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Abstract

We explored a novel reciprocity-based influence strategy to stimulate cooperation called the reciprocity-by-proxy strategy. Unlike in traditional reciprocity, in which benefactors provide direct benefits to target individuals to elicit reciprocity, the reciprocity-by-proxy strategy elicits in the target a sense of indebtedness to benefactors by providing benefits to a valued third party on behalf of the target (e.g., first making a donation to a charity on behalf of one's employees and then later asking employees to comply with a request). We hypothesize that this strategy should be more effective than the widely used incentive-by-proxy strategy, in which one makes a request of a target, promising to provide aid to a valued third party if the target first complies with the request (e.g., offering to make a donation to charity for every employee who complies with a request). We found that hotel guests were more likely to reuse their towels when the hotel's environmental conservation program used a reciprocity-by-proxy strategy than when it used an incentive-by-proxy or standard environmental strategy. Four additional experiments replicate this finding, rule out alternative explanations, and reveal that the reciprocity-by-proxy approach can backfire when the target audience does not support the beneficiary of the aid.

Keywords: reciprocity norm, incentives, compliance, sustainability, cause-related marketing

Cooperation is the cornerstone of organizational efficiency and productivity. To achieve organizational goals, employees must be able to effectively solicit cooperation from one another, and the organizations they work for must be able to attain cooperation from a wide array of parties, including their customers, partner organizations, and personnel. One of the central drivers of organizational cooperation is the norm of reciprocity—the societal rule that obligates

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individuals to repay gifts, favors, and services that have been performed for them (Mauss, 1954; Gouldner, 1960; Blau, 1964; Regan, 1971; Emerson, 1976; Cialdini, 2009).

In a typical reciprocal exchange, Party A provides resources to Party B with the expectation, but not explicit requirement, that Party B will provide resources to Party A at a later point in time. For example, an employee might help a colleague on one of his or her work projects, which will make the colleague feel obligated to return the favor in the future. Recipients feel personally obligated to return resources that are of similar value to those they have previously received, but the resources themselves are fungible, meaning that what Party A gives Party B at Time 1 (e.g., help on a project) can be quite different from what Party B returns to Party A at Time 2 (e.g., a spare office chair) (e.g., Regan, 1971). Thus the reciprocity norm plays an integral role in cooperation and productivity by helping parties optimize the balance between the resources they have and those they need at various points in time. A number of factors determine the extent to which individuals feel a personal obligation to reciprocate, including the relationship between the benefactor and beneficiary (Clark, 1984; Clark, Mills, and Corcoran, 1989), perceived costs incurred by the benefactor (Ames, Flynn, and Weber, 2004), and the amount of time that has passed from the initial favor (Flynn, 2003). But the most critical determinant tends to be how much beneficiaries believe they benefitted from the favor (Greenberg, Block, and Silverman, 1971; Zhang and Epley, 2009).

Much of the previous research on the role of reciprocity in facilitating cooperation has explored how receiving benefits that directly enhance one's own welfare creates a sense of indebtedness and obligation to return the favor to the benefactor. But compliance strategies based on this direct form of reciprocity have their limitations. For example, one difficulty of relying on direct reciprocity to elicit cooperation arises when a requester has a need that only a single target individual can fulfill, but the requester has no resources that the target desires. Because the requester has nothing of value to give or offer the target, a strategy based on direct reciprocity is not likely to enhance the chances of compliance over and above simply asking. Requesters facing this obstacle, however, are often in the position of having resources desired by a third-party cause, organization, or individual that the target values. If requesters can make target individuals feel indebted to them by providing benefits not to the target individuals themselves (as in traditional direct reciprocity), but by providing benefits to a valued third party on the targets' behalf, they may be able to create an obligation that will induce targets to reciprocate.

STRATEGIES FOR STIMULATING COOPERATION

The Reciprocity-by-proxy Strategy

In traditional reciprocal exchange, Party A provides resources to Party B, making Party B feel indebted to Party A, which in turn obligates Party B to return the favor to Party A. In contrast, we propose that Party A can also create in Party B a sense of indebtedness and personal obligation to reciprocate by providing resources on Party B's behalf to a third party (Party C) that Party B values. For example, an employee might make a donation to a colleague's favorite charity on the colleague's behalf, making him or her feel indebted to the

employee and obligating him or her to help the employee on a work project in the future. We call this approach the “reciprocity-by-proxy strategy” because the benefactor (Party A) acts as an agent, or proxy, for the colleague (Party B) in providing aid to the valued charity (Party C). In this paper, we conduct five experiments to examine the effectiveness of this novel strategy in inducing cooperation.

There are several reasons why targets of the reciprocity-by-proxy approach would feel obligated to reciprocate when they receive no personal benefit from the action. Although people certainly want to enhance their own personal welfare (Hobbes, 1950; Miller, 1999), they also tend to be motivated to enhance the welfare of individuals, groups, and issues that are tied to their identity, beliefs, or values (Krosnick, 1988; Mael and Ashforth, 1992; Herzog, 1993; Boninger, Krosnick, and Berent, 1995; Muniz and O’Guinn, 2001; Small and Simonsohn, 2007). This motivation is often so strong that it leads people to sacrifice their own resources—including time, effort, and money—to provide aid to those valued individuals, groups, and issues (O’Reilly and Chatman, 1986; Lee, Piliavin, and Call, 1999; Fowler and Kam, 2007; Olivola, 2011). Therefore when a benefactor acts as the targets’ surrogate by enhancing the welfare of a third party that the targets value, the benefactor has, in essence, helped the targets achieve their goals for that party.

Importantly, targets are most likely to perceive the benefactor’s action as a favor performed directly for them when the benefactor conveys that the provision of resources to the valued third party was done specifically on the targets’ behalf or in their name. It is certainly possible that the targets of this strategy would instead feel a sense of obligation to help the benefactor regardless of on whose behalf the favor was performed—after all, the valued third party would benefit from the benefactor’s actions irrespective of the rationale provided for those actions. Yet previous research on dyadic reciprocal exchange has found that favor recipients’ reactions toward benefactors are influenced by their attributions of the benefactors’ behavior (e.g., Schopler and Thompson, 1968; Ames, Flynn, and Weber, 2004). In particular, the perceived intentionality underlying the benefactor’s actions is a key predictor of the recipient’s level of gratitude, indebtedness, and obligation to reciprocate the favor. For example, individuals are more motivated to return a favor when they view the favor as having been deliberately performed for them rather than accidentally (Leventhal, Weiss, and Long, 1969; Greenberg and Frisch, 1972).

In the context of reciprocity by proxy, performing the favor on behalf of or in the name of the targets should convey the intentionality underlying the benefactor’s actions, communicating that the benefactor has specifically considered the targets’ goals as they relate to the valued third party and has acted as the targets’ proxy by helping the targets achieve those goals through the aid. Thus, even though the targets receive no direct benefits, they are likely to view the favor as having been performed directly for them. This also suggests that if the favor were instead performed on behalf of someone other than the target individuals, the targets would be unlikely to perceive the benefactor’s actions as having been performed for them personally, and therefore they would be less likely to reciprocate.

Reciprocity by proxy creates a unique form of personal obligation to reciprocate favors that have been performed for third parties. Although others have also proposed that favor exchange might operate through third parties, the

current research differs from previous research in this domain. The norm of reciprocity is one main reason why individuals often sacrifice their resources to help another person, including complete strangers, when they receive no immediate return of resources from that person; the norm gives confidence to the potential benefactors that the prospective recipient will eventually return the favor at a future point in time. Researchers who study prosocial behavior have therefore sought to understand why individuals frequently help others who will never have an opportunity to reciprocate (e.g., volunteering at a soup kitchen to help feed the homeless). One central explanation for this behavior involves the principle of indirect reciprocity (Alexander, 1987; Boyd and Richerson, 1989; Nowak and Sigmund, 2005), in which the provision of aid from one person to another is returned, but not by the original recipient of the help. Instead, aid to the initial helper is "reciprocated" by another member of the community. For example, Party A might help Party B by tutoring him or her in how to use a new software system, which then leads a third member of the community, Party C, to help Party A with his or her work project. Although this form of indirect reciprocity is the most commonly studied, there are other forms, including circular indirect reciprocity, in which Party A gives to Party B, Party B then gives to Party C, and then Party C "closes the loop" by giving to Person A (Malinowski, 1922; Levi-Strauss, 1949; Boyd and Richerson, 1989; Ziegler, 1990; Bearman, 1997). But these other forms of indirect reciprocity are less comparable to reciprocity by proxy than the primary form because only the primary form has the same sequence of benefit exchange as reciprocity by proxy (from Party A to Party B and then from Party C to Party A) and are therefore not relevant to our theory.

Several potential explanations have been proposed to account for how and why indirect reciprocity occurs. Researchers have shown that providing unconditional support to members of the community results in substantial reputational benefits, or "image scoring" (Boyd and Richerson, 1989; Wedekind and Milinski, 2000; Panchanathan and Boyd, 2004; Nowak and Sigmund, 2005; Hardy and Van Vugt, 2006; Simpson and Willer, 2008). When Party A performs a favor for Party B without requiring something from Party B in return, other members of the community learn about this generous behavior either through direct observation or gossip and therefore make positive inferences about Party A. One likely inference that community members make is that Party A is a trustworthy, cooperative, generous person and therefore a reliable (and deserving) exchange partner. Party A's public self-sacrificing behavior may also be a form of costly signaling, meaning that his or her actions might signal that person's inherent superior quality, abilities, wealth, or status, or represent some other fitness indicator (Smith and Bliege Bird, 2000; Zahavi, 1995). Regardless of the exact inferences made by community members, Party A's behavior creates a reputation that suggests he or she is a desirable exchange partner and therefore someone worth helping.

