

Better to Give Than Reciprocate? Status and Reciprocity in Prosocial Exchange

Francis J. Flynn and Alisa Yu
Stanford University

Reciprocity implies equality in the giving and receiving of benefits. However, we find that reciprocity does not generate equal benefits, in terms of social status. Instead, across 7 studies ($N = 3,426$), observers conferred more status to individuals who initiated (i.e., initiators) than individuals who reciprocated (i.e., reciprocators) identical prosocial acts. Further, choosing not to reciprocate a prosocial act led to a more severe status penalty than choosing not to initiate a prosocial act. We find this discounting of reciprocity is driven by perceived obligation—observers view reciprocators as acting under constraint. When reciprocation appears less obligatory (e.g., given indirectly, or privately), the status discount is mitigated. Finally, we show that the discounting of a reciprocal act can be enduring—reciprocators still received less status after 2 successive, counterbalanced rounds of exchange.

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Past theory and research, spread across multiple disciplines, suggests that prosocial behavior elevates the social status of individuals who help others (Barclay & Willer, 2007; Flynn, 2003; Frank, 2004; Goffman, 1971; Hardy & van Vugt, 2006; Malinowski, 1922; Mauss, 1925; Nowak & Sigmund, 2005; Raihani & Smith, 2015; Sylwester & Roberts, 2010). Across the fields of social psychology, sociology, and anthropology, scholars have found that a simple act of kindness can boost one's reputation (Milinski, Semmann, & Krambeck, 2002; Sahlins, 1972), elicit feelings of respect (Barclay, 2004; Hardy & van Vugt, 2006; Williams & Bartlett, 2015), and increase an individual's social influence in a group (Blau, 1964; Flynn, Reagans, Amanatullah, & Ames, 2006). This link between prosocial contributions and gains in social status makes sense, given that generous people are more highly valued as group members because of their selfless, rather than selfish, action (e.g., Willer, 2009).


Despite its intuitive appeal, and empirical support, the link between prosocial behavior and social status may be more nuanced than previously suggested. Past research has mostly focused either on single episodes of giving and receiving benefits—so-called “one-shot trials” (Frank, Gilovich, & Regan, 1993; Janssen, 2008)—or aggregate measures that capture a history of exchange (Flynn, 2003; Willer, 2009). These methods may misrepresent some prosocial acts, failing to reflect whether the act was spontaneous or expected, immediate or delayed, and substantive or

trivial. That is, they overlook how the context surrounding the decision to give can shape an observer's interpretation of the exchange itself (Cook & Emerson, 1978; Kelley & Thibaut, 1978; Trivers, 1971). Framed by this context, some prosocial acts may be viewed in less flattering terms. In particular, a prosocial act intended to repay a previous act of kindness may be viewed less favorably than an initial, unsolicited prosocial act.

We propose that the link between prosocial behavior and social status depends on the norm of reciprocity, which governs informal social exchange in nearly all human cultures (Malinowski, 1922; Mauss, 1925; Triandis, 1978). The moral norm of reciprocity avers that recipients of valuable goods and services are indebted to their benefactors until the original benefit has been repaid (Gouldner, 1960). Reciprocity presumably maintains balance and equivalence in social exchange (Blau, 1964; Emerson, 1962; Homans, 1958). However, we posit that upholding the norm of reciprocity can actually lead to imbalance, with respect to social status. A reciprocating prosocial act might be seen as an act of obligation (i.e., the reciprocator had to do it; Simpson, Willer, & Harrell, 2017). In contrast, an initial, unprompted prosocial act might be seen as an act of volition (i.e., the initiator wanted to do it). These conflicting interpretations of the same prosocial act could lead to less favorable evaluations of individuals who perform reciprocal, rather than initial, prosocial acts.

We primarily focus on single rounds of dyadic exchange, in which one party initiates the exchange and the other reciprocates at a later date. We begin by documenting how individuals who initiate prosocial behavior gain more status than individuals who reciprocate the same prosocial act. We show that this status difference can be explained by inferred distress from the receipt of the initial act, and, in turn, perceived obligation in performing a reciprocal act (to remove the distress). We also show that reciprocating not only yields less of a status gain relative to initiating, but not reciprocating yields a greater status penalty than not

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Francis J. Flynn and  Alisa Yu, Department of Organizational Behavior, Stanford Graduate School of Business, Stanford University.

Both authors contributed equally to this work.

Correspondence concerning this article should be addressed to Alisa Yu, Stanford Graduate School of Business, Stanford University, 655 Knight Way, Stanford, CA 94305. E-mail: alisay@stanford.edu

initiating. Next, we test the underlying psychological mechanism of obligation by examining how reciprocating indirectly, rather than directly, and reciprocating privately, rather than publicly, can mitigate this status discounting effect. Finally, we explore whether the discounting of reciprocal prosocial behavior can endure through multiple rounds of reciprocal exchange.

The present research aims to deepen our understanding of both social status and social exchange by focusing on the important role of social judgment. Although past research has found a strong link between prosocial behavior and status gains (Barclay & Willer, 2007; Flynn, 2003; Flynn et al., 2006; Frank, 2004), this work fails to account for the influence of reciprocity, instead assuming that all prosocial acts in a pattern of social exchange are judged equally, regardless of the order in which they occur. Our findings clarify that reciprocal does not necessarily mean equal, at least not when it comes to the effect of prosocial behavior on social status. Scholars have often touted the concept of reciprocity as a “solution” for various social problems, reducing risk and opportunistic behavior in exchange relations. This simplistic view of reciprocity is certainly appealing. However, while the benefits of reciprocity are clear, we suggest there may also be drawbacks.

Status Conferrals and Prosocial Behavior

Status can be gained from exhibiting dominance (Anderson, Kraus, Galinsky, & Keltner, 2012; Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013; Kyl-Heku & Buss, 1996) competence (Berger, Cohen, & Zelditch, 1972; Berger & Zelditch, 1985; Fiske, Cuddy, Glick, & Xu, 2002), or moral virtue (Bai, Ho, & Yan, 2020). People hold in high esteem others whom they can trust, respect, and depend on for social support (Dunning, Anderson, Schlösser, Ehlebracht, & Fetchenhauer, 2014; Everett, Pizarro, & Crockett, 2016; Krueger & DiDonato, 2010). As a moral act that is intended to benefit another individual, prosocial behavior can provide a clear pathway to social status (Flynn, 2003; Flynn et al., 2006). Group members benefit from other members' performance of prosocial acts that contribute to the collective welfare (Willer, 2009). To encourage this sacrifice, individuals confer status to fellow group members who behave prosocially. This dynamic has been referred to as a “virtuous cycle,” in which costly, prosocial contributions are incentivized with prestige, or enhanced social standing, and, therefore, subsequently repeated (Willer, 2009, p. 133).

Past research has found a strong, positive relationship between prosocial behavior and virtue-based status (Barclay & Willer, 2007; Blau, 1964; Flynn et al., 2006). For instance, Flynn (2003) found that when employees were more generous with coworkers, their social status increased. Along a similar vein, Hardy and Van Vugt (2006) showed that participants who acted altruistically in social dilemma scenarios were rated by other participants as having higher status (see also Pagliaro, Ellemers, & Barreto, 2011). In small groups, individual members might even use gossip with peers as a means to reinforce this link—to point out prosocial individuals who warrant higher esteem (Feinberg, Willer, Stellar, & Keltner, 2012). These results broadly align with research on leadership attributions that point to exceptional acts of virtue, other-concern, and altruism as a fundamental basis for elevating individuals to higher rank (Franco, Blau, & Zimbardo, 2011;

Goethals & Allison, 2012). In short, the link between prosocial behavior and virtue-based status seems clear and robust.

Status Conferrals and the Norm of Reciprocity

At the heart of social exchange is the norm of reciprocity (e.g., Emerson, 1962; Thibaut & Kelley, 1959), which ensures equity in an exchange relation, and which Gouldner (1960) referred to as a “causal force” in social life. The norm of reciprocity has been used to explain healthy patterns of exchange in various forms, including gift-giving, advice networks, and interpersonal helping (Blau, 1964; Camerer, 1988; Flynn, 2003; Gouldner, 1960; Molm, 2010; Simmel, 1950). Social exchange theorists do not view reciprocal exchange as a simple, conditioned pattern of behavior, but rather a moral obligation (Gouldner, 1960). Both actors feel motivated to maintain balance, or equity, in the exchange of valued resources, so that neither individual overbenefits at the expense of the other (Uehara, 1995). Adherence to the norm of reciprocity is not formally supervised, or enforced. Rather, it operates informally, based on implicitly understood social expectations (Diekmann, 2004; Fehr & Gächter, 2000).

As a norm governing social exchange, reciprocity hinges on the psychological experience of indebtedness, which has been defined as the “state of being obligated to repay another” (Greenberg, 1980). To the extent that people have received more benefit than they have given in return, they tend to feel more indebted to their benefactors (Burger, 1999; Flynn, 2003; Goldstein, Griskevicius, & Cialdini, 2011; Regan, 1971; Romano & Balliet, 2017). This dysphoric feeling of indebtedness is associated with feelings of distress, discomfort, and guilt (Fisher, Nadler, & Whitcher-Alagna, 1982; Greenberg & Shapiro, 1971), which people are motivated to reduce by performing reciprocal acts (Ong, Theseira, & Ng, 2019). Aversion to indebtedness, and its accompanying feeling of distress, is well understood; indeed, people are so attuned to its influence that they may be reluctant to accept benefits from others to avoid feeling indebted (Greenberg & Westcott, 1983).

Given the influence of indebtedness in motivating reciprocal exchange, how might observers make sense of reciprocal (vs. initial) prosocial acts? To a casual observer, an unprompted act of kindness would seem more impressive than the same act given in direct reciprocation because the former represents a clearer display of prosocial motivation. Observers tend to associate spontaneous acts of kindness with positive underlying feelings, such as empathy, sensitivity, and concern for others (Barasch, Levine, Berman, & Small, 2014; Batson, Duncan, Ackerman, Buckley, & Birch, 1981). In contrast, reciprocal acts may be perceived as less selfless because the reciprocator's inferred motives seem ambiguous. Rather than assume the act is motivated by a prosocial desire to help, observers might construe a reciprocal act as a self-interested gesture, aimed at reducing indebtedness and unwanted feelings of distress (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997; cf., Batson et al., 1981; Batson, Fultz, & Schoenrade, 1987).

When observers witness the receipt of an initial, prosocial act, they recognize that the recipient may subsequently experience distress—the discomfort and guilt that accompanies indebtedness. Later, when the recipient attempts to relieve the distress by performing a reciprocal prosocial act, observers might infer that the action is not entirely volitional, but at least partly obligatory—strict adherence to the norm of reciprocity aimed at reducing the

aversive feeling of indebtedness (e.g., Kunz & Woolcott, 1976). In other words, to the observer, the reciprocal act might appear to be performed under constraint: Reciprocators are behaving generously because they “have to” and not because they “want to” (Ames, Flynn, & Weber, 2004; Burger, Horita, Kinoshita, Roberts, & Vera, 1997; Jacob, Guéguen, & Boulbry, 2015; Regan, 1971). In general, people receive less credit for acts that are viewed as forced, rather than unforced (cf., Heider, 1958; Jones & Harris, 1967; Lagnado & Channon, 2008; Malle & Knobe, 1997; Weiner, 1972).

Perceived obligation in performing prosocial acts can limit gains in social status. The link between prosocial behavior and status hinges on the belief that generous acts are prosocially motivated—focusing on others’ rather than one’s own interests (Flynn, 2003; Flynn et al., 2006; Willer, 2009). Observers may view reciprocal prosocial acts as a poor predictor of an individual’s prosocial motivation, relative to initial prosocial acts. (i.e., the reciprocal act was intended to repay a debt, whereas the initial act was intended to benefit the target; Pillutla, Malhotra, & Murnighan, 2003). As a result, repaying an initial prosocial act may bear a relative disadvantage for reciprocators—observers confer less status to individuals who reciprocate prosocial acts relative to those who initiate prosocial acts, even when holding constant the act itself (i.e., when the exact same prosocial behavior is initially performed and subsequently reciprocated). This conceptual path model is depicted in Figure 1.

What if Recipients of Prosocial Acts Refuse to Reciprocate?

We propose that observers do not confer the same amount of virtue-based social status for initiators and reciprocators, even if their prosocial acts are identical and incur equal costs. What can a reciprocator do to avoid this status discounting? One might suggest withholding reciprocation. However, this approach could be problematic. An observer would likely punish this apparent ingratitude by conferring even *less* status, given that the failure to act prosocially (via reciprocation) stands in stark contrast to the initial prosocial act. It seems the recipient of an initial prosocial act faces a dilemma: Reciprocating will yield a relatively lesser status benefit, but not reciprocating may yield a relatively greater status penalty. Indeed, even if an observer knows that the initial giver had an opportunity to act prosocially, but chose not to do so, this

decision not to perform an initial prosocial act may not draw as much of a status penalty as choosing not to reciprocate.

Factors That Alter Perceptions of Obligation in Reciprocating Prosocial Behavior

The norm of reciprocity avers that previous acts of kindness be repaid (Gouldner, 1960). Noting this, reciprocators are presumably motivated to receive credit from initiators for their attempts at repayment—if these attempts go unnoticed, reciprocators run the risk of eliciting resentment for unpaid debts. Some reciprocators attempt to draw attention to, or broadcast, their prosocial acts to ensure they get credit for their generosity (Berman, Levine, Barsch, & Small, 2015; Malinowski, 1922; Pryor & Graburn, 1980). However, if reciprocators forgo an opportunity to receive credit from the initial giver for repayment, observers may view this act of reciprocation as driven less by obligation. That is, the status discount for reciprocators may be attenuated when reciprocators relinquish the opportunity to claim credit directly from initiators for their prosocial act.

With this in mind, we examine two moderators that might enable reciprocators to elevate their (relative) status. These moderators were selected for theoretical, not practical, reasons; they serve as proximate manipulations of our psychological mechanism of obligation. First, we examine the form of reciprocity. Typically, reciprocity takes a direct form (e.g., Savage & Sommer, 2016), but reciprocity can also operate indirectly (Molm, Collett, & Schaefer, 2007)—repaying a debt by giving to someone other than the original benefactor (Gray, Ward, & Norton, 2014; Willer, Flynn, & Zak, 2012). We suggest that indirect reciprocal acts are seen as less obligatory than direct reciprocal acts because repayment to the initiator is normative, but repayment to someone else is not. Further, indirect reciprocity can be costly. “Paying it forward” not only fails to repay the debt created by the initiator, the generous act is also typically performed in their absence. If the initiator is unaware of an indirect reciprocal act, the reciprocator will receive no credit from the initiator for repayment. In this context, observers cannot easily assume that the motivation of the reciprocator is to remove the distress of indebtedness. As such, we expect that status conferrals will be relatively lower for reciprocal prosocial acts than for initial, unprompted prosocial acts, but that status discounting will be attenuated in cases of indirect, rather than direct, reciprocation.

