
Keeping Up with the Joneses

The Relationship of Perceived Descriptive Social Norms, Social Information, and Charitable Giving

*Rachel Croson, Femida Handy,
Jen Shang*

We study the influence of perceived descriptive social norms on subsequent giving behavior to nonprofits, explore how social information can influence these norms, and provide insight for fundraising practice. A survey conducted in a nonprofit organization first shows that donors use their beliefs about the descriptive social norm to inform their own donation behavior. Donors who believe that others make high contributions tend to make high contributions themselves. Next, a laboratory experiment demonstrates the influence of social information on the descriptive social norm and consequently on giving. These results suggest strategies for fundraising practice. Informing donors of contributions made by another person influences their perceptions about the descriptive social norm, which in turn influences their giving behavior. We conclude with a discussion of theoretical and practical implications.

IN 2005, ALMOST \$200 BILLION WAS RAISED by U.S. nonprofit organizations from individuals and households (Giving USA Foundation, 2006). A significant portion of these individual contributions (\$36.92 billion) was from nonitemizing individuals, who contribute on average about \$551 a year (Giving USA Foundation, 2006). This is not a phenomenon limited to the United States. In Canada, individual donations totaled \$8.9 billion in 2004, with donors giving an average of \$400 each (Hall, Lasby, Gumulka, and Tryon, 2005). In the United Kingdom, individual donations were £8.9 billion in 2005–2006 (National Council for Voluntary Organisations, 2007), and in Australia this figure reached \$7.7 billion in 2005 (Philanthropy Australia, 2007).

However, with cuts in government funding and increased competition for funds, nonprofits are continually challenged to find ways

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to recruit donors and garner greater levels of donations. Indeed, the scholarly literature in the field of nonprofit studies recognizes this challenge and is replete with research on what motivates donors to give. This literature includes predictors of individual giving such as personal values (Mount, 1996; Bennett, 2003); trust (Bekkers, 2003); past giving (Lindahl and Winship, 1992; Sargeant, 2001a); loyalty and commitment to the organization (Lindahl, 1995; Sargeant, 2001b; Sargeant and Woodliffe, 2005); the efficacy of fundraising techniques such as the design of the appeal (Diamond and Gooding-Williams, 2002); segmenting the donor population (Grande and Vavra, 1994; Sargeant, Wymer, and Hilton, 2006); suggested contributions (Marks, Schansberg, and Croson, 1999); and organizational characteristics such as administrative efficiency (Bowman, 2006; Tinkelman and Mankaney, 2007), fundraising expenditures (Sargeant and Kähler, 1999; Okten and Weisbrod, 2000), the impact of professional solicitors (Greenlee and Gordon, 1998), level of use by the donor (Kingma and McClelland, 1995), and other sources of revenue (Kingma, 1995).

A separate strand of literature in psychology and marketing also examines how to increase the effectiveness of fundraising. This literature has mostly focused on creating and testing compliance techniques that induce nondonors to give; examples are foot-in-the-door (Freedman and Fraser, 1966), door-in-the-face (Cialdini and others, 1975), legitimization of small donations (Cialdini and Schroeder, 1976), and the low-ball technique (Cialdini, Cacioppo, Bassett, and Miller, 1978). This literature focuses on increasing participation rates and suggests techniques that rely on the social interaction between the fundraiser and the donor and activate psychological constructs like guilt and the desire to act consistently.

Our research focuses on one aspect of giving: the descriptive social norms as perceived by existing donors. We refer to these in this article as *perceived descriptive social norms*, by which we mean the individual donor's belief of what others are contributing. Here, we are not examining how to increase the participation rate, but instead how to increase the level of donations from existing donors. We examine the social dynamics between the target donors and their knowledge of the behavior of other donors, activating psychological constructs like conformity to social norms. We first show how social norms influence donation levels to a nonprofit organization among existing donors. We find that the level of donation is influenced by the donors' perceived descriptive social norms. Second, we move to the laboratory and investigate ways in which such perceived descriptive social norms can be influenced. In particular, we identify the influence of social information—in this case, information about another donor's contribution—on descriptive social norm perception. We find that such social information influences the target donor's contribution by changing his or her perceptions of the descriptive social norm (that is, the average level of contribution by

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other donors, as defined in Cialdini, Reno, and Kallgren, 1990). The desire to conform to this perceived descriptive social norm causes behavioral changes and thus increases contributions.

