Gratitude Increases Recipients' Commitment Through Automatic Partner Evaluations, Yet Unreciprocated Gratitude Decreases Commitment Through Deliberative Evaluations

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Abstract

Feelings of gratitude motivate intimates to maintain valuable relationships. However, it is unknown whether expressions of gratitude similarly increase recipients' relationship commitment. Two experiments tested the idea that expressions of gratitude simultaneously increase and decrease recipients' commitment via different interpersonal evaluations, and reciprocity of gratitude determines the implications of such expressions. In Study 1, couples exchanged letters that did or did not express gratitude. Study 2 was a high-powered, preregistered experiment that led participants to believe they were or were not grateful for their partners, and their partners were or were not grateful for them. Both studies subsequently assessed automatic partner evaluations, deliberative partner and self-evaluations, and relationship commitment. Results demonstrated that intimates automatically evaluated partners who expressed gratitude more favorably and thus became more committed; however, if intimates did not reciprocate such gratitude, their deliberate self-evaluations became more favorable than their partner evaluations, and thus they became less committed.

Intimates often express feelings of gratitude for their partners by acknowledging those partners' actions (e.g., "Thank-you for taking out the trash") and/or qualities (e.g., "I love that you are so supportive"). Although extensive research suggests that gratitude adaptively motivates grateful individuals (i.e., "actors") to maintain relationships with valuable partners (i.e., "targets"; Algoe & Haidt, 2009; Algoe et al., 2008; Brady et al., 2020; Joel et al., 2013; Lambert & Fincham, 2011; for review, see Algoe, 2012), it is unknown whether expressions of gratitude similarly increase *targets'* commitment to those relationships. On one hand, given that receiving gratitude tends to be rewarding for targets (Algoe et al., 2016), and people automatically evaluate others who elicit rewarding experiences favorably (e.g., Hicks et al., 2016), targets of gratitude might develop more favorable automatic evaluations of, and thus become more committed to, grateful actors. Nevertheless, if targets do not reciprocate such feelings of gratitude, gratitude may cause targets to evaluate themselves more favorably than they evaluate grateful actors (Zeigler-Hill & Myers, 2011) and thus become less committed. The overarching goal of the current research is to test these ideas.

Gratitude May Increase Automatic Partner Evaluations and Thus Commitment

There are reasons to expect that gratitude may increase targets' relationship commitment by increasing their positive automatic evaluations of grateful actors. Specifically, perspectives on evaluative conditioning suggest that people automatically evaluate others more favorably when they are associated with positive experiences (e.g., Gawronski & Bodenhausen, 2006). Similarly, research on romantic relationships has demonstrated that people automatically evaluate partners more favorably when those partners engage in rewarding behaviors and avoid unpleasant behaviors (Hicks et al., 2016; Murray et al.,

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2010). Gratitude should be rewarding for targets for several reasons. First, recognition for positive qualities and behaviors tends to satiate targets' self-enhancement needs (Jussim et al., 1995). Second, gratitude signals that targets are accepted and valued (Grant & Gino, 2010; Park et al., 2019) and thus should increase feelings of relationship security (see Murray et al., 2009). Thus, it was predicted that gratitude would increase automatic partner evaluations. Although research has yet to directly test this idea, prior research that has revealed that gratitude tends to elicit positive affect in targets (Algoe et al., 2016) and affectionate feelings toward actors (Algoe et al., 2008) indirectly supports this idea.

By automatically evaluating grateful actors more favorably, targets should become more committed to them. Specifically, it has been suggested (Chen & Bargh, 1999) that automatic attitudes function to motivate people to approach and/or remain close to stimuli they automatically evaluate favorably and avoid stimuli they automatically evaluate unfavorably. Similarly, interdependence perspectives (e.g., Rusbult, 1980; Thibaut & Kelley, 1959) suggest that people become more committed to maintaining relationships when they evaluate those relationships favorably. Although research has not yet directly tested whether automatic partner evaluations increase commitment, several studies have revealed that positive automatic partner evaluations decrease the risk of relationship dissolution (Lee et al., 2010; McNulty et al., 2013), suggesting they may similarly increase commitment.

Unreciprocated Gratitude May Increase Discrepancies Between Own and Partner Deliberative Evaluations and Thus Decrease Commitment

Nevertheless, the implications of gratitude may differ for targets' *deliberative* evaluations, and thus commitment, because of differences in how such evaluations are formed. In particular, researchers have argued (Gawronski & Bodenhausen, 2006, 2014; Jones et al., 2010) that unlike automatic evaluations, which tend to emerge from simple associations between a stimulus (e.g., partner) and experiences with that stimulus (e.g., receiving gratitude), deliberative evaluations can be revised by comparing those experiences against other deliberatively held beliefs.