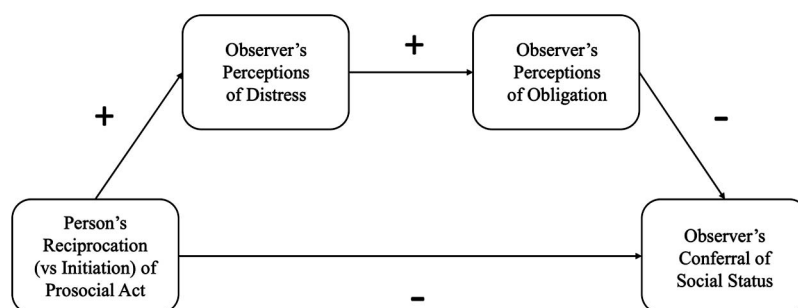


Figure 1. A conceptual path model depicting how reciprocation (as opposed to initiation) of a prosocial act leads to lower status.

Second, we examine anonymity—when reciprocation is offered in private. Consider the following exchange. John brings a bottle of wine to Cassie's party. A couple weeks later, Cassie returns the gesture at John's party, but rather than presenting the bottle directly to John, she sets it down after he has left the room. Samantha, a witness to both gestures, recognizes that the prosocial act has been reciprocated, but the initiator may be unaware of it (or at least unaware of who is responsible for it). Observers of this private, reciprocal act may view the reciprocator in a different light. To an observer, it might seem that a private, reciprocal act fulfills the social obligation to provide repayment. However, the observer would also recognize that the reciprocator chose not to receive credit for the gesture, thereby risking reputational harm. On balance, such an act might seem to be driven more by volition than obligation—more closely resembling the initial, prosocial act. Noting this, we expect that status conferrals will be lower for reciprocal prosocial acts than for initial prosocial acts, but that the status discount will be attenuated in cases of private, rather than public, reciprocation.¹

Is the Reciprocator's Status Disadvantage Enduring?

We have outlined differences in status conferred to initiators and reciprocators within a single round of prosocial exchange, where one party initiates the prosocial act and the other party reciprocates at a later date. However, many interpersonal relationships involve multiple rounds of prosocial exchange, sustained over long periods of time. One might predict that status differences will disappear quickly after a subsequent, counterbalancing round of exchange (i.e., the two parties reverse the roles of initiator and reciprocator so that both have served once as an initiator and once as a reciprocator). However, we suspect that the reciprocator's relative disadvantage may be enduring. That is, we propose that the reciprocator will *still* be awarded less status after a subsequent, counterbalanced round of exchange, partly because the continuation of the exchange relation (i.e., performing an unprompted prosocial act after an initial round of reciprocal exchange) will be viewed by an observer as more obligatory than the creation of the exchange relation (i.e., performing an initial, unprompted prosocial act).

Overview of Current Research

In a series of seven studies, we investigate the relationship between prosocial behavior and social status in reciprocal exchange. In Study 1, we examine whether people who perform reciprocal prosocial acts accrue less virtue-based status than people who perform initial prosocial acts and whether they are less likely to be selected as a leader on a group task. In Studies 2 and 3, we attempt to replicate this effect and examine perceived distress and obligation as possible psychological mechanisms. In Study 4, we highlight the dilemma faced by reciprocators: They are not only awarded less status than initiators for helping, they are also penalized more for not helping. Next, we test our proposed psychological mechanism more carefully by investigating whether indirect (Study 5) and private (Study 6) reciprocal acts can mitigate the main effect. In our final study, we explore the persistence of the reciprocator's relative status disadvantage by documenting the impact of prosocial behavior on status gains after two counterbalanced rounds of reciprocal exchange (Study 7). The first four

studies were preregistered, and the final three were exploratory. Given that several of our studies involved interactions, we recruited at least 100 participants per cell for each study (Simmons, Nelson, & Simonsohn, 2018). These studies were approved by the Institutional Review Board at Stanford University ("Prosocial motivation in helping" #36448).

Study 1

In Study 1, we tested the hypothesis that people confer less status to an individual who reciprocates a prosocial act than to an individual who initiates the same prosocial act. Specifically, we showed participants the outcome of two successive rounds of the Dictator Game (Kahneman, Knetsch, & Thaler, 1986) in which one player (the initiator) gave the entirety of their bonus money to the other, and then in a subsequent round, the other player (the reciprocator) gave all their bonus money to the initiator. We then asked participants to select whom they want to be their team leader (the initiator or the reciprocator) on the next task, which carried an incentive for high performance. Finally, we assessed status in different ways to determine convergence across measures. The study design and analyses for this study were preregistered on [aspredicted.org](https://aspredicted.org/#44325) (#44325).

Method

Participants. We recruited 160 participants (84 women; $M_{\text{age}} = 37.62$, $SD_{\text{age}} = 12.76$) using Prolific, a national online subject pool. The sample was 72% Caucasian, 10% Asian, 8% Hispanic, 7% African American, and 4% other ethnicities.

Procedure. Participants learned they would work with two other individuals to play a series of games. Each game would involve two participants at a time. After the first game, the participant who did not take part would learn what happened in the first game before the start of the next game. The third participant would then choose one of the other two participants to join them in the next game.

Participants began the session by reading the rules of the Dictator Game. Specifically, they learned that one participant would be assigned the role of "proposer" and the other the role of "receiver." After receiving some bonus money, the proposer would decide the amount of bonus money they would allocate to themselves and the amount they would allocate to the receiver. The receiver has no say; they can only accept the money that the proposer decides to give. After learning the rules of the game, participants responded to four multiple-choice comprehension checks: "Who is the first player in the game to take an action?", "How much money does the first player have to give away to the second player?", "What is the role of the proposer?", and "What is the role of the receiver?"

Participants read that they would be randomly selected to either play the Dictator game or sit out. On the next screen, after some

¹ Again, although reciprocating anonymously might elevate the status of the reciprocator in the eyes of a third-party observer, it is likely to have the opposite effect in the eyes of the initiator. Indeed, the reciprocator's relationship with the initiator might suffer, given that, from the initiator's perspective, their kind act was never repaid. Thus, like indirect reciprocity, private reciprocity is not likely to serve as a practical solution to the problem of discounting reciprocity.

delay, participants learned that they would sit out, while the other two “participants,” Sam and Taylor, played the Dictator Game. Participants then waited for approximately 2 min while Sam and Taylor ostensibly played the game.

Next, we showed participants the outcomes of the Dictator game involving Sam and Taylor. Participants saw that Sam and Taylor played two rounds. In the first round, Sam was randomly assigned to be the proposer and decided to give the entire \$0.50 bonus to Taylor. In the second round, Taylor was randomly assigned to be the proposer, and Taylor decided to give the entire \$0.50 bonus to Sam. Thus, Sam initiated the prosocial gesture of giving Taylor his entire bonus, and Taylor subsequently reciprocated.

Participants were then told that the next game involved collaboration between themselves and one of the other two participants (Sam and Taylor). The focal participant would have a chance to earn a \$0.50 bonus based on their own performance as well as their partner’s performance. Drawing from past research that examines leadership selection as a downstream consequence of status (Anderson, Brion, Moore, & Kennedy, 2012; Kilduff & Galinsky, 2013), we asked participants to choose either Sam or Taylor to serve as the team leader for the next game. Finally, participants answered three separate measures of status and were told that their responses to these questions would remain private and confidential. That is, their responses would not be revealed to either Sam or Taylor.

Measures.

Selection as team leader. After viewing the outcomes of the Dictator game, participants were asked, “Which participant would you prefer to serve as team leader?” They were then asked to select either Sam or Taylor.

Ladder measure of virtue-based status. We assessed virtue-based status using several different measures. First, we adapted the MacArthur Scale of Subjective Social Status (Adler, Epel, Castellazzo, & Ickovics, 2000) to measure the social status of Sam and Taylor. Participants were given a picture of two side-by-side ladders with 12 rungs on each ladder. Participants then read the following instructions:

Think of these ladders as representing how much admiration, value, and respect you have for Sam and Taylor. Higher on the ladder indicates higher admiration, value, and respect. Lower on the ladder indicates lower admiration, value, and respect. On the ladder on the left, please select the rung that indicates how much admiration, value, and respect you have for Sam. On the ladder on the right, please select the rung that indicates how much admiration, value, and respect you have for Taylor.

Participants then clicked the rung of the ladder that best represented how they felt about each person.

Other virtue-based status measures. Participants completed three Likert-scale items ($\alpha = .85$): “Please select the option that best represents how much you admire/value/respect Taylor and Sam.” The response options varied from (1) I admire/value/respect Taylor much more than Sam to (6) I admire/value/respect Sam much more than Taylor.

Participants were also asked to answer a one-item, rank-order measure of status: “Which participant do you admire, value, and respect more?” They were then asked to select either Sam or Taylor.

Results

In our preregistration, we specified that we would exclude participants who answered two or more attention checks incorrectly. As a result, we excluded four participants from our analyses, yielding a final sample of 156 participants.

We hypothesized that the reciprocator in the Dictator Game would be selected less often as team leader for the next game than would the initiator. Consistent with this prediction, we found that only 21% of participants preferred the reciprocator over the initiator to act as their team leader for the next game, which represented a significant minority, $\chi^2(1) = 54.26, p < .001$.

For the ladder measure of status, we hypothesized that the reciprocator would be placed on a lower rung than would the reciprocator. As expected, Taylor (the reciprocator; $M = 9.31, SD = 2.07$) tended to be placed lower on the ladder than Sam (the initiator; $M = 9.91, SD = 1.95$), $\text{paired-}t(155) = -7.34, p < .001, d = -.59$.

Aggregating the three Likert-scale status items in which lower ratings (1–3) indicated a preference for the reciprocator, and higher ratings (4–6) indicated a preference for the initiator, we found that participants admired/valued/respected the reciprocator significantly less than the initiator ($M = 4.01, SD = .72$), 95% confidence interval (CI) = [3.90, 4.12]. Finally, using the single-item, rank-order measure, we found that only 13% of participants conferred greater status to the reciprocator, which represented a significant minority, $\chi^2(1) = 86.26, p < .001$.²

Discussion

In Study 1, participants learned about the outcomes of two rounds in the Dictator game, in which one player gave their entire bonus to the other player in the first round, and the other player reciprocated by giving away their entire bonus in the second round. Despite the two acts being objectively equal, participants conferred less status to the reciprocator than the initiator (across all three measures of virtue-based status), and participants were less likely to choose the reciprocator than the initiator as team leader for the next game (that involved a performance incentive). In Study 2, we aimed to replicate this effect using a different economic game and explore distress and obligation as potential underlying mechanisms.

Study 2

In Study 2, we attempt to replicate the main finding from Study 1—that reciprocators will be conferred less status than initiators. In this study, we rely on a different economic game to serve as an experimental context—the Trust Game (Berg, Dickhaut, & McCabe, 1995). Participants read about the outcomes of two people who played the Trust Game, and then evaluated each person. In addition to virtue-based status, we measured perceived distress and

² As expected, our three measures of status were significantly correlated with each other, $r_{\text{ladder-Likert}}(154) = .46, r_{\text{ladder-rank}}(154) = .43, r_{\text{rank-Likert}}(154) = .57, ps < .001$.

obligation.³ We hypothesized that reciprocators would receive less credit for their prosocial act than would initiators because their prosocial acts would be viewed as obligatory. As such, perceived obligation was our primary mechanism. However, we also tested the extent to which differences in obligation could be driven by inferences about the distress felt by each actor in the exchange. Observers may infer that reciprocators are motivated by feelings of distress caused by the initial “debt.” This perceived distress may lead participants to interpret the reciprocator’s prosocial gesture as an act of obligation, rather than volition, thereby leading to lower status conferrals. We examined this sequence in a serial mediation model. The study design, analyses, and hypotheses for this study were preregistered on aspredicted.org (#20878).

Method

Participants. We recruited 160 participants (103 women; $M_{\text{age}} = 36.14$, $SD_{\text{age}} = 12.74$) using SONA, a national online subject pool. The sample was 71% Caucasian, 21% Asian, 4% Hispanic, 2% African American, and 2% other ethnicities.

Procedure. Participants first read the rules of the Trust Game. Specifically, they learned that the game occurs in two stages. In the first stage, Player 1 receives \$1 and must decide how much to keep for him or herself, and how much to give to Player 2. In the second stage, Player 2 receives an amount that is three times the money Player 1 decided to give. Then, Player 2 must decide how much money to give back to Player 1.

Participants were asked four multiple-choice attention checks to assess their comprehension of these rules: “Which player gets to make the first move?”, “How much money does Player 1 start off with?”, “How much money does Player 2 receive from Player 1?”, and “What is the choice that each player needs to make?”

Next, participants reviewed the outcomes for two purported players of the Trust Game who were randomly assigned to their roles: Player 1 (Michael) and Player 2 (Dave). Player 1 gives the entirety of his \$1.00 to Player 2, which triples Player 2’s starting money to \$3.00. Then, Player 2 decides to split the earnings, and give \$1.50 back to Player 1. In this instance of the Trust Game, Player 1 initiates a prosocial exchange by giving \$1.00 to Player 2 and Player 2 reciprocates the prosocial exchange by giving \$1.50 back to Player 1. However, unlike Study 1, Player 2 gives back an amount that is *greater* than what he initially received.

Following the description of Michael and Dave’s Trust Game, participants rated each player using our measures of status, distress, and obligation. At the end of the study, participants answered a multiple-choice manipulation check, “In the description of the game you just read, who was the first person to give away money?” Response options were “Michael,” “Dave,” and “I don’t know.” Finally, participants provided demographic information.

Measures.

Status. Status was measured using three items adapted from Anderson, John, Keltner, and Kring (2001) and van de Ven, Zeelenberg, and Pieters (2009; $\alpha_{\text{Initiator}} = .92$, $\alpha_{\text{Reciprocator}} = .89$): “I admire Michael/Dave,” “I value Michael/Dave,” and “I respect Michael/Dave.” Participants responded to each item using a 7-point Likert scale ranging from 1 = *not at all* to 7 = *extremely*.

Perceived obligation. Observers’ perceptions of obligation felt by Michael and Dave in performing the prosocial act was measured using four original items ($\alpha_{\text{Initiator}} = .80$, $\alpha_{\text{Reciprocator}} =$

.77): “He felt he had to give money away,” “He felt he had no choice but to give money away,” “He gave money away voluntarily” (reverse coded), and “It was optional for him to give money away, but he wanted to do it” (reverse coded). Participants responded to each item using a 7-point Likert scale ranging from 1 = *not at all* to 7 = *extremely*.