This article advances research on the factors affecting the level of individual donations to a nonprofit organization in a given industry along the following lines:

- We examine the giving behavior of existing donors to a public radio station, where the nature of the organization's output or product is subject to severe free riding and where donations do not "buy" different amounts of the collective good.
- We link respondents' actual giving behavior for the year preceding the survey and the year following with self-reports of their contributions to a nonprofit organization. This linkage allows us to examine the relationship between donors' perceptions of descriptive social norms of others' giving and their own self-reported giving, as well as their actual giving.
- We use a laboratory study to investigate factors that affect the perceptions of descriptive social norms. We identify one particular factor, social information, and demonstrate that social information affects contributions and does so by influencing the perceived descriptive social norms. This laboratory study demonstrates causality between these norms and subsequent giving in ways that field survey data cannot.

Previous Literature

Classic research in social influence has shown that people's behavior is influenced by their perceptions of others' behavior (Crutchfield, 1955). Cialdini, Reno, and Kallgren (1990) describe these perceptions as descriptive social norms, which specify what is typically done in a given setting (what most people do), and they differentiate these from injunctive social norms, which specify what behaviors garner approval in society (what people ought to do). Many studies have demonstrated the influence of descriptive and injunctive social norms on subsequent behavior in varying situations. For example, they have been shown to influence the choice of exercising during leisure time (Okun, Karoly, and Lutz, 2002; Okun and others, 2003; Rhodes and Courneya, 2003); communication styles during wedding ceremonies (Strano, 2006); team-based innovations in the workplace (Caldwell and O'Reilly, 2003); littering (Cialdini, Reno, and Kallgren, 1990); and stereotyping, prejudice, and discrimination (Mackie and Smith, 1998). The relationship between social norms and behavior has also been shown for specific subpopulations, including breakfast food choice among children (Berg, Jonsson, and Conner, 2000), alcohol misuse among college students (Walters and Neighbors, 2005), smoking cessation among smokers (Van den Putte, Yzer, and Brunsting, 2005), and condom use among

drug users (Van Empelen, Kok, Jansen, and Hoebe, 2001). However, this article is the first to look at the influence of social norms, and descriptive social norms in particular, in the domain of donations to nonprofit organizations.

Individuals are more likely to be influenced by social norms when the following two conditions hold. First, there is a perception of ambiguity about what should be done (Crutchfield, 1955). If no such ambiguity exists and there is an obvious (correct) thing to do, then what others do does not influence an individual's behavior (Reno, Cialdini, and Kallgren, 1993). The fundraising environment satisfies this ambiguity condition, especially in solicitation of small gifts. Typically multiple giving levels are suggested to donors in mail, telephone, or online solicitations. Moreover, donors cannot always remember what they did in the past or whether what they did in the past is still applicable to their current donation decisions, in terms of either the organization's need or their own financial or other constraints. The multiplicity (and range) of recommended contribution levels, the lack of clear recollections, and the changes faced by nonprofits and the donors mean that potential donors have relatively little idea of what the right contribution might be for them.

Second, the descriptive social norms must be perceived as relevant or appropriate. Cialdini (1998) summarized a variety of variables that influence this perception. The reasonableness of the social norms is the most relevant for our discussion here. In fundraising campaigns, giving levels are generated to make sure that they are affordable to the target audience. Similarly, in our second experiment, we will provide social information that is relevant or appropriate for the donors. When people have no information about descriptive social norms in giving, they are likely to rely on any information provided to form their perception of descriptive social norms, and their subsequent giving behavior is likely to be influenced by this perception.

On the basis of this previous research and practice, we hypothesize that perceived descriptive social norms will influence charitable giving behavior:

Hypothesis 1: The higher the perceived descriptive social norms as measured on the survey, the higher are the donations received by the station.

This hypothesis will be tested by a field survey of existing donors to a public radio station.

In the experimental study that follows, we examine how fundraisers may change donors' perceptions of descriptive social norms. Previous work has identified multiple factors that might affect one's belief about the descriptive social norms. For example, if a person believes others are correct in their judgments and there is a private acceptance of what others do, then this person will

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conform to others' behaviors (Burnkrant and Cousineau, 1975; Miniard and Cohen, 1983). Such conformity has been shown to come from a variety of sources, including the behavior of family and peer reference groups (Childers and Rao, 1992), and in a variety of settings—primarily that of private consumption (Osterhus, 1997; Bearden and Etzel, 1982). We are the first to test the impact of descriptive social norms on charitable giving.