One belief that may be important in determining the implications of gratitude for targets' deliberative evaluations is the extent to which they reciprocate actors' gratitude. Specifically, people strive for consistency between their deliberative beliefs (Festinger, 1957; Gawronski, 2012). Thus, to maintain cognitive consistency, targets who do not reciprocate actors' feelings of gratitude might not experience increases in deliberative partner evaluations after receiving gratitude. Further, gratitude may actually cause targets who do not reciprocate these feelings to develop deliberate evaluations of their partners that are *less* favorable than those of themselves. Indeed, receiving positive feedback not only increases deliberative self-evaluations

(Leary et al., 1998) but also decreases deliberative evaluations of others (Dunning & Cohen, 1992; Dunning & Hayes, 1996; Story & Dunning, 1998). Further, given that gratitude signals that the target has exceeded the actors' standards for a partner (Buck, 2004; Wood et al., 2011), and such standards are often based on actors' self-evaluations (Buston & Emlen, 2003), targets of gratitude may reason that actors would not be as appreciative if those actors were an equally valuable partner and thus evaluate them less positively than they evaluate themselves (see Zeigler-Hill & Myers, 2011).

However, such decreased deliberative partner evaluations should only emerge when targets do not feel similarly grateful. Indeed, feeling grateful tends to increase deliberative evaluations of partners (Lambert & Fincham, 2011), and such positive evaluations are consistent with the automatically rewarding experience of receiving gratitude. Therefore, reciprocating feelings of gratitude may prevent decreased partner evaluations that might otherwise emerge from being the initial target of actors' gratitude. Together, this suggests that unreciprocated, but not reciprocated, gratitude may cause targets to evaluate themselves more favorably than they evaluate actors.

Such discrepant deliberative evaluations should decrease targets' commitment. In particular, equity theory (Adams, 1963) suggests that people become less committed to their relationships if they believe they benefit less from those relationships than do their partners. Given that people benefit from being with high-value partners (Conroy-Beam et al., 2015), people who believe they are better than their partners should believe they benefit less from, and thus become less committed to, that relationship. Similarly, interdependence perspectives (e.g., Rusbult, 1980; Thibaut & Kelley, 1959) suggest that people become less committed to their partners when they believe they can secure a more desirable partner, and people are more likely to think they can secure a better partner when they believe their mate value is greater than their partners' (Buss et al., 2017). Supporting this idea, research has demonstrated that people tend to be less committed to partners who they deliberatively evaluate less favorably than themselves (Sidelinger & McMullen, 2008).

Current Research

Although previous research has established that gratitude motivates actors to maintain valuable relationships, research has yet to reveal an association between gratitude and *targets'* commitment. One possible reason why research has yet to reveal an association is because gratitude might simultaneously increase and decrease commitment via two different types of interpersonal evaluations, thus resulting in a null total effect. Two experiments tested two primary predictions (see Figure 1). First, it was predicted that both reciprocated and unreciprocated gratitude would increase targets' automatic partner evaluations and thus commitment (i.e., a main effect of gratitude). Second, given that deliberative evaluations can be revised by other deliberative beliefs (e.g., feelings of reciprocity), it was predicted that the implications of gratitude for deliberative
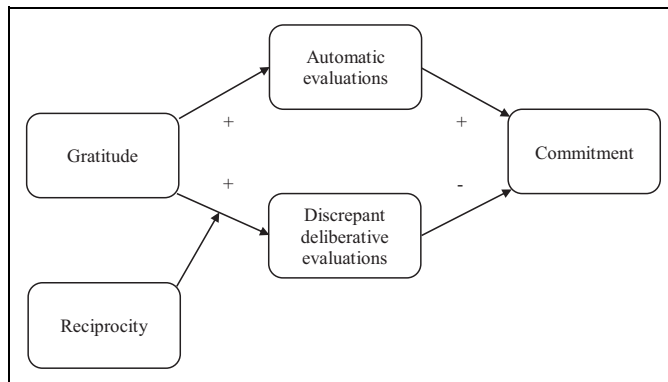
Figure 1. Summary of hypotheses.

evaluations would be moderated by feelings of reciprocity, such that gratitude would increase deliberate self-evaluations and decrease deliberate partner evaluations for nonreciprocating targets, and such increased discrepancies between partner and self-evaluations would decrease their commitment.

Study 1

Study 1 was a laboratory study of undergraduate romantic couples in which partners wrote and exchanged letters that did or did not express gratitude. Automatic partner evaluations, deliberative partner and self-evaluations, and commitment were subsequently assessed.

Method

Participants

Participants were 89 undergraduate romantic couples (80 men, 96 women, 2 transgender, $M_{age} = 19.16$, $SD_{age} = 2.91$). This sample size was obtained because it was the maximum number of participants we were able to recruit in 1 year. A sensitivity power analysis revealed that this sample would provide adequate power (>.80) for all analyses to detect an effect size of approximately $r = .43$ or greater. Details about the sample and power analyses are reported in the Online Supplemental Materials (OSM).

