prime), each participant was asked to make decisions in a risk task and a series of time preference tasks. Risk preferences were elicited using a simple gamble-choice task (Eckel and Grossman 2008). In the time preference task, participants made a sequence of choices between a smaller amount sooner and a larger amount later. The number of patient choices, i.e., choices of larger amount at a later time, is used to proxy patience in the

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9 In the risk task, participants choose which of the six 50/50 gambles ($80/$80, $60/$120, $40/$160, $20/$200, $0/$240, and -$20/$260) to play. The ten time-preference choices were $60 tomorrow vs. $61 ($62, $64, $66, $68) in one month and $60 tomorrow vs. $65 ($70, $80, $90, $100) in five months. In the VCM task, the amount contributed to the group account is divided equally among the three participants in the group.
empirical analysis below.

At the end of the study, a survey was given to collect demographic information. One of the six incentivized tasks (including the risk, time preferences tasks, the laboratory VCM, and the three donations decisions) was selected for payment for all participants, so at most one of the donations was implemented. If selected, a check was made out payable to the organization, sealed in a stamped and pre-addressed envelope in front of the participants and mailed later.

Participants. There were 190 participants in the Fair Park sample (102 in the control treatment and 88 in the identity treatment), and 97 participants in East Plano (49 in the control treatment and 48 in the identity treatment). Sessions lasted on average two hours, and participants were paid a $20 show-up fee plus their earnings from the incentivized tasks. Total average earnings were $79 in Fair Park and $70 in East Plano.

Table 1 reports participant demographics by treatment. On average, participants are in their late 30s and early 40s. Many have children, and are the main wage-earner in their households. Participants in Fair Park are almost all African American, with low levels of income and other financial assets. In East Plano participants are more ethnically diverse, with 57 percent of Hispanics, 27 percent of blacks, and 12 percent of Caucasians. The proportion of participants who were born locally is significantly higher in Fair Park (61 percent born in Dallas; 82 percent born in Texas) than in East Plano (19 percent born in Dallas; 31 percent born in Texas) ($p < 0.01$ in both cases, 2-side test of proportions). Participants in Fair Park have lived in the community for 17.7 years, significantly higher than 11.5 years by those in East Plano ($p < 0.01$, 2-side t test of means).

Note that we randomly assigned experimental sessions (rather than individual participants) to the two treatments. Significant differences were found in the number of children per family in Fair Park, the number of years of residence and one identity item in East Plano ($p < 0.05$). No systematic differences a priori were
found otherwise across the two treatments in other aspects of participants’ demographics and their connections to neighborhoods, which implied successful randomization of participants between treatments \textit{ex post}.

In the online appendix (Table B1) we present summary statistics for all items in the Community Connection Questionnaire, which were asked \textit{before} the incentivized tasks in the identity treatment and \textit{after} the tasks in the control. We highlight the key findings here. East Plano participants show significantly more positive attitudes than those in Fair Park in their responses to the questions regarding happiness, sense of belonging, pride, and feeling good about being a member of the neighborhood ($p < 0.01$ for happiness, pride, and feeling good, two-sided t-test of means; $p = 0.02$ for sense of belonging after we control for the number of years of residence). This suggests that the residents in Fair Park have lower social esteem than those in East Plano, despite the fact that the former engaged in daily activities in their neighborhood \textit{more} than the latter (as shown in the first five columns of Table B1.) We note, however, the average social esteem in East Plano is only at a moderate level. As shown in Table B1, the average values of the first five variables on participants’ engagement in the neighborhood are significantly lower than 4 (out of the maximum score 5; $p < 0.01$, t test of means), and the average values of the last four variables on their happiness and attachment to the neighborhood are significantly lower than the maximum score 5 ($p < 0.01$, t test of means). It further confirms that although East Plano is an up-and-coming neighborhood – a better one than the struggling Fair Park, it is not an exceptionally good neighborhood. This might limit the positive impact of identity priming on participants’ giving to the local public goods in East Plano.

This study takes advantage of these pre-existing differences in social esteem across the two neighborhoods to examine how priming a common identity affects contributions to local public goods. The theoretical framework in section II suggests that priming community identity is likely to trigger a positive self-image
among East Plano participants who have moderately high self-esteem, and a negative self-image among Fair Park participants who have low self-esteem. Therefore, we hypothesize that individual contributions to local public goods, i.e., $x$, will increase (or decrease) in response to the identity prime in East Plano (Fair Park). These hypotheses also apply to an individual’s willingness to contribute.