We use one of the weakest possible types of social information from this previous literature: one other person's behavior (compared with previous studies that examine the impact of many others' behavior). We thus hypothesize that:

Hypothesis 2: The higher the social information as manipulated by the experimenter, the higher are the perceived descriptive social norms elicited from the participants.

Previous research has also shown that social information influences behavior directly. In the domain of charitable contributions, Frey and Meier (2004) use a mail fundraising campaign run by their university to show that social information increases participation rates. Reingen (1982) and Shang and Croson (2009) provide complementary results and show that social information can also increase the amount of charitable donations in college students and in the general population, respectively. While these previous studies have identified an influence of social information on contributing behavior, none has provided an explanation or mechanism for this influence. The main contribution of our study is to demonstrate that social norms drive the previously observed impact of social information on contributing behavior.

While our field survey will show that perceived descriptive social norms could be one of the mechanisms that influence the level of charitable giving, our laboratory experiment advances research by Reingen (1982) and Shang and Croson (2009) by manipulating the level of social information and measuring the perceived descriptive social norms and subsequent contribution behavior in the same experimental setting. In doing so, we provide both additional evidence for the influence of social information on behavior and a precise and complete understanding of the relationship among perceived descriptive social norms, social information, and charitable giving. This relationship is stated as follows:

Hypothesis 3: The positive effect that social information has on contribution behavior is fully mediated by perceived descriptive social norms.

To summarize, previous research has shown that contribution behavior is influenced by social information. We hypothesize and demonstrate that the mechanism through which this influence

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operates is perceived descriptive social norms. Social information can change perceived descriptive social norms (hypothesis 2), which in turn changes donation behavior (hypothesis 3). This article is the first to demonstrate this mechanism, measure the effect of perceived descriptive social norms on actual and self-reported contribution behavior (hypothesis 1), and test possible techniques of changing the perceived descriptive social norms.

Our Environment

We collect data from donors and potential donors to a public radio station. In the first study we collected survey responses from a local radio station's existing donors, and in the second study we developed a scenario that closely mimics public radio fundraising situations. Public radio is an important area to study for a number of reasons. First, public radio stations are a crucial segment of the non-profit world. There are more than 750 public radio stations in the United States, with gross revenue of more than \$2.5 billion. They raised well over \$640 million from individual donors in 2005 (Corporation for Public Broadcasting, 2005).

Second, evidence obtained from the public radio industry can be generalized to public TV stations. The results could also be generalized to other charitable organizations that share similar properties: the amount to be donated is not fixed, the services provided by the non-profit can be enjoyed regardless of the existence or extent of the contribution, and the potential donor has access to social information that can influence giving.

Finally, the potential for practice is large. Previous research suggests that social information influences individual giving from 10 to 30 percent (Shang and Croson, 2009). This would translate into increased donations of \$15 million to \$45 million to the public radio industry if appropriate social information were provided in the fundraising efforts of every station. An increase of similar scale may be applicable to public TV and other related nonprofits.

Field Study: Donor Survey

Our target population for this first study was a set of active and recently lapsed donors to a public radio station. We developed a survey instrument and selected a month at random (August 2003) during which to send it. The survey was sent to all members who normally would receive a renewal letter that month. There is no reason to believe that this month is different from any other month; therefore, we believe that we have a random sample of active and recently lapsed members.

Surveys were included with the renewal mailing; also included was a separately provided preaddressed envelope. Surveys were completed and returned in the separate envelope, which was addressed

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to the researchers, not the radio station. Individuals who renewed their membership sent their renewal to the station in the usual way; if they also submitted a survey, it was sent directly to the researchers in the separate envelope. Respondents were told that an additional five dollar contribution would be made to the station for each of the first two hundred completed and returned surveys (this payment was made as promised).

We sent 7,123 surveys to active and lapsed donors of a public radio station and received 975 completed surveys in return, making the response rate 13.7 percent. Of these 975 respondents, 422 identified themselves. This enabled us to link responses on their surveys with the station's database, which provided their actual donations for the year preceding the survey and the year following the survey. (To comply with human subject protocols regarding privacy, respondents had to self-identify in order for us to access their contribution history. This identification information was deleted from our research records as soon as the survey responses were linked to their contribution history records.) These 422 respondents are representative of the sample of returned surveys in terms of gender, race, age, marital status, geographical location by state, and postal code (chi square tests on these variables between the identifying respondents and others showed no significant differences), and in the average level of donations (*t* test on average donations between the identifying respondents and others showed no significant differences). Of these 422 matched surveys, 394 surveys had no missing responses. Our more detailed analysis primarily focuses on these 394 respondents. The survey respondents were 42 percent male and 58 percent female, with an average age of forty-six years and with an average of sixteen years of formal education. Most (97.6 percent) respondents described themselves as Caucasians.