Procedure

Members of the couple were split into two separate rooms for the entire study. Participants were informed that they would have 10 min to write a letter to their partner that their partner would read. Participants were also informed that their partners would be simultaneously writing a letter to them that they would read. Participants were then randomly assigned to one of the two conditions, independent from their partners. Those in the *gratitude condition* were instructed to "...describe everything about your partner that makes you feel grateful." Those in the *control condition* were instructed to "...describe your partner's personality." Letters were then exchanged. Two dummy codes were created for each participant. First, an

actors' gratitude dummy code indicated each participants' partner's condition (0 = *control*, 1 = *gratitude*). Second, a target's reciprocation dummy code indicated whether or not participants were in the same condition as their partners and thus reciprocated gratitude (0 = *targets reciprocated*, 1 = *targets did not reciprocate*). After reading the letter, participants completed manipulation checks, a task assessing their automatic partner evaluations, and questionnaires described below. Finally, participants were debriefed.

Measures

Manipulation checks. Participants responded to two face-valid items ("In my letter, I expressed appreciation for my partner" and "In my partner's letter, my partner expressed appreciation to me"), using a 9-point scale (1 = *do not agree at all*, 9 = *agree completely*). Further, participants' letters were coded by two researchers for the gratitude expressed using a 7-point scale (1 = *letter contained none*, 7 = *letter contained a lot*). Half were coded by both raters; coders were reliable (intraclass correlation (ICC) = .86).

Deliberative evaluations. Participants completed the Mate Value Inventory (MVI; Kirsner et al., 2003) to assess their deliberative evaluations of their own value as a relationship partner. This measure requires individuals to report the extent to which they believe 34 desirable attributes (e.g., generous, intelligent) describe the target using a 7-point scale (1 = *low on this attribute*, 7 = *high on this attribute*). Participants also completed a modified MVI that asked about the extent to which those attributes described their partners. All items were averaged ($\alpha_{own} = .90$, $\alpha_{partner} = .88$). Discrepancy scores were also created with the unstandardized residuals from an analysis that regressed targets' evaluations of their own mate value onto their evaluations of actors' mate value; higher values indicate that participants believed their mate value was higher than their partners.

Automatic partner evaluations. To assess participants' automatic evaluations of their partners, participants completed a modified priming task developed by Fazio et al. (1995). In this task, the participant's own name, their partner's name, one of the four male names, or one of the four female names would briefly appear before positive (e.g., "wonderful") or negative (e.g., "horrible") words that participants categorized using a designated computer key. The average response time it took to respond to positive words preceded by the partners' name was subtracted from the average time it took to respond to negative words preceded by the partners' name. To ensure that results were not due to individual differences that would affect all responses (e.g., motor speed), an index of automatic partner evaluations was created with the unstandardized residuals from an analysis that regressed these average response times to the partner onto the average response times to the eight other names.[1] Higher values indicate that participants reacted more favorably to their partner's name than strangers' names. Six participants were excluded because their average reaction

Table 1. Descriptive Statistics and Correlations Among Variables in Study 1.

Predictor	1	2	3	4
1. Deliberative self-evaluations				
2. Deliberative partner evaluations	−.20**			
3. Automatic partner evaluations [a]	.08	−.05		
4. Commitment	−.22**	.16*	.22**	
M	5.70	5.71	12.71	8.04
SD	0.63	0.58	104.85	1.22

[a] Average response time of positive words preceded by the partners' name subtracted from average of negative words preceded by the partners' name.
*p < .05. **p < .01.

times were greater than three standard deviations above or below the sample mean (see OSM for additional information about this task).

Relationship commitment. Participants completed the Commitment subscale of Rusbult and colleagues' (1998) Investment Model Scale. This measure requires individuals to report their agreement with seven items that assess relationship commitment (e.g., "I am committed to maintaining my relationship with my partner") using a 9-point Likert-type response scale (1 = *do not agree at all*, 9 = *agree completely*). All items were averaged (α = 84).

Results

Preliminary Analyses

Descriptive statistics and correlations between the variables are presented in Table 1. Preliminary analyses can be found in the OSM. Confirming the effectiveness of the manipulations, participants who were instructed to express gratitude reported expressing more appreciation, $t(176) = -3.25$, $p < .001$, and their letters were evaluated as containing more expressions of gratitude, $t(176) = -7.43$, $p < .001$, compared to those in the control condition. Similarly, participants reported receiving more appreciation if their partners were in the gratitude condition rather than the control condition, $t(176) = -2.42$, $p = .017$.

Did Gratitude Affect Automatic and/or Deliberative Evaluations?

