

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/317557203>

It's the Motive That Counts: Perceived Sacrifice Motives and Gratitude in Romantic Relationships

Article in *Emotion* · June 2017

DOI: 10.1037/emo0000344

CITATION

1

READS

473

5 authors, including:



Mariko Visserman

Vrije Universiteit Amsterdam

6 PUBLICATIONS 26 CITATIONS

SEE PROFILE



Emily A Impett

78 PUBLICATIONS 2,856 CITATIONS

SEE PROFILE



Paul A M Van Lange

Vrije Universiteit Amsterdam

197 PUBLICATIONS 9,327 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Eyes Wide Open [View project](#)



Climate and Culture [View project](#)

All content following this page was uploaded by [Mariko Visserman](#) on 26 July 2017.

The user has requested enhancement of the downloaded file.

Emotion

It's the Motive That Counts: Perceived Sacrifice Motives and Gratitude in Romantic Relationships

Mariko L. Visserman, Francesca Righetti, Emily A. Impett, Dacher Keltner, and Paul A. M. Van Lange
Online First Publication, June 12, 2017. <http://dx.doi.org/10.1037/emo0000344>

CITATION

Visserman, M. L., Righetti, F., Impett, E. A., Keltner, D., & Van Lange, P. A. M. (2017, June 12). It's the Motive That Counts: Perceived Sacrifice Motives and Gratitude in Romantic Relationships. *Emotion*. Advance online publication. <http://dx.doi.org/10.1037/emo0000344>

It's the Motive That Counts: Perceived Sacrifice Motives and Gratitude in Romantic Relationships

Mariko L. Visserman and Francesca Righetti
Vrije Universiteit Amsterdam

Emily A. Impett
University of Toronto Mississauga

Dacher Keltner
University of California, Berkeley

Paul A. M. Van Lange
Vrije Universiteit Amsterdam

Gratitude is robustly linked to many positive outcomes for individuals and relationships (e.g., greater life and relationship satisfaction). However, little is known about how romantic partners come to feel grateful for each other's pro-relational acts, such as when a partner makes a sacrifice. The present research examines how perceptions of partner sacrifice motives evoke gratitude. We distinguish between partner, relationship, and self-focused motives, and how they are guided by approach or avoidance orientations. We expected that perceiving a partner to sacrifice for partner-focused approach motives (i.e., to promote the partner's well-being) should evoke gratitude, as this type of motive may signal a genuine departure from self-interest. Moreover, we expected these motives to provoke greater perceptions of partner responsiveness, which should partially explain why they elicit gratitude. In contrast, perceiving a partner to sacrifice for relationship-focused motives (e.g., to promote the well-being of the relationship), or self-focused motives (e.g., to feel good about oneself), should not evoke gratitude—irrespective of an approach or avoidance orientation—as these motives may, to some extent, be perceived as tainted by self-interest. Two studies of romantic couples ($N = 413$), using diary methods (Studies 1 and 2) and having couples converse about a major sacrifice in the laboratory (Study 2), consistently showed that perceived partner-focused approach motives promote gratitude and that this association is partly mediated by perceived partner responsiveness. In contrast, relationship and self-focused motives (approach and avoidance oriented) were not associated with gratitude. Implications regarding perceiving and displaying sacrifice motives are discussed.

Keywords: romantic relationships, sacrifice, gratitude, responsiveness, prosocial emotions

Let us be grateful to people who make us happy; they are the charming gardeners who make our souls blossom.

—Marcel Proust

Gratitude has important implications for people's individual well-being and their relationships. Feeling grateful from receiving benefits from another person fosters an abundance of positive outcomes for individual well-being, such as greater positive mood, life satisfaction, and physical health (e.g., Emmons & McCullough, 2003; McCullough, Emmons, & Tsang, 2002; Watkins, Woodward, Stone, & Kolts, 2003; Wood, Froh, & Geraghty, 2010). And we are not just grateful for the good deeds of strangers or acquaintances; gratitude is

an essential emotion that promotes rewarding outcomes in romantic relationships, such as increased relationship satisfaction and commitment (e.g., Algoe, Gable, & Maisel, 2010; Gordon, Impett, Kogan, Oveis, & Keltner, 2012). While much research has focused on the positive outcomes derived from feeling grateful (e.g., Algoe et al., 2010; Emmons & McCullough, 2003), little is known about the factors that promote gratitude. In romantic relationships, when do we feel most grateful toward our romantic partner?