IV. Results

While the focus of this paper is on the donation game contributions, two comments about the public goods game (VCM) are in order. First, behavior in the VCM is within the general bounds for a one-shot game (full details about the game can be found in de Oliveira et al. 2011, 2012). Second, most relevant for the present discussion, we do not find any impact of the identity treatment on behavior in the VCM, indicating that the identity treatment does not influence general cooperative tendencies (as measured by the public goods game).10

We analyze the effect of priming an individual’s connection to the neighborhood on giving to local public goods. The analysis considers specifically the likelihood of donating, since we find that the primary impact of the identity prime is on the likelihood of giving rather than the amount given.11 Descriptive statistics and results based on aggregate data are presented first, followed by regression analysis using individual data. In order to tackle the potential confounds caused by omitting the neutral priming in the control treatment (e.g., difference in the starting time of the games or participants’ attention), as discussed in Section III, we differentiate

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10 The analysis and results on VCM are reported in Appendix E.
11 This is consistent with other work on charitable giving where treatments affect the extensive margin (bringing in new donors), but not the intensive margin (how much a set of donors are giving – e.g., Kessler 2013), as well as theoretical results indicating that variables can impact the two margins in different manners (e.g., Bergstrom et al. 1986). In this study the identity treatment effect on the amount given is directionally consistent but not statistically significant. The identity treatment insignificantly increases (decreases) average contributions in East Plano (Fair Park). Online/Referees’ Appendix Figure A1 reports average contributions by category. Appendix Figure A2 presents contribution histograms by category for each neighborhood. Appendix F includes the analysis on the impact of identity prime on the aggregate amount given and the amount conditional on giving.
two terms in the analysis – the identity treatment effect and the impact of identity salience. The identity treatment effect refers to the difference in giving between the control and the identity treatments within a neighborhood. The treatment effects of identity are then compared across the two neighborhoods using a difference-in-difference empirical strategy to draw inferences on the causal impact of the identity salience since the difference-in-difference across the neighborhoods helps cancel out the possible confounds. For the sake of completeness and the ease of interpretation, we still discuss the treatment effects within each neighborhood separately. However, the causal impact of the salience of community identity is drawn based on the difference-in-difference estimates.

Figure 1 presents the likelihood of contributing by category. We find that the identity treatment affects participants’ likelihood of giving in the same pattern across categories within each neighborhood, but the impact is in the opposite direction across neighborhoods. Two-sided test of proportions shows that the identity treatment decreases the likelihood of contributing in Fair Park, and increases the likelihood of giving in East Plano, though not always significantly so (Fair Park, \( p = 0.088 \) for Health, \( p = 0.062 \) for Children, \( p = 0.018 \) for Job Training; \( p > 0.10 \) for all the three categories in East Plano).

Figure 2 presents histograms of the number of charities to which participants contribute. The x-axis shows the number of charities that participants made contributions to. In Fair Park the fraction of participants who contribute to none of the charities increases significantly from 0.25 to 0.40 (\( p = 0.036 \), two-side test of proportions) when primed, and the fraction who contribute to all three charities drops sharply from 0.58 to 0.43 (\( p = 0.044 \)). In East Plano the fraction of participants who contribute to none of the charities decreases from 0.22 to 0.15 (\( p = 0.319 \)), and the fraction of those who contribute to all three charities increases from 0.59 to 0.73 (\( p = 0.154 \)). Overall, the identity treatment leads to a leftward shift of the histogram in Fair Park (\( p = 0.029 \), two-side Wilcoxon rank-sum test),
and a rightward, but insignificant, shift of the histogram in East Plano \( (p = 0.161) \).

On average, participants in Fair Park made contributions to 2.0 charities in the control and to 1.5 in the identity treatment \( (p = 0.031, t \text{ test of means}) \); participants in East Plano made contributions to 2.1 charities in the control, compared to 2.4 in the identity treatment \( (p = 0.194) \).

Recall that participants were randomly assigned to groups of three in the experiment. All participants were asked about their beliefs about the other two participants’ contributions in their group. For each charity, there are three possible cases: a participant believes 0, 1, or 2 of the other two participants in his/her group donate to this charity. Figure 3 presents the histograms of their beliefs about these three cases by pooling the three charities. The patterns of the histograms are similar for each charity. The Wilcoxon rank-sum test shows that the identity treatment does not influence participants’ beliefs, compared with the control treatment \( (p > 0.10) \) in each neighborhood.