Measures

In reporting the findings, we first focus on how perceived descriptive social norms influence giving behavior. In particular, our independent variable of interest is the perception of descriptive social norms: what the respondent believes others give. Responders reported this variable in the survey. Due to data limitations, we do not have access to respondents' income and therefore use age and education as controls (Pharoah and Tanner, 1997; Schervish, O'Herlihy, and Havens, 2006).

Our independent variables are:

- Age: Number of years
- Education: Number of years
- Male: Dummy variable for gender (male = 1, female = 0)
- Perceived descriptive social norms: the estimated average donation of other donors

We examine four dependent variables. The first is the self-reported contribution from the survey. These data allow us to use all the survey responses that we received ($n = 975$). Our second, and most reliable, dependent variable is the average of the individual's contributions in the year prior to and the year after the survey was sent. Since there may be variation in year-to-year giving due to exogenous variables (for example, loss or increase of income, birth of a child, death of family members, family relocation, or home remodeling), this measure is a limited attempt to smooth the variation. This dependent variable thus provides the most stable estimate of the individual's giving behavior.

One potential concern about this dependent variable is that it includes contributions made after the survey was sent out, which could introduce a false collinearity. In particular, something external could have happened that affected both the survey's answers and the subsequent year's contribution, causing a correlation where none exists. Thus, for a robustness check, we examine the individual's contribution in the year prior to the survey being sent as the third dependent variable. This measure represents the donor's preferred giving levels without interference from any third cause or from the survey itself. Finally, for completeness, we examine the individual's contribution in the year after the survey was sent as the fourth dependent variable. These last three analyses focus on the 394 completed surveys whose respondents self-identified.

Respondents who believe that others contribute high amounts self-report their own contributions as high.

Results

Four different models inform our results. These models give insight into how social norms might affect people's perceived and actual contributing behavior. We present the findings for each model separately and then discuss them in the next section.

Model 1—Dependent Variable: Self-Reported Contribution

This model examines the effect of the perceived descriptive social norm on self-reported contributions to the station, using all 975 returned surveys. Table 1 reports the results from a regression analysis with self-reported contributions as the dependent variable and with age, education, gender, and the perceived descriptive social norm (estimated average of others' contribution) as independent variables.

As shown in Table 1, the perceived descriptive social norm is a significant predictor of self-reported contributions ($p = 0.037$). Respondents who believe that others contribute high amounts self-report their own contributions as high. We find some other directional but statistically insignificant results, as well. However, this regression has some important limitations. The low R^2 suggests that

Table 1. Self-Reported Contributions

<i>Independent Variable</i>	<i>Estimate (Standard Error)</i>	<i>T-Statistic</i>	<i>P-Value</i>
Constant	9.43 (62.52)	0.15	0.880
Age	1.63 (1.10)	1.49	0.138
Education	-0.28 (0.33)	0.83	0.405
Male	18.60 (21.04)	0.88	0.377
Descriptive social norms	0.59 (0.28)	2.09	0.037*
R^2	0.012		
N	975		

* $p < 0.05$.

not much of the variance in the data is explained by the variables. This, we believe, is primarily the result of extreme noise in the dependent variable of self-reported contributions. Past research shows that people's self-reported giving varies substantially depending on how the questions are asked (Rooney, Steinberg, and Schervish, 2004). Other recollection mistakes may also contribute to variation in the self-reported data.

We can provide some additional evidence on this variation in self-reported contributions. In particular, for the 394 respondents who completed the full survey, we can compare their self-reported contributions with their actual contributions from the station's database. Although we find a significantly positive correlation between self-reported contributions and actual contributions ($p < 0.05$), the correlation coefficient is relatively low ($r = 0.333$). This suggests that self-reported contributions are, at best, a noisy indicator of actual contributions. Because of this weakness in using self-reported contributions as the dependent variable, our subsequent analyses focus on the respondents whose surveys we could link to their actual contribution history and whose surveys were complete ($n = 394$).