Perceived distress. Observers’ perceptions of distress felt by Michael and Dave was measured using three items adapted from Barasch et al. (2014; $\alpha_{\text{Initiator}} = .88$, $\alpha_{\text{Reciprocator}} = .87$): “I believe Michael/Dave’s decision was motivated by distress,” “I believe Michael/Dave’s decision was motivated by discomfort,” and “I believe Michael/Dave’s decision was motivated by guilt.” Participants responded to each item using a 7-point Likert scale ranging from 1 = *not at all* to 7 = *extremely*.

Results

In our preregistration, we specified that we would exclude participants who answered two or more attention checks incorrectly. As a result, we excluded six participants from our analyses, yielding a final sample of 154 participants.

Of the participants in the final sample, 147 (i.e., 95% of participants) correctly indicated that Michael was the first person in the game to give money, $\chi^2(1) = 132.66$, $p < .001$, which suggests that participants could accurately recall the initiator in the exchange.

We hypothesized in our preregistration that the second player in the game would be conferred less status than the first player. To examine whether participants differed in their perceptions of Player 1 (i.e., the initiator) and Player 2 (i.e., the reciprocator), we conducted a series of paired sample *t* tests. As predicted, participants conferred less status to Player 2 ($M = 5.23$, $SD = 1.29$) than to Player 1 ($M = 5.50$, $SD = 1.34$), $\text{paired-}t(153) = -3.59$, $p < .001$, $d = -.29$, providing evidence of a discounting of reciprocal prosocial acts.

We also predicted that the reciprocator’s act would be perceived as more obligatory, and more motivated by distress, than would the initiator’s act. In line with these predictions, participants perceived Player 2 ($M = 3.44$, $SD = 1.38$) as acting significantly more out of obligation than Player 1 ($M = 2.58$, $SD = 1.28$), $\text{paired-}t(153) = 8.20$, $p < .001$, $d = .66$, despite the fact that the roles were randomly assigned. Participants also perceived Player 2 ($M = 2.94$, $SD = 1.61$) as being significantly more motivated by distress than Player 1 ($M = 2.25$, $SD = 1.38$), $\text{paired-}t(153) = 7.10$, $p < .001$, $d = .57$.

Next, as outlined in our preregistration, we tested whether reciprocation of the initial act affected status conferral through perceived obligation by conducting a mediation analysis designed to examine two-condition within-participant designs (Montoya & Hayes, 2017). Using 5,000 bootstrapped samples, we found support for a mediation pathway from reciprocation to perceived obligation to subsequent status conferral, $B = -.25$, $SE = .07$, 95% CI = $[-.38, -.12]$. That is, participants conferred less status

³ Measures of empathy and generosity were also included in this preregistered study. However, because they were not related to our primary hypotheses, we report analyses of these measures in our [online supplemental materials](#).

to the reciprocator, relative to the initiator, because they viewed the former as acting more out of obligation.

Although not specified in our preregistration, we conducted an exploratory analysis to examine whether reciprocating the prosocial act would first influence perceived distress, which, in turn, would influence perceived obligation, and subsequent status conferral. Using 5,000 bootstrapped samples, we found support for a serial mediation pathway from reciprocation to distress to obligation to status, $B = -.06$, $SE = .03$, 95% CI = $[-.13, -.02]$.⁴ This pattern of results suggests that perceived distress mediated the relationship between reciprocation and perceived obligation, and, in turn, status conferral.

Discussion

In Study 2, we conducted a test of our predictions using the Trust Game. Overall, participants conferred less status to Player 2 than Player 1, even though Player 2 offered 50% more money to Player 1 (i.e., \$1.50) than Player 1 offered to Player 2 (i.e., \$1.00). This difference in status can be explained by perceived obligation in performing the prosocial act. Player 2 was conferred less status because his reciprocal act was perceived as more motivated by distress, and in turn, more obligatory than the initial act of Player 1. The effect of perceived obligation was particularly striking because neither player in the Trust Game was given agency over the order of his actions—the rules dictated which player would act first. Nevertheless, observers perceived the first actor's gesture as less obligatory.

Although Study 2 identified status differences between the initiator and reciprocator in a prosocial exchange, it is important to note that the two parties did not engage in the same prosocial acts. Perhaps the status differences between Player 1 and Player 2 were based on relative, rather than absolute, generosity. That is, even though Player 2 gave Player 1 \$0.50 more than was given to him, Player 1 gave away 100% of his money, whereas Player 2 only gave 50%. Participants may have awarded Player 2 less status because he gave a smaller portion of his money than did Player 1. We addressed this limitation in Study 3 by examining cases in which initiators and reciprocators exchange prosocial benefits of equal magnitude. To build on the economic games used in Studies 1 and 2, we used hypothetical scenarios that describe prosocial exchanges in everyday situations.

Study 3

In Study 3, we aimed to replicate the findings from Studies 1 and 2 using a scenario design. For each scenario, the initiator and the reciprocator performed identical prosocial acts. The study design, analyses, and hypotheses for this study were preregistered and reported on [aspredicted.org](https://aspredicted.org/#20880) (#20880).

Method

Participants. We recruited 400 participants (282 women; $M_{\text{age}} = 37.78$, $SD_{\text{age}} = 12.46$) using Amazon Mechanical Turk (MTurk), a national online subject pool. The sample was 70% Caucasian, 14% Asian, 4% Hispanic, 6% African American, and 6% other ethnicities.

Procedure. Participants were randomly assigned to read one of four scenarios describing a prosocial exchange. The scenarios

covered a wide range of everyday behaviors (i.e., hosting a dinner party, driving someone to the airport, house-sitting, and providing feedback). In every scenario, one person initiates a prosocial act, and another person reciprocates the same prosocial act. For example, participants assigned to the airport scenario read the following:

Ronald has recently started graduate school and moved into a new apartment. He was assigned a housemate, Dave, whom he hadn't met before. After a couple weeks of becoming acquainted, Ronald tells Dave of his plans to fly home over the weekend. Dave offers to drive Ronald to the airport. After Ronald returns from his weekend getaway, he learns that Dave plans to travel for an upcoming conference. Ronald offers to drive Dave to the airport.

After reading the scenario, participants answered questions about their impressions of the initiator and the reciprocator. Specifically, they completed the same items for status ($\alpha_{\text{Initiator}} = .88$, $\alpha_{\text{Reciprocator}} = .89$), obligation ($\alpha_{\text{Initiator}} = .77$, $\alpha_{\text{Reciprocator}} = .73$), and distress ($\alpha_{\text{Initiator}} = .97$, $\alpha_{\text{Reciprocator}} = .94$) used in Study 2. At the end of the study, participants answered a multiple-choice manipulation check about the scenario they read. The manipulation check followed the same format for each scenario: "In the description you just read, who was the first person to [offer the prosocial behavior]?" Response options were the name of the initiator, the name of the reciprocator, and "I don't know." Participants also provided demographic information.

Results

Our preregistration stated that we would not exclude any participants, so we used the entire sample of 400 participants for our analyses.

Of the final sample, 320 participants (80%) correctly identified the first person in the scenario to perform the prosocial gesture, $\chi^2(1) = 148.74$, $p < .001$, which suggests that most participants were attentive to information about the initiator and reciprocator. Scenario assignment did not affect whether participants correctly answered the manipulation check, $\chi^2(3) = 5.52$, $p = .14$.

To probe the extent to which the scenarios affected our pattern of results, we conducted a 2 (Reciprocation: Initiator, Reciprocator) \times 4 (Prosocial Scenarios) mixed-model analysis of variance (ANOVA) with repeated measures on the first factor. The interaction of reciprocation and scenario was not significant for status, $F(3, 396) = 1.86$, $p = .14$, $\eta_p^2 = .01$, perceived obligation, $F(3, 396) = 1.89$, $p = .13$, $\eta_p^2 = .01$, or perceived distress, $F(3, 396) = .80$, $p = .50$, $\eta_p^2 = .01$, indicating that these patterns were consistent across scenarios. As such, we collapsed the data across all scenarios and used aggregate measures in subsequent analyses.

We hypothesized in our preregistration that reciprocators would be conferred less status than would initiators, even for identical prosocial acts. We analyzed the effect of reciprocating (vs. initi-

⁴ Although we find some evidence for alternative mediation pathways (i.e., parallel and reverse serial mediation), support for our proposed model was the most consistent across studies. Further, our model better represents the sequential flow of actions between the two parties—the initiator's act would likely trigger distress, which presumably would motivate the decision to reciprocate, and, subsequently, whether observers perceive the reciprocal act as obligatory. That said, our mediation results should be interpreted with caution because our study design prevents us from drawing any conclusions about causality (Fiedler, Harris, & Schott, 2018).

ating) the prosocial act on status using a paired sample t test. Consistent with Study 2, we found that participants conferred less status to reciprocators ($M = 5.23$, $SD = 1.08$) than initiators ($M = 5.48$, $SD = 1.02$), $\text{paired-}t(399) = -7.26$, $p < .001$, $d = -.36$.

We also predicted in our preregistration that reciprocators would be seen as driven more by obligation and feelings of distress than initiators. Once again, in line with these predictions, participants perceived reciprocators ($M = 3.43$, $SD = 1.13$) as acting more out of obligation relative to initiators ($M = 2.71$, $SD = 1.19$), $\text{paired-}t(399) = 11.15$, $p < .001$, $d = .56$. Further, participants perceived reciprocators ($M = 2.71$, $SD = 1.75$) as being more motivated by distress relative to initiators ($M = 2.37$, $SD = 1.82$), $\text{paired-}t(399) = 7.90$, $p < .001$, $d = .40$.

As outlined in our preregistration, we tested the mediation of reciprocation on status through perceived obligation. Using 5,000 bootstrapped samples, we again found evidence for a mediation pathway from the reciprocation of a prosocial act to perceived obligation to subsequent status conferral, $B = -.12$, $SE = .03$, 95% CI = $[-.18, -.06]$. Consistent with our previous findings, participants perceived the reciprocator as acting relatively more out of obligation and subsequently conferred the reciprocator relatively lower status.

Finally, we sought to replicate our exploratory serial mediation model from Study 2. Using 5,000 bootstrapped samples, we again found evidence of a serial mediation pathway from reciprocation to distress to obligation to status, $B = -.02$, $SE = .01$, 95% CI = $[-.04, -.005]$. Although not specified in our preregistration, these analyses provide evidence that observers are sensitive to the feeling of indebtedness that recipients of prosocial acts may experience and use this information to assess whether a prosocial act was performed under constraint.

Discussion

In Study 3, we demonstrated the robustness of our effect across a variety of social contexts. Specifically, we replicated the link between the reciprocation of a prosocial act (i.e., initial vs. reciprocal) and subsequent status conferrals. However, unlike Study 2, the prosocial acts were described in equivalent terms and in familiar, everyday social contexts. In addition, we replicated the mediating roles of perceived distress and obligation in accounting for this relationship. Observers conferred less status to reciprocators than initiators for the same prosocial behavior because the reciprocal act was interpreted as relatively more obligatory and more motivated by distress than the initial act.

Study 4

We have shown that a prosocial gesture earns less status for a reciprocator than an initiator. Noting that an equivalent prosocial behavior will not accrue equivalent status gains, we examine whether a recipient of a prosocial act might be better off withholding reciprocation. Given that the norm of reciprocity is strongly enforced (and perhaps more strongly than a general norm of benevolence), we expect that the penalty paid by potential reciprocators for not offering a reciprocal prosocial behavior may be greater than the penalty paid by potential initiators for not offering an initial prosocial behavior in the first place. In other words, the second actor in a prosocial exchange may face a Catch-22: Not

only will they be conferred less status than the first actor when deciding to help, but the second actor will also be penalized to a greater extent than the first actor when deciding not to help. Along with our hypotheses, the design and analyses for this study were preregistered on [aspredicted.org](https://aspredicted.org/#44225) (#44225).

Method

Participants. We recruited 1,200 (569 women; $M_{\text{age}} = 36.78$, $SD_{\text{age}} = 13.15$) participants using Prolific. The sample was 69% Caucasian, 7% African American, 13% Asian, 7% Hispanic, and 4% other ethnicities.

Procedure. Participants were randomly assigned to read about one of three scenarios (i.e., shoveling snow from a neighbor's driveway, getting a celebratory birthday cake for a coworker, helping a friend move out of their apartment). Unlike previous studies, this study used a between-subjects (rather than a within-subjects) design. Specifically, we varied which role participants were asked to evaluate (i.e., the first or second actor in the exchange), and what the focal actor decided to do (i.e., extend or withhold a prosocial gesture). Participants rating the first actor were given information about their decision to behave prosocially or not. However, they were not given information about the second actor's subsequent response. In contrast, participants rating the second actor were made aware of the first actor's decision to extend the prosocial gesture (as a necessity), and then given information about the second actor's decision to reciprocate or not. This design allowed us to compare the consequences of reciprocating and initiating a prosocial gesture. It also allowed us to compare the consequences of *not* reciprocating help and *not* initially offering help. We provide an example of these scenarios in Table 1.

Status was measured using the same three-item scale reported in Studies 2 and 3 ($\alpha = .96$). At the end of the study, participants answered a multiple-choice manipulation check about the scenario they read. The manipulation check followed the same format for each scenario: "In the scenario you just read, what did [name of the focal actor] do?" Response options for the shoveling scenario were, "He decided to shovel [other actor's] driveway" and "He decided not to shovel [other actor's] driveway." The response options for the other scenarios are included in our [online supplemental materials](#). Participants also provided demographic information.

Results

In our preregistration, we specified that we would exclude any participants who failed our manipulation check about whether the focal actor behaved prosocially.⁵ In the prosocial condition, 594 participants (99%) correctly answered that the focal actor decided to help, $\chi^2(1) = 576.24$, $p < .001$. In the nonprosocial condition, 584 participants (97%) correctly answered that the focal actor

⁵ In our first three studies, we focused on establishing our main effect and did not use our manipulation checks to exclude participants. However, in this, and all subsequent studies where we examine moderators, we used the manipulation check of the moderator as our exclusion criterion. Although this exclusion criterion did not substantially impact our pattern of results, we also report findings with the full sample in our [online supplemental materials](#).