The aggregate results in Figures 1-3 suggest that the identity treatment encourages (discourages) giving in East Plano (Fair Park), but has no impact on participants’ beliefs of others’ choices in their group. We next use a logit model to investigate the impact of the identity treatment on the likelihood of giving and to compare the impact across the two neighborhoods. Results are presented in Table 2. The dependent variable is whether a participant contributes to the charity. It is coded as ‘1’ if he/she does, and ‘0’ otherwise. Column 1 includes the main variables of interest such as the identity treatment dummy, the East Plano neighborhood dummy, their interaction term, and the charity fixed effects (with the charities in the Health category being omitted). More explanatory variables are added in Column 2, including the female dummy, risk preference (measured by individual choices made in the gambling task) and time preference (measured by the number of patient choices made in the time-preference tasks). Column 3 further adds to the analysis participant’s belief on how many others are contributing to the charity.
Since there are three participants in each group, the “belief” variable takes a value of 0, 1 or 2. Standard errors, given in parentheses, are clustered on the individual level since no feedback information was given to the participants until the end of the experiment. Marginal effects are reported. The impact of identity treatment on the likelihood of giving in Fair Park is measured by $\alpha_1$. Its overall impact in East Plano ($\alpha_1 + \alpha_3$) is reported in the lower panel of Table 2.

Column (1) of Table 2 shows that in Fair Park the identity treatment significantly decreases the likelihood of giving to charity by 12.9 percentage points ($\alpha_1, p = 0.027$), relative to the control treatment. We also find that the impact of the identity treatment is 25.2 percentage points higher ($\alpha_3, p = 0.021$) in East Plano than in Fair Park, although its treatment effect on the likelihood of giving is 12.3 percentage points but statistically insignificant ($\alpha_1 + \alpha_3, p = 0.191$) in East Plano. These main treatment effects hold after additional explanatory variables are included in columns (2) and (3).

In Column (2) we find no gender differences in the likelihood of giving ($\alpha_4 = 0.017, p = 0.736$). The more risky choice a participant makes in the gambling tasks, the more likely he/she contributes to the local public goods. But this effect ($\alpha_5 = 0.038, p = 0.059$) is only marginally significant in Column (2). In contrast, individual time preference significantly relates to the likelihood of giving. A higher number of patient choices in the time preference elicitation task is associated with a greater likelihood of contributing to local charities ($\alpha_6 = 0.057, p < 0.001$). This can be interpreted to mean that more patient individuals view their contributions as investments in their neighborhood’s future and hence are more willing to donate.

Column (3) further includes the belief variable. Recall belief is not affected by the identity treatment, as shown in Figure 3. However, we find in Column (3) that participant’s belief significantly influences ones’ likelihood to give. The marginal effect of belief is 0.208 ($\alpha_7, p < 0.001$), indicating that one is more likely to give when he/she believes the two other participants in their group will give. This
indicates that these participants are by and large conditional cooperators when making decisions (Chaudhuri 2011). Despite the concern that the belief was elicited after decisions were made for public goods and hence might potentially be subject to an endogeneity problem, we find that including the belief variable does not alter the main results and the estimates of other explanatory variables.

Findings in Table 2 thus lead to Results 1-3.

**Result 1 (Treatment Effect in Fair Park).** The identity treatment significantly decreases participants’ likelihood of giving in the struggling, poor neighborhood.

**Result 2 (Treatment Effect in East Plano).** The identity treatment increases participants’ likelihood of giving in the low- to middle-income, up-and-coming neighborhood, but the impact is not statistically significant.

**Result 3 (Differential Treatment Effects).** The impact of the common identity salience on participants’ likelihood of giving is significantly higher in the low- to middle-income neighborhood than in the struggling, poor neighborhood.