Clearly, gratitude often emerges when an individual receives benefits from another person. However, gratitude may be influenced not only by the concrete benefits that an individual receives, but also by the perceptions of why the benefactor has provided those benefits. For instance, romantic couples inevitably come across situations in which their preferences diverge, and one of the partners may sacrifice his or her preference to benefit the partner or the relationship (Van Lange et al., 1997). When receiving a partner's sacrifice, the perceptions of the motives underlying the partner's decision to sacrifice may shape the extent to which people experience gratitude, a notion that we examine in the present investigation.

Gratitude

Gratitude is a positive emotion that people experience in response to an intentionally rendered benefit that is valuable to them,

Mariko L. Visserman and Francesca Righetti, Department of Experimental and Applied Psychology, Vrije Universiteit Amsterdam; Emily A. Impett, Department of Psychology, University of Toronto Mississauga; Dacher Keltner, Department of Psychology, University of California, Berkeley; Paul A. M. Van Lange, Department of Experimental and Applied Psychology, Vrije Universiteit Amsterdam.

Correspondence concerning this article should be addressed to Mariko L. Visserman, Department of Experimental and Applied Psychology, Vrije Universiteit Amsterdam, Van der Boechorststraat 1, 1081 BT, Amsterdam, Netherlands. E-mail: m.l.visserman@vu.nl

and costly to the benefactor (McCullough, Kilpatrick, Emmons, & Larson, 2001; Tesser, Gatewood, & Driver, 1968). The emotion of gratitude can be defined as a *self-transcendent* emotion—along with compassion, awe, inspiration, elevation, and love—and accordingly is elicited by appraisals of other people's actions (Stellar et al., in press). Experiencing gratitude not only promotes the receiver's health and psychological well-being (for a review see Wood et al., 2010), it is an important social emotion that strengthens social ties—varying from those between strangers, to relationships between colleagues, friends, family members, and romantic partners (e.g., Algoe, Haidt, & Gable, 2008; Algoe et al., 2010; Tsang, 2006a). Further, the benefits of gratitude can even extend to third parties such as when people receive a gift or favor and decide to “pay it forward” (Bartlett & DeSteno, 2006; McCullough, Kimeldorf, & Cohen, 2008).

Gratitude is the “social glue” of interpersonal interactions, given the important social functions it fulfills, illustrated by the “find-remind-and-bind” theory of gratitude (Algoe, 2012). The emotional experience of gratitude in response to another's altruistic act helps people to identify a responsive relationship partner (i.e., to find), to value an established relationship (i.e., to remind), and it functions to strengthen the relationship with this responsive other (i.e., to bind) (Algoe, 2012). Indeed, in the context of established romantic relationships, studies have shown that when people feel grateful toward their partner, they feel more connected, satisfied, and committed to their relationship (Algoe et al., 2010; Gordon, Arnette, & Smith, 2011; Gordon et al., 2012). Moreover, gratitude toward a partner is predictive of actual relationship longevity (Gordon et al., 2012), and fuels relationship maintenance behaviors such as trying to resolve conflict (Kubacka, Finkenauer, Rusbult, & Keijsers, 2011). These studies speak to the consequences of gratitude; little is known about the predictors of gratitude within romantic relationships, the focus of the present investigation.

Given the importance of gratitude for people's well-being and their relationships, strikingly little is known about how gratitude is elicited. Most studies on gratitude have focused on the experience of gratitude in response to benefits received from unknown or fictional others (e.g., Tsang, 2006a, 2006b), and on gratitude as a general state, or disposition, in which people are appreciative of “what they have” (e.g., McCullough et al., 2002; Watkins et al., 2003), and mostly focused on the outcomes of feeling grateful. Especially in romantic relationships, which are contexts characterized by high interdependence between partners (Rusbult & Van Lange, 2003), and in which the process of give and take is very frequent as partners coordinate a life together (Van Lange et al., 1997), it is of crucial importance to gain a better understanding of how romantic partners come to feel grateful for each other's pro-relationship behaviors. To our knowledge, the only studies that have examined predictors of experiencing gratitude in romantic relationships have found that people feel more grateful toward their partner when they perceive their partner to be responsive to their needs (Algoe et al., 2008, 2010; Kubacka et al., 2011) and when they perceive their partner to have invested a great deal in the relationship (Joel, Gordon, Impett, MacDonald, & Keltner, 2013). No prior research has investigated whether gratitude emerges not only in response to observing a partner's pro-relationship behaviors but also in response to the reasons why the partner is perceived to have engaged in those behaviors. In the

present work, we argue that the perceived motives underlying a partner's sacrifice are one important elicitor of gratitude.