Model 2—Dependent Variable: Average Actual Contributions

Our most robust dependent variable is the average of the previous and subsequent years' actual contributions made by the individual. Independent variables include the respondent's age, education, and gender and the perceived descriptive social norm. Table 2 shows the

Table 2. Average Actual Contribution

<i>Independent Variable</i>	<i>Estimate (Standard Error)</i>	<i>T-Statistic</i>	<i>P-Value</i>
Constant	58.97 (54.97)	1.07	0.284
Age	0.80 (0.58)	1.37	0.173
Education	-0.50 (2.39)	0.21	0.835
Male	18.81 (10.69)	1.76	0.079
Descriptive social norms	0.61 (0.11)	5.76	0.000***
R ²	0.096		
N	394		

****p* < 0.001.

Respondents who believe that others give more give more themselves.

regression results. As can be seen, results from this regression are more reassuring than those from the previous one. First, the R² of 0.096 is low but reasonable for cross-sectional data. Second, we find, as before, a significant positive effect of the perceived descriptive social norm (*p* < 0.001). Respondents who believe that others give more (as reported on the survey) give more themselves (as measured by their average actual contributions).

Although this dependent variable (average actual contribution) is much more stable than self-reported contributions, it is not without its flaws. In particular, there may be concerns about false collinearity between the descriptive social norm and the subsequent year’s giving. Some third event could have occurred prior to the survey that affected both the descriptive social norm and the subsequent year’s giving. Our next set of regressions provides a robustness check on our results by examining the impact of our independent variables on contributions made the year prior to the study.

Model 3—Dependent Variable: Actual Contribution in the Year Prior to the Survey

We run the same regressions as before, using the previous year’s actual contribution rather than the average contribution smoothed over two years. Table 3 describes the regression results. This regression confirms our significant findings of the effect of the perceived descriptive social norm (*p* < 0.001) after controlling for possible false causality by using previous contributions as the dependent measure of actual giving.

Table 3. Actual Contribution in Year Prior to the Survey

<i>Independent Variable</i>	<i>Estimate (Standard Error)</i>	<i>T-Statistic</i>	<i>P-Value</i>
Constant	56.00 (56.30)	0.99	0.321
Age	0.64 (0.60)	1.07	0.283
Education	-0.12 (2.45)	0.05	0.960
Male	13.39 (10.95)	1.22	0.222
Descriptive social norms	0.54 (0.11)	4.97	0.000***
R ²	0.070		
N	394		

*** $p < 0.001$.

Model 4—Dependent Variable: Actual Contribution in the Year after the Survey

For a final robustness check, we run similar regressions using the subsequent year's actual contribution as the dependent variable. The overall regression is reported in Table 4. Again, our results replicate the results in Tables 2 and 3. We find a significant effect for the descriptive social norm ($p < 0.001$). The main effect of gender is also significant ($p < 0.05$). Our final robustness test confirms hypothesis 1: the higher the perceived descriptive social norms, the higher the donations.

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Table 4. Actual Contribution in Year After the Survey

<i>Independent Variable</i>	<i>Estimate (Standard Error)</i>	<i>T-Statistic</i>	<i>P-Value</i>
Constant	61.95 (62.23)	0.99	0.320
Age	0.95 (0.66)	1.44	0.151
Education	-0.87 (2.71)	0.32	0.747
Male	24.24 (12.11)	2.00	0.046*
Descriptive social norms	0.68 (0.12)	5.69	0.000***
R ²	0.098		
N	394		

*** $p < 0.001$; * $p < 0.05$.

Discussion

In addition to the tests discussed, we performed a number of other diagnostics on our regression results. In all of our models, the statistics show no multicollinearity between the independent variables. (The variance inflation factor ranges from 1.005 to 1.139 for the dependent variable in all the models. Thus, multicollinearity is not a cause for concern; Myers, 1990.) Overall, our results are supportive of our first hypothesis that perceived descriptive social norms are positively related to how much individuals actually give. Those who believe others give more, contribute more themselves.

However, this relationship is correlational. The next experimental study asks if there is causality between the perception of descriptive social norms and individuals' giving behavior. And if so, what factors influence perceptions of the descriptive social norms? The next section addresses this question and suggests that providing social information to potential donors influences their perceptions of the descriptive social norms and thus increases (or decreases) actual contributions.

Experimental Study

Our results from the field study show that perceptions of descriptive social norms influence both self-reported and actual donations. Donors often form their perceptions of descriptive social norms based on the information provided by the nonprofit organizations, for example, the giving levels suggested on the pledge form or, in the case of the public radio station, what is announced on the air about gift levels offered or received. In our second study, we examine another likely influence on the perception of descriptive social norms, social information, which has not been widely and effectively used by nonprofits to influence giving levels. (Although nonprofits have used "telling a friend" campaigns or testimonial-type techniques to attract new donors or maintain retention rate, we know of none that uses social information to influence the level of giving.)