Why does the common identity treatment exhibit such different effects across neighborhoods? We believe that reminding participants that they are part of their neighborhood may remind them of their perceptions and experiences living in their neighborhood. These perceptions and experiences may be different depending on the neighborhoods they live, and in turn trigger the differential changes in their behaviors. Some evidence supporting this conjecture comes from the data collected from the post-experiment survey. In the survey, participants were asked about how much they trust people from their neighborhoods, how fair or helpful they think people from their neighborhoods are, whether they have ever been a victim of any violent incident (been assaulted or robbed), whether they ever witnessed someone else being involved in a violent incident, and how important it is to them to feel
safe from harm.\textsuperscript{12} Table 3 compares individual perceptions and experiences across neighborhoods. Overall, participants in East Plano reported significantly higher ratings on the trust, fairness and helpfulness questions compared to Fair Park participants ($p < 0.05$). The rate of being victimized in or witnessing violent incidents in Fair Park is more than double the rate in East Plano ($p < 0.01$); the need to feel safe from harm is significantly greater in Fair Park than in East Plano ($p < 0.01$).\textsuperscript{13} These observations may explain why the community identity prime back fires by decreasing, rather than increasing, the likelihood of giving to local public goods in a struggling, low-income neighborhood like Fair Park.

In Table 4, we formally investigate the mechanism behind the differential treatment effects that is suggested above. Specifically, we test a hypothesis that the identity treatment triggers participants’ perceptions or memories of experiences with their communities which in turn lead to the treatment differences across the two communities. We introduce a new variable, \textit{Experience with Crime}, which takes a value of 1 if a participant had been a victim of a crime or had witnessed a crime in their communities, and takes a value of 0 if otherwise.\textsuperscript{14} This new variable, its interaction with the treatment variable, and a three-way interaction with the treatment variable and the community dummy are further added in an augmented analysis based on Table 2 to test whether and how the differences in the treatment effects are driven by the differences in individual experiences across communities. Table 4 presents the results. Similar to Table 2, standard errors are clustered on the individual level, and marginal effects of the logit models are reported.

\textsuperscript{12} The trust, fairness, and helpfulness questions were based on 1 to 4 likert scale with a higher number meaning higher level of trust, fairness and helpfulness; the importance to feel safe is based on 1 to 5 likert scale with a higher number meaning greater importance. The questions on violent incidents were binary-choice questions.

\textsuperscript{13} There is no significant difference in the self-reported perceptions between the identity and the control treatments within each neighborhood. These perception questions were always asked \textit{after} the identity prime questions.

\textsuperscript{14} The exact wording of the two questions were “[h]ave you ever been assaulted, robbed, or have you been a victim of any violent incident?” and “[h]ave you ever witnessed someone else being assaulted, robbed, or involved in another violent incident?”
Our discussion will focus on the lower panel of Table 4 on the overall impact of identity treatment for participants with different experiences with their communities. We find that in the poor, struggling community Fair Park, the identity treatment has a significant negative impact on the likelihood of giving for participants who had experienced crime there, but it has no impact on the likelihood of giving for those who did not experience crime. Using column (1) as an example, we find that compared to the control treatment, the identity treatment leads to 19.1 percentage points ($p = 0.008$) of reduction in the likelihood of giving among those who experienced crime in Fair Park, while this reduction is only 2.9 percentage points ($p = 0.768$) among those who did not experience crime. This leads to an overall significant negative impact of the identity treatment in Fair Park reported in Result 1. In sharp contrast, in the low- to middle-income but up-and-coming community East Plano, the identity treatment leads to 22.0 percentage points of increase ($p = 0.049$) in the likelihood of giving among those who did not experience crime, but 4.8 percentage points of decrease ($p = 0.776$) in the likelihood of giving among those who experienced crime. These effects combined leads to a positive but insignificant effect of the identity treatment in East Plano found in Result 2. Therefore, results in Table 4 provide support for our hypothesis on the mechanism of the identity treatment effects. This is summarized in Result 4.

**Result 4 (Mechanism of Differential Treatment Effects).** *The differential impact of identity salience on participants’ likelihood of giving across the two neighborhoods is primarily driven by the fact that the identity treatment triggers participants’ perceptions or memories of experiences with their communities.*