To examine the implications of gratitude for targets' automatic and deliberative evaluations, three separate two-level models were conducted in Mplus that regressed targets' (a) automatic partner evaluations, (b) deliberative self-evaluations, or (c) deliberative partner evaluations onto the actors' gratitude dummy code, the target's reciprocation dummy code, and their interaction. The nonindependence of couples' data was controlled in the second level of the model. Results are presented in the first three sets of columns in Table 2. First, receiving gratitude increased targets' positive automatic partner evaluations;

targets' reciprocity did not significantly moderate this association. Second, the Actor's Gratitude × Target's Reciprocation interaction predicted targets' deliberative partner and self-evaluations (see Figure 2). Simple effects analyses revealed that actors' gratitude increased targets' deliberative self-evaluations, $b = 0.76$, $SE = 0.11$, $z = 6.79$, $p < .001$, 95% confidence interval (CI) = [0.58, 0.95], and decreased partner evaluations, $b = -0.43$, $SE = 0.11$, $z = -3.99$, $p < .001$, 95% CI [−0.61, −0.26], when targets did not reciprocate such gratitude. However, gratitude did not predict targets' deliberative self-evaluations, $b = 0.16$, $SE = 0.12$, $z = 1.35$, $p = .178$, 95% CI [−1.17, 11.75], or partner evaluations, $b = 0.15$, $SE = 0.10$, $z = 1.49$, $p = .136$, 95% CI [−0.02, 0.32], when targets reciprocated such gratitude.

Did Gratitude Affect Commitment?

To examine the implications of gratitude for targets' commitment, a similar analysis regressed targets' commitment onto the condition dummy codes and their interaction. These results are presented in the fourth set of columns in Table 2 and are expanded upon in the OSM. Consistent with predictions, it revealed a null total effect of gratitude; however, this analysis does not address the prediction that gratitude might simultaneously increase commitment via more positive automatic partner evaluations but also decrease commitment via greater discrepancies in deliberative evaluations among nonreciprocating targets. To test this, a similar structural model was conducted that simultaneously regressed (a) targets' commitment onto targets' automatic partner evaluations, deliberative evaluation discrepancy scores, and the condition dummy codes and interaction and (b) both automatic partner evaluations scores and deliberative evaluation discrepancy scores onto the condition dummy codes and interaction.

Consistent with predictions, two significant indirect effects simultaneously emerged from this full model. First, actors' gratitude increased targets' positive automatic partner evaluations, $b = 51.65$, $SE = 19.14$, $z = 2.70$, $p = .007$, 95% CI [20.16, 83.14], which then predicted greater commitment, $b = 0.00$, $SE = 0.00$, $z = 3.39$, $p < .001$, 95% CI [0.00, 0.00], indirect effect, $z = 2.39$, $p = .017$. Second, the Actor's Gratitude × Target's Reciprocation interaction led to greater discrepancies in targets' deliberative evaluations, $b = 0.48$, $SE = 0.16$, $z = 2.92$, $p = .004$, 95% CI [0.21, 0.75], which then led to lower commitment, $b = -0.58$, $SE = 0.14$, $z = -4.11$, $p < .001$, 95% CI [−0.82, −0.35], indirect effect $z = -2.10$, $p = .036$.

Discussion

Study 1 provides initial evidence that gratitude increases targets' automatic partner attitudes and thus their commitment; however, if targets do not reciprocate such gratitude, it leads their deliberate self-evaluations to become more favorable than their partner evaluations and thus become less committed. Nevertheless, Study 1 is limited in two important ways. First, the sample size was relatively small. Second, Study 1 did not

Table 2. Effects of Actor's Gratitude, Target's Reciprocity, and Their Interaction in Study 1.

Predictor	Automatic Partner Evaluations		Deliberative Self-Evaluations		Deliberative Partner Evaluations		Commitment	
	b	95% CI	b	95% CI	b	95% CI	b	95% CI
Actor's gratitude (A) [a]	51.66**	[20.39, 82.92]	.16	[−.03, .35]	.15	[−.02, .32]	−.21	[−0.61, 0.20]
Target's reciprocity (T) [b]	−19.27	[−51.92, 13.38]	−.37**	[−.56, −.18]	.20†	[.02, .39]	−.37	[−0.80, 0.07]
A × T	3.43	[−45.86, 52.73]	.61**	[.34, .87]	−.59**	[−.83, −.34]	.59†	[0.05, 1.14]