Perceived Sacrifice Motives

Previous research that has examined the reasons why people choose to sacrifice for their romantic partner has distinguished between approach and avoidance motives (for a review, see Day & Impett, 2016). When people sacrifice for approach motives, they focus on trying to bring about positive outcomes in their relationships, such as a making their partner happy or increasing intimacy in their relationship. In contrast, when people sacrifice for avoidance motives, they focus on averting negative outcomes, such as feeling guilty, disappointing their partner, or causing conflict in their relationship. Approach motives are associated with increased personal and relationship well-being, whereas avoidance motives are typically associated with lowered personal and relationship well-being (Elliot, Gable, & Mapes, 2006; Gable, 2006; Gable & Impett, 2012).

Similarly, when making a relational sacrifice in pursuit of approach motives people typically experience a boost in positive emotions and an increase in relationship quality, whereas pursuing avoidance motives for sacrifice typically increases negative emotions and relationship conflict (Impett, Gable, & Peplau, 2005; Impett, Gere, Kogan, Gordon, & Keltner, 2014; Impett et al., 2010). Moreover, people's perceptions of their partner's motives for sacrifice also matter: people typically experience increased well-being and relationship quality when they perceive their partner to sacrifice in pursuit of approach goals, but poorer well-being and relationship quality when they perceive their partner to sacrifice to avoid negative outcomes (Impett et al., 2005).

To investigate when people are most likely to feel grateful for a partner's sacrifice, we propose to go beyond the fundamental distinction between approach and avoidance motives by advancing a distinction based on the perceived focus of the sacrificer's motives. Specifically, we draw on recent research that stresses the importance of disentangling partners' goals and behaviors in reflecting a focus on either the partner, the relationship, or the self (Fitzsimons, Finkel, & vanDellen, 2015; see also Kelley et al., 2003). We follow this distinction and we propose three types of perceived motives for sacrifice: whether the person who sacrifices is doing so to pursue partner-focused, relationship-focused, or self-focused motives. Crossed with approach and avoidance, we distinguish among six different types of motives: partner-focused approach, partner-focused avoidance, relationship-focused approach, relationship-focused avoidance, self-focused approach, and self-focused avoidance motives.

To illustrate the distinction between these six different kinds of motives, imagine a fictional couple John and Sara. Partner-focused approach motives occur when John perceives Sara to have sacrificed to benefit him (e.g., to make him happy), whereas partner-focused avoidance motives occur when John perceives Sara to have sacrificed to reduce any harm that John might experience (e.g., to prevent him from being upset). Relationship-focused approach motives occur when John perceives Sara to have sacrificed to promote the well-being of the relationship (e.g., to have a harmonious relationship with him), whereas relationship-focused avoidance motives occur when

John perceives Sara to have sacrificed to avoid harming the relationship (e.g., to avoid conflict). Finally, self-focused approach motives occur when John perceives Sara to have sacrificed to feel good about herself (e.g., to feel good as a person or as a partner), whereas self-focused avoidance motives occur when John perceives Sara to have sacrificed to avoid feeling bad about herself (e.g., to avoid feeling guilty).