The result in Table 4 for the low- to middle-income community East Plano suggests that despite the significant positive treatment effect among those who had no experiences with crime, those who had witnessed a crime or had been a victim reacted to the identity treatment negatively, *albeit* insignificant. This finding, combined with the observations in Tables 1 and 3, helps explain why the identity
treatment fails to generate a significant increase in the likelihood of giving, relative to the control treatment, in East Plano. East Plano is a highly ethnically diverse neighborhood with a large portion of residents born elsewhere and later moving into this neighborhood. With largely low- to middle-income households, East Plano is far from being a very good neighborhood. This can be reflected by the following observations in Tables 1 and 3. On average, 30% of East Plano participants had at least some college education, and 54% were unemployed during the past 12 months before the experiment. Sixteen percent of East Plano participants had been victim of crime, 20% had witnessed crime, and the average response to the survey question on “need to feel safe” was 4.44, out of 5. All these factors, plus the high ethnic diversity in East Plano, may explain why the subtle identity treatment implemented in our experiment has only achieved a moderately positive increase, albeit statistically insignificant, in the likelihood of charitable giving, relative to the control treatment. Our findings reveal the limitations on the power of common group identity in influencing individual economic decision making, which has not drawn enough attention in the literature.

In sum, we find that the community identity priming influences local residents’ willingness to provide support to real local public goods (as measured in the charity donation game), but not their cooperative tendencies (as measure in the lab VCM game). Since the two games differ mainly in the strategic uncertainty involved in the lab VCM game, our findings suggest that individual decisions when facing strategic uncertainty may not be as easily maneuvered by identity priming. This can also be inferred by the lack of impact of identity priming on beliefs about others’ actions in the lab VCM game (as shown in Appendix Table E2).

In contrast to our null results on behavior and beliefs in the VCM game, some previous work has shown that contributions to the lab VCM are positively affected by participants’ ingroup identity (e.g. Eckel and Grossman 2005). Specifically, Eckel and Grossman (2005) find that cooperation in a series of
repeated-play, public goods experiments (which are framed as a team production problem) is not influenced by the simple and artificial assignment of team identity. However, cooperation increases significantly when the artificial team identity is further enhanced by having team members cooperate in an unrelated, collective problem-solving task. The different identity priming methods may be the source of the difference in results between Eckel and Grossman (2005) and our study. In Eckel and Grossman (2005), since little was known about others in the control treatment with no team identity, adding the collective problem-solving task (which involved face-to-face interactions of team members) may have helped reduce strategic uncertainty, leading to greater cooperation in the strong identity treatment. In our study, however, participants were always local residents of the same community, and this was public knowledge among the participants. Our identity priming questionnaire (i.e., the Community Connection Questionnaire) was designed to focus on and temporarily activate participants’ connections to their communities. It did not provide any additional information that might have helped reduce strategic uncertainty in the VCM game. Therefore, relative to the control treatment, the identity priming treatment does not influence the participants’ cooperative tendencies as measured in the VCM game. Instead, it influences the tendencies to donate to help out with their communities, as shown in the charity donation games.

V. Conclusion

In this study, we design a framed field experiment to investigate the impact of a common identity – being a member of their neighborhood – on individual’s contributions to local public goods. We find that the identity treatment influences participants’ likelihood of contributing to local public goods, but its impact depends
on the community context. When the common community identity is made salient, participants are more likely (qualitatively) to contribute to local charities in the low-to middle-income and up-and-coming neighborhood, but significantly less likely to do so in the struggling, poor neighborhood. In addition, the impact of the identity salience on the likelihood of giving is significantly higher in the former neighborhood than in the latter. We also find that the differential impact of identity salience on participants’ likelihood of giving across the two neighborhoods is primarily driven by the fact that the identity treatment triggers participants’ perceptions or memories of experiences with their communities.

Our findings have several important implications. Studies in economics show that ethnically fragmented communities in the U.S. suffer from low financial support for public goods or welfare spending (see Alesina and La Ferrara 2005 for a review). Previous research has suggested promoting common identity as a nonpecuniary mechanism to increase the voluntary provision of local public goods. Our results provide an important caveat to this recommendation. Particularly, policy makers may increase the set of contributors and overall contributions to local public goods through promoting common identity among their residents, but only in communities where the common identity is associated with a positive social image. Our findings suggest that effective policy interventions through motivating common identity should be targeted rather than applied generally.

Our results also identify an important factor – social image – that constrains the positive influences of a common identity. The sharp contrast of our findings in the two neighborhoods show that an common-identity motivating policy intervention may work well in one community where the residents feel proud and attached to their community, but may fail to work or even backfire in another community where the residents feel attached to but dislike the connotation associated with it. The finding on the negative impact of common identity in the poor neighborhood may not seem surprising ex post, but its potential importance has been
overshadowed by the emphasis on the positive influences of promoting common identity which a disproportionally large volume of literature has focused on. Our findings suggest that equal attention ought to be given to the limitations of the influences of a common identity and the constraining factors.