Table 1
Example Scenario for Each Condition in Study 4

| Condition: Focal actor | Condition: Focal actor's decision | Scenario |
|---------------------------|--------------------------------------|---|
| First actor | Extended prosocial gesture | Jonathan and Don are neighbors. After a big snowstorm, Jonathan goes outside to shovel his driveway. As he is shoveling, Jonathan notices that Don's driveway is also full of snow. Jonathan thinks about shoveling Don's driveway as well. Jonathan decides to shovel Don's driveway. |
| First actor | Withheld prosocial gesture | Jonathan and Don are neighbors. After a big snowstorm, Jonathan goes outside to shovel his driveway. As he is shoveling, Jonathan notices that Don's driveway is also full of snow. Jonathan thinks about shoveling Don's driveway as well. However, Jonathan decides not to shovel Don's driveway. |
| Second actor | Extended prosocial gesture | Jonathan and Don are neighbors. After a big snowstorm, Jonathan goes outside to shovel his driveway. As he is shoveling, Jonathan notices that Don's driveway is also full of snow. Jonathan thinks about shoveling Don's driveway as well. Jonathan decides to shovel Don's driveway. A couple of weeks later, there is another big snowstorm. After the big snowstorm, Don goes outside to shovel his driveway. As he is shoveling, Don notices that Jonathan's driveway is also full of snow. Don thinks about shoveling Jonathan's driveway as well. Don decides to shovel Jonathan's driveway. |
| Second actor | Withheld prosocial gesture | Jonathan and Don are neighbors. After a big snowstorm, Jonathan goes outside to shovel his driveway. As he is shoveling, Jonathan notices that Don's driveway is also full of snow. Jonathan thinks about shoveling Don's driveway as well. Jonathan decides to shovel Don's driveway. A couple of weeks later, there is another big snowstorm. After the big snowstorm, Don goes outside to shovel his driveway. As he is shoveling, Don notices that Jonathan's driveway is also full of snow. Don thinks about shoveling Jonathan's driveway as well. However, Don decides not to shovel Jonathan's driveway. |

decided not to help, $\chi^2(1) = 537.71, p < .001$. These results suggest that participants generally remembered whether the focal actor behaved prosocially. We did not find any evidence that scenario assignment affected whether participants answered the manipulation check correctly, $\chi^2(2) = .06, p = .97$. We excluded the 22 participants that incorrectly answered our manipulation check, providing a final sample of 1,178 participants.

To probe the extent to which the scenarios affected our pattern of results, we conducted a 2 (Role in Social Exchange: First Actor, Second Actor) \times 3 (Prosocial Scenarios) between-subjects ANOVA. The interaction of reciprocation and scenario did not have a significant effect on status, $F(2, 1172) = .09, p = .91, \eta_p^2 = .00$, indicating that these patterns were consistent across scenarios. As such, we collapsed the data across all scenarios and used aggregate measures in subsequent analyses.

We predicted main effects of role and prosocial behavior in our preregistration. Using a 2 (Role in Social Exchange: First Actor, Second Actor) \times 2 (Prosocial Behavior: Prosocial Act, No Prosocial Act) between-subjects ANOVA, we found a significant main effect of role on status. That is, second actors (i.e., potential reciprocators; $M = 3.94, SD = 1.84$) were conferred less status than first actors (i.e., potential initiators; $M = 4.56, SD = 1.67$), $F(1, 1174) = 77.89, p < .001, \eta_p^2 = .06$. Also, as predicted, we found a significant main effect of prosocial behavior on status. Focal actors who behaved prosocially were conferred more status ($M = 5.51, SD = 1.08$) than those who did not ($M = 2.97, SD = 1.40$), $F(1, 1174) = 1313.09, p < .001, \eta_p^2 = .53$.

As shown in Figure 2, we found a significant interaction between focal actor and prosocial behavior on status, $F(1, 1174) = 6.90, p = .009, \eta_p^2 = .01$. Consistent with our preregistered hypotheses, reciprocating a prosocial act ($M = 5.29, SD = 1.13$) led to lower status than did initiating a prosocial act ($M = 5.73, SD = .98$), $t(592) = -5.03, p < .001, d = -.41$. However, *not* reciprocating a prosocial act ($M = 2.56, SD = 1.32$) led to an even

greater status penalty than *not* initially acting prosocially ($M = 3.36, SD = 1.36$), $t(582) = -7.28, p < .001, d = -.60$. These results highlight the double bind faced by recipients of an initial prosocial act.

Discussion

The results of Study 4 portray the double bind that recipients of prosocial behavior face—if they choose to reciprocate a prosocial act, their subsequent status gains are discounted relative to the gains accrued by the initiator, but if they choose not to reciprocate, the subsequent status penalty will be relatively greater than that incurred by the initiator if he or she chose not to help in the first place. These findings highlight an intriguing predicament for the recipient of an unsolicited prosocial act—reciprocate and accrue relatively less status or do not reciprocate and accrue relatively less status.

Study 5

In our first four studies, we examined direct reciprocal exchange. In Study 5, we examine indirect reciprocal exchange, which does not adhere to the standard norm of reciprocity. Rather, in indirect reciprocal exchange, individuals “respond to an altruistic act that benefits themselves by acting altruistically toward a third individual uninvolved in the initial interaction” (Trivers, 1971). We explored whether this unique form of exchange would produce less of a status discount for reciprocal prosocial acts. Given that reciprocators cannot claim credit for their good deeds in indirect exchange (because the initiator is neither a benefactor nor perhaps a witness of this prosocial act), observers cannot easily assume that the act of reciprocation was merely obligatory. Noting this, we expect observers to attenuate their discounting of reciprocal acts in indirect exchange.

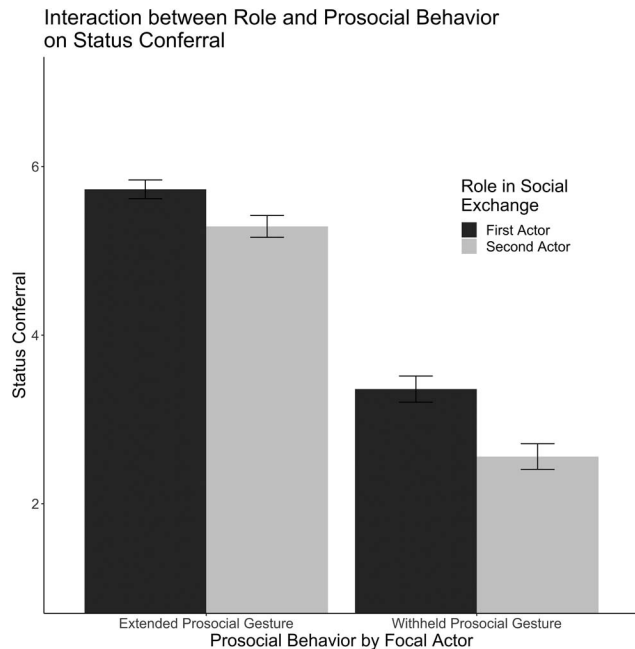


Figure 2. This graph depicts the double bind that second actors face in prosocial exchange. Second actors accrue less status for reciprocating a prosocial gesture than first actors do for initiating it. However, second actors are also penalized more for not reciprocating after receiving a prosocial gesture than first actors are for not extending a prosocial gesture to begin with. Unlike our other studies, participants in this study evaluated only the first or second actor, but not both. The depicted bars represent mean values of social status and error bars represent 95% confidence intervals (Study 4).

Method

Participants. We recruited 240 (101 women; $M_{\text{age}} = 40.59$, $SD_{\text{age}} = 11.47$) participants using MTurk. The sample was 77% Caucasian, 8% Hispanic, 7% African American, 4% Asian, and 4% other ethnicities.

Procedure. Participants were assigned to watch a brief video clip that captured an episode of direct or indirect reciprocal exchange. To create these video clips, we partnered with a local coffee shop. We hired and trained two actors to play the role of customers involved in the exchange and one additional actor to play the role of barista.

The actors performed two scenes. In the scene depicting direct exchange, the first actor converses with a barista and offers to pay for the next customer's coffee. After the first actor leaves, the second actor enters. Upon learning from the barista that his coffee has been paid for, the second actor asks to pay for the first customer's coffee the next time he comes into the shop. In the scene depicting indirect exchange, the first actor's behavior is identical to the direct exchange scene, but, in this case, the second actor offers to "pay-it-forward" by purchasing the next customer's coffee (that person is not seen on camera). The script and still shots from the videos are shown in [Appendix A](#) and [Appendix B](#), respectively. We controlled for actor effects by counterbalancing the roles played in each scene. In other words, each actor played the role of reciprocator and initiator, resulting in two videos per condition (i.e., four videos in total).

Participants were randomly assigned to watch one of the four videos. After watching the video, they completed the same status items ($\alpha_{\text{Initiator}} = .92$, $\alpha_{\text{Reciprocator}} = .94$) that were used in Studies 2–4.

At the end of the study, participants answered a multiple-choice manipulation check: "In the video you watched, what did the second customer do?" Response options were "He paid it forward and offered to buy the next customer's coffee" and "He reciprocated and offered to buy the first customer's coffee the next time he comes in." Participants also provided demographic information.

Results

In the indirect exchange condition, 116 participants (97%) correctly indicated that the second customer offered to buy the next customer's coffee, $\chi^2(1) = 104.53$, $p < .001$. In the direct reciprocity condition, 113 participants (94%) correctly indicated that the second customer offered to buy the first customer's coffee the next time he visits the shop, $\chi^2(1) = 110.21$, $p < .001$. These results suggest that participants generally attended to whether reciprocation happened indirectly or directly. For our analyses, we excluded 11 participants who failed the manipulation check and one who reported having trouble watching the video, leaving a final sample size of 228.

To analyze our results, we conducted a 2 (Reciprocation: Initiator, Reciprocator) \times 2 (Exchange Type: Direct, Indirect) mixed-model analysis of covariance (ANCOVA; i.e., controlling for actor), with repeated-measures on the first factor. We found a significant main effect of reciprocation on status, such that reciprocators ($M = 5.85$, $SD = 1.07$) received less status than did initiators ($M = 6.15$, $SD = .96$), $F(1, 225) = 11.10$, $p < .001$, $\eta_p^2 = .05$. There was no main effect of type of exchange (direct vs. indirect; $F(1, 225) = 1.00$, $p = .32$, $\eta_p^2 = .004$) or choice of actor (actor 1 vs. actor 2; $F(1, 225) = 1.47$, $p = .23$, $\eta_p^2 = .006$) on status. Choice of actor also did not moderate the relationship between reciprocation and status, $F(1, 225) = 3.12$, $p = .08$, $\eta_p^2 = .01$.

We found a significant interaction between reciprocation and type of exchange on status, $F(1, 225) = 4.81$, $p < .03$, $\eta_p^2 = .02$ ([Figure 3](#)). Compared with the direct exchange condition ($M_{\text{Reciprocator}} = 5.73$, $SD_{\text{Reciprocator}} = 1.09$ vs. $M_{\text{Initiator}} = 6.14$, $SD_{\text{Initiator}} = 1.01$), $\text{paired-}t(112) = -5.36$, $p < .001$, $d = -.39$, the discounting of reciprocal acts was attenuated in the indirect exchange condition ($M_{\text{Reciprocator}} = 5.96$, $SD_{\text{Reciprocator}} = 1.04$ vs. $M_{\text{Initiator}} = 6.16$, $SD_{\text{Initiator}} = .92$), $\text{paired-}t(115) = -3.43$, $p < .001$, $d = -.21$. That is, the relative status of the reciprocator was elevated when observers witnessed indirect, rather than direct, reciprocation by the second customer.

Discussion

In Study 5, we used a visual enactment of a prosocial exchange to provide a better test of our proposed psychological mechanism. By manipulating the form of reciprocity, we could manipulate perceived obligation. Observers would interpret the reciprocator's prosocial act as more volitional, rather than forced, in an indirect exchange. Consistent with our prediction, although the reciprocator was conferred significantly less status than the initiator in both the direct and indirect exchange conditions, the difference between

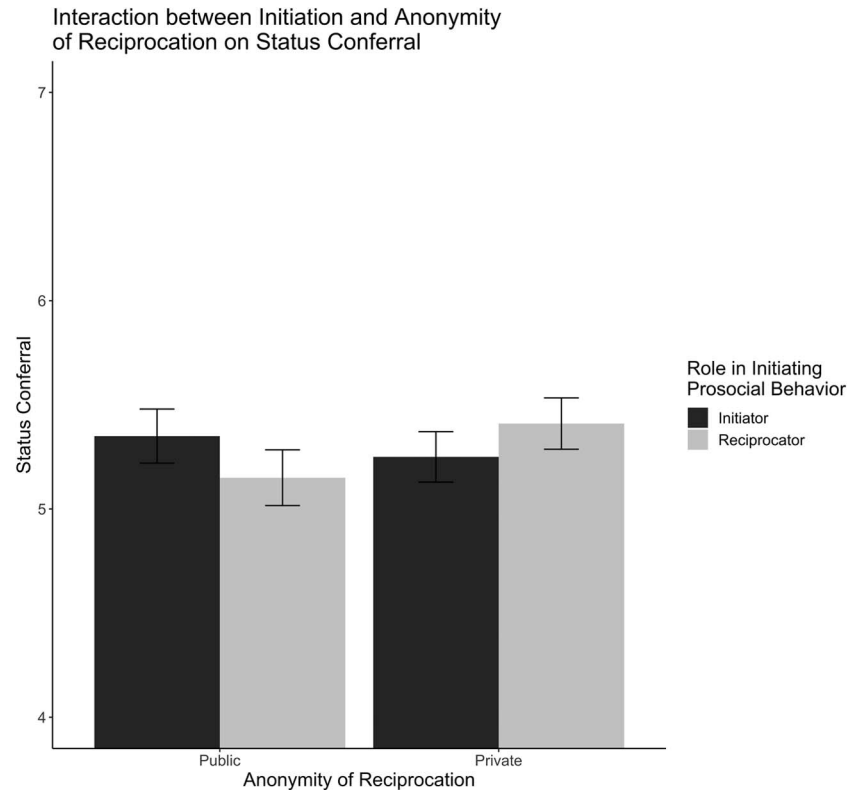


Figure 3. This graph shows how the reciprocator's relative disadvantage in status conferrals can be attenuated by engaging in indirect reciprocity (e.g., paying-it-forward) rather than direct reciprocity. A status difference still exists for cases of indirect reciprocity, but the difference is significantly smaller than for cases of direct reciprocity. Participants in this study evaluated both the initiator and reciprocator in the exchange. The depicted bars represent mean values of social status and error bars represent 95% confidence intervals (Study 5).

the two was significantly reduced after an indirect exchange. This result highlights an important insight about the reciprocator's status disadvantage—it pertains more to direct, rather than indirect, forms of reciprocity.

Study 6

In Study 6, we examined whether observers would confer more comparable levels of status to initiators and reciprocators if the reciprocator acted privately (i.e., the reciprocator kept their identity anonymous) rather than publicly (i.e., the reciprocator made their identity known to the initiator). Once again, manipulating the form of exchange allows us to manipulate the expectation that the reciprocator's act is obligatory. When prosocial acts are performed in private, the reciprocator cannot receive direct credit for their good deed from the initiator because the initiator is unaware of its source. Thus, although reciprocating privately might incur a penalty from the initiator, *third-party observers* who are aware of the reciprocator's gesture may be willing to confer more status to the reciprocator because they see this prosocial gesture as less obligatory than a public reciprocal act.