In relation to gratitude, we expected that when people perceive their partner's decision to sacrifice to be driven by partner-focused approach motives, they will feel grateful because their partner seems to want to benefit them specifically. In support of our hypothesis, previous research showed that people are most likely to feel grateful when they perceive the other—often a (newly) acquainted other—to be motivated by benevolent, sincere, and altruistic intentions (Tesser et al., 1968; Tsang, 2006b). People may feel most benefitted by their partner's sacrifice, and construe the sacrifice as a genuine departure from self-interest, when they perceive this prosocial act to be driven by a motivation to specifically benefit their well-being. Thus, they may especially value their partner's sacrifice, which is an important ingredient for the emotion of gratitude to occur (McCullough et al., 2001). Moreover, they may perceive their partner to have their best interest in mind by being responsive to their needs specifically (Algoe et al., 2008; Algoe, 2012; Reis, Clark, & Holmes, 2004), and this should turn on the "gratitude spotlight" as they identify and remember how valuable their partner is to them, which should trigger a gratitude response (Algoe, 2012). However, partner-focused motives should not elicit gratitude when these motives are avoidance oriented. Even though partner-focused avoidance motives may reflect a concern about the partner's well-being, these motives may not signal direct benefits to the receiver, but instead signal indirect value through the absence of negative end states, which may not be strong enough to elicit gratitude. Furthermore, the avoidant nature of these motives, which is usually linked to negative outcomes, may undermine the positivity of partner-focused motives and, therefore, may not promote gratitude.

In contrast, self-focused motives (whether approach or avoidance oriented) may not be perceived as benevolent, sincere, and altruistic (Tesser et al., 1968; Tsang, 2006b), and therefore may not elicit gratitude. When people perceive their partner to sacrifice for self-focused motives, they may think that their partner's sacrifice is tainted by self-interest and therefore may not feel particularly grateful toward their partner. In fact, recent research showed that when people's costly prosocial acts—such as giving to charity—are perceived to be motivated by selfish intentions (e.g., to feel good about oneself or promote one's reputation), these acts are appreciated even less than when people do not behave charitably at all (Newman & Cain, 2014). Consistent with these findings, perceiving selfish motives when receiving benefits from an acquaintance or fictional other does not lead to gratitude (Tsang, 2006b). In short, perceiving self-focused motives to underlie a partner's decision to sacrifice should not elicit gratitude.

Given the sensitivity of emotional experiences such as gratitude to the intentions that people perceive to underlie others' behaviors (e.g., Tesser et al., 1968; Weiner, 1985), we suggest that even relationship-focused motives may not be strong enough to elicit

gratitude. Partners in committed relationships are highly interdependent and form a highly intertwined system (Fitzsimons et al., 2015; Kelley et al., 2003; Rusbult & Van Lange, 2003) and may highly identify with the relationship, as they merge more closely together and become a "self-and-partner-collective" (Agnew, Van Lange, Rusbult, & Langston, 1998; Aron & Aron, 1986). Any investment in the relationship would benefit the sacrificing partner as well, either in the short term (e.g., being able to spend time together), but also in the long term, given the various benefits people derive from being in a well-functioning relationship. For example, when people are in a committed relationship, they typically experience high psychological well-being and happiness (Kamp Dush & Amato, 2005; Kim & McKenry, 2002), good health and health habits (Holt-Lunstad, Smith, & Layton, 2010; Kiecolt-Glaser & Newton, 2001), and potential for personal growth (Feeney & Collins, 2015; Rusbult, Finkel, & Kumashiro, 2009). In short, relationship-focused motives may also—to some extent—be perceived as tainted by self-interest, as being focused on the relationship may fail to signal a "true" departure from self-interest, and therefore may not elicit gratitude (Tesser et al., 1968). To feel grateful, people may need to perceive partner motives that exceed this more general goal of promoting the well-being of the common good that is the relationship (which may be generally expected in communal relationships; Clark, Lemay, Graham, Pataki, & Finkel, 2010) and instead need to perceive the partner to be focused on their needs specifically. Thus, we propose that partner-focused motives are the best—and likely the only—candidate in eliciting gratitude.

Perceived Partner Responsiveness

Perceiving a partner to react supportively to central, core defining features of the self makes people feel understood, valued, and cared for (Reis et al., 2004), and we propose that perceiving a partner as being responsive may help explain why perceived partner-focused approach motives may elicit gratitude. Perceiving a partner's sacrifice motives to be partner-focused and approach-oriented (i.e., to make them happy) may signal that the partner genuinely cares about one's well-being, and this may enhance the perception that the partner is responsive to one's needs and interests (Reis et al., 2004). In turn, perceptions of partner responsiveness promote gratitude (Algoe et al., 2008; Kubacka et al., 2011). Thus, perceptions of partner responsiveness may be an important mechanism by which partner-focused sacrifice motives lead to gratitude. Furthermore, because previous research showed that only partners with high approach motives, as opposed to low avoidance motives, are perceived as responsive (Impett et al., 2010), we expect that only perceived partner-focused approach motives would elicit perceptions of partner responsiveness, and in turn, promote gratitude.