In this study the impact of identity is modeled as the change of identity strength (and in turn the change of the weight put on the norm-prescribed action in individual’s utility function) contingent upon the associated esteem. An alternative explanation can be that the impact of identity works through the degree to which the norm-prescribed behavior of contributing to the public goods is internalized or made salient. While our results are consistent with the predictions based on our current theoretical framework, this alternative explanation cannot be ruled out since our current experimental design does not allow us to distinguish between these two explanations. One direction for future research that this study suggests is to distinguish competing explanations for the impact of naturally existing social identity in the field.

In addition, while we consider neighborhood identity – a special case of common identity – results can be applied to other individual and common identities. The connotations associated with religious identity may affect engagement in religious services and overall commitment to the cause. The way one feels about a company may affect their productivity especially in the case of corporate merger. Since the positive or negative perceptions that an individual holds about their group will affect how they interact with the group, even if they strongly identify with the group, building strength of identification, while necessary, is not always sufficient to reap the rewards of identity as a non-pecuniary mechanism. To policy makers or practitioners, this important finding indicates that both strength of identity and the broader perceptions of the identity must be addressed to successfully promote cooperation through fostering common identity.

Finally, while the vast majority of research into identity priming has suggested
that priming can improve economic outcomes, our results join several recent studies suggesting that priming or otherwise using identity to improve outcomes may have limitations. Chen et al. (2014) find that priming ethic identity decreases efficient coordination. Morita and Servátka (2016) find that group identity can increase inefficiencies in bilateral trade relationships. Priming identity as a bank employee can increase dishonesty (Cohn et al. 2014), and priming status as a convicted criminal increases cheating (Cohn et al. 2015). More research is needed to better understand when, and under what conditions, identity priming can effectively be used as a nonpecuniary mechanism to improve social welfare.
REFERENCES


FIGURE 1: LIKELIHOOD OF GIVING BY CATEGORY

FIGURE 2: HISTOGRAM OF THE NUMBER OF CHARITIES TO WHICH PARTICIPANTS CONTRIBUTED

FIGURE 3: PARTICIPANTS’ BELIEFS ON OTHER PARTICIPANTS’ CHOICES
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<th>East Plano</th>
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<td>Attend religious service at least once a month (%)</td>
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*Notes: Exact wording is given in Online Appendix G.*
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<td>0.242**</td>
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</tbody>
</table>

Notes: Logit model is used with the likelihood of giving as the dependent variable.
Standard errors are clustered on the individual level and reported in parentheses. Marginal effects are reported.

*** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.
**TABLE 3: PERCEPTION AND EXPERIENCE IN NEIGHBORHOODS**

<table>
<thead>
<tr>
<th></th>
<th>Fair Park</th>
<th>East Plano</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust (1–4)</td>
<td>2.58</td>
<td>2.87</td>
<td>0.00</td>
</tr>
<tr>
<td>Fairness (1–4)</td>
<td>2.85</td>
<td>3.03</td>
<td>0.03</td>
</tr>
<tr>
<td>Helpfulness (1–4)</td>
<td>2.99</td>
<td>3.23</td>
<td>0.01</td>
</tr>
<tr>
<td>Ever being victim of crime (yes/no)</td>
<td>0.41</td>
<td>0.16</td>
<td>0.00</td>
</tr>
<tr>
<td>Witnessed crime (yes/no)</td>
<td>0.53</td>
<td>0.20</td>
<td>0.00</td>
</tr>
<tr>
<td>Need to feel safe (1–5)</td>
<td>4.69</td>
<td>4.44</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*Note:* Test of means is used for trust, fairness, helpfulness and importance to feel safe. Test of proportions is used for being victim of or witnessing crime. Two-sided p values are reported. Non-parametric results are consistent.
### Table 4: Mechanisms of Identity Treatment Effects (Logit)