We use lab experiments to confirm results from previous research that descriptive social norms are indeed causally related to donation behavior. (A detailed version of the experimental materials is available from the authors on request.) However, we go further to demonstrate the mechanism behind this result: that social information changes the perception of descriptive social norms and thus changes the level of donations. Although the survey results reported earlier show unambiguously that all four dependent variables correlate with perceived descriptive social norms, they do not demonstrate causality. Demonstrating causality is the primary goal of the experimental study that follows.

Procedure

One hundred forty-two undergraduate students at a university in the same city as the public radio station completed the experiment to fulfill course requirements. We randomly assigned two versions of a survey to participants: one with high and one with low social information. We assessed participants' perceptions about the descriptive social norm and asked about their intended future actions. In the scenario, participants were told:

Imagine that since you arrived in City A, you have been listening to a local public radio station and that this station is currently having its on-air fund drive. You have been listening to the campaign for a few hours each day for the past three days and have decided that you would like to become a contributing member of the station.

You called the radio station and made your contribution of \$25. During your conversation with a volunteer on the phone, you were told that another station member had contributed \$10 [or \$50] this year.

Note the two versions of the scenario: some participants were told that the other donor contributed less than he or she did (ten dollars versus twenty-five dollars), while others were told that the other donor contributed more than he or she (fifty dollars versus twenty-five dollars).

Next, participants were asked about the mediating variable of descriptive social norm: "How much do you think an average station listener would contribute?" Finally, the dependent variable asked how much the participant would contribute in a subsequent year.

The order in which these questions were presented to participants is important to understanding the full mediation effects on the dependent variable, as cause → mediation → effect (Baron and Kenny, 1984). This requires that the cause (social information) be manipulated, followed by the mediating variable (descriptive social norms) being measured and then the dependent variable (future giving) being measured. The mediation procedure explained in the results section shows that the effect that the manipulated variable has on the dependent variable is due to the mediating mechanism. To demonstrate this statistically, it is crucial to measure the mechanism between the cause and the effect, as we have done.

One concern, raised by a helpful reviewer, is that social desirability biases might arise in the lab (Fisher, 2000). This is often a concern when one moves between the lab and the field, as we do. It is therefore important to examine the likely impact of social desirability biases in our setting.

The most obvious possibility is simply that participants in the lab would be significantly more generous than those in the field, as they know they are being “watched.” This is not what we find: average contributions in the field are significantly larger than those in the lab. A second possible bias might be that individuals respond to perceived descriptive social norms more strongly in the lab than in the field. However, in the previous field study, we demonstrated a strong relationship between perceived descriptive social norms and contributions; we are not using the laboratory study to demonstrate this effect but to identify the direction of causality through which it operates.

Finally, we note that social desirability is an important part of the charitable giving decision in the field as well as in the lab. In the field, someone is also “watching” (usually a representative of the nonprofit). And many individuals report that they give because they believe it is the right thing to do. As Fisher and Katz (2000) showed, the high correlation between the social desirability bias and variables of theoretical interests in a given research project, which in our case are perceived descriptive social norms and social information, could be evidence to confirm rather than discredit the validity of these variables. It is precisely because there are cultural, individual, and social reasons that donors should value certain information—in our case, descriptive social norms—that donors’ perceptions of these descriptive social norms are correlated with social desirability instruments. Practically, the nature of behavior did not change between the field and the scenario; in both, participants are giving money to a real or imaginary organization.

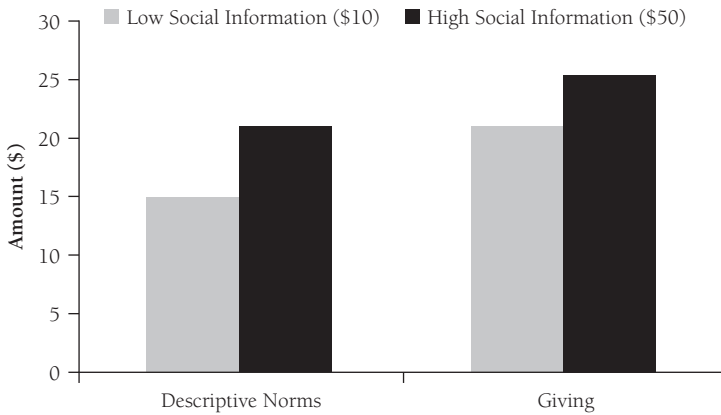
If social desirability differed systematically in the field versus the lab setting, we would be more concerned about its impact (King and Bruner, 2000). However, this is not what we found in our data. People seem to behave in socially desirable ways in both the field and the lab.