Research Overview

In two studies, we investigated how perceptions of partner-focused, relationship-focused, and self-focused motives (both approach and avoidance) are related to the experience of gratitude for a partner's sacrifice. We hypothesized that only partner-focused approach sacrifice motives would evoke gratitude, and that this process would be in part explained by heightened perceptions of

partner responsiveness.¹ We tested our hypotheses with two complementary methods.

First, in Studies 1 and 2, we used daily diary methods to provide an everyday account of behaviors, perceptions, and emotions relevant to the relationship. The use of experience sampling methods not only drastically reduces retrospective bias, but it also allows partners to provide reports of ongoing experiences within their natural environment (Bolger, Davis, & Rafaeli, 2003). Furthermore, such methods allow us to examine within-person variation in sacrifice motives as well as links with gratitude and partner responsiveness (Bolger et al., 2003). In particular, we expected that on days when participants perceived their romantic partner to sacrifice for partner-focused approach motives more than they typically do in their relationship, they will also report higher levels of gratitude and partner responsiveness.

Second, in Study 2 we complemented the diary procedure with a laboratory investigation of romantic couples who discussed a major sacrifice in their relationship. This method allowed us to test our hypotheses in a controlled environment, and enables generalization of findings regarding “every day” sacrifices to major sacrifices that partners have made over the course of their relationship.

Study 1

In Study 1, we used a daily diary procedure to capture perceptions of sacrifice motives, partner responsiveness, and feelings of gratitude in a sample of romantic couples each day over an 8-day period. Specifically, we tested our prediction that perceptions of partner-focused approach motives would be positively associated with gratitude, and that this association would be mediated by perceptions of partner responsiveness.

Method

Participants. Participants were 125 heterosexual couples (and one individual whose partner dropped out) and one lesbian couple ($N = 253$) residing in the Netherlands. Participants' mean age was 23.3 years ($SD = 3.7$, range = 18 to 43 years), and 64% were university students. Almost all participants were Dutch (93%), and all participants spoke Dutch fluently. On average, couples were involved in their current romantic relationship for 2.8 years ($SD = 29$ months, range = 4 months to 17 years), and 35% lived together. The data come from a larger project on romantic relationships (see Righetti, Balliet, Visserman, & Hofmann, 2015; Righetti, Gere, Hofmann, Visserman, & Van Lange, 2016; Righetti & Visserman, 2017; Visserman, Righetti, Kumashiro, & Van Lange, 2017). Originally, 130 couples participated in the study, but one couple broke up before completing the diary portion of the study, and five individuals did not follow the instructions properly.

Measures and procedure. In a laboratory intake session, participants were carefully instructed by the experimenter on how to recognize daily sacrifices in their relationship. Sacrifices were explained as forgoing your own preference by doing something that you find unpleasant and that you would not like to do (active sacrifice; e.g., going on a boring outing with your partner's friends), or by giving up something that you find pleasant or would like to do (passive sacrifice; e.g., not going out with your best friend), or a combination of the above (e.g., giving up spending

time with your friends to go on a boring outing with your partner's friends). In addition, participants received a booklet with definitions and examples of sacrifice, as well as instructions for completing the diary.

The first Saturday after the laboratory session, participants started the diary procedure. They received a link to a short survey every evening on their mobile phone (using the SurveySignal application; Hofmann & Patel, 2015) for 8 days (two blocks of 4 days with 1 rest day in between on Wednesday). In general, participants responded to 87.6% of the daily surveys ($M = 7.35$ out of 8 days). On each day, they were asked whether they had encountered a situation of divergence of interest with their partner. Participants were then asked whether their partner had sacrificed his or her preference that day. On average, participants reported their partner to have sacrificed on 1.91 days ($SD = 1.73$, ranging from 0 to 7 days). Relevant to the current investigation, participants responded to questions regarding the motives underlying their partner's daily sacrifices, as well as their perception of their partner's responsiveness and how grateful they felt toward their partner, all measured on a 7-point scale (0 = *not at all* to 6 = *very much*). All diary measures were assessed with a single item in order to minimize participant fatigue and reduce attrition (Bolger et al., 2003).