[a] 0 = control, 1 = gratitude. [b] 0 = targets reciprocated, 1 = targets did not reciprocate. †$p < .10$. **$p < .01$.
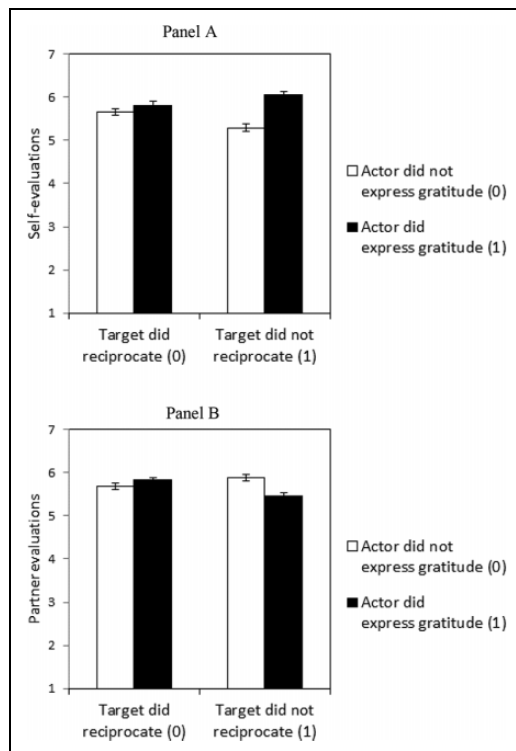

Figure 2. Interactive effects of actor's gratitude and target's reciprocation on target's deliberative self-evaluations and partner evaluations in Study 1. Panel A: Self-evaluations. Panel B: Partner evaluations.

examine whether gratitude might influence (e.g., trust, perceived partners' responsiveness) or be moderated by (e.g., communal motivation) other factors. Study 2 addressed these issues.

Study 2

Study 2 was a high-powered, preregistered experiment intended to replicate and extend the results from Study 1 by examining potential alternative mechanisms and moderators. Participants were led to believe that they were or were not grateful for their partners and their partners were or were not grateful for them. Next, automatic partner evaluations, deliberative partner and self-evaluations, relationship commitment, and other variables were assessed. Full measures, a

time-stamped preregistration plan, update documents, and the full data set can be found at https://osf.io/aevpt/

Method

Participants

Participants were 394 (232 men, 161 women, 1 other, $M_{age} = 66.63$, $SD_{age} = 84.46$) individuals recruited from the Mechanical Turk (MTurk) service on Amazon.com. A priori power analysis based on the effects from Study 1 indicated that 275 participants would be needed to achieve a power greater than .80. Nevertheless, given that studies on MTurk tend to obtain greater error variance (Rouse, 2015), an a priori decision was made to collect an additional 125 participants. Details about the sample and power analyses are reported in the OSM.

Procedure

Participants were randomly assigned to one of the two partners' gratitude conditions. Those in the *high partners' gratitude condition* were asked to identify two of their qualities or behaviors that they believe their partner is grateful for, and those in the *low partners' gratitude condition* were asked to identify 10 qualities or behaviors. Prior research on cognitive ease (Schwarz et al., 1991; Tan & Agnew, 2016) has revealed that people are more confident in judgments when they can easily provide evidence for that judgment. Thus, identifying few positive examples should be relatively easy and thus increase participants' confidence in their partners' gratitude, whereas identifying many examples should be difficult and thus decrease participants' confidence in their partners' gratitude. Next, participants were randomly assigned to one of the two feeling gratitude conditions. Those in the *high feeling gratitude condition* identified two qualities about their partner or things that their partner does that they are grateful for, which should increase participants' feelings of gratitude, and those in the *low feeling gratitude condition* identified 10 qualities or behaviors, which should decrease participants' feelings of gratitude. Two dummy codes were created for each participant. First, a partners' gratitude dummy code indicated whether participants were led to believe their partners were high or low in gratitude (0 = *low*, 1 = *high*). Second, a reciprocated feelings dummy code indicated whether or not the two manipulations led participants to hold feelings consistent with their partners (0 = *did not reciprocate*—i.e.,

Table 3. Descriptive Statistics and Correlations Among Variables in Study 2.

Predictor	1	2	3	4
1. Deliberative self-evaluations				
2. Deliberative partner evaluations	.38**			
3. Automatic partner evaluations [a]	.20**	.25**		
4. Commitment	.03	.47**	.22**	
M	5.42	5.53	5.10	6.90
SD	1.11	1.04	1.36	1.65

[a]Ratings of letters that comprise the partners' initials.
**$p < .01$.

participants were in one high condition and one low condition; 1 = *reciprocated*—i.e., both partners' and feeling conditions were either high or low). Next, participants completed manipulation checks, a task assessing their automatic partner evaluations, and questionnaires described below. Finally, participants were debriefed and received USD$1.00 for completing the study.

Measures

Manipulation check. Participants reported their agreement with one item assessing the effectiveness of the reception manipulation ("I feel like my partner makes me feel appreciated") and one item for the expression manipulations ("I feel like I make my partner feel appreciated"), using a 7-point Likert-type response scale from 1 (*do not agree at all*) to 7 (*agree completely*).