There are two central differences between reciprocity by proxy and indirect reciprocity. First, the psychological mechanisms underlying the two phenomena are quite different. When benefactors act as the targets' agent by performing a favor for a valued cause via reciprocity by proxy, the favor will be perceived by targets as akin to a favor performed directly for them, even though the benefits flow indirectly to a valued other. The idea that benefits do not flow directly to targets but that targets nevertheless perceive the action as

a favor performed personally for them makes reciprocity by proxy a unique hybrid of direct and indirect forms of exchange. Despite not personally receiving anything that directly enhances their own welfare, individuals will feel indebted to the benefactor, obligating them to return the favor performed for them. In contrast, as described above, in indirect reciprocity, those who are aware of the provision of aid from a benefactor to a valued beneficiary help the benefactor not because they feel a sense of indebtedness born out of perceiving the favor was done for them, but because the helping signals something about the benefactor's inherent attributes as a potential exchange partner (e.g., generous, trustworthy, capable).

The second central distinction between reciprocity by proxy and indirect reciprocity relates to the specificity and explicitness with which the influence target is chosen. As traditionally conceptualized, indirect reciprocity is completely generalized, meaning that when Party A provides resources to Party B, it is unclear who will come to Party A's aid when needed. This system relies on another member of the community to return the favor, but the identity of that individual remains completely unspecified by the requester—it could be Party C, D, E, or anyone else in the community with the means to help. By choosing on whose behalf to perform the favor, reciprocity by proxy allows those utilizing the strategy to pick their influence target so that the particular target chosen is singularly obligated to help. This could be done at the individual level (e.g., an employee could provide aid on behalf of his or her coworker) or could be aimed at a particular group or subpopulation (e.g., an organization could provide aid on behalf of a particular set of employees or customers). Thus reciprocity by proxy is more strategically useful because it can be deployed in a more targeted way than indirect reciprocity to elicit cooperation.

The Incentive-by-proxy Strategy

Reciprocity by proxy is also likely to be more effective than other indirect strategies for eliciting cooperation. One frequently employed approach in particular seems like a natural strategy against which to compare the reciprocity by proxy strategy because it shares many features with it. This other influence strategy, which we refer to as the incentive-by-proxy approach, involves offering to provide resources to third parties (e.g., individuals, groups, and causes) valued by a target individual on the condition that the target complies with one's request. Incentive-by-proxy approaches are widely used in numerous organizational contexts. For example, some companies encourage their employees to volunteer in local communities by offering a financial donation to a given cause in exchange for volunteering a certain number of hours (Peterson, 2004; City of Bloomington, Indiana, 2011). Similarly, some hotels attempt to spur participation in their conservation programs by offering to make a contribution to a non-profit organization valued by the guests for each guest who participates in the program (Cialdini and Goldstein, 2002). The incentive-by-proxy strategy is also commonly used in cause-related marketing, in which companies promise to make a donation to a specified charity every time consumers purchase a designated product (Varadarajan and Menon, 1988; Strahilevitz and Myers, 1998).

The incentive-by-proxy approach is an influence strategy based on what might be considered an indirect form of negotiated exchange. As traditionally conceptualized, negotiated exchange involves two parties agreeing on the

terms of exchange, whereby each side provides a benefit to the other (Markovsky, Willer, and Patton, 1988; Bazerman et al., 2000). Unlike reciprocal exchange, negotiated exchange is conditional in that the two parties cooperate only if each performs a mutually agreed upon set of behaviors. For instance, an employee who needs help on a project might offer to tutor a coworker in how to use new software if the coworker will agree to help him or her with the project. Thus he or she will provide the tutoring only if the coworker agrees to the transaction. In addition, unlike in reciprocal exchange, in negotiated exchange, the terms of the transaction are explicitly laid out (e.g., tutoring in exchange for help on his or her project). Moreover, whereas benefits change hands over relatively long periods of time in reciprocal exchange, in negotiated exchange, the provision and acceptance of benefits tend to occur either simultaneously or with only a brief delay (Emerson, 1976; Malhotra and Murnighan, 2002; Flynn, 2005). For instance, the employee would likely tutor the coworker soon after the coworker agrees to help the employee or shortly after the coworker finishes helping on the employee's project. Finally, despite the term "negotiated" exchange, the exchange itself need not involve negotiation or haggling. One party can simply offer incentives in return for particular behavior and the other party can choose to accept or reject the offered proposition.

The incentive-by-proxy approach shares many features with negotiated exchange as traditionally conceptualized, except that the flow of benefits is indirect rather than direct. Party A solicits help from Party B by offering to provide resources not to Party B (as in traditional negotiated exchange) but, rather, to Party C, a third-party individual, group, or cause that Party B values. If Party B provides the desired benefits to Party A, Party A then provides the promised benefits to Party C. But the incentive-by-proxy strategy is like negotiated exchange in most other respects: they are both characterized by conditional exchange in which the exchange terms are explicit and resources tend to trade hands simultaneously or with only a short delay.

It is likely that practitioners employ incentive-by-proxy strategies far more frequently than reciprocity-by-proxy strategies because managers, like most people, strongly believe in the power of incentives in general to influence behavior in all manner of contexts. After all, the anticipation of a paycheck is spectacularly successful at luring employees out of bed and into the office every morning, the promise of a banana split propels children to clean their rooms, and the expectation of receiving another treat appears to help even old dogs learn new tricks. Incentives certainly have their limitations (e.g., Heyman and Ariely, 2004), but the widely held intuition that incentives can be a powerful motivational tool is also backed up by a great deal of research in fields such as organizational behavior, economics, psychology, and consumer behavior (e.g., Pritchard and Curtis, 1973; Shepperd and Wright, 1989; Gerhart and Milkovich, 1990; Eisenberger and Cameron, 1996; Lee and Ariely, 2006). Although the targets of incentive by proxy do not benefit directly, there are several reasons one might expect such indirect incentives to be effective. First, assuming the reward is promised to a cause (or other third party) valued by the target audience, incentive-by-proxy offers allow the target's actions to help support that cause. Second, this kind of incentive is akin to an offer of partnership aimed at attaining a shared goal, and cooperating with others toward the achievement of a common goal is more motivating than attempting to achieve that goal on one's own (Rafaeli and Sutton, 1991; Stanne, Johnson, and Johnson, 1999).

Reciprocity by Proxy as an Alternative to Incentive by Proxy

If promise, popularity, and intuitiveness alone were the chief criteria used to judge a strategy's success, there would be every indication that incentive-by-proxy approaches are effective means to produce desired behavior. Although incentive by proxy is widely assumed to be a powerful motivational tool, it remains unclear how effective it is at stimulating cooperation compared with other available alternatives, including the reciprocity-by-proxy approach. Despite widespread implementation, surprisingly little empirical research has been conducted on incentive-by-proxy strategies or on indirect negotiated exchanges more generally. Nearly all of the literature on incentives has focused on direct incentives (e.g., Eisenberger and Cameron, 1996). Thus a large gap exists in the literature regarding the influence of rewards that are tied to a given action but that do not benefit the actor directly. Moreover, of the little work that has been conducted on the topic, only a small portion of that research has been conducted in the field or has examined real behavior (Nan and Heo, 2007).

In a notable exception, Strahilevitz and Myers (1998) found that offers to donate to charity in exchange for certain purchase behavior were quite effective in promoting hedonic, frivolous, and indulgent behaviors but were far less so in promoting utilitarian, necessary, and practical behaviors. This seems to be the case because the incentive-by-proxy offer gives people an excuse to treat themselves to something fun and pleasurable while avoiding the feelings of guilt that might otherwise result from engaging in the indulgent behavior (because their actions help a valued cause). These findings suggest that although the incentive-by-proxy approach may be effective at spurring hedonic behaviors—such as purchasing indulgent goods or luxury products—this strategy might not live up to its full potential in other contexts. Because actions like volunteering to work extra hours to help colleagues with their projects or reusing one's hotel towels hardly qualify as hedonic delights, it is important to investigate the extent to which the incentive-by-proxy strategy is effective at motivating non-hedonic behavior—and whether the reciprocity-by-proxy strategy might be a more sound approach to eliciting cooperative behaviors when those behaviors are not inherently pleasurable.

Although the reciprocity-by-proxy and incentive-by-proxy strategies share many similarities (e.g., indirect exchange based on providing resources to valued third parties), the reciprocity-by-proxy strategy's ability to create a sense of personal obligation in the targets should lead to greater cooperation than the incentive-by-proxy strategy. In the domain of direct exchange, researchers have found that strategies based on reciprocal exchange are often more effective at eliciting cooperation than those based on comparable—or even more lucrative—offers of negotiated exchange (Berry and Kanouse, 1987; for a meta-analysis, see Church, 1993). For instance, people are more likely to fill out a long survey if they are first provided with a non-contingent gift (e.g., \$5), rather than the prospect of an even larger reward (e.g., \$50) contingent on completing the survey (James and Bolstein, 1992). When people receive non-contingent benefits (as in reciprocal exchange), they are likely to comply with later requests out of a sense of indebtedness and obligation due to the norm of reciprocity. In contrast, there is little felt duty to cooperate with those who offer something only on the condition that one first performs the desired behavior. Thus if the same benefits are offered conditionally (as in negotiated exchange),

people are likely to base their decision to comply not on a feeling of indebtedness or obligation to the requester but, rather, on how favorable they find the terms of the offer (Heyman and Ariely, 2004). Therefore, like the relative advantage that influence strategies based on direct reciprocal exchange have over those based on direct negotiated exchange, reciprocity-by-proxy appeals should elicit greater cooperation than comparable incentive-by-proxy appeals because they create a feeling of obligation.