To measure perceptions of a partner's sacrifice motives, participants were first asked, each day, whether their partner had made a sacrifice for them. If they replied that their partner sacrificed, they also answered a series of questions designed to assess their perceptions of their partner's motives for sacrifice. Participants indicated the extent to which each of the six different reasons motivated their partner's decision to sacrifice, including “to make you happy” (partner-focused approach), “to avoid you being upset (angry or sad)” (partner-focused avoidance), “to maintain a harmonious relationship with you” (relationship-focused approach), “to avoid damaging your relationship” (relationship-focused avoidance), “to feel good about him/herself” (self-focused approach), and “to not feel bad (e.g., guilty or ashamed)” (self-focused avoidance). Importantly, in accordance with the main goal of the present research, the above items were designed to distinguish between partner-focused, relationship-focused, and self-focused motives for sacrifice, as well as between approach and avoidance motives.

Each day, we assessed each participants' perceptions of their partner's responsiveness and their gratitude, irrespective of whether participants had perceived their partner to have sacrificed. To measure responsiveness, we asked participants to answer the question, “I feel that my partner supports me”; gratitude was assessed with the item, “I feel very grateful to my partner.” See Table 1 for means, standard deviations, and correlations among all variables. Given that gratitude is linked with positive emotions in general (e.g., Emmons & McCullough, 2003), we measured positive mood (“I'm in a positive mood”) to examine our effects above and beyond a general positive state.

¹ For brevity, in the remainder of the article, we use the labels *partner motives* and *responsiveness* when referring to the perception of these constructs.

Table 1
Means, Standard Deviations, and Correlations Among Variables in Study 1

Variable	1	2	3	4	5	6	7	8
1. Gratitude	4.99 (.67)							
2. Responsiveness	.45***	4.92 (.70)						
3. Partner-focused approach	.11*	.17**	4.25 (.95)					
4. Partner-focused avoidance	-.17**	-.14*	.15**	2.46 (1.20)				
5. Relationship-focused approach	-.06	-.06	.16**	.25***	3.06 (1.17)			
6. Relationship-focused avoidance	-.15**	-.18**	-.05	.44***	.33***	1.80 (1.02)		
7. Self-focused approach	.02	.003	.009	.04	.20***	.15**	2.15 (.96)	
8. Self-focused avoidance	-.15**	-.15**	-.03	.34***	.32***	.44***	.16**	1.94 (1.11)

Note. Correlations represent daily within-person correlations (i.e., correlated fluctuations within participants) and do not take the dyadic structure of the data (i.e., nesting within dyads) into account. Means and standard deviations (in parentheses) are displayed on the diagonal (scale range = 0–6) and are calculated on the basis of within-person averages across the diary, thus the standard deviations reflect the within-person variability of each variable.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Results

Multilevel modeling was used to take into account the occurrence of multiple measurement occasions within participants, and the nesting of participants within couples (Kenny, Kashy, & Cook, 2006), using SPSS v.22. We used a two-level cross model in which participants and the daily measurements within participants (i.e., time) were treated as crossed and nested within the dyad. Furthermore, intercepts were allowed to randomly vary, whereas slopes were treated as fixed effects. Dyads were treated as indistinguishable unless gender moderated the effects (Kenny et al., 2006), in which case we report the different effects for men and women in Footnote 2.²

To test for mediation, we used the Monte Carlo method for assessing mediation (MCMAM), using unstandardized estimates. This simulation method shows 95% confidence intervals for the indirect effects using 20,000 simulations (Selig & Preacher, 2008). The confidence interval is significant at $p < .05$ when it does not include the value of zero.³

In all analyses, predictors were within-person centered (Enders & Tofighi, 2007), such that all daily effects assessed whether day-to-day changes from a participant's own mean in perceived partner sacrifice motives were associated with corresponding changes in partner responsiveness and gratitude.⁴ We tested models in which we entered all six sacrifice motives simultaneously as predictors of the daily outcomes so that we could examine unique effects of each motive controlling for the others.