Deliberative evaluations. Participants completed the Mate Value Scale (MVS; Edlund & Sagarin, 2014) to assess their deliberative evaluations of their own mate value and a modified partner version of the MVS to assess their deliberative evaluations of their partners' mate value. This measure instructs participants to respond to four items (e.g., "Overall, how would you rate your level of desirability as a partner on the following scale?") using a 7-point Likert-type response scale (1 = *extremely undesirable*, 7 = *extremely desirable*). All items were averaged ($\alpha_{own} = .89$, $\alpha_{partner} = .86$).

Automatic partner evaluations. Participants completed a modified version of the name letter task (Nuttin, 1985) to assess automatic partner evaluations. This task asks participants to report the extent to which they like each letter of the alphabet (1 = *I do not like this letter*, 7 = *I really like this letter*). Participants then reported their partners' initials. An extensive body of research (see LeBel & Gawronski, 2009) suggests that more positive evaluations of a person yield a greater preference for that person's initials. To ensure that results were not due to individual differences (e.g., mood) that would affect all responses, an index of automatic partner evaluations was created from the unstandardized residuals of regressing their responses to the letters that comprise their partners' initials onto their responses to all other letters (see Note 1). Higher values indicate that participants responded more favorably to their

partners' initials than other letters (see OSM for additional information about this task).

Relationship commitment. Participants completed the Commitment subscale of Rusbult and colleagues' (1998) Investment Model Scale ($\alpha = 85$).

Additional questionnaires. Participants completed additional questionnaires assessing their communal strength, satisfaction, alternatives, trust, and partner responsiveness. Information about, and the rationale for, these measures can be found in the OSM.

Results

The primary analyses conducted for this study used the same statistical approach as Study 1, except that multilevel models were not estimated given that data were not dyadic.

Preliminary Analyses

Descriptive statistics among and correlations between the variables are presented in Table 3. Preliminary analyses are in the OSM. Confirming the effectiveness of the manipulations, those in the high partners' gratitude condition reported feeling more appreciated than did those in the low partners' gratitude condition, $t(392) = 3.16$, $p = .002$, $d = .32$, and those in the high feeling gratitude condition reported greater appreciation than did those in the low feeling gratitude condition, $t(392) = 2.72$, $p = .007$, $d = .27$.

Did Gratitude Affect Automatic and/or Deliberative Evaluations?

The first three sets of columns in Table 4 present the results examining the implications of the gratitude manipulations and their interaction for automatic and deliberative evaluations. First, receiving gratitude increased targets' positive automatic partner evaluations; targets' reciprocity did not significantly moderate this association. Second, the Partners' Gratitude × Reciprocated Gratitude interaction was significantly associated with targets' deliberative partner and self-evaluations (see Figure 3). Consistent with predictions, being led to believe that partners were grateful increased targets' deliberative self-evaluations, $b = 0.51$, $SE = 0.15$, $z = 3.49$, $p < .001$, 95% CI [0.27, 0.75], and decreased partner evaluations, $b = -0.49$, $SE = 0.15$, $z = -3.21$, $p < .001$, 95% CI [−0.73, −0.24], when participants were not led to reciprocate. However, partners' gratitude did not predict deliberative self-evaluations, $b = -0.12$, $SE = 0.17$, $z = -0.69$, $p = .486$, 95% CI [−0.39, 0.16], or partner evaluations, $b = -0.00$, $SE = 0.14$, $z = -0.02$, $p = .982$, 95% CI [−0.24, 0.23], when participants were led to reciprocate. Further, supplemental analyses reported in the OSM revealed that (a) gratitude was not associated with relationship satisfaction, quality of alternatives, trust, or perceived partner responsiveness; (b) primary results did not substantially change after

Table 4. Effects of Actor's Gratitude, Target's Reciprocity, and Their Interaction in Study 2.

Predictor	Automatic Partner Evaluations		Deliberative Self-Evaluations		Deliberative Partner Evaluations		Commitment	
	b	95% CI	*b*	95% CI	*b*	95% CI	*b*	95% CI
Partners' gratitude (PG) [a]	.35*	[.08, .61]	−.12	[−.39, .16]	−.00	[−24, .23]	.04	[−.32, .41]
Reciprocated gratitude (RG) [b]	.28[†]	[.04, .52]	−.31[†]	[−.56, −.05]	.25[†]	[.03, .47]	.19	[−.18, .56]
PG × RG	.11	[−.26, .48]	.62**	[0.26, .99]	−.48*	[−.83, −.14]	−.07	[−.61, .47]