Research Overview

The central purpose of the current investigation is to test the reciprocity-by-proxy approach against the commonly used incentive-by-proxy approach and a standard approach (i.e., request-only control) in a wide range of organizationally relevant domains. Formally, we aimed to test the following three hypotheses:

Hypothesis 1: Reciprocity-by-proxy appeals will yield greater compliance than either equivalent incentive-by-proxy appeals or standard appeals for cooperative behavior that are commonly used.

Hypothesis 2: The enhanced compliance rates generated by reciprocity-by-proxy appeals compared with the incentive-by-proxy and standard appeals for cooperative behavior will be due to their ability to elicit in the target audience a greater sense of obligation to help the organizations or individuals who employ the appeals.

Hypothesis 3: Reciprocity-by-proxy appeals will be most successful when they clearly convey to targets that the favor to the valued third party was done on behalf of the targets rather than on someone else's behalf.

We first test the superiority of reciprocity by proxy with a field experiment examining a hotel's environmental conservation program and then present data from four additional experiments and one pilot test that rule out alternative explanations, reveal the underlying psychological mechanism (felt obligation to return a favor), and demonstrate several boundary conditions.

EXPERIMENT 1: TOWEL REUSE IN A HOTEL

More than ever, institutions around the globe are imploring citizens to conserve environmental resources (Van Vugt, 2009). Hotels, for example, routinely encourage guests to reuse their towels during their stays (Goldstein, Cialdini, and Griskevicius, 2008). To motivate this prosocial conduct, the vast majority of in-room signs urge guests to reuse their towels to save resources and benefit the environment. In addition, some enterprising hotels have begun adding an incentive-by-proxy appeal: in exchange for towel reuse, the hotel will donate a portion of the resultant savings to an environmental protection organization (Cialdini and Goldstein, 2002). Support for hypothesis 1 would indicate that this approach could be a costly mistake for the hotels (and the environment), and that a reciprocity-by-proxy approach would be a more effective alternative.

To test this possibility, we conducted a large-scale field experiment in a major hotel in which we examined the effectiveness of specific types of appeals on guests' towel reuse by creating and deploying our own signs. One of the signs employed the most common approach taken by hotels, which is to

urge compliance on the basis of environmental benefits; this served as our *Standard environmental control* condition. A second sign was designed to be similar to widely used types of appeals that attempt to induce a desirable action by offering an indirect incentive. This *Incentive-by-proxy* sign informed guests that the hotel would make a donation to an environmental protection organization if guests reused their towels, thereby using the donation as an indirect incentive to induce a cooperative response. A third sign represented the *Reciprocity-by-proxy* approach, which we have never seen employed by any hotel. This sign reversed the sequence of action by describing an already-made donation on behalf of the guests, thereby attempting to harness the power of social obligation within the norm of reciprocity. We predicted that the reciprocity-by-proxy message would yield greater towel reuse than either the standard environmental control message or the incentive-by-proxy message.

Method

Sample. Over 80 days, we collected data on 634 instances of potential towel reuse in a mid-sized (190 rooms), mid-priced hotel. Guests were not aware that they were participants in a study.

Materials. Three different messages urging guests' participation in the towel reuse program were printed on hanging signs positioned on washroom towel racks: The *Standard environmental control* message stated, "HELP SAVE THE ENVIRONMENT. You can show your respect for nature and help save the environment by reusing your towels during your stay." The *Incentive-by-proxy* message stated, "PARTNER WITH US TO HELP SAVE THE ENVIRONMENT. In exchange for your participation in this program, we at the hotel will donate a percentage of the energy savings to a nonprofit environmental protection organization. The environment deserves our combined efforts. You can join us by reusing your towels during your stay." The *Reciprocity-by-proxy* message stated, "WE'RE DOING OUR PART FOR THE ENVIRONMENT. CAN WE COUNT ON YOU? Because we are committed to preserving the environment, we have made a financial contribution to a nonprofit environmental protection organization on behalf of the hotel and its guests. If you would like to help us in recovering the expense, while conserving natural resources, please reuse your towels during your stay."

Below each of the messages were instructions detailing how to participate: "If you choose to participate in the program . . . Please drape used towels over the curtain rod or the towel rack. If you choose not to participate in the program . . . Please place towels on the floor." Information about the benefits of participating was provided on the back of each sign.

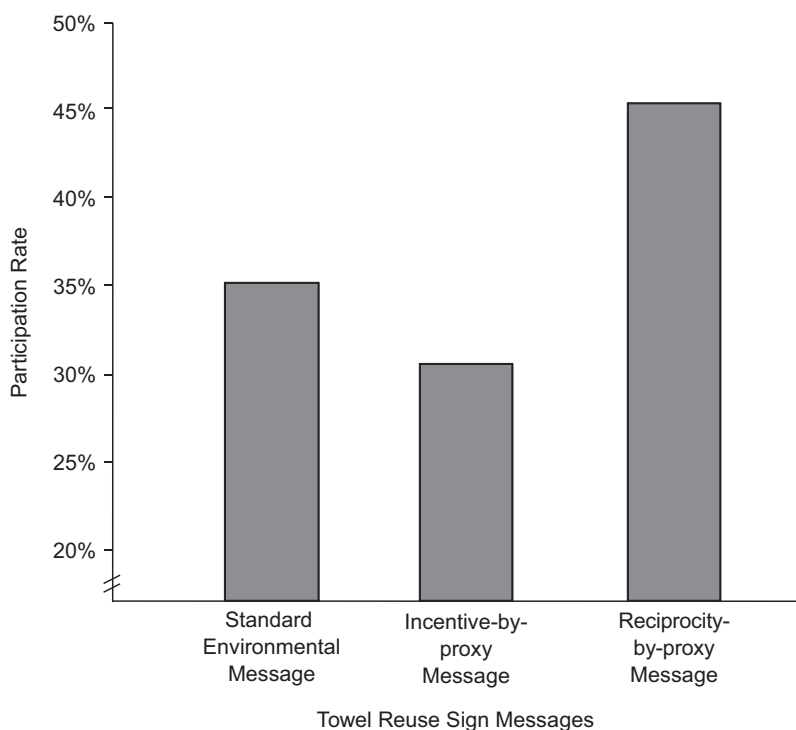
Intervention. The three different signs were randomly assigned to rooms throughout the hotel. Prior to data collection, the hotel room attendant supervisor placed one sign on the towel rack in each hotel room's washroom. The hotel's room attendants, who were blind to the hypotheses, were responsible for collecting the participation data. Data from several room attendants who did not understand our directions during training due to the language barrier or who did not follow our instructions throughout the study were excluded from the analyses.

Results

Because the towel reuse program was not applicable to those staying only one night, data were recorded only for guests who stayed a minimum of two nights. In addition, we analyzed only the towel reuse data from guests' first night so that no guest would participate in the study more than once. The dependent variable was dichotomous; room attendants recorded whether guests did or did not participate in the towel reuse program on their first eligible night.

A chi-square test for overall differences among the three conditions was significant, $\chi^2(2, N = 634) = 10.20, p = .006$. The results are shown in figure 1. A more specific comparison showed that guests in the incentive-by-proxy condition were no more likely to reuse their towels (30.7 percent) than those in the standard environmental control condition (35.1 percent); in fact, they were somewhat, but non-significantly, less likely to do so. Consistent with hypothesis 1, however, guests in the reciprocity-by-proxy condition were significantly more likely to reuse their towels (45.2 percent) than were those in either the incentive-by-proxy condition, $\chi^2(1, N = 423) = 9.42, p < .01$, or the standard environmental control condition, $\chi^2(1, N = 432) = 4.65, p = .03$.

Figure 1. Towel reuse rates as a function of sign in room, Experiment 1.



Test of psychological effects of the messages. Because it was not possible to ask the participants additional questions, we collected additional data from a different group of participants to examine the psychological mechanism that might underlie the effects demonstrated in the field experiment.

Specifically, we examined whether the superior level of towel reuse elicited by the reciprocity-by-proxy message was due to a sense of obligation stemming from the norm of reciprocity rather than one of two potential alternative explanations. One alternative account is that guests who saw the reciprocity-by-proxy message perceived the hotel to care more about the environment than those who saw the incentive-by-proxy message because making an initial donation might signal more commitment to the cause than would promising a donation contingent on the guests' behavior. We were skeptical of this possibility because we designed the reciprocity-by-proxy message to rule it out by including language in that message focusing guests on how reusing their towels would help the hotel recover the expense of its donation—hardly a selfless gesture to Mother Nature. A second possible alternative explanation is that guests who saw the reciprocity-by-proxy message might have trusted the hotel more than did those who saw the incentive-by-proxy message because they presumed that claims made about prior behaviors are more likely to be truthful than promises about future behaviors.