Method

Participants. We recruited 800 (359 women; $M_{\text{age}} = 35.72$, $SD_{\text{age}} = 12.49$) participants using Prolific. The sample was 63%

Caucasian, 16% Asian, 8% Hispanic, 8% African American, and 5% other ethnicities.

Procedure. Participants were randomly assigned to read one of four scenarios about a prosocial exchange (i.e., donating to the March of Dimes, purchasing an item for a fundraiser, giving a vacation day to a coworker, or nominating a colleague for a reward). We varied whether the reciprocal act was performed in public or private (i.e., the reciprocator either made their identity known or remained anonymous to the initiator). Scenarios can be found in the [online supplemental materials](#).

After reading the scenario, participants answered questions about their impressions of the initiator and reciprocator. Specifically, they completed the items for status ($\alpha_{\text{Initiator}} = .93$, $\alpha_{\text{Reciprocator}} = .94$), obligation ($\alpha_{\text{Initiator}} = .72$, $\alpha_{\text{Reciprocator}} = .74$), and distress ($\alpha_{\text{Initiator}} = .93$, $\alpha_{\text{Reciprocator}} = .89$) that were used in Studies 2 and 3.

At the end of the study, participants answered a multiple-choice manipulation check about the scenario they read. The manipulation check varied by scenario (see [online supplemental materials](#)), but each question asked participants about whether the reciprocator's action was performed in private or public. For example, in the vacation day condition, participants were asked, "In the scenario you just read, what did Courtney do when she found out that Tammy donated a vacation day to her?" Response options were, "Courtney donated her vacation day to

Tammy publicly,” and “Courtney donated her vacation day to Tammy anonymously.” Then, participants provided demographic information.

Results

In the private condition, 383 participants (96%) correctly answered the manipulation check by indicating that the gesture was reciprocated in private, $\chi^2(1) = 334.89, p < .001$. In the public condition, 374 participants (94%) correctly answered the manipulation check by indicating that the gesture was reciprocated in public, $\chi^2(1) = 302.76, p < .001$. These results suggest that participants were generally able to recall whether the focal actor reciprocated in public or private. We did not find any evidence that scenario assignment affected whether participants answered the manipulation check correctly, $\chi^2(3) = .57, p = .90$. We excluded 43 participants who failed the manipulation check (7.8%), leaving a final sample of 757.

To probe the extent to which the scenarios affected our pattern of results, we conducted a 2 (Reciprocation: Initiator, Reciprocator) \times 4 (Prosocial Scenarios) mixed-model ANOVA with repeated measures on the first factor. The interaction of reciprocation and scenario did not have a significant effect on status, $F(3, 753) = 1.64, p = .18, \eta_p^2 = .006$, indicating that the effects were consistent across scenarios. For subsequent analyses, we collapsed the data across all scenarios and used an aggregate measure of status.

To test our hypothesis, we conducted a 2 (Reciprocation: Initiator, Reciprocator) \times 2 (Anonymity: Private, Public) mixed-model ANOVA with repeated-measures on the first factor. We did not find a significant main effect of reciprocation on status—reciprocators ($M = 5.28, SD = 1.28$) were not conferred less status than initiators ($M = 5.30, SD = 1.24$), $F(1, 755) = .46, p = .50, \eta_p^2 = .001$. There was also no main effect of anonymity (private vs. public) on status, $F(1, 755) = 1.01, p = .32, \eta_p^2 = .001$.

Next, we explored the interaction between reciprocation and anonymity on status. As hypothesized, there was a significant interaction, such that observers conferred more comparable levels of status to initiators and reciprocators when reciprocation was performed in private, rather than in public, $F(1, 755) = 12.31, p < .001, \eta_p^2 = .05$ (Figure 4). When reciprocation was performed in public, observers conferred less status to reciprocators than initiators ($M_{\text{Reciprocator}} = 5.15, SD_{\text{Reciprocator}} = 1.32$ vs. $M_{\text{Initiator}} = 5.35, SD_{\text{Initiator}} = 1.28$), $\text{paired-}t(373) = -6.48, p < .001, d = -.34$. However, when reciprocation was performed privately (i.e., anonymously), observers actually conferred *more* status to reciprocators than initiators ($M_{\text{Reciprocator}} = 5.41, SD_{\text{Reciprocator}} = 1.23$ vs. $M_{\text{Initiator}} = 5.25, SD_{\text{Initiator}} = 1.21$), $\text{paired-}t(382) = 3.15, p = .002, d = .16$.

We theorized that reciprocating in private should not change how observers view the *initiator's* act, but it should decrease the extent to which observers view the *reciprocator's* act as obligatory. As expected, there was a significant interaction between

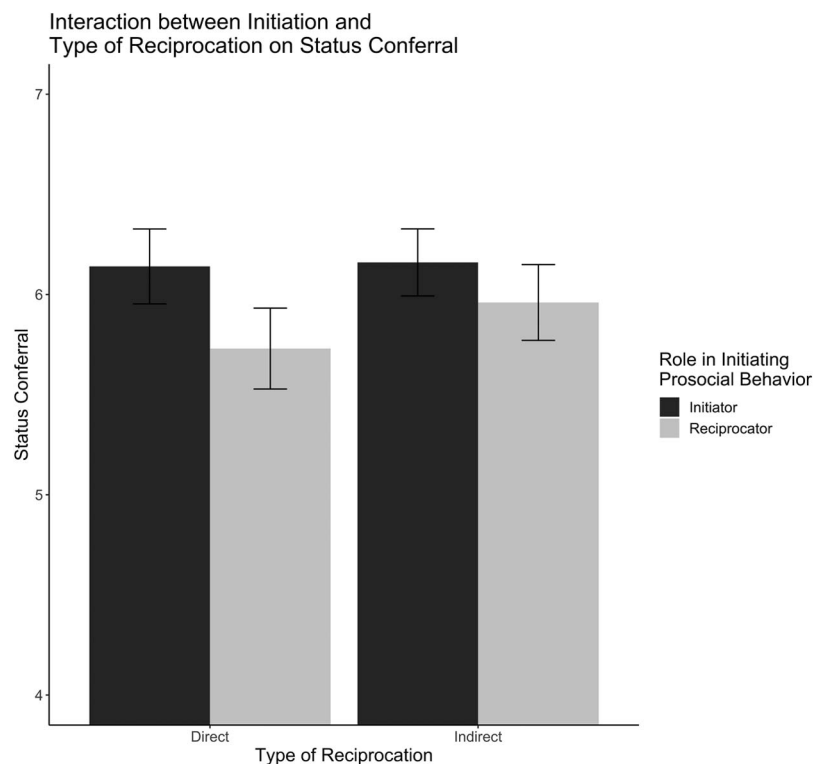


Figure 4. This graph shows how the reciprocator's relative status disadvantage is not only weakened, but reversed when reciprocation occurs in private, rather than in public. Note that participants evaluated both the initiator and reciprocator. The depicted bars represent mean values of status, and error bars represent 95% confidence intervals (Study 6).

reciprocity and anonymity on perceived obligation, $F(1, 755) = 13.09$, $p < .001$, $\eta_p^2 = .02$. Private reciprocation did not affect observers' perceived obligation of the initiator's act ($M_{\text{private}} = 2.37$, $SD_{\text{private}} = 1.15$ vs. $M_{\text{public}} = 2.43$, $SD_{\text{public}} = 1.18$), $t(755) = -.71$, $p = .48$, $d = -.05$. However, private reciprocation significantly decreased the extent to which observers perceived the reciprocator's act as obligatory ($M_{\text{private}} = 2.95$, $SD_{\text{private}} = 1.25$ vs. $M_{\text{public}} = 3.35$, $SD_{\text{public}} = 1.17$), $t(755) = -4.53$, $p < .001$, $d = -.33$. We also examined the simple effects of reciprocity on perceived obligation within each anonymity condition. As expected, when reciprocation was performed in public, observers viewed the reciprocator's act as more obligatory than the initiator's ($M_{\text{Reciprocator}} = 3.35$, $SD_{\text{Reciprocator}} = 1.17$ vs. $M_{\text{Initiator}} = 2.43$, $SD_{\text{Initiator}} = 1.18$), $\text{paired-}t(373) = 14.01$, $p < .001$, $d = .72$. However, when reciprocation was performed privately (i.e., anonymously), this difference in perceived obligation was attenuated ($M_{\text{Reciprocator}} = 2.95$, $SD_{\text{Reciprocator}} = 1.25$ vs. $M_{\text{Initiator}} = 2.37$, $SD_{\text{Initiator}} = 1.15$), $\text{paired-}t(382) = 8.69$, $p < .001$, $d = .44$.

Along a similar vein, reciprocating in private should not change how much observers view the initiator as being motivated by distress, but it should decrease the extent to which observers view the reciprocator as being motivated by distress. As expected, we found a significant interaction between reciprocity and anonymity on perceived distress, $F(1, 755) = 9.90$, $p = .002$, $\eta_p^2 = .01$. Private reciprocation did not affect observers' perceptions of the initiator's distress ($M_{\text{private}} = 1.67$, $SD_{\text{private}} = 1.06$ vs. $M_{\text{public}} = 1.69$, $SD_{\text{public}} = 1.19$), $t(755) = -.23$, $p = .81$, $d = .02$. However, private reciprocation significantly decreased the extent to which observers perceived the reciprocator as being motivated by distress ($M_{\text{private}} = 1.89$, $SD_{\text{private}} = 1.24$ vs. $M_{\text{public}} = 2.13$, $SD_{\text{public}} = 1.32$), $t(755) = -2.52$, $p = .01$, $d = .18$. We also examined the simple effects of reciprocity on perceived distress within each anonymity condition. As expected, when reciprocation was performed in public, observers viewed the reciprocator as being more motivated by distress than the initiator ($M_{\text{Reciprocator}} = 2.13$, $SD_{\text{Reciprocator}} = 1.32$ vs. $M_{\text{Initiator}} = 1.69$, $SD_{\text{Initiator}} = 1.19$), $\text{paired-}t(373) = 9.58$, $p < .001$, $d = .50$. However, when reciprocation was performed privately (i.e., anonymously), this difference in perceived distress was attenuated ($M_{\text{Reciprocator}} = 1.89$, $SD_{\text{Reciprocator}} = 1.24$ vs. $M_{\text{Initiator}} = 1.67$, $SD_{\text{Initiator}} = 1.06$), $\text{paired-}t(382) = 4.52$, $p < .001$, $d = .23$.

In both the private and public conditions, observers infer greater distress and obligation from the reciprocator than initiator, even though these differences are attenuated in the private condition. Thus, for our mediation models, we conducted analyses using the full sample, collapsing across the private and public conditions. First, we tested perceived obligation as a mediator for the relationship between reciprocation and status. Using 5,000 bootstrapped samples, we again found support for a mediation pathway from reciprocation of the prosocial act to perceived obligation to subsequent status conferral, $B = -.19$, $SE = .03$, 95% CI = $[-.24, -.14]$; thereby replicating our findings from Studies 2 and 3. We also tested a serial mediation pathway from reciprocation to distress to obligation to status. Consistent with the findings from Studies 2 and 3, we found support for serial mediation, $B = -.07$, $SE = .02$, 95% CI = $[-.12, -.02]$.

Discussion

The results of Study 6 highlight another moderator for the discounting of reciprocal prosocial acts. Specifically, the reciprocator's relative disadvantage (in terms of eliciting status gains) can be mitigated when the reciprocator returns the prosocial gesture in private, rather than in public. That is, when reciprocators kept their identities hidden from the initiator, they received more comparable status conferrals (relative to initiators) from observers. By choosing not to receive credit for their reciprocal act directly from the initiator, reciprocators appeared to be acting less out of obligation, and thus avoided the status penalty. Whereas this option to give privately seems to be a benefit for reciprocators when it comes to status conferrals from third-party observers, such benefit is still limited, given that the initiators might resent the fact that their initial gestures went unreciprocated (at least, as far as they know).

Study 7

We have examined single rounds of reciprocal exchange, in which one actor gives a benefit to another, and the second actor provides a benefit in return. However, most exchange relations might not end at that point. Rather, the giving of prosocial benefits may continue, while the pattern of giving may change. For example, the reciprocator could initiate a subsequent round of exchange, in which he or she provides an unsolicited benefit to the original initiator, and the original initiator then reciprocates. Would that eliminate the status difference between initiators and reciprocators, given that the exchange is seemingly counterbalanced? We suspect that it would reduce, but not entirely eliminate, the difference. Instead, we suggest that the original reciprocator would still be perceived as lower status because he or she is seen as merely continuing an existing exchange relation. In contrast, the initiator of the first round will be credited with establishing a new exchange relation. Thus, even after a sequential, counterbalancing round of prosocial exchange, the original reciprocator may still accrue relatively less status. We test this idea in our seventh, and final, study.

Method

Participants. We recruited 600 (270 women; $M_{\text{age}} = 38.84$, $SD_{\text{age}} = 10.84$) using MTurk. The sample was 72% Caucasian, 14% African American, 7% Asian, 5% Hispanic, and 3% other ethnicities.

Procedure. Participants were randomly assigned to read one of three scenarios involving a reciprocal exchange (e.g., offering cookies, inviting a coworker for dinner, or paying for a coworker's lunch). Half the participants were randomly assigned to read about a single round of prosocial exchange. This condition mirrored the paradigm described in previous studies, in which one person initiates a prosocial act, and the other person reciprocates in kind. The other half were randomly assigned to read about two rounds of prosocial exchange. This condition described an additional round, in which the reciprocator in the first round becomes the initiator in the second round. Because these scenarios involved two rounds of prosocial exchange (i.e., four prosocial acts in total), we included a visual timeline in all conditions to help participants understand the sequence of events. Below is an example of what the participants in the lunch scenario read and saw in the single round of exchange (Figure 5):

Nicholas and Lou recently met each other for the first time at a work event. Afterward, Nicholas reached out to Lou and offered to buy him lunch. Lou accepted the offer. A couple days later, Lou reciprocated and offered to buy Nicholas lunch. Nicholas accepted the offer.

Participants who read about two rounds of exchange read and saw the following (Figure 6):

After several weeks, Lou reaches out to Nicholas and offers to buy him lunch. Nicholas accepts the offer. A couple days later, Nicholas reciprocates and offers to buy Lou lunch. Lou accepts the offer.

Participants then answered questions about their general impressions of the initiator and reciprocator, completing the same items for status ($\alpha_{\text{Initiator}} = .93$, $\alpha_{\text{Reciprocator}} = .93$) used in Studies 2–6. At the end of the study, participants answered a multiple-choice manipulation check about the scenario they read. The manipulation check for each scenario followed the same format: “In the description you just read, who was the first person to [extend the prosocial behavior]?” Response options were the names of the initiator and reciprocator. Participants also provided demographic information.