[a] 0 = *low*, 1 = *high*. [b] 0 = *did not reciprocate*, 1 = *reciprocated*. [†]*p* < .10. *p* < .05. **p* < .01.
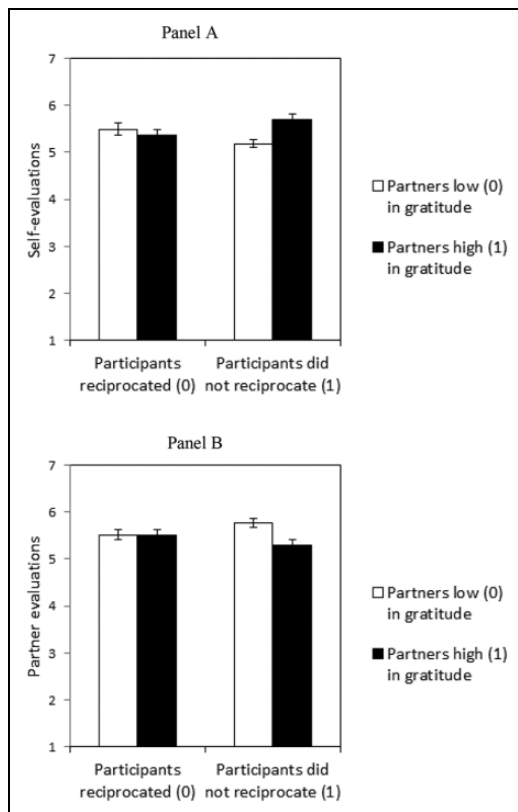

Figure 3. Interactive effects of actors' gratitude and reciprocated gratitude conditions on target's deliberative self-evaluations and partner evaluations in Study 2.

controlling for these variables; and (c) gratitude was not moderated by communal motivation.

Did Gratitude Affect Commitment?

Consistent with the results from Study 1, a similar model revealed a null total effect of gratitude on commitment (see the last set of columns in Table 4 and OSM). However, two significant indirect effects simultaneously also emerged. First, partners' gratitude increased participants' automatic partner evaluations, $b = 0.34$, $SE = 0.16$, $z = 2.14$, $p = .032$, 95% CI [0.08, 0.60], and thus increased commitment, $b = 0.37$, $SE = 0.08$, $z = 4.41$, $p < .001$, 95% CI [0.23, 0.51], indirect effect $z = 1.97$, $p = .049$.

Second, the Partners' Gratitude × Reciprocated Gratitude interaction led to greater discrepancies in deliberative evaluations, $b = 0.82$, $SE = 0.21$, $z = 4.02$, $p < .001$, 95% CI [0.49, 1.16], which led to lower commitment, $b = -0.23$, $SE = 0.09$, $z = -2.61$, $p = .009$, 95% CI [−0.37, −0.08], indirect effect $z = -2.11$, $p = .035$.

General Discussion

Although it has been argued (Algoe, 2012) that feelings of gratitude adaptively motivate intimates to maintain valuable relationships, it is unknown whether expressions of gratitude similarly motivate *recipients* to maintain relationships with those actors. The current two experiments provide evidence that gratitude simultaneously increases and decreases targets' commitment to maintaining a relationship via two different types of evaluations. In Study 1, couples wrote and exchanged letters in which they either did or did not express gratitude to one another. Study 2 was a high-powered, preregistered experiment in which participants were led to believe they were or were not grateful for their partners and their partners were or were not grateful for them. Results from both studies suggest that expressions of gratitude not only increase targets' automatic partner evaluations and thus commitment toward those partners, but also, when unreciprocated, cause targets' deliberative evaluations of themselves to become more favorable than their partner evaluations and thus decrease commitment.

Theoretical Implications

These findings have several important implications. First, they highlight the importance of examining both automatic and deliberative relationship evaluations. Specifically, these studies join a small but growing body of research (Hicks et al., 2016, 2018; LeBel & Campbell, 2009; McNulty et al., 2013, 2014; Murray et al., 2010), demonstrating that automatic and deliberative relationship evaluations have unique determinants and consequences. Nevertheless, although automatic and deliberative relationship evaluations are distinct, they can shape one another. For example, McNulty et al. (2017) recently showed that intimates' relationship experiences influence explicit relationship satisfaction through changes in automatic partner evaluations. Future research might examine whether gratitude similarly has downstream implications for how targets deliberatively evaluate their partners and thus commitment.

These findings have several important implications. First, they highlight the importance of examining both automatic and deliberative relationship evaluations. Specifically, these studies join a small but growing body of research (Hicks et al., 2016, 2018; LeBel & Campbell, 2009; McNulty et al., 2013, 2014; Murray et al., 2010), demonstrating that automatic and deliberative relationship evaluations have unique determinants and consequences. Nevertheless, although automatic and deliberative relationship evaluations are distinct, they can shape one another. For example, McNulty et al. (2017) recently showed that intimates' relationship experiences influence explicit relationship satisfaction through changes in automatic partner evaluations. Future research might examine whether gratitude similarly has downstream implications for how targets deliberatively evaluate their partners and thus commitment.