To investigate these possibilities, we administered a short online survey to a sample of 263 individuals (150 male, 113 female) who had experience staying at hotels. Participants were asked to imagine that they were staying at a hotel and saw one of the three messages displayed on a sign hanging on the towel rack; we randomly assigned which message they viewed. After reading the message, participants responded to two items assessing the degree to which they thought the hotel's management was trustworthy (e.g., "To what extent would you think the hotel management is trustworthy?" $\alpha = .93$), two items assessing the degree to which they thought that the hotel's management cared about protecting the environment (e.g., "To what extent would you think the hotel management cares about protecting the environment?" $\alpha = .86$), and two items about their perceived sense of obligation to the hotel's management to reuse their towels (e.g., "To what extent would you feel indebted to the hotel management?" $\alpha = .81$). Participants were also asked two questions aimed at assessing the extent to which they personally endorsed the norm of reciprocation (adapted from Eisenberger, Cotterell, and Marvel, 1987): e.g., "If a person did a favor for me, I would feel that I owed that person a favor in return" ($\alpha = .76$). Responses for all items ranged from 1, "Strongly Disagree," to 9, "Strongly Agree."

We expected to find no differences in the perceived trustworthiness of the hotel's management or in the management's care of the environment as a function of the sign participants viewed. But we did anticipate two findings that would be consistent with the supposition that reciprocity-by-proxy messages are more effective at eliciting compliance because they create a sense of obligation and indebtedness to the benefactor via the norm of reciprocation. First, we expected that those who viewed the reciprocity-by-proxy message would report feeling that they owed it to the hotel's management to reuse their towels to a greater extent than would those who viewed either of the other messages. Second, because only the reciprocity-by-proxy message should activate the norm of reciprocation, we expected to find a significant, positive correlation between participants' personal endorsement of the reciprocation norm and the extent to which they felt they owed it to the hotel to reuse their towels *only* for those participants who viewed the reciprocity-by-proxy message. That is, we anticipated that the extent to which our participants personally

subscribed to the tenets of the reciprocation norm would predict how indebted they felt to hotel management, but only for the condition that activated the norm.

As predicted, the results showed no differences between the conditions in perceptions of the hotel management's trustworthiness (incentive-by-proxy mean = 5.21, S.D. = 1.75; reciprocity-by-proxy mean = 5.10, S.D. = 1.60; standard environmental control mean = 4.82, S.D. = 1.59) or commitment to the environment (incentive-by-proxy mean = 5.01, S.D. = 1.93; reciprocity-by-proxy mean = 5.10, S.D. = 1.69; standard environmental control mean = 4.71, S.D. = 1.77), all $F_s < 1.4$.¹

Instead, the results supported our hypothesized explanation for the effect—that targets of reciprocity-by-proxy messages experienced a heightened sense of obligation to the requester compared with the other types of messages (hypothesis 2). Consistent with hypothesis 2, the results revealed that those in the reciprocity-by-proxy message condition were more likely to report feeling they owed it to the hotel's management to reuse their towels (mean = 3.94, S.D. = 1.83) than those in the incentive-by-proxy message condition (mean = 3.40, S.D. = 2.06), $F(1, 260) = 3.95$, $p < .05$, or in the standard environmental message condition (mean = 3.44, S.D. = 1.90), $F(1, 260) = 3.20$, $p = .07$. Also, consistent with our hypothesized explanation for the effect, participants' personal endorsement of the norm of reciprocity was significantly correlated with their felt obligation to the hotel's management in the reciprocity-by-proxy message condition ($r = .22$, $p < .05$), but not in the incentive-by-proxy message or the standard environmental message conditions ($p_s > .15$).

Taken together, the results of Experiment 1 showed that the reciprocity-by-proxy message yielded greater towel reuse than the incentive-by-proxy message, even though from a rational standpoint, reusing one's towels would have a greater overall environmental impact in the incentive-by-proxy condition. The results also suggest that the enhanced compliance elicited by the reciprocity-by-proxy signage in the field experiment was due to an enhanced sense of obligation to reciprocate the hotel's actions rather than several possible alternative explanations.

EXPERIMENT 2: VOLUNTEERISM

The results of Experiment 1 are consistent with our hypothesis that reciprocity-by-proxy messages are more effective at motivating the desired behavior than are either incentive-by-proxy messages or standard control messages. Nevertheless, it is possible that certain features of the messages, which we considered to be extraneous and experimentally innocuous, served to diminish the equivalency between conditions in meaningful ways and thus allowed for alternative explanations for the observed effect. For example, one might argue that the reciprocity-by-proxy message appealed more directly to the target than did the incentive-by-proxy message via inclusion of the phrase "Can we count on you?" Thus one purpose of Experiment 2 was to conceptually replicate

¹ There were no interactions with participant gender in these analyses (or in any other analysis throughout this paper other than those presented in Experiment 5); accordingly, we do not discuss gender further until Experiment 5.

Experiment 1 in a way that eliminated alternative explanations for the observed effect.

The second purpose of Experiment 2 was to examine the phenomenon in a different domain: volunteering one's time. Many organizations use incentive-by-proxy appeals when attempting to recruit volunteers for their corporate responsibility programs by promising to make a monetary contribution to a given cause for each employee who volunteers for a certain number of hours (Miller, 1997; Peterson, 2004). We wanted to test the efficacy of both this incentive-by-proxy approach and our reciprocity-by-proxy approach in terms of their ability to convince volunteers to sacrifice their time and effort on a requested task.

The third purpose of Experiment 2 was to extend the findings from the initial study by examining two conceptually different variants of the reciprocity-by-proxy appeals—variants that differed in whether the message made it explicitly clear that the target's compliance would help recover costs that were incurred by the organization. This would help determine whether it was necessary in Experiment 1 to explicitly state that reusing the towels would help the hotel recover the expense it incurred by donating to the environmental organization. Although we did not have a formal prediction as to how these two versions of the reciprocity-by-proxy appeal would fare relative to one another, we believed that finding no difference between the two variants would suggest that the feeling of indebtedness that is produced by reciprocity-by-proxy messages is broad in nature, obligating the targets to help the benefactor more generally. Finally, it is noteworthy that the incentive-by-proxy appeal in Experiment 1 fared no better than a control appeal. The lack of effectiveness for such a commonly used type of appeal deserves more attention. Thus Experiment 2 again examined the effectiveness of an incentive-by-proxy appeal relative to a control message.

Method

Sample. Participants were 62 university students (40 female, 22 male) who received payment for participating in an online study. The average age of the participants was 22.3 years old (ages ranged between 18 and 64 years).

Procedure. After completing an unrelated study online, participants read, "Thank you very much for participating in our study. We have just a few more questions for you to be sure you are credited for participating. However, before getting to that, we wanted to ask you whether you would be willing to volunteer to do an additional twenty-minute survey assessing your thoughts about environmental practices taking place at UCLA and the greater Los Angeles area. If you are willing to do the survey, we will e-mail you a link later this week and ask you to complete the 20-minute survey." The rest of the wording depended on the randomly assigned treatment condition. The *Control* message stated, "UCLA researchers are committed to protecting the environment. We hope you will join us in our commitment to the environment by volunteering to do the survey." The *Incentive-by-proxy* message stated, "Because UCLA researchers are committed to protecting the environment, we will make a donation to a local environmental protection organization if you volunteer. We hope you will join us in our commitment to the environment by volunteering to do the survey." The *Reciprocity-by-proxy* (explicit link to cost recovery)

message stated, "Because UCLA researchers are committed to protecting the environment, we recently made a donation to a local environmental protection organization on behalf of all of our participants. We hope you will join us in our commitment to the environment, while also helping us cover the cost of the donation, by volunteering to do the survey." The *Reciprocity-by-proxy* (no link to cost recovery) message stated, "Because UCLA researchers are committed to protecting the environment, we recently made a donation to a local environmental protection organization on behalf of all of our participants. We hope you will join us in our commitment to the environment by volunteering to do the survey."

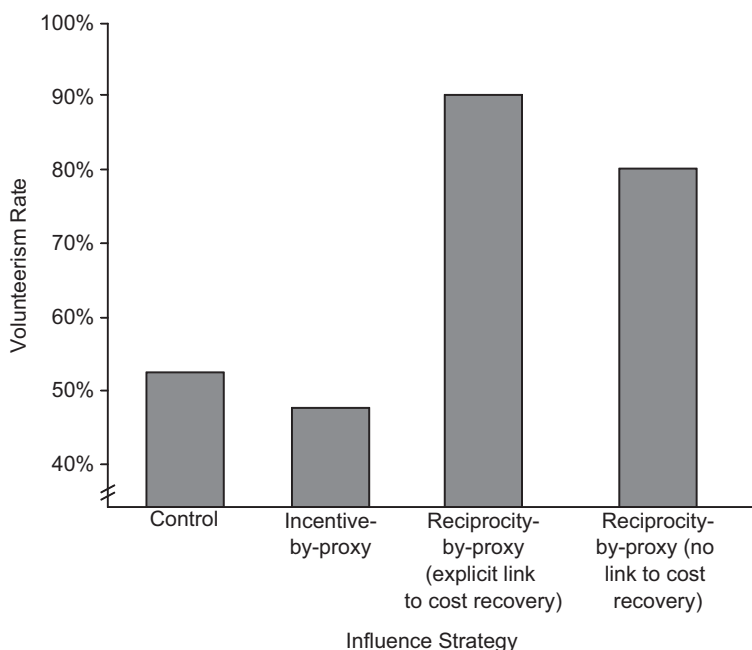
Dependent measure. After reading the request, participants answered either "No, I won't volunteer to do the 20-minute survey" or "Yes, I'll volunteer to do the 20-minute survey."