Results

Five hundred fifty-three participants (92%) correctly identified the first person in the scenario to perform the prosocial gesture, $\chi^2(2) = 426.73$, $p < .001$, but this varied by scenario, $\chi^2(2) = 6.05$, $p < .05$: 96% in the cookies scenario, 89% in the dinner scenario, and 92% in the lunch scenario. We excluded the 47 participants who failed the manipulation check (7.8%).

To test whether the scenarios affected our pattern of results, we conducted a 2 (Reciprocation: Initiator, Reciprocator) \times 3 (Prosocial Scenarios) mixed-model ANOVA with repeated measures on the first factor. There was no main effect of scenario on status, $F(1, 550) = .95$, $p = .39$, $\eta_p^2 = .003$, nor was there a significant interaction of reciprocation and scenario on status, $F(2, 550) = .02$, $p = .98$, $\eta_p^2 = .00$, indicating that these effects were consistent across scenarios. For subsequent analyses, we collapsed the data across all scenarios.

Next, we explored whether the amount of status conferred to each actor depended on the round of exchange using a 2 (Reciprocation: Initiator, Reciprocator) \times 2 (Rounds of Exchange: One, Two) mixed-model ANOVA with repeated measures on the first factor. As before, we found a significant main effect of reciprocation on status, such that reciprocators in the first round ($M = 5.51$, $SD = 1.15$) were conferred less status than initiators in the first round ($M = 5.73$, $SD = 1.11$), $F(1, 551) = 56.47$, $p < .001$, $\eta_p^2 = .09$. There was no main effect of rounds of prosocial exchange (one vs. two) on status, $F(1, 551) = .16$, $p = .69$, $\eta_p^2 = .00$.

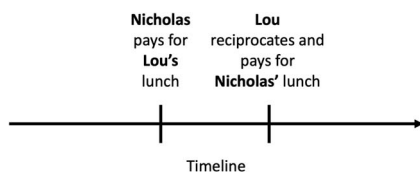


Figure 5. Visual timeline in Study 7 for one round of exchange

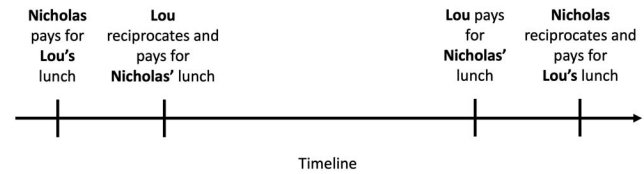


Figure 6. Visual timeline in Study 7 for two rounds of exchange.

As shown in Figure 7, a significant interaction between reciprocation and rounds of exchange emerged, such that status differences between initiators and reciprocators were significantly weakened when there were two, as opposed to one, round of prosocial exchange, $F(1, 551) = 14.32$, $p < .001$, $\eta_p^2 = .03$. Notably, the effect of reciprocation on status held not only for one round of exchange ($M_{\text{Reciprocator}} = 5.47$, $SD_{\text{Reciprocator}} = 1.09$ vs. $M_{\text{Initiator}} = 5.80$, $SD_{\text{Initiator}} = 1.03$), $\text{paired-}t(284) = -7.41$, $p < .001$, $d = -.31$, but also for two rounds of counterbalanced exchange ($M_{\text{Reciprocator}} = 5.54$, $SD_{\text{Reciprocator}} = 1.20$ vs. $M_{\text{Initiator}} = 5.65$, $SD_{\text{Initiator}} = 1.19$), $\text{paired-}t(267) = -2.93$, $p < .001$, $d = -.09$.

Discussion

The results from Study 7 highlight the persistence of the reciprocator's status disadvantage in two counterbalanced rounds of prosocial exchange. Even when the original reciprocator from the first round initiated a new round with identical prosocial benefits, the reciprocator was conferred less status than the initiator of the first round. These findings suggest that observers evaluate prosocial exchanges, not by considering the average behavior performed by each actor, on balance, but by considering the full history of their interactions. Observers still attribute more credit to initiators of the first round of exchange presumably because they took the first step to establish the exchange relation.

General Discussion

We advance research on the link between prosocial behavior and social status by highlighting the asymmetry between status gains for initial and reciprocal prosocial acts. Across seven studies, using a variety of contexts, we find that people confer less status to individuals who reciprocate a prosocial act than to individuals who initiate, even when the two acts are identical. In Study 1, after witnessing two individuals exhibit equal generosity in the Dictator Game, participants were more likely to choose the individual who acted first to serve as the leader for a subsequent task. In Study 2, we find further evidence for this basic effect using the Trust Game. Participants conferred less status to the reciprocator, even though the reciprocator returned more money than was initially received. In Study 3, we show the robustness of this effect in a variety of everyday contexts (e.g., inviting a colleague over for dinner, housesitting, or driving a friend to the airport).

In Study 4, we consider the option of refusing to reciprocate an initial prosocial act. We find that the initial recipient is penalized for not offering reciprocation (i.e., observers confer less status), and, indeed, penalized more than the initial actor had he or she chosen not to perform the initial prosocial act in the first place. It seems that recipients of an initial prosocial act are faced with a

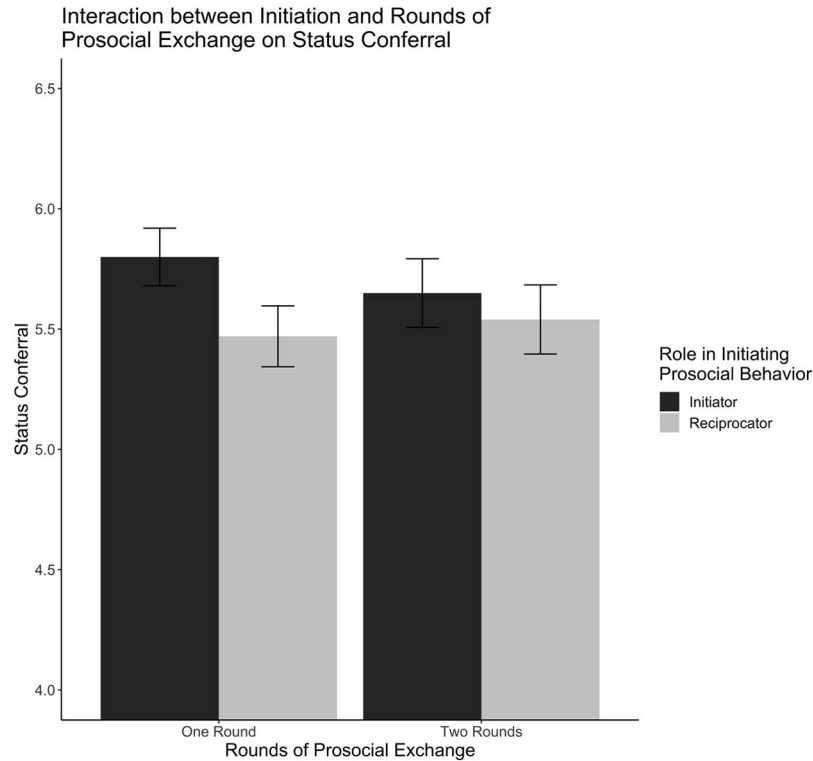


Figure 7. This graph shows the robustness of the reciprocator's status disadvantage. Even after two counter-balanced rounds of prosocial exchange (i.e., reciprocator of first round becomes initiator of second round), status differences remained. Note that participants in this study evaluated both the initiator and reciprocator in the exchange(s). The depicted bars represent mean values of status and error bars represent 95% confidence intervals (Study 7).

challenging dilemma—offer to reciprocate and receive less status, or refuse to reciprocate and receive less status.

In Studies 2, 3, and 6, we show that status accrual can be explained, in part, by perceived obligation. Individuals who reciprocated a prosocial act were seen as acting out of greater obligation, whereas individuals who initiated were seen as acting on their own freewill. Participants attributed the reciprocator's act of kindness to feelings of obligation, in part, because they presumed that the reciprocator experienced distress upon receipt of the initial, prosocial act, and the reciprocator was motivated to alleviate this distress.

In Studies 5 and 6, we explored two potential moderators that might alter the perception of obligation, thereby reducing differences in status gains between initiators and reciprocators in contexts where the norm of reciprocity may be weakened. Indeed, we found that the reciprocator's relative status disadvantage was significantly reduced in an indirect, rather than a direct, prosocial exchange (Study 5). That is, when the beneficiary of the reciprocal act was a third party, rather than the initial actor, observers presumably saw the reciprocator as acting less out of an obligation to "repay" the initial actor and more out of their own volition. In Study 6, we found that reciprocating in private (i.e., anonymously) rather than in public reduced the reciprocator's relative disadvantage, presumably because the second actor chose not to receive credit from the initial actor for reciprocating. These findings sug-

gest that when reciprocators perform good deeds unbeknownst to (and perhaps not directed toward) the initiator, they accrue more status than when reciprocators perform good deeds that appear directly aimed at claiming credit for returning the favor.

In Study 7, we found that the reciprocator's status disadvantage held for two sequential, counterbalanced rounds of reciprocal exchange. Even when the reciprocator of the initial prosocial act became the initiator in a second round of exchange, we still observed a difference in status gains between initiators and reciprocators, such that the reciprocator in the first round was conferred less status after the second, counterbalancing round. These findings show that prosocial acts are not judged in isolation when observers confer status; rather, they are viewed through a contextualized lens that accounts for the history of social interactions between the two parties. Together, our findings shed new light on the link between prosocial behavior and social status—its strength depends on the norm of reciprocity. Simply put, a reciprocal, prosocial act intended to repay a debt generates less status than an initial, prosocial act that incurs a debt.

These findings have clear, practical implications, in part, because social exchange is ubiquitous. For most people, the experience of prosocial exchange occurs many times in the course of a single day. It might be a casual gesture, like colleagues exchanging dinner invitations. Or, it might involve high stakes, like world leaders exchanging state visits (in which both elected officials are

keen to boost their standing in the public eye). Status is accrued through this ongoing process of exchange, in turn yielding material benefits, such as better physical health, enhanced subjective well-being, increased social influence, and improved task performance (Anderson et al., 2012; Bales, Strodtbeck, Mills, & Roseborough, 1951; Flynn & Amanatullah, 2012). Although scholars often extol the benefits of performing prosocial behavior, identifying it as a path to success (Grant, 2013), the degree of benefit differs between the initiator and the reciprocator of that kind deed. Astute individuals might take advantage of this difference by strategically seeking opportunities to initiate prosocial acts as a way of bolstering their own status.

Theoretical Contributions

The theoretical contributions of the present work are manifold. First, and foremost, we challenge and extend past theorizing about the link between prosocial behavior and social status (Flynn, 2003; Flynn et al., 2006; Willer, 2009) by examining reciprocal exchanges, rather than “one-shot trials” or an aggregated pattern of exchange (Frank et al., 1993; Janssen, 2008). Using the context of direct reciprocal exchange, we shed light on how the universal norm of reciprocity (Gouldner, 1960), which governs social exchange in almost all cultures, can influence observers to confer more status for initial prosocial acts than for reciprocal prosocial acts. Even when both acts are identical, subsequent status conferrals are not. To put this in the context of Foa and Foa’s (1980) social resource model, whereas the norm of reciprocity may maintain balance in material resources exchanged (i.e., goods, services, or money), it may yield inequity in symbolic resources generated (i.e., status).

Second, we account for the psychology at work in discounting reciprocal prosocial acts. Unsolicited acts that initiate social exchange are perceived to be more volitional; thus, to an observer, it may seem clear that an initial act of kindness is motivated by prosocial goals. However, the motivation for reciprocal acts may not be so clear. Instead, it might seem that reciprocators perform prosocial acts because they “have to,” not because they “want to”—that is, reciprocators are motivated, at least in part, to alleviate personal feelings of distress that accompany the psychological experience of indebtedness (Cialdini et al., 1987). This highlights an underlying psychological mechanism that explains the “first mover advantage” in prosocial behavior—initial prosocial acts are seen as unambiguously selfless whereas reciprocal prosocial acts may be seen as partly selfless and partly selfish. To an observer, these reciprocal prosocial acts seem less deserving of status.

Third, this research contributes to our understanding of the norm of reciprocity, a fundamental concept often invoked in the behavioral sciences to explain various social outcomes, ranging from organ donation to collaboration in the workplace (Cook & Emerson, 1978; Cropanzano & Mitchell, 2005; Falk & Fischbacher, 2006; Mauss, 1925; Nadel & Nadel, 2005; Ostrom & Walker, 2003; Sahlin, 1972; van Veelen, Garcia, Rand, & Nowak, 2012). In many of these accounts, reciprocity is conceptualized as an equilibrium that can reconcile imbalances in social exchange through normative pressure (Gouldner, 1960). Our research suggests that while this may be true in the minds of the parties involved in the exchange, it may not be true in the minds of others

who observe the exchange. Instead, the reputation gains from adhering to the norm of reciprocity appear limited, which implies that the norm of reciprocity may not be a means to creating equality; rather, it may be a source of inequality in the broader social status hierarchy, particularly if individuals become pigeonholed into the role of initiator or reciprocator (cf. Flynn et al., 2006).

Fourth, our work might be of interest to evolutionary theorists who invoke the concept of reciprocity to explain selfless, prosocial behavior, suggesting that various forms of cooperation, including reciprocal exchange, enable survival (Field, 2001; Nowak & Roch, 2006; Price & Van Vugt, 2014; Roberts, 2008). According to reciprocal altruism theory (RAT; Trivers, 1971), reciprocity should improve fitness by encouraging more altruistic behavior from an exchange partner, whereas failing to provide reciprocation should diminish fitness by eliciting direct punishment from the same exchange partner. Our work supports this notion that reciprocal acts convey a fitness advantage, but our findings also suggest a complicating factor: Whereas performing reciprocal acts in front of third-party observers can attract future partners (e.g., Milinski, 2016), the reputational advantage gained from reciprocal acts might be less than that conveyed by initial acts. In its current form, RAT does not capture the discounting of reciprocal acts, but doing so might help strengthen the theory’s explanatory power.

Limitations and Future Directions

Our investigation of the link between reciprocal exchange and social status can be strengthened in several ways. In particular, our study materials rely heavily on hypothetical scenarios and online samples, which offer rigorous control, but limited external validity. Going forward, these ideas should be further tested in real-world situations, involving naturally occurring episodes of exchange. In addition, most of our participants are citizens of the United States, who may enforce the norm of reciprocity in ways that reflect their national culture. For example, within an American population, European Americans tend to be less anxious in highly reciprocal relationships, whereas the opposite is true for Asian Americans (Shiv, 2016). Given these cultural differences, it would be worthwhile to test whether certain cultures are more likely to discount reciprocal prosocial behavior. Finally, our studies focused on one type of status—virtue-based status. However, past research suggests that status may also be gained through competence and dominance. Although we suspect that the initiation and reciprocation of prosocial acts are less likely to affect dominance- or competence-based status, future research might explore other types of exchange that influence these forms of status.