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity Treatment ($\beta_1$)</td>
<td>-0.029</td>
<td>-0.072</td>
<td>-0.036</td>
</tr>
<tr>
<td></td>
<td>(0.098)</td>
<td>(0.091)</td>
<td>(0.071)</td>
</tr>
<tr>
<td>Experience with crime ($\beta_2$)</td>
<td>0.011</td>
<td>0.007</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(0.086)</td>
<td>(0.081)</td>
<td>(0.065)</td>
</tr>
<tr>
<td>Treatment × Experience with crime ($\beta_3$)</td>
<td>-0.162</td>
<td>-0.089</td>
<td>-0.115</td>
</tr>
<tr>
<td></td>
<td>(0.122)</td>
<td>(0.116)</td>
<td>(0.089)</td>
</tr>
<tr>
<td>East Plano ($\beta_4$)</td>
<td>0.044</td>
<td>0.006</td>
<td>-0.037</td>
</tr>
<tr>
<td></td>
<td>(0.098)</td>
<td>(0.092)</td>
<td>(0.062)</td>
</tr>
<tr>
<td>Identity Treatment × East Plano ($\beta_5$)</td>
<td>0.248*</td>
<td>0.295**</td>
<td>0.175</td>
</tr>
<tr>
<td></td>
<td>(0.148)</td>
<td>(0.142)</td>
<td>(0.114)</td>
</tr>
<tr>
<td>Experience with crime × East Plano ($\beta_6$)</td>
<td>-0.013</td>
<td>0.038</td>
<td>0.048</td>
</tr>
<tr>
<td></td>
<td>(0.162)</td>
<td>(0.152)</td>
<td>(0.094)</td>
</tr>
<tr>
<td>Treatment × Experience with crime × East Plano</td>
<td>-0.106</td>
<td>-0.225</td>
<td>-0.036</td>
</tr>
<tr>
<td></td>
<td>(0.238)</td>
<td>(0.228)</td>
<td>(0.177)</td>
</tr>
<tr>
<td>Women ($\beta_8$)</td>
<td>0.009</td>
<td>-0.003</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.053)</td>
<td>(0.039)</td>
<td></td>
</tr>
<tr>
<td>Risk ($\beta_9$)</td>
<td>0.037*</td>
<td>0.007</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.020)</td>
<td>(0.016)</td>
<td></td>
</tr>
<tr>
<td>Number of patient choices ($\beta_{10}$)</td>
<td>0.057***</td>
<td>0.027***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.013)</td>
<td>(0.009)</td>
<td></td>
</tr>
<tr>
<td>Belief ($\beta_{11}$)</td>
<td></td>
<td></td>
<td>0.207***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.011)</td>
</tr>
<tr>
<td>Charity category fixed effects</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Observations</td>
<td>861</td>
<td>858</td>
<td>845</td>
</tr>
<tr>
<td>Log-likelihood</td>
<td>-533.7</td>
<td>-491.6</td>
<td>-352.8</td>
</tr>
<tr>
<td>Pseudo-$R^2$</td>
<td>0.049</td>
<td>0.122</td>
<td>0.359</td>
</tr>
</tbody>
</table>

Overall effect of identity treatment conditional on experiences with crime

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not experienced crime in Fair Park ($\beta_1$)</td>
<td>-0.029</td>
<td>-0.072</td>
<td>-0.036</td>
</tr>
<tr>
<td></td>
<td>(0.098)</td>
<td>(0.091)</td>
<td>(0.071)</td>
</tr>
<tr>
<td>Experienced crime in Fair Park ($\beta_1 + \beta_3$)</td>
<td>-0.191***</td>
<td>-0.161**</td>
<td>-0.151***</td>
</tr>
<tr>
<td></td>
<td>(0.072)</td>
<td>(0.070)</td>
<td>(0.053)</td>
</tr>
<tr>
<td>Not experienced crime in East Plano ($\beta_1 + \beta_5$)</td>
<td>0.220**</td>
<td>0.223**</td>
<td>0.139</td>
</tr>
<tr>
<td></td>
<td>(0.112)</td>
<td>(0.107)</td>
<td>(0.086)</td>
</tr>
<tr>
<td>Experienced crime in East Plano ($\beta_1 + \beta_3 + \beta_5$)</td>
<td>-0.048</td>
<td>-0.091</td>
<td>-0.011</td>
</tr>
<tr>
<td></td>
<td>(0.170)</td>
<td>(0.159)</td>
<td>(0.118)</td>
</tr>
</tbody>
</table>

Notes: Logit model is used with the likelihood of giving as the dependent variable. Standard errors are clustered on the individual level and reported in parentheses. Marginal effects are reported.

*** significant at the 1% level, ** significant at the 5% level, * significant at the 10% level.