Results

A chi-square test for overall differences among the four conditions was significant, $\chi^2(3, N = 62) = 8.35, p = .04$. Figure 2 graphs the results. Consistent with the results of Experiment 1, the *incentive-by-proxy* message (47.4 percent) yielded no more volunteerism than the control message (52.9 percent), $p > .74$.

For the two reciprocity-by-proxy messages, a chi-square test revealed that those in the reciprocity-by-proxy (explicit link to cost recovery) condition (90.9 percent) were not significantly more likely to volunteer than were those in the reciprocity-by-proxy (no link to cost recovery) condition (80.0 percent), $p > .44$. Consistent with hypothesis 1 and Experiment 1, however, the reciprocity-by-proxy

Figure 2. Volunteerism rates as a function of influence strategy, Experiment 2.



messages (84.6 percent combined compliance rate) yielded significantly more volunteerism than either the incentive-by-proxy message, $\chi^2(1, N = 45) = 7.11$, $p = .008$, or the control message, $\chi^2(1, N = 43) = 5.13$, $p = .02$.

Experiment 2 reinforced what we found in Experiment 1. First, incentive-by-proxy messages that are commonly used by organizations today were no more effective than a standard request at eliciting compliance. Second, reciprocity-by-proxy messages yielded far greater compliance than either control or incentive-by-proxy messages. Moreover, these findings revealed that reciprocity-by-proxy messages do not need to explicitly depict the requested behavior as directly linked to the favor performed for the third party.

EXPERIMENT 3: ORGANIZATIONAL CITIZENSHIP BEHAVIOR

Although the evidence to this point strongly suggests that target audiences of reciprocity-by-proxy messages comply with the request due to the obligating forces that result from the norm of reciprocation, Experiments 1 and 2 limited our ability to test proximate psychological mechanisms within a mediational model. Thus we conducted a scenario study that would allow us greater access to the psychological processes of those target individuals considering the request. We also sought to increase the generalizability of the phenomenon in several respects. First, we wanted to examine the relative efficacy of reciprocity-by-proxy messages and incentive-by-proxy messages in a different organizationally relevant context, namely, among employees working within an organization. Second, we wanted to establish that the effects observed in the first two studies are not limited to the particular issue of environmentalism and that these phenomena extend to specific individuals as the beneficiaries of the favor as well as the influence target. Experiment 3 examined the effectiveness of the approaches in promoting a particular type of organizational citizenship behavior (Smith, Organ, and Near, 1983): showing appreciation for a coworker's efforts in the form of gift giving. This kind of behavior has the potential to enhance morale, commitment, team spirit, group cohesiveness, and ultimately, productivity (e.g., Organ, 1988; Podsakoff and MacKenzie, 1997; Grant, Dutton, and Rosso, 2008); accordingly, it is important to determine how best to encourage such behavior. In addition, Experiment 3 examined a different kind of incentive-by-proxy appeal: offers to make a matching gift to the valued third party (e.g., Meier, 2007).

Method

Sample. The non-student sample was made up of 34 individuals (18 female, 16 male) who received payment for participating in an online study. The average age of the participants was 33.2 years old (ages ranged between 19 and 55 years).

Procedure. All participants read a scenario that asked them to imagine they were a consultant at a small consulting company working primarily with two people—a colleague and an administrative assistant who worked for both of them. After being away from the office for a few days due to illness, the participant ran into his or her colleague. The rest of the scenario depended on the treatment condition to which participants were randomly assigned.

In the *Control* condition, the scenario continued, "When you ask if you've missed anything at the office, your colleague mentions that yesterday was Secretary's Day (a day that bosses typically show appreciation for secretaries, administrative assistants, and receptionists by either sending flowers, buying gifts, or giving cash to them). Unfortunately, you are leaving town for a week-long business trip tomorrow morning, so you don't have time to shop for gifts or flowers; if you are going to give the administrative assistant something, it's going to have to be cash from your wallet. The administrative assistant, who you've known for a much shorter period of time than your colleague has, has left for the day. However, your colleague mentions he will see the assistant tomorrow and is happy to pass along anything you'd like (such as cash and/or a note of thanks) for you. He mentions that you should feel free to give as little or as much as you'd like to him, including not giving anything at all. You know that the only bill you have in your wallet is a \$50 bill."

The *Incentive-by-proxy* condition was the same as the control condition, with two exceptions. The first is that the colleague had also been away from the office for the last two days and therefore had also not gotten the assistant anything yet. Second, instead of the colleague simply offering to pass along the participant's money and/or note, participants read that "your colleague mentions he will see the assistant tomorrow, is happy to match from his own pocket any amount of money you want to give (up to \$50, meaning \$100 in total), and will pass the combined cash along to the assistant with a note of thanks from the both of you."

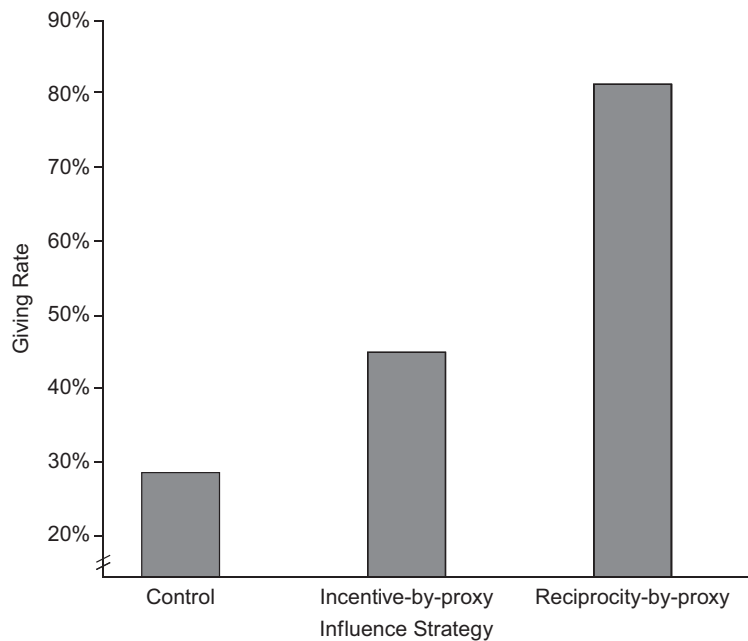
The *Reciprocity-by-proxy* condition was the same as the control condition, except that instead of the colleague simply offering to pass along the participant's money and/or note, participants read that "your colleague tells you he gave you a call yesterday to ask if you wanted to give a joint gift, but got no answer, so he gave the administrative assistant \$100 with a note of thanks saying the gift was from the both of you. He mentions that you should feel free to give as little or as much as you'd like to him for reimbursement, including not giving anything at all. . . ."

Dependent measures. After reading the scenarios, participants were asked the following question regarding their decision to give the colleague the \$50 bill: "If you had to decide between giving nothing or handing the \$50 bill to your colleague, which do you think you would choose?" Participants had to choose from one of the following two answers: "I would NOT give the \$50 bill to my colleague" and "I WOULD give the \$50 bill to my colleague."

Next, participants responded to a series of questions, ranging from 1 "Not at All" to 7 "Very Much." Two questions measured perceptions that their colleague had done a nice favor for them (e.g., "To what extent would you think your colleague is doing or has done a favor for you?" $\alpha = .97$). Next, two questions measured their perceived indebtedness to the colleague (e.g., "To what extent would you feel indebted to your colleague?" $\alpha = .83$); the final question asked, "How much guilt would you feel if you did not hand the \$50 bill to your colleague?"

Results

Decision to give. A chi-square test revealed that the participants' giving decision was significantly influenced by the treatment condition, $\chi^2(2, N = 34) = 7.14, p = .03$. Results are shown in figure 3. Planned tests show that

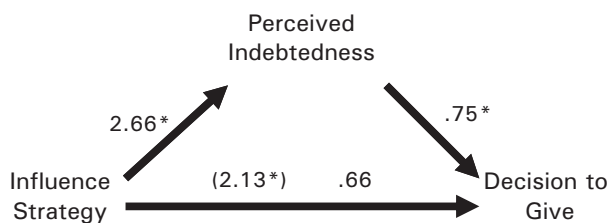
Figure 3. Giving rates as a function of influence strategy, Experiment 3.

participants in the reciprocity-by-proxy condition were significantly more likely to report giving the \$50 bill (81.8 percent) than were those in the incentive-by-proxy and control conditions (34.8 percent combined), $\chi^2(1, N = 34) = 6.59, p = .01$; the latter two conditions (44.4 percent and 28.6 percent, respectively) did not significantly differ from one another.

Perceptions of the colleague's actions. An ANOVA revealed that participants' perceptions of their colleague's actions were significantly affected by the treatment condition, $F(2, 31) = 6.43, p = .005$. Planned contrasts further revealed that participants in the reciprocity-by-proxy condition were significantly more likely to perceive the colleague's actions as a personal favor (mean = 5.46, S.D. = 1.35) than were participants in the incentive-by-proxy and control conditions (combined mean = 3.78, S.D. = 1.20), $F(2, 31) = 3.56, p = .001$; the latter two conditions (mean = 3.78, S.D. = 1.30 and mean = 3.79, S.D. = 1.19, respectively) did not differ from one another ($F < 1$).