In each of our studies, we take the point of view of a third party, who is aware of, but not a part of, the exchange. One could imagine a different set of results if we asked those individuals directly involved for their evaluations. After the exchange, we suspect that the reciprocator would confer more status to the initiator than vice versa, consistent with what we have shown. However, when it comes to their own self-evaluations of social status, a different pattern might appear: Reciprocators may not discount their contributions as much as others do. Instead, reciprocators might see themselves as acting out of volition, rather than obligation, thereby creating a gap between how reciprocators view

their own status and how others view them. This gap in status evaluations, if it exists, could be a source of conflict in subsequent interactions (cf. Anderson et al., 2012).

In Studies 5 and 6, we used private and indirect forms of reciprocity as proximate manipulations of our psychological mechanism—perceived obligation. Despite the conceptual strength of these moderators, and their empirical support, neither approach may be practical for reciprocators to adopt. Instead, reciprocators may worry about damaging their relationship with initiators if initiators feel their acts of kindness have not been repaid. Hoping to avoid this problem, reciprocators might choose to do both—reciprocate publicly and directly with the initiator, and give indirectly or anonymously to someone else. Of course, this would require a substantial amount of extra effort for reciprocators, perhaps making it feel like an undue burden. Future research might consider whether reciprocators are sensitive to this tradeoff between attaining status from initiators or observers, and whether they weigh such tradeoffs in strategic terms. For instance, would reciprocators be more willing to offer indirect or private reciprocation as the number of observers grows; thereby, increasing the total amount of status they accrue, relative to the loss they incur?

Strategic individuals might be motivated to initiate prosocial acts to buoy their own reputations. In particular, high self-monitors are much more likely to give help than ask for it because they are sensitive to the status penalty that comes with help-seeking (e.g., Flynn et al., 2006). It would be interesting to test whether high self-monitors are also more inclined to initiate rather than reciprocate prosocial acts. Of course, this type of savvy behavior could come with a cost. If observers are more aware of the potential gain from initiating (rather than reciprocating) prosocial behavior, they might be inclined to *discount* an initial prosocial act if they assume it was performed with the intent to solicit status. Although our results suggest this is not the case, there may be *some* individuals who are likely to discount initial acts of kindness. For example, individuals who are low on trusting attitudes may be less likely to confer status to an initiator of a prosocial act because of their cynical beliefs.

Future research might also explore ways that reciprocators behave strategically to minimize their status disadvantage. For example, some reciprocators might try to elevate their status by reciprocating *more* generously than the initiator. Individuals abiding by the norms of *guanxi*, a critical form of social exchange in China, often choose to reciprocate with a gift of greater value than that originally received. According to one *guanxi* practitioner, “if you do not give more than you receive, then you will have a bad reputation” (Wilson, 2002, p. 170). Future research might explore whether exchange participants in some cultures are more aware of the status discount applied to reciprocal prosocial acts. Aside from giving more in return, reciprocators might also try changing the domain of resources exchanged. According to Foa and Foa (1980), observers may be less likely to compare initial and reciprocal acts that involve different goods or services because they are more difficult to evaluate in relative terms.

Another potentially fruitful area of future research is the enduring quality of the reciprocator’s status disadvantage. In Study 7, its persistence is noteworthy, given that the exchange described was completely counterbalanced. We suspect that the status disadvantage might be further reduced after additional iterations. However, we contend that the effect will still remain, so long as the identity

of the initiator remains salient to the observer. The initiator serves as the “primal mark” in the exchange relation, denoting when the exchange began. If that mark was obscured from view, observers could no longer credit the initiator for taking the first step. However, if the identity of the initiator remains salient, then differences in status gains would likely persist. Further, the initial first-mover advantage may have self-reinforcing effects on future patterns of exchange, even if observers do forget the original source (e.g., Ross, 1977). This is merely a conjecture, but one that seems worth testing.

Future research might also consider other mediators that can account for the reciprocator’s status disadvantage. For example, initiators of prosocial acts could be seen as higher in trait dominance or warmth, both of which serve as primary drivers of social status (Anderson & Kilduff, 2009; Fiske et al., 2002). Other indicators of competence or confidence, like perceived expertise, might also have a mediating effect on the link between reciprocity and social status. Finally, risk tolerance might serve as a plausible alternative mediator. Individuals who initiate prosocial acts exhibit less concern about the risk that their kindness may go unrewarded. To observers, such risk tolerance would convey self-assuredness, optimism, and perhaps even a signal of wealth that also serves as a primary driver of status conferrals (Wagner & Berger, 1993).

Conclusion

The universal moral norm of reciprocity aims to ensure balance in social relationships. The present research calls such balance into question, suggesting instead that individuals who offer equal reciprocation are not viewed as equal to individuals who initiate prosocial acts. The reciprocator is viewed as lower status than the initiator, presumably because the reciprocator’s prosocial act was obligatory, driven by a motivation to reduce indebtedness. This distinction between initial and reciprocal prosocial acts perpetuate an *imbalance* in social exchange, which should be recognized in future theorizing about the norm of reciprocity and in future research on the link between prosocial behavior and social status.

References

- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy white women. *Health Psychology, 19*, 586–592. <http://dx.doi.org/10.1037/0278-6133.19.6.586>
- Ames, D., Flynn, F., & Weber, E. (2004). It’s the thought that counts: On perceiving how helpers decide to lend a hand. *Personality and Social Psychology Bulletin, 30*, 461–474. <http://dx.doi.org/10.1177/0146167203261890>
- Anderson, C., Brion, S., Moore, D. A., & Kennedy, J. A. (2012). A status-enhancement account of overconfidence. *Journal of Personality and Social Psychology, 103*, 718–735. <http://dx.doi.org/10.1037/a0029395>
- Anderson, C. P., John, O. J., Keltner, D., & Kring, A. M. (2001). Who attains social status? Effects of personality and physical attractiveness in social groups. *Journal of Personality and Social Psychology, 81*, 116–132. <http://dx.doi.org/10.1037/0022-3514.81.1.116>
- Anderson, C., & Kilduff, G. J. (2009). Why do dominant personalities attain influence in face-to-face groups? The competence-signaling effects of trait dominance. *Journal of Personality and Social Psychology, 96*, 491–503. <http://dx.doi.org/10.1037/a0014201>

- Anderson, C., Kraus, M. W., Galinsky, A. D., & Keltner, D. (2012). The local-ladder effect: Social status and subjective well-being. *Psychological Science*, 23, 764–771. <http://dx.doi.org/10.1177/0956797611434537>
- Bai, F., Ho, G. C. C., & Yan, J. (2020). Does virtue lead to status? Testing the moral virtue theory of status attainment. *Journal of Personality and Social Psychology*, 118, 501–531. <http://dx.doi.org/10.1037/pspi0000192>
- Bales, R. F., Strodtbeck, F. L., Mills, T. M., & Roseborough, M. (1951). Channels of communication in small groups. *American Sociological Review*, 16, 461–468. <http://dx.doi.org/10.2307/2088276>
- Barasch, A., Levine, E. E., Berman, J. Z., & Small, D. A. (2014). Selfish or selfless? On the signal value of emotion in altruistic behavior. *Journal of Personality and Social Psychology*, 107, 393–413. <http://dx.doi.org/10.1037/a0037207>
- Barclay, P. (2004). Trustworthiness and competitive altruism can also solve the “tragedy of the commons.” *Evolution and Human Behavior*, 25, 209–220. <http://dx.doi.org/10.1016/j.evolhumbehav.2004.04.002>
- Barclay, P., & Willer, R. (2007). Partner choice creates competitive altruism in humans. *Proceedings Biological Sciences*, 274, 749–753. <http://dx.doi.org/10.1098/rspb.2006.0209>
- Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology*, 40, 290–302. <http://dx.doi.org/10.1037/0022-3514.40.2.290>
- Batson, C. D., Fultz, J., & Schoenrade, P. A. (1987). Distress and empathy: Two qualitatively distinct vicarious emotions with different motivational consequences. *Journal of Personality*, 55, 19–39. <http://dx.doi.org/10.1111/j.1467-6494.1987.tb00426.x>
- Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity and social history. *Games and Economic Behavior*, 10, 122–142. <http://dx.doi.org/10.1006/game.1995.1027>
- Berger, J., Cohen, B. P., & Zelditch, M., Jr. (1972). Status characteristics and social interaction. *American Sociological Review*, 37, 241–255. <http://dx.doi.org/10.2307/2093465>
- Berger, J., & Zelditch, M. (1985). *Status, rewards, and influence*. San Francisco, CA: Jossey-Bass.
- Berman, J. Z., Levine, E. E., Barasch, A., & Small, D. A. (2015). The Braggart's dilemma: On the social rewards and penalties of advertising prosocial behavior. *Journal of Marketing Research*, 52, 90–104. <http://dx.doi.org/10.1509/jmr.14.0002>
- Blau, P. M. (1964). *Exchange and power in social life*. New York, NY: Wiley.
- Burger, J. M. (1999). The foot-in-the-door compliance procedure: A multiple-process analysis and review. *Personality and Social Psychology Review*, 3, 303–325. http://dx.doi.org/10.1207/s15327957pspr0304_2
- Burger, J. M., Horita, M., Kinoshita, L., Roberts, K., & Vera, C. (1997). Effects of time on the norm reciprocity. *Basic and Applied Social Psychology*, 19, 91–100. http://dx.doi.org/10.1207/s15324834baspr1901_7
- Camerer, C. (1988). Gifts as economic signals and social symbols. *American Journal of Sociology*, 94, 180–214. <http://dx.doi.org/10.1086/228946>
- Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., & Henrich, J. (2013). Two ways to the top: Evidence that dominance and prestige are distinct yet viable avenues to social rank and influence. *Journal of Personality and Social Psychology*, 104, 103–125. <http://dx.doi.org/10.1037/a0030398>
- Cialdini, R. B., Brown, S. L., Lewis, B. P., Luce, C., & Neuberg, S. L. (1997). Reinterpreting the empathy–altruism relationship: When one into one equals oneness. *Journal of Personality and Social Psychology*, 73, 481–494. <http://dx.doi.org/10.1037/0022-3514.73.3.481>
- Cialdini, R. B., Schaller, M., Houlihan, D., Arps, K., Fultz, J., & Beaman, A. L. (1987). Empathy-based helping: Is it selflessly or selfishly motivated? *Journal of Personality and Social Psychology*, 52, 749–758. <http://dx.doi.org/10.1037/0022-3514.52.4.749>
- Cook, K. S., & Emerson, R. M. (1978). Power, equity and commitment in exchange networks. *American Sociological Review*, 43, 721–739. <http://dx.doi.org/10.2307/2094546>
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31, 874–900. <http://dx.doi.org/10.1177/0149206305279602>
- Diekmann, A. (2004). The power of reciprocity - fairness, reciprocity, and stakes in variants of the dictator game. *Journal of Conflict Resolution*, 48, 487–505. <http://dx.doi.org/10.1177/0022002704265948>
- Dunning, D., Anderson, J. E., Schlösser, T., Ehlebracht, D., & Fetchenhauer, D. (2014). Trust at zero acquaintance: More a matter of respect than expectation of reward. *Journal of Personality and Social Psychology*, 107, 122–141. <http://dx.doi.org/10.1037/a0036673>
- Emerson, R. (1962). Power-dependence relations. *American Sociological Review*, 27, 31–41. <http://dx.doi.org/10.2307/2089716>
- Everett, J. A., Pizarro, D. A., & Crockett, M. J. (2016). Inference of trustworthiness from intuitive moral judgments. *Journal of Experimental Psychology: General*, 145, 772–787. <http://dx.doi.org/10.1037/xge0000165>
- Falk, A., & Fischbacher, U. (2006). A theory of reciprocity. *Games and Economic Behavior*, 54, 293–315. <http://dx.doi.org/10.1016/j.geb.2005.03.001>
- Fehr, E., & Gächter, S. (2000). Cooperation and punishment in public goods experiments. *The American Economic Review*, 90, 980–994. <http://dx.doi.org/10.1257/aer.90.4.980>
- Feinberg, M., Willer, R., Stellar, J., & Keltner, D. (2012). The virtues of gossip: Reputational information sharing as prosocial behavior. *Journal of Personality and Social Psychology*, 102, 1015–1030. <http://dx.doi.org/10.1037/a0026650>
- Fiedler, K., Harris, C., & Schott, M. (2018). Unwarranted inferences from statistical mediation tests—An analysis of articles published in 2015. *Journal of Experimental Social Psychology*, 75, 95–102. <http://dx.doi.org/10.1016/j.jesp.2017.11.008>
- Field, A. J. (2001). *Economics, cognition, and society. Altruistically inclined?: The behavioral sciences, evolutionary theory, and the origins of reciprocity*. Ann Arbor, MI: The University of Michigan Press.
- Fisher, J. D., Nadler, A., & Whitcher-Alagna, S. (1982). Recipient reactions to aid. *Psychological Bulletin*, 91, 27–54. <http://dx.doi.org/10.1037/0033-2909.91.1.27>
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82, 878–902. <http://dx.doi.org/10.1037/0022-3514.82.6.878>
- Flynn, F. J. (2003). How much should I give and how often? The effects of generosity and frequency of favor exchange on social status and productivity. *Academy of Management Journal*, 46, 539–553. <http://dx.doi.org/10.5465/30040648>
- Flynn, F. J., & Amanatullah, E. T. (2012). Psyched up or psyched out? The influence of coactor status on individual performance. *Organization Science*, 23, 402–415. <http://dx.doi.org/10.1287/orsc.1100.0552>
- Flynn, F. J., Reagans, R. E., Amanatullah, E. T., & Ames, D. R. (2006). Helping one's way to the top: Self-monitors achieve status by helping others and knowing who helps whom. *Journal of Personality and Social Psychology*, 91, 1123–1137. <http://dx.doi.org/10.1037/0022-3514.91.6.1123>
- Foa, E. B., & Foa, U. G. (1980). Resource theory: Interpersonal behavior as exchange. In K. S. Gergen, M. S. Greenberg, & R. H. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 77–94). New