As predicted, partner-focused approach motives were positively associated with gratitude (see Table 2). Furthermore, partner-focused avoidance motives were negatively associated with gratitude ($b = -.07$, $SE = .03$, 95% CI = $[-.14, -.01]$, $t(284.35) = -2.30$, $p = .022$). That is, on days when participants perceived their partner to have sacrificed to make them happy more than they typically did across the 8-day study, the more grateful they reported feeling on that day. Further, on days when participants perceived their partner to have sacrificed to prevent them from becoming upset, the less grateful they felt on that day. None of the other sacrifice motives were significantly associated with daily gratitude (ps ranged from .112 to .832). Note that these associations held when controlling for positive mood (e.g., the association between partner-focused approach motives and gratitude ($b = .09$, $SE = .04$, 95% CI = $[.02, .16]$), $t(288.56) = 2.43$, $p = .016$).

Next, we examined the effects of the six sacrifice motives on partner responsiveness. Again, as expected, partner-focused approach motives were positively associated with partner responsiveness (see Table 2). Further, partner-focused avoidance motives were negatively associated with partner responsiveness ($b = -.09$, $SE = .04$, 95% CI = $[-.16, .01]$, $t(290.09) = -2.31$, $p = .022$). Thus, on days when participants perceived their partner to have sacrificed to make them happy, more so than they typically did, they perceived their partner to be more responsive. In addition, on days when participants perceived their partner to sacrifice to prevent them from becoming upset, they perceived their partner to be less responsive. None of the other sacrifice motives were significantly associated with partner responsiveness (ps ranged from .331 to .644).

² Because gender did not consistently moderate our key findings across studies and, therefore, could not be reliably interpreted, we report here the separate effects for men and women. In Study 1, three out of 12 possible gender interactions were significant. Gender interacted with self-focused avoidance motives in predicting gratitude ($b = .16$, $SE = .07$, 95% CI $[.02, .30]$), $t(287.79) = 2.26$, $p = .025$, with this association being significant among women ($b = -.14$, $SE = .05$, 95% CI $[-.29, .01]$), $t(153.20) = -2.79$, $p = .006$, but not among men ($p = .854$). Gender also interacted with the partner-focused approach motives in predicting responsiveness ($b = -.18$, $SE = .08$, 95% CI $[-.34, -.02]$), $t(282.54) = -2.19$, $p = .029$, with this association being significant among women ($b = .21$, $SE = .06$, 95% CI $[.09, .32]$), $t(153.06) = 3.63$, $p < .001$, but not among men ($p = .646$). Further, gender interacted with the partner-focused avoidance motives in predicting responsiveness ($b = -.15$, $SE = .07$, 95% CI $[-.30, -.01]$), $t(284.32) = -2.07$, $p = .039$, with this association being significant among men ($b = -.19$, $SE = .06$, 95% CI $[-.30, -.07]$), $t(142.83) = -3.25$, $p = .001$, but not among women ($p = .504$).

³ Although indirect effects stemming from the other motives were neither hypothesized nor of core interest, on the request of a reviewer we explored indirect effects other than those reported in the main text. In Study 1, none of the other indirect effects were significant. In Study 2, relationship-focused approach motives showed a significant indirect effect on gratitude (conversation: MCMAM 95% CI = $[.05, .34]$; direct effect: $b = -.10$, $SE = .07$, 95% CI = $[-.24, .05]$, $t[145.40] = -1.31$, $p = .193$; diary: MCMAM 95% CI = $[.07, .22]$; direct effect: $b = -.02$, $SE = .08$, 95% CI = $[-.17, .14]$, $t[310.61] = -0.19$, $p = .851$). Thus, these motives might indirectly relate to gratitude, to the extent that they produce greater perceptions of partner responsiveness. Note that this result was not consistent across studies.

⁴ When we include the within-person means of perceived motives as predictors in the model, the results are consistent with those reported in the article.