Feelings of indebtedness toward the colleague. An ANOVA revealed that participants' feelings of indebtedness toward their colleague were significantly affected by the treatment condition, $F(2, 31) = 15.36, p < .001$. Planned contrasts further revealed that participants in the reciprocity-by-proxy condition were significantly more likely to feel indebted toward the colleague (mean = 4.68, S.D. = 1.82) than were participants in the incentive-by-proxy and control conditions (combined mean = 2.02, S.D. = .96), $F(2, 31) = 5.46, p < .001$; the latter two conditions (mean = 2.11, S.D. = .74 and mean = 1.96, S.D. = 1.10, respectively) did not differ from one another ($F < 1$).

Test of mediation. We hypothesized that feelings of indebtedness would mediate the relationship between the treatment condition and the likelihood of

Figure 4. Mediation model, Experiment 3.

* Statistically significant at $p < .05$

giving. We tested this hypothesis using the procedure outlined by Baron and Kenny (1986), using logistic regression in several instances because our dependent variable was dichotomous (MacKinnon and Dwyer, 1993). As noted earlier, the colleague's behavior had a significant effect on the likelihood of giving and on the proposed mediator of perceived indebtedness. Consistent with hypothesis 2, when indebtedness ratings were added to the model, they yielded a significant effect on the likelihood of giving, Wald statistic (1) = 3.87, $p < .05$, and the effect of the colleague's behavior was no longer significant, Wald statistic (1) = 0.33, $p > .56$. This change in significance was itself significant, Sobel $Z = 1.93$, $p = .05$. Figure 4 presents results of the mediation model, which shows that participants' self-reported levels of indebtedness toward their colleague mediate the relationship between influence strategy type (i.e., colleague behavior) and the likelihood of giving in Experiment 3. Coefficients are unstandardized. The coefficient in parentheses (2.13) represents the direct effect of influence strategy type on participants' likelihood of giving, whereas the adjacent coefficient (.66) was found when the indebtedness was statistically controlled.

Experiment 3 shows that individuals were most likely to contribute money when the requester took a reciprocity-by-proxy approach and that they did so due to a greater sense of indebtedness to the requester. The results show that despite the indirect nature of the initial giving, the norm of reciprocation operates powerfully in such a circumstance, and individuals exhibit greater generosity and greater compliance to avoid feelings of guilt associated with not fulfilling their obligation to repay the requester (Greenberg, 1980). Consistent with our predictions, an ANOVA revealed that participants' expectations that they would feel guilty for not giving were significantly affected by the treatment condition, $F(2, 31) = 5.02$, $p = .01$. Planned contrasts further revealed that reciprocity-by-proxy participants reported that they would feel significantly more guilty for not giving the money (mean = 5.55, S.D. = 1.63) than incentive-by-proxy and control participants (combined mean = 3.48, S.D. = 1.64), $F(2, 31) = 3.12$, $p = .004$; the latter two conditions (mean = 3.56, S.D. = 2.07 and mean = 3.43, S.D. = 1.70, respectively) did not differ from one another ($F < 1$).

EXPERIMENT 4: FAVORS DONE ON BEHALF OF TARGETS

Experiment 3 showed that a reciprocity-by-proxy approach yields greater prosocial behavior than more widely used approaches because of its ability to elicit in

the target audience a sense of personal obligation and indebtedness toward the organization or individual making the request, but the exact nature of that obligation has not been ascertained to this point. In particular, we have not yet determined whether targets of the reciprocity-by-proxy approach feel obligated to help the benefactor simply because that benefactor has performed a favor for an individual, cause, or organization that the targets support, or whether it is because the benefactor has performed that favor specifically on behalf of the targets.

It is possible that the targets of this strategy would feel a sense of obligation to the requester regardless of on whose behalf the favor was performed because a cause the target values would benefit from the requester's actions irrespective of the rationale provided for those actions. As stated in hypothesis 3, however, we reasoned that reciprocity-by-proxy appeals would be most successful when they clearly convey that the favor to the third party was done on targets' behalf rather than on someone else's behalf. Thus Experiment 4 was designed to test the supposition that to be optimally effective, the reciprocity-by-proxy approach must communicate that the aid provided to the valued third party was given on targets' behalf and with them in mind. Doing so should convey the intentionality underlying the benefactor's actions, communicating that the benefactor has specifically considered the targets' goals as they relate to the valued third party and has taken steps to act as the targets' proxy by helping the targets achieve those goals through the aid. Because the influence targets under these circumstances are likely to interpret the provision of aid on their behalf as evidence that the favor was performed for them, they will be more likely to return the favor than if the favor was performed on someone else's behalf.

Method

Sample. Participants were 158 individuals (90 female, 68 male) who received payment for participating in an online study. The average age of the participants in this sample was 35.0 years old (ages ranged between 18 and 68 years). Unlike in Experiment 2, these participants had no preexisting affiliation with the university.

Procedure. After completing an unrelated study online, all participants read the following: "Thank you very much for participating in our study. We have just a few more questions for you to be sure you are credited for participating. However, before getting to that, we wanted to ask you whether you would be willing to volunteer to do an additional twenty-minute survey assessing your thoughts about environmental practices taking place around the world. If you are willing to do the survey, we will direct you to that survey at the end of this one and ask you to complete the twenty-minute survey." The next sentence was the only one that varied by condition. The final sentence was the same for all conditions: "We hope you will join us in our commitment to the environment by volunteering to do the survey."

The *Control* condition message stated, "UCLA researchers are committed to protecting the environment." The *Incentive-by-proxy* message stated, "Because UCLA researchers are committed to protecting the environment, we will make a donation to a local environmental protection organization for each volunteer." The *Reciprocity-by-proxy (on behalf of target)* message stated,

"Because UCLA researchers are committed to protecting the environment, we recently made a donation to a local environmental protection organization on behalf of all of our participants." The *Reciprocity-by-proxy (on behalf of others)* message stated, "Because UCLA researchers are committed to protecting the environment, we recently made a donation to a local environmental protection organization on behalf of the UCLA faculty."

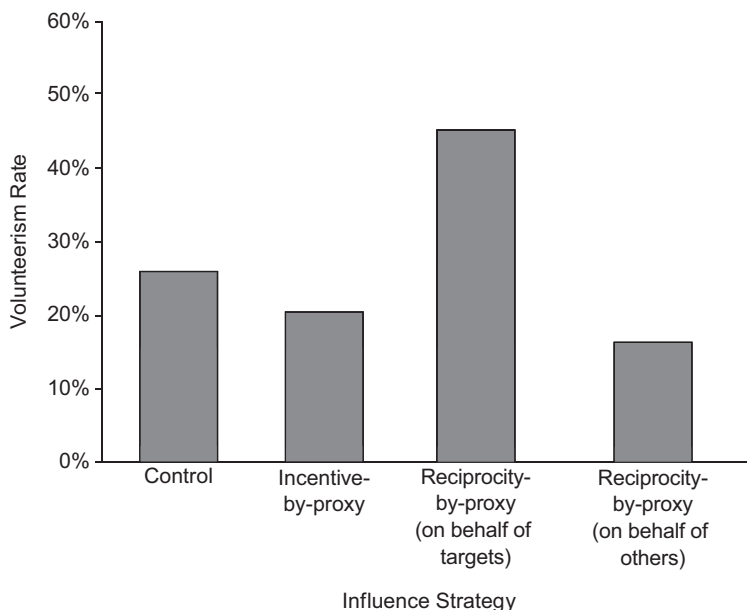
Dependent measure. After reading the request, participants indicated either "No, I won't volunteer to do the 20-minute survey" or "Yes, I'll volunteer to do the 20-minute survey."

Results

A chi-square test for overall differences among the four conditions was significant, $\chi^2(3, N = 158) = 9.56, p = .02$. The results are shown in figure 5. Consistent with the results of the other experiments, the incentive-by-proxy message (20.5 percent) yielded no more volunteerism than the control message (26.1 percent), $p > .54$. In line with predictions and the results of Experiments 1–3, however, the reciprocity-by-proxy (on behalf of target) message (45.2 percent) elicited greater volunteerism than the incentive-by-proxy message, $\chi^2(1, N = 81) = 5.56, p = .02$, and the control message, $\chi^2(1, N = 88) = 3.53, p = .06$.

Importantly, consistent with hypothesis 3, reciprocity-by-proxy participants were significantly more likely to volunteer for the survey when the donation was made on their behalf (45.2 percent) than when the donation was made on the faculty's behalf (16.1 percent), $\chi^2(1, N = 73) = 6.85, p = .009$. In fact, when

Figure 5. Volunteerism rates as a function of influence strategy, Experiment 4.



it was made on the faculty's behalf, the compliance rate was no different than the control or incentive-by-proxy conditions, both $ps > .30$.

The results of this experiment indicate that an essential component of the reciprocity-by-proxy strategy is performing the favor on behalf of the influence targets, an action that conveys that the requester understands what the targets value and that they have performed a favor for the targets by acting as their agents to help the valued cause.