- York, NY: Plenum Press. http://dx.doi.org/10.1007/978-1-4613-3087-5_4
- Franco, Z., Blau, K., & Zimbardo, P. (2011). Heroism: A conceptual analysis and differentiation between heroic action and altruism. *Review of General Psychology*, 15, 99–113. <http://dx.doi.org/10.1037/a0022672>
- Frank, R. H. (2004). How not to buy happiness. *Daedalus*, 133, 69–79. <http://dx.doi.org/10.1162/001152604323049415>
- Frank, R. H., Gilovich, T., & Regan, D. T. (1993). Does studying economics inhibit cooperation? *The Journal of Economic Perspectives*, 7, 159–171. <http://dx.doi.org/10.1257/jep.7.2.159>
- Goethals, G. R., & Allison, S. T. (2012). Making heroes: The construction of courage, competence and virtue. *Advances in Experimental Social Psychology*, 46, 183–235. <http://dx.doi.org/10.1016/B978-0-12-394281-4.00004-0>
- Goffman, E. (1971). *Relations in public: Microstudies of the public order*. New York, NY: Basic Books.
- Goldstein, N. J., Griskevicius, V., & Cialdini, R. B. (2011). Reciprocity by proxy: A novel influence strategy for stimulating cooperation. *Administrative Science Quarterly*, 56, 441–473. <http://dx.doi.org/10.1177/0001839211435904>
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25, 161–178. <http://dx.doi.org/10.2307/2092623>
- Grant, A. M. (2013). *Give and take: A revolutionary approach to success*. New York, NY: Viking.
- Gray, K., Ward, A. F., & Norton, M. I. (2014). Paying it forward: Generalized reciprocity and the limits of generosity. *Journal of Experimental Psychology: General*, 143, 247–254. <http://dx.doi.org/10.1037/a0031047>
- Greenberg, M. S. (1980). A theory of indebtedness. In K. Gergen, M. Greenberg, & R. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 3–26). New York, NY: Plenum Press; http://dx.doi.org/10.1007/978-1-4613-3087-5_1
- Greenberg, M. S., & Shapiro, S. P. (1971). Indebtedness: An aversive aspect of asking for and receiving help. *Sociometry*, 34, 290–301. <http://dx.doi.org/10.2307/2786418>
- Greenberg, M. S., & Westcott, D. R. (1983). Indebtedness as a mediator of reactions to aid. In J. D. Fisher, A. Nadler, & B. M. DePaulo (Eds.), *New directions in helping: Vol. 1. Recipient reactions to aid* (pg. 81–112). New York, NY: Academic Press.
- Hardy, C. L., & Van Vugt, M. (2006). Nice guys finish first: The competitive altruism hypothesis. *Personality and Social Psychology Bulletin*, 32, 1402–1413. <http://dx.doi.org/10.1177/0146167206291006>
- Heider, F. (1958). *The psychology of interpersonal relations*. New York, NY: Wiley; <http://dx.doi.org/10.1037/10628-000>
- Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology*, 63, 597–606. <http://dx.doi.org/10.1086/222355>
- Jacob, C., Guéguen, N., & Boulbry, G. (2015). Effect of an unexpected small favor on compliance with a survey request. *Journal of Business Research*, 68, 56–59. <http://dx.doi.org/10.1016/j.jbusres.2014.05.008>
- Janssen, M. A. (2008). Evolution of cooperation in a one-shot prisoner's dilemma based on recognition of trustworthy and untrustworthy agents. *Journal of Economic Behavior & Organization*, 65, 458–471. <http://dx.doi.org/10.1016/j.jebo.2006.02.004>
- Jones, E. E., & Harris, V. A. (1967). The attribution of attitudes. *Journal of Experimental Social Psychology*, 3, 1–24. [http://dx.doi.org/10.1016/0022-1031\(67\)90034-0](http://dx.doi.org/10.1016/0022-1031(67)90034-0)
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1986). Fairness as a constraint on profit seeking: Entitlements in the market. *The American Economic Review*, 76, 728–741.
- Kelley, H. H., & Thibaut, J. (1978). *Interpersonal relations: A theory of interdependence*. New York, NY: Wiley.
- Kilduff, G. J., & Galinsky, A. D. (2013). From the ephemeral to the enduring: How approach-oriented mindsets lead to greater status. *Journal of Personality and Social Psychology*, 105, 816–831. <http://dx.doi.org/10.1037/a0033667>
- Krueger, J. I., & DiDonato, T. E. (2010). Perceptions of morality and competence in (non) interdependent games. *Acta Psychologica*, 134, 85–93. <http://dx.doi.org/10.1016/j.actpsy.2009.12.010>
- Kunz, P. R., & Woolcott, M. (1976). Season's greetings: From my status to yours. *Social Science Research*, 5, 269–278. [http://dx.doi.org/10.1016/0049-089X\(76\)90003-X](http://dx.doi.org/10.1016/0049-089X(76)90003-X)
- Kyl-Heku, L. M., & Buss, D. M. (1996). Tactics as units of analysis in personality psychology: An illustration using tactics of hierarchy negotiation. *Personality and Individual Differences*, 21, 497–517. [http://dx.doi.org/10.1016/0191-8869\(96\)00103-1](http://dx.doi.org/10.1016/0191-8869(96)00103-1)
- Lagnado, D. A., & Channon, S. (2008). Judgments of cause and blame: The effects of intentionality and foreseeability. *Cognition*, 108, 754–770. <http://dx.doi.org/10.1016/j.cognition.2008.06.009>
- Malinowski, B. (1922). *Argonauts of the Western Pacific: An account of native, enterprise and adventure in the archipelagos of Melanesian New Guinea*. New York, NY: E. P. Dutton.
- Malle, B. F., & Knobe, J. (1997). The folk concept of intentionality. *Journal of Experimental Social Psychology*, 33, 101–121. <http://dx.doi.org/10.1006/jesp.1996.1314>
- Mauss, M. (1925). *The gift: Forms and functions of exchange in archaic societies* (I. Cunnison, Trans.). New York, NY: Norton.
- Milinski, M. (2016). Reputation, a universal currency for human social interactions. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 371, 20150100. <http://dx.doi.org/10.1098/rstb.2015.0100>
- Milinski, M., Semmann, D., & Krambeck, H. (2002). Donors to charity gain in both indirect reciprocity and political reputation. *Proceedings Biological Sciences*, 269, 881–883. <http://dx.doi.org/10.1098/rspb.2002.1964>
- Molm, L. D. (2010). The structure of reciprocity. *Social Psychology Quarterly*, 73, 119–131. <http://dx.doi.org/10.1177/0190272510369079>
- Molm, L. D., Collett, J. L., & Schaefer, D. R. (2007). Building solidarity through generalized exchange: A theory of reciprocity. *American Journal of Sociology*, 113, 205–242. <http://dx.doi.org/10.1086/517900>
- Montoya, A. K., & Hayes, A. F. (2017). Two condition within-participant statistical mediation analysis: A path-analytic framework. *Psychological Methods*, 22, 6–27. <http://dx.doi.org/10.1037/met0000086>
- Nadel, M. S., & Nadel, C. A. (2005). Using reciprocity to motivate organ donations. *Yale Journal of Health Policy, Law, and Ethics*, 5, 293–325.
- Nowak, M., & Roch, S. (2006). Upstream reciprocity and the evolution of gratitude. *Proceedings of the Royal Society of London, Series B: Biological Sciences*, 274, 605–609.
- Nowak, M. A., & Sigmund, K. (2005). Evolution of indirect reciprocity. *Nature*, 437, 1291–1298. <http://dx.doi.org/10.1038/nature04131>
- Ong, Q., Theseira, W., & Ng, I. Y. H. (2019). Reducing debt improves psychological functioning and changes decision-making in the poor. *Proceedings of the National Academy of Sciences of the United States of America*, 116, 7244–7249. <http://dx.doi.org/10.1073/pnas.1810901116>
- Ostrom, E., & Walker, J. (2003). *Trust and reciprocity: Interdisciplinary lessons from experimental research*. New York, NY: Russell Sage Foundation.
- Pagliaro, S., Ellemers, N., & Barreto, M. (2011). Sharing moral values: Anticipated in-group respect as a determinant of adherence to morality-based (but not competence-based) group norms. *Personality and Social Psychology Bulletin*, 37, 1117–1129. <http://dx.doi.org/10.1177/0146167211406906>
- Pillutla, M., Malhotra, D., & Murnighan, J. K. (2003). Attributions of trust and the calculus of reciprocity. *Journal of Experimental Social Psychology*, 39, 448–455. [http://dx.doi.org/10.1016/S0022-1031\(03\)00015-5](http://dx.doi.org/10.1016/S0022-1031(03)00015-5)
- Price, M. E., & Van Vugt, M. (2014). The evolution of leader-follower reciprocity: The theory of service-for-prestige. *Frontiers in Human Neuroscience*, 8, 363. <http://dx.doi.org/10.3389/fnhum.2014.00363>

- Pryor, L. P., & Graburn, N. H. (1980). The myth of reciprocity. In K. J. Gergen, M. S. Greenberg, & R. H. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 165–188). New York, NY: Plenum Press.
- Raihani, N. J., & Smith, S. (2015). Competitive helping in online giving. *Current Biology*, 25, 1183–1186. <http://dx.doi.org/10.1016/j.cub.2015.02.042>
- Regan, D. T. (1971). Effects of a favor and liking on compliance. *Journal of Experimental Social Psychology*, 7, 627–639. [http://dx.doi.org/10.1016/0022-1031\(71\)90025-4](http://dx.doi.org/10.1016/0022-1031(71)90025-4)
- Roberts, G. (2008). Evolution of direct and indirect reciprocity. *Proceedings Biological Sciences*, 275, 173–179. <http://dx.doi.org/10.1098/rspb.2007.1134>
- Romano, A., & Balliet, D. (2017). Reciprocity outperforms conformity to promote cooperation. *Psychological Science*, 28, 1490–1502. <http://dx.doi.org/10.1177/0956797617714828>
- Ross, L. (1977). The intuitive psychologist and his shortcomings. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10, pp. 173–220). New York, NY: Academic Press.
- Sahlins, M. (1972). *Stone age economics*. Chicago, IL: Aldine.
- Savage, S. V., & Sommer, Z. L. (2016). Should I stay or should I go? Reciprocity, negotiation, and the choice of structurally disadvantaged actors to remain in networks. *Social Psychology Quarterly*, 79, 115–135. <http://dx.doi.org/10.1177/0190272516641392>
- Shiv, D. (2016). *Cultural differences in reciprocal and mutual social support* (Unpublished thesis). Department of Psychology, Haverford College.
- Simmel, G. (1950). *The sociology of Georg Simmel*. Glencoe, IL: Free Press.
- Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2018). False-positive citations. *Perspectives on Psychological Science*, 13, 255–259. <http://dx.doi.org/10.1177/1745691617698146>
- Simpson, B., Willer, R., & Harrell, A. (2017). The enforcement of moral boundaries promotes cooperation and prosocial behavior in groups. *Scientific Reports*, 7, 428–444. <http://dx.doi.org/10.1038/srep42844>
- Sylwester, K., & Roberts, G. (2010). Cooperators benefit through reputation-based partner choice in economic games. *Biology Letters*, 6, 659–662. <http://dx.doi.org/10.1098/rsbl.2010.0209>
- Thibaut, J. W., & Kelley, H. H. (1959). *The social psychology of groups*. New York, NY: Wiley.
- Triandis, H. C. (1978). Some universals of social behavior. *Personality and Social Psychology Bulletin*, 4, 1–16. <http://dx.doi.org/10.1177/014616727800400101>
- Trivers, R. L. (1971). The evolution of reciprocal altruism. *The Quarterly Review of Biology*, 46, 35–57. <http://dx.doi.org/10.1086/406755>
- Uehara, E. S. (1995). Reciprocity reconsidered: Gouldner's "moral norm of reciprocity" and social support. *Journal of Social and Personal Relationships*, 12, 483–502. <http://dx.doi.org/10.1177/0265407595124001>
- van de Ven, N., Zeelenberg, M., & Pieters, R. (2009). Leveling up and down: The experiences of benign and malicious envy. *Emotion*, 9, 419–429. <http://dx.doi.org/10.1037/a0015669>
- van Veelen, M., García, J., Rand, D. G., & Nowak, M. A. (2012). Direct reciprocity in structured populations. *Proceedings of the National Academy of Sciences of the United States of America*, 109, 9929–9934. <http://dx.doi.org/10.1073/pnas.1206694109>
- Wagner, D. G., & Berger, J. (1993). Status characteristics theory: The growth of a program. In J. Berger & M. Zelditch, Jr., (Eds.), *Theoretical research programs: Studies in the growth of theory* (pp. 23–63). Palo Alto, CA: Stanford University Press.
- Weiner, B. (1972). Attribution theory, achievement motivation, and the educational process. *Review of Educational Research*, 42, 203–215. <http://dx.doi.org/10.3102/00346543042002203>
- Willer, R. (2009). Groups reward individual sacrifice: The status solution to the collective action problem. *American Sociological Review*, 74, 23–43. <http://dx.doi.org/10.1177/000312240907400102>
- Willer, R., Flynn, F. J., & Zak, S. (2012). Structure, identity, and solidarity a comparative field study of generalized and direct exchange. *Administrative Science Quarterly*, 57, 119–155. <http://dx.doi.org/10.1177/0001839212448626>
- Williams, L. A., & Bartlett, M. Y. (2015). Warm thanks: Gratitude expression facilitates social affiliation in new relationships via perceived warmth. *Emotion*, 15, 1–5. <http://dx.doi.org/10.1037/emo0000017>
- Wilson, S. (2002). Face, norms, and instrumentality. In T. Gold, D. Guthrie, & D. Wank (Eds.), *Social connections in China: Institutions, culture, and the changing nature of Guanxi* (pp. 163–178). Cambridge: Cambridge University Press. <http://dx.doi.org/10.1017/CBO9780511499579.010>

(Appendices follow)

Appendix A

Script Used for Video Stimuli in Study 5

*[Camera facing Customer 1 and Barista at the cafe cashier.
Barista sets a coffee on the counter]*

Barista: "Here's your regular coffee. Will that be all?"

Customer 1: "Actually, I was wondering . . . Can I pay for the next person who orders coffee? You can charge it to my tab."

Barista: "Sure, I can do that. No problem."

Customer 1: "Great, thanks!"
*[Customer 1 takes his coffee and leaves cafe]
[Customer 2 walks up to cafe and opens the door]*

Barista: "Hi, what can I get for you today?"

Customer 2: "Hi, can I get a regular coffee?"

Barista: "Sure. It'll actually be free. The last customer already paid for it."

Customer 2: Direct Exchange Condition: "Oh! That's great. Okay, I'd like to reciprocate. Can I pay for their coffee the next time they're here? You can charge it to my tab."

Indirect Exchange Condition: "Oh! That's great. Okay, I'd like to pay it forward. Can I pay for the next person who orders a coffee? You can charge it to my tab."

Barista: Direct Exchange Condition: "Sure. No problem. They come here almost every day. I can do that."

Indirect Exchange Condition: "Sure. No problem. I can do that."

Customer 2: "Great, thanks!"

(Appendices continue)

Appendix B**Still Shots From Video Stimuli in Study 5**

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