Table 2
Associations Between Perceived Partner-Focused Approach Motives and Gratitude Mediated by Perceived Partner Responsiveness

Partner-focused approach	<i>b</i>	<i>SE</i>	95% CI	<i>df</i>	<i>t</i>	<i>p</i>
Study 1: Diary						
Responsiveness	.13	.04	.05, .21	288.80	3.30	.001
Gratitude						
Total effect	.08	.04	.01, .15	291.34	2.38	.018
Direct effect	.05	.03	-.02, .12	290.30	1.44	.152
Indirect effect			[.01, .06]			
Study 2: Conversation						
Responsiveness	.24	.12	.01, .48	148.00	2.02	.046
Gratitude						
Total effect	.35	.13	.08, .62	145.05	2.60	.010
Direct effect	.17	.10	-.03, .36	143.80	1.72	.088
Indirect effect			[.01, .39]			
Study 2: Diary						
Responsiveness	.38	.08	.24, .53	290.01	5.11	<.001
Gratitude						
Total effect	.38	.08	.22, .53	311.07	4.78	<.001
Direct effect	.23	.08	.07, .39	301.26	2.86	.005
Indirect effect			[.08, .24]			

Note. Between brackets are 95% confidence intervals using the Monte Carlo method for assessing mediation to test the indirect effect of perceived partner-focused motives on gratitude mediated by perceived partner responsiveness.

Next, we tested our hypothesis that partner responsiveness would mediate the association between partner-focused motives and daily gratitude. Indeed, in a model in which we simultaneously entered all six sacrifice motives and partner responsiveness, partner responsiveness was positively associated with gratitude ($b = .26$, $SE = .05$, 95% CI = [.18, .35]), $t(353.15) = 5.83$, $p < .001$. That is, on days when participants perceived their partner to be responsive more so than they typically did, they felt more grateful for their partner. Moreover, partner responsiveness mediated the association between partner-focused approach motives and gratitude (see Table 2), and between partner-focused avoidance motives and gratitude (indirect effect: 95% CI = [-.05, -.004]; direct effect: $b = -.05$, $SE = .03$, 95% CI = [-.11, .01], $t(280.68) = -1.70$, $p = .091$). So indeed, on days when participants perceived their partner to have sacrificed to make them happy more than they typically did, they felt more grateful, at least in part because they perceived their partner to be more responsive. In addition, when perceiving their partner to sacrifice to avoid them being upset, they perceived them to be less responsive, and in turn, felt less grateful.

Discussion

Study 1 revealed that when people perceived their romantic partner make a daily sacrifice in pursuit of partner-focused approach motives (i.e., to promote their happiness), they experienced increased gratitude toward their partner. Moreover, participants perceived their partner to be more responsive when they perceived them to sacrifice in pursuit of partner-focused approach motives, and this, in turn, promoted gratitude⁵. In contrast, perceiving the partner to sacrifice for partner-focused avoidance motives (i.e., to prevent them from becoming upset)

yielded opposite results, that is, participants perceived their partner to be less responsive and felt less grateful toward them. As expected, neither relationship-focused nor self-focused motives were associated with participants' daily gratitude toward their partner, suggesting that it is indeed only the partner-focused motives that elicit gratitude.

⁵ To gain a better understanding of the direction of our findings, we tested whether perceived partner motives predicted gratitude above and beyond previous day gratitude (and gratitude before the laboratory conversation). In the diary and laboratory conversation of Study 2, we observe a change in gratitude as a result of perceiving partner-focused approach motives for sacrifice (diary: $b = .33$, $SE = .10$, 95% CI = [.14, .52], $t[198.78] = 3.46$, $p = .001$; conversation: $b = .32$, $SE = .11$, 95% CI = [.10, .54], $t[138.14] = 2.88$, $p = .005$). This effect was in the same direction but not significant in Study 1 ($p = .190$). Moreover, we tested whether within-person average perceptions of partner motives during the diary studies would predict gratitude a year (Study 1) or three months (Study 2) later. However, we did not observe such an effect in either Study 1 (ps ranged from .132 to .982), or in Study 2 (ps ranging from .193 to .983). Furthermore, we explored the directionality of the mediation through responsiveness by testing reverse mediation models, in which gratitude served as the mediator and responsiveness as the outcome. Also, in the laboratory conversation, we ran a lagged mediation model by controlling for gratitude reported before the start of the conversation. These analyses showed that (a) the original mediation model seems stronger than the reversed mediation model (Study 1: % mediation: original = 41.65%, reversed = 20.90%; Study 2: % mediation: original = 38.94%, reversed = 32.52%; except for the conversation of Study 2: % mediation: original = 51.80%, reversed = 83.91%), and (b) the proposed mediation model held in