EXPERIMENT 5: THE CAUSE MATTERS

The results from the previous experiments indicate that the reciprocity-by-proxy strategy is an effective tool for harnessing the power of obligation to elicit compliance with one's requests. We have argued that what underlies the strength of this effect is that performing a favor on behalf of target individuals for a third-party person, organization, or cause that they value will be viewed as a favor performed for the targets themselves. In keeping with this logic, we designed all of the prior experiments so that the direct beneficiary of the gift or favor is someone or something that is likely to be valued by the target audience: in Experiments 1, 2, and 4, the recipient of the favor was an environmental protection organization, an entity that most of our participants were likely to value and support (Mackoy, Calantone, and Droge, 1995), and in Experiment 3, it was a valued employee.

The central purpose of Experiment 5 was to test explicitly this aspect of the phenomenon by choosing a recipient organization that was likely to divide the target audience into those who would value the organization—and would therefore appreciate the donation in the reciprocity-by-proxy condition—and those who would not. The participants in this experiment were male and female university students, and the beneficiary of the donation(s) in the reciprocity-by-proxy and incentive-by-proxy conditions was a scholarship fund for incoming male undergraduates. We expected that men would replicate the reciprocity-by-proxy effect we observed in Experiments 1–4 because they would be more likely than women to care about and value the fund. In contrast, we anticipated that the reciprocity-by-proxy condition would fail to be effective among women because we expected female students would be less likely to care about or value a scholarship fund dedicated only for male students. More formally:

Hypothesis 4: The reciprocity-by-proxy strategy will be effective when targets value the beneficiary of the favor but ineffective when they do not.

It is also noteworthy that in Experiments 1–4, the beneficiary of the favor was always clearly related to the benefactor's request regardless of the explicitness of that link. For example, in Experiments 1, 2, and 4, the favor involved a donation to an environmental protection organization, and the request involved environmental protection in one form or another; in Experiment 3, the favor involved a gift to a colleague and then a request for money that would help cover that particular expense. Thus, in addition to the primary aim, Experiment 5 was also designed to test the generalizability of the reciprocity-by-proxy strategy by having the beneficiary of the request (a men's scholarship fund) be completely unrelated to the purpose of the request (an environmental survey).

Method

Sample. Participants were 273 UCLA students (144 female, 129 male) who received payment for participating in an online study. The average age of the participants in this sample was 21.1 years old (ages ranged between 18 and 58 years).

Procedure. After completing a number of filler items on the topic of retail preferences, all participants read the following: "Thank you very much for participating in our study. We have just a few more questions for you. However, before getting to the last few questions, we wanted to ask you whether you would be willing to volunteer to do an unpaid 20-minute survey assessing your thoughts about environmental practices taking place around the world. If you are willing to do the survey, we will direct you to that survey at the end of this one and ask you to complete the 20-minute survey." The next sentence was the only one that varied by condition. The final sentence was the same for all conditions: "We hope you will join us in our commitment to the environment by volunteering to do the 20-minute environmental practices survey."

The *Control* message stated, "UCLA researchers are committed to improving the community." The *Incentive-by-proxy* message stated, "Because UCLA researchers are committed to improving the community, we will make a donation to the UCLA Men's Scholarship Fund (for incoming undergraduate men) for each volunteer." The *Reciprocity-by-proxy* message stated, "Because UCLA researchers are committed to improving the community, we recently made a donation to the UCLA Men's Scholarship Fund (for incoming undergraduate men) on behalf of all of our participants."

Dependent measures. The dependent measures were the same measures used in Experiments 2 and 4; participants indicated whether or not they agreed to complete the survey. After responding to this question, all participants were asked the following question: "To what extent do you think the UCLA Men's Scholarship Fund is something that you personally care about?" Responses to this question ranged from 1, "Not at All," to 7, "Very Much."

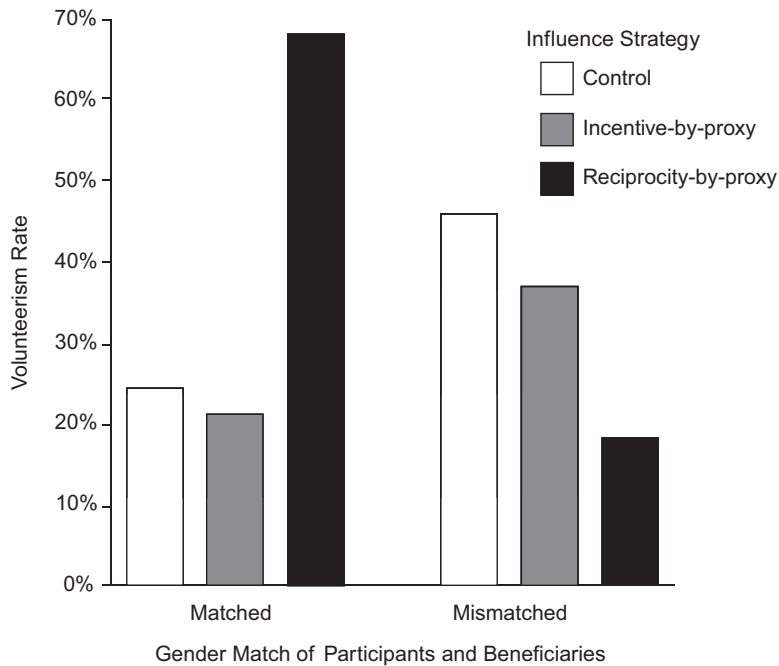
Results

Attitudes toward the scholarship fund. As expected, men reported personally caring about the Men's Scholarship Fund more than women (mean = 3.67, S.D. = 1.51 and mean = 2.58, S.D. = 1.23, respectively), $F(1, 259) = 41.00, p < .001$. There were no other significant effects on attitudes.

Volunteerism. As predicted, a logistic regression revealed a significant interaction between the message conditions and the gender of the participant on volunteerism, indicating that men's and women's response patterns differed as a function of the various messages (Wald = 28.52, $p < .001$). Figure 6 shows the results.

For men, chi-square tests showed that participants in the reciprocity-by-proxy condition were significantly more likely to volunteer to do the survey (68.3 percent) than those in either the control (24.0 percent) or incentive-by-proxy condition (21.1 percent), $\chi^2(1, N = 91) = 17.94, p < .001$ and $\chi^2(1, N = 79) = 17.74, p < .001$, respectively. There was no significant difference for men between the control and the incentive-by-proxy condition, $\chi^2(1, N = 88) =$

Figure 6. Volunteerism rates as a function of influence strategy and gender match of participants and beneficiaries, Experiment 5.



0.11, $p > .74$. These results replicate the positive effects of the reciprocity-by-proxy strategy we observed in Experiments 1–4.

In contrast, women showed the opposite pattern. For women, chi-square tests showed that participants in the reciprocity-by-proxy condition were significantly *less* likely to volunteer to do the survey (19.6 percent) than those in either the control (46.7 percent) or the incentive-by-proxy condition (37.2 percent), $\chi^2(1, N = 101) = 8.42, p < .005$ and $\chi^2(1, N = 99) = 3.78, p = .05$, respectively. There was also no significant difference between the control or the incentive-by-proxy condition for women, $\chi^2(1, N = 88) = 0.81, p > .36$.

Experiment 5 showed that the reciprocity-by-proxy strategy was again effective for those who are likely to value the third-party beneficiary of the donation. Moreover, this finding extends the generalizability of this approach to situations in which the beneficiary of the favor (e.g., a scholarship organization) is in a different domain than the request (e.g., completion of an environmental survey). Yet we also found that the reciprocity-by-proxy strategy was not only ineffective for women, it actually backfired relative to women who were in the control and incentive-by-proxy conditions. These results strongly suggest that the backfire effect was not merely due to the requesters' choice of beneficiary—the beneficiary was the same in both the reciprocity-by-proxy and incentive-by-proxy conditions—but, rather, that women found it especially offensive to be told that the requester donated on their behalf to a cause they did not support.

GENERAL DISCUSSION

The reciprocity literature has focused almost exclusively on the role of indebtedness in direct (i.e., two-party) reciprocal exchange. In the current investigation, we proposed and examined a novel reciprocity-based influence strategy aimed at gaining the cooperation of target individuals, unlike strategies based on traditional reciprocal exchange, in which a benefactor provides direct benefits to a target individual to elicit reciprocity. We argued that a benefactor can elicit in a target a sense of indebtedness and personal obligation to reciprocate by providing benefits not to the target but rather to a valued third party on behalf of the target. We suggested that this reciprocity-by-proxy strategy would be more successful at eliciting cooperation than the incentive-by-proxy strategy, an indirect exchange strategy with which it shares many features. In that widely used but rarely studied approach, one party makes a request of target individuals, promising to provide aid to a third party or cause valued by the targets if they comply. We challenged the effectiveness of this strategy, arguing that the incentive-by-proxy approach is suboptimal at motivating coworkers, employees, or consumers to cooperate because, unlike the reciprocity-by-proxy approach, it does not elicit a sense of personal obligation to cooperate.