Second, they suggest that certain relationship behaviors may immediately affect automatic partner evaluations after only one occurrence. In particular, automatic evaluations tend to emerge when stimuli are repeatedly paired with affective experiences (Gawronski & Bodenhausen, 2006). Shaping automatic partner evaluations, for example, tends to require repeated experiences (McNulty et al., 2017) due to the countless previous experiences people have shared with their partners. Nevertheless, single events can temporarily affect automatic evaluations in certain situations, such as when others facilitate important goals (Ferguson, 2008). Given that gratitude satiates needs for self-enhancement by highlighting positive qualities (Jussim et al., 1995) and relationship security by signaling partners' acceptance (Grant & Gino, 2010), the current results provide further evidence that single events can momentarily affect automatic evaluations of others who facilitate goals. Whether or not these increases in automatic partner evaluations are temporary and require repeated expressions of gratitude to crystalize remains an open question for future research.

Third, they are among the first to reveal a drawback of expressing gratitude. As previously noted, considerable research has identified several benefits of gratitude (Algoe & Haidt, 2009; Algoe et al., 2008, 2016; Brady et al., 2020; Lambert & Fincham, 2011). Further, several therapeutic interventions (Emmons & Stern, 2013), best-selling books (Kaplan, 2015), and popular articles (Brooks, 2015) all suggest that intimates should express gratitude. Although the current studies similarly revealed that gratitude may be beneficial by increasing targets' automatic partner evaluations, one important cost also emerged: When unreciprocated, gratitude led targets to evaluate themselves more favorably than actors and thus become less committed (see also McNulty & Dugas, 2019). Future research might benefit by identifying contexts in which this cost of gratitude outweighs the benefits. For example, given that people rely on automatic evaluations more when they lack the cognitive resources to access deliberative evaluations (McNulty & Olson, 2015), the costs of unreciprocated gratitude that emerge through deliberative evaluations might be greater when intimates have the ability and motivation to deliberatively evaluate their relationships (see also Hicks et al., 2020).

Finally, they highlight the benefits of employing parallel mediation models to understand ostensibly null effects. Although previous research has revealed numerous benefits of gratitude (e.g., Algoe et al., 2008), previous research has failed to demonstrate that receiving gratitude affects targets' commitment. For example, Gordon and colleagues (2012) revealed across two studies that partners' gratitude increases targets' feelings of gratitude for, and thus commitment to, those partners. However, despite this indirect effect, those two studies also revealed a null total effect of partners' gratitude on targets' commitment. One explanation for this null total effect is that, like the current studies, partners' gratitude may not only have increased targets' commitment via targets' increased feelings of gratitude but also affected another mechanism (e.g., deliberate evaluations) that simultaneously decreased commitment. Thus, these positive and negative effects may counteract one another and thus yield a null total effect of partners' gratitude. The current results demonstrate that parallel mediation models can provide a more comprehensive account of the implications of gratitude by identifying the independent, and sometimes opposing, effects of multiple mechanisms. Future research would benefit by using parallel mediation models to examine whether previously obtained null effects are more complex than initially thought.

Limitations

Several limitations of this research should be addressed. First, participants in the unreciprocated conditions were not given the opportunity to reciprocate gratitude, which is different, and may have yielded weaker effects, than if they naturally did not desire to reciprocate gratitude. Second, given that expressions of gratitude often contain positive feedback (see Study 2: Manipulation Checks section), it is unclear whether the current results emerged due to expressions of gratitude or positive feedback in general. Finally, none of these studies distinguished between gratitude for personal qualities and behavior. Given that targets may not feel obligated to reciprocate gratitude addressing behavior, future research may examine whether the consequences of different types of gratitude differ across contexts.

Conclusion

Should people express feelings of gratitude to their partners? The current results suggest that the consequences of expressed gratitude are complex. Consistent with extensive literature (e.g., Algoe & Haidt, 2009; Algoe et al., 2008, 2016; Lambert & Fincham, 2011), the current studies first revealed a benefit of expressing gratitude: Recipients *automatically* evaluated grateful partners more favorably and thus became more committed to those partners. Nevertheless, an important boundary condition—reciprocity—determined the consequence for recipients' *deliberative* partner evaluations. If recipients did not reciprocate such gratitude, they evaluated themselves more favorably than their partners and thus became less committed. Together,

these results highlight the unique implications of gratitude for recipients' automatic and deliberative evaluations and suggest that gratitude may have an important drawback if it is unreciprocated.

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Supplemental Material

The supplemental material is available in the online version of the article.

Note

1. Analyses using traditional difference scores can be found in the Online Supplemental Materials. These analyses replicate the primary pattern of results with one exception: The indirect effect of gratitude on commitment through automatic evaluations became slightly weaker in Study 2 ($p = .060$).

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