Social desirability is an important part of the charitable giving decision in the field as well as in the lab.

Results

We find an effect of social information on the perception of descriptive social norms. In the high social information treatment, the descriptive social norm averages \$21.00, whereas in the low social information treatment, the descriptive social norm averages \$15.05 (coefficient = 6.067, $t = 3.791$, $p < 0.001$). There is also a positive and significant relationship between social information and the amount contributed in the subsequent year; in the high social information treatment, contributions average \$25.40, and in the low social information treatment, contributions average \$20.99 (coefficient = 4.410, $t = 2.319$, $p < 0.05$). The results on descriptive social norms are displayed in the left panel of Figure 1, and the results on giving are displayed in the right panel.

Figure 1. Relationship Between Social Information and Descriptive Social Norms and Giving



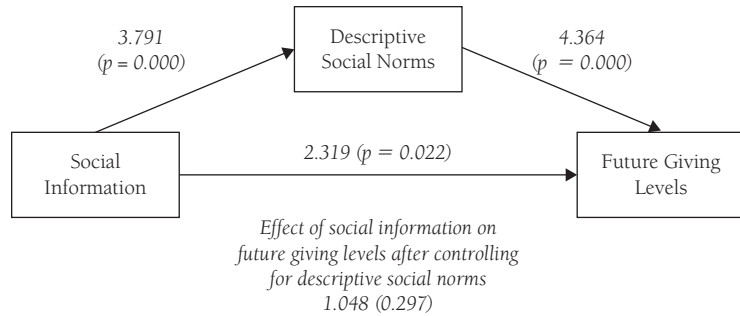
But how are these variables causally related? To answer this question, we use a procedure routinely used by psychologists: mediation analysis (Baron and Kenny, 1984). Mediation analysis requires three steps. First, we need to demonstrate that social information has an impact on contribution behavior, thus showing an effect for descriptive social norms to mediate. This first step is satisfied by the earlier analysis in which we find a significant relationship between the treatment (social information) and the dependent variable (intended contributions).

Second, we need to demonstrate that social information affects the perceptions of the descriptive social norm, thus showing that the descriptive social norm is responsive to the treatment. Again, this condition is satisfied by the previous analysis where we have the respondents reporting a higher descriptive social norm with high social information.

Finally, the critical third step is to include both the experimental condition (social information) and descriptive social norm (perceptions about average contribution) into a regression predicting intended contributions. Now, the effect of experimental condition disappears (coefficient of social information is insignificant; coefficient = 1.964, $t = 1.048$, $p = 2.97$), while the effect of the mediator (descriptive social norm) remains significant (coefficient = .411, $t = 4.364$, $p < 0.001$).

A Sobel test is typically conducted to determine the significance of the indirect effect of the mediator; it tests if the mediator explains extra variance in the dependent variable (Sobel, 1982). In our case, it is significant ($z = 2.862$, $p < 0.05$). Thus, we conclude that descriptive social norms fully mediate the influence of social information on behavior. The mediation model and resulting statistical tests are illustrated in Figure 2. This full mediation result shows that

Figure 2. Mediation Analysis of the Effect of Social Information on Giving Levels



the variance in giving observed in different social information treatments is entirely explained by the variance in the descriptive social norm. In other words, social information directly influences the perception of descriptive social norms, and then, through this perception, influences giving levels.

Thus, our results support hypotheses 2 and 3. The higher the social information, the higher the perceived descriptive norms; and the positive effect that social information has on the levels of contribution is fully mediated by perceived descriptive social norms.

Summary

To summarize, the laboratory experiment confirms the results obtained from the donor survey: perceived descriptive social norms influence giving levels. In addition, the experiment demonstrates the causal relationship between social information, perceived descriptive social norms, and giving. By telling target donors about only one other donor's contribution, target donors' perceptions of descriptive social norms and thus their future giving levels can be changed.

Implications and Conclusion

This research makes a number of contributions. First, we show the influence of perceived descriptive social norms on giving in a donor survey from a public radio station. A laboratory experiment demonstrates that these perceived descriptive social norms can be influenced by social information, such as another donor's giving. Finally, we demonstrate the causality behind the relationships: an increase in the target donor's perception of what others give leads to an increase in donation levels, operating through the mechanism of perceived descriptive social norms. These results are both theoretically and practically important.

On the theoretical side, this is the first research to demonstrate the positive correlation between the perception of descriptive social norms and giving in a field setting. In addition, this is the first effort to explore possible avenues to change perceptions of descriptive social norms and, in turn, increase charitable giving. The combination of survey results and experimental results with mediation analysis provides us solid ground to make causal inferences about proposed psychological mechanisms (perceived descriptive social norms) involved in increasing contributions.

This deeper understanding of the psychological processes involved in generating higher charitable giving is an important contribution of research to nonprofit practice. By identifying this psychological mechanism that motivates giving (descriptive social norms), we provide the necessary theoretical background to invent a variety of norm-changing methods to improve the practice of fundraising.

Fundraisers and development officers can provide social information and increase individual giving. Shang and Croson (2009) showed that social information is effective in increasing contributions on average between 10 and 30 percent. In this article, we go beyond this previous study to demonstrate the mechanism through which social information influences the level of giving: perceived descriptive social norms.

Second, fundraising and development officers can shape perceived descriptive social norms to affect participation rates as well. For example, mentioning the percentage of listeners who donate for a particular cycle, the percentage of the public who donate to public radio, and the percentage of donors who renew their membership every year may strengthen the descriptive social norms to donate. This social norm information can be used to both attract new donors and increase the retention rate of existing donors.

Having such psychological constructs and mechanisms in mind will also help major gift or planned gift officers in their face-to-face meetings with potential donors, even when the particular social information or descriptive social norms used in those contexts might differ dramatically from small gift solicitations. For example, descriptive norms in those contexts might include others' major or bequest gifts, from donors who share similar life experiences or connections with certain organizations.

One concern about strategies for increasing donations is that they could be used unethically. We believe that these strategies can be used, and will be most effective when used, with the highest ethical standards. This means that the information provided to potential donors about others' donations (or the donation rate) is honest and accurate. This also means protecting the anonymity of the donors whose information is being provided, either by requesting their permission to use their donation as an example or by revealing aggregate statistics (like the percentage of listeners who donate),

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which does not allow any one individual to be identified. Furthermore, deceptive strategies are likely to be ineffective. Evidence from our previous research suggests that providing social information that is “too high” is ineffective at increasing contributions (Croson and Shang, 2009).

All studies have limitations, and ours is no exception. The particular environment in which our research was conducted may have influenced our results. We feel comfortable that our recommendations apply to other similar nonprofit fundraising (like public television) and may apply less directly to other nonprofits that share similar characteristics. While we believe our results are generalizable, future work remains to test the impact of perceived descriptive social norms in other settings. Similarly, our work examined the motivations of individual donors; further research with corporate donors and other funding entities would be helpful. We investigated only one way to influence perceived descriptive social norms (social information), but other mechanisms would be fruitful to investigate, for example, recommended contributions, celebrity giving, creating a popular giving level, or organizing giving clubs or social events among donors. Finally, both of our studies involve individuals making decisions (real or hypothetical) in responding to written material or appeals. This focus somewhat limits our ability to generalize our results to other solicitation situations. One interesting avenue for further research would be to identify different fundraising interactions such as telemarketing and face-to-face solicitation and to examine the impact of descriptive social norms in each. Even given these limitations, we believe that perceived descriptive social norms have a strong impact on giving and that this psychological construct will be useful for fundraisers and scholars to consider further.

In summary, we investigate the causal relationship between descriptive social norms and donations, and the techniques that development officers may implement to change donors' perceptions of descriptive social norms. These techniques can help attract new donors, retain existing donors, and increase the level of contribution from individual donors. Adding one piece of social information before donors decide on their contribution increases contributions to nonprofit organizations with close to no cost. This effect occurs because this social information influences the perceived descriptive social norm; other techniques that have the same effect can be similarly helpful. We suggest that development officers explore these low-cost, effective techniques in their practices.

RACHEL CROSON is the director of the Negotiations Center, a professor of economics, and a professor of organizations, strategy, and international management at the University of Texas at Dallas.

FEMIDA HANDY is a professor at the School of Social Policy and Practice at the University of Pennsylvania and the Faculty of Environmental Studies, York University, Toronto.

JEN SHANG is an assistant professor at the School of Public and Environmental Affairs, Indiana University, Bloomington.

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