A large field experiment in a hotel supported our predictions by producing two telling findings. First, the sign using the incentive-by-proxy approach was not any more successful than a standard environmental control sign at motivating the desired behavior. Second, the sign using the reciprocity-by-proxy approach was the most effective. These findings are noteworthy in that the incentive-by-proxy and reciprocity-by-proxy appeals carried similar content (in the form of monetary donations to a worthy and valued cause) but differentially activated a crucial psychological motivation: a personal sense of obligation to reciprocate. Experiment 2 replicated the field experiment in a different context and with a different behavior (i.e., volunteering time and effort for a task) and showed that reciprocity-by-proxy approaches need not explicitly portray a target's compliance with the request as helping to recover the costs of the requester's actions. Experiment 3 examined the effectiveness of these approaches in a different context and with a different behavior: gift giving to show one's appreciation for one's coworker, a form of organizational citizenship. In conjunction with the findings of the survey study that was paired with the field experiment, the results of Experiment 3 yielded strong support for our contention that the reciprocity-by-proxy approach's effectiveness is mediated by the feeling of obligation that the norm of reciprocation elicits in the target individual. Experiment 4 provided further support for our reciprocation-based account and revealed an important boundary condition for the effect by demonstrating that the approach is only effective when the favor to the third party has been performed on behalf of the target individuals, an approach that makes clear to the targets that the benefactor was attempting to perform a favor specifically for them. Finally, Experiment 5 demonstrated that this strategy is most effective when the targets strongly value the third-party beneficiary and that reciprocity-by-proxy appeals can backfire if the targets do not value the beneficiary.

The current research not only helps address a sizeable gap in the reciprocity literature, which has been largely restricted to exploring the antecedents and consequences of indebtedness within dyads, but it also expands the universe

of forms of social exchange. We suggested that the widely used incentive-by-proxy strategy was actually a form of exchange rarely studied by social exchange scholars—essentially indirect negotiated exchange. In this form of exchange, benefits flow contingently and explicitly as in negotiated exchange, but unlike negotiated exchange, benefits flow indirectly. In addition, our research indicates that the reciprocity-by-proxy approach is not only a novel influence strategy, it also blurs the boundaries between direct and indirect exchange. Specifically, the reciprocity-by-proxy approach is a unique hybrid of indirect exchange, in that the target receives no direct personal benefit, and direct exchange, in that the target perceives the favor as being performed directly for him- or herself.

Although reciprocity by proxy shares many features with traditional conceptualizations of indirect reciprocity, it differs in important ways as well. One primary distinction between indirect reciprocity and reciprocity by proxy is that they are driven by different psychological mechanisms. When benefactors act as the targets' agents by performing a favor for a valued cause in reciprocity by proxy, targets will perceive this action as akin to a favor performed directly for them, making them feel indebted to the benefactors and obligated to return the favor. In contrast, in a traditional indirect reciprocity framework, those who are aware of the provision of aid from a benefactor to a third-party beneficiary help the benefactor not because they perceive it as a favor done for them, but because the helping signals that the benefactor is likely a generous and trustworthy exchange partner. The results of Experiment 4 are more in line with a reciprocity-by-proxy account than with a traditional indirect reciprocity account in that participants were sensitive to information regarding on whose behalf the donation was made, increasing their compliance relative to the control only when the action was performed on their behalf. In contrast, a traditional indirect reciprocity framework would suggest that it should not matter on whose behalf the donation was made because, either way, the action demonstrates that the benefactor is likely a generous and trustworthy exchange partner. Yet when the donation was made on behalf of others, the targets' compliance rate was no greater than in the control condition. Thus reciprocity by proxy appears to be a more effective strategy than traditional indirect reciprocity, at least in the current experimental context.

Organizational Implications and Future Directions

The present work yields several important organizational implications and brings up a number of interesting questions for future research. Many organizations currently utilize the incentive-by-proxy approach in a wide variety of domains, ranging from influencing consumers to buy their products via cause-related marketing (Varadarajan and Menon, 1988) to prodding their employees to be involved in their community outreach programs (Miller, 1997; City of Bloomington, Indiana, 2011). The current research strongly suggests that organizations are more likely to gain the cooperation of a target audience by employing the obligation-inducing reciprocity-by-proxy approach rather than the reputation-based indirect reciprocity approach or the deal-making incentive-by-proxy approach.

This investigation also has a number of implications for exchange processes that occur on an interpersonal level within organizations, many of which could

be the focus of future research. Researchers have focused on how various forms of exchange—including negotiated exchange, reciprocal exchange, and indirect reciprocity—help coworkers gain cooperation with each other in the workplace. Although each of these commonly studied forms of exchange has its advantages in particular contexts (Flynn, 2005), each one also has drawbacks in certain circumstances. For example, if an employee has a request that only one target individual can fulfill but has nothing to offer that the target needs, trying to gain compliance via indirect reciprocity—for instance, by helping another random coworker—would not necessarily improve the likelihood of compliance because doing so does not obligate the target any more than any other individual in the community to provide help. Such a situation would be particularly inhospitable to these three traditional forms of exchange, but reciprocity by proxy could be particularly effective under such circumstances for two reasons. First, even if the requester has no resources the target personally needs, he or she is likely to have resources desired by a cause or individual that the target values. Second, compared with the more generalized indirect reciprocity strategy, the reciprocity-by-proxy strategy allows the requester to provide those resources to the valued cause or individual on behalf of the specific target, which reduces the diffusion of responsibility (Darley and Latané, 1968) and obligates that specific target to comply.

Requesters might also benefit more from a reciprocity-by-proxy approach than a direct reciprocal exchange approach when they fear their coworkers might otherwise turn down a direct favor to avoid feeling obligated to the requester. Although people often feel pressure to accept direct gifts and favors even when unsolicited (Mauss, 1954), they sometimes reject them because they know accepting them will obligate them to reciprocate in kind (Rosen, 1971; Clark, Gotay, and Mills, 1974; Gergen et al., 1975; Greenberg, 1980; Ackerman and Kenrick, 2008; Shen, Wan, and Wyer, 2011). Yet in the case of reciprocity by proxy, individuals who use this strategy have already provided assistance to the valued third party, who has presumably already accepted the benefits, meaning that targets would not be in a position to refuse the favor, as they could in direct reciprocal exchange. Thus the reciprocity-by-proxy strategy could be more effective than a direct reciprocity strategy because it eliminates a potential escape hatch that would normally be available for targets of the direct reciprocity strategy.

Although the reciprocity-by-proxy strategy may be more successful than one based on direct reciprocal exchange under the circumstances described above, there are likely contexts in which the effectiveness of direct reciprocity would trump reciprocity by proxy. Although we did not directly compare the two in the current research, it is easy to imagine that directly receiving a benefit from a requester could create a greater obligation to return the favor than having the same benefit go to a third party on one's behalf. In fact, it is possible that targets may respond especially negatively to reciprocity-by-proxy appeals rather than a direct reciprocity approach if they personally desire the requester's resources and feel the requester has explicitly chosen to allocate those resources to a third party—even a valued one—instead of to them.

Yet it is also quite possible that, especially for small gifts and favors, the reciprocity-by-proxy strategy could be the more powerful approach. Research on direct reciprocity has found that the most critical and direct determinant of whether and how much recipients reciprocate a favor is their valuation of the

benefits they personally received from the favor (Greenberg, Block, and Silverman, 1971; Zhang and Epley, 2009). The fact that the recipients' valuation is subjective suggests that it is relative to a number of factors, including how much they perceive they needed the favor (see Flynn, 2003). Thus influence targets might perceive small gifts and favors as unnecessary for themselves but more necessary for needy third parties that they value. For example, an employee who receives a \$30 gift card from a coworker might value it less than a \$30 donation provided to a charity that helps the poor made on his or her behalf because the \$30 would be much more valuable and meaningful to an underprivileged individual than to the employee.

It is also an open question how the various forms of social exchange influence cooperation and relationship development among coworkers over the long term. Our current research only investigated one-shot exchanges, so it is currently unclear how the various approaches fare over long periods of time, both in terms of the long-term implications of one-shot exchanges as well as the repeated usage of the strategies. Although there is relatively little work on the influence of incentive-by-proxy strategies over time, research has shown that when direct incentives are promised in exchange for performing a given behavior, target individuals attribute their decision to perform that behavior not to their own intrinsic motivation but, rather, to the incentive. These individuals are less likely to engage in the behavior once the perceived driver of the initial behavior (i.e., the incentive) has been removed, a phenomenon known as overjustification (Lepper, Greene, and Nisbett, 1973; see also Deci, Koestner, and Ryan, 1999). In a similar vein, recent research suggests that incentive-by-proxy approaches may also lead individuals to reduce their cooperative behaviors in the long term once the indirect incentives are no longer available. Meier (2007) found that a matching program led to an immediate increase in the donations to a charitable fund relative to no matching program, but once the matching offer was discontinued, there was such a large decline in contributions that it actually resulted in an overall net loss effect in giving relative to the no-matching program control. This finding suggests that intrinsic interest in contributing to the fund may have been undermined by the incentive-by-proxy approach, which is consistent with the overjustification effect often found with direct incentives.

It is currently unknown how reciprocity-by-proxy appeals influence behavior in the long term. On the one hand, it is possible that, like the incentive-by-proxy approach, such appeals could also undermine cooperative behaviors in the future if the influence targets attribute their initial cooperation not to their own intrinsic interest in cooperating but, rather, to the strong social pressures that derive from the norm of reciprocation. On the other hand, we would speculate that incentive-by-proxy appeals are more likely to produce an undermining effect than their reciprocity-by-proxy counterparts because the explicit offer of indirect incentives is likely to be a more obvious source of external attribution for the cooperative behavior than the felt social pressure that comes from the norm of reciprocation. This question and many of the other implications we have discussed could be fruitful topics for further research. More generally, future empirical research comparing relevant mediators, moderators, and the situational features best suited for each of the exchange-based strategies will undoubtedly help shed greater light on the processes by which individuals and organizations can successfully solicit cooperation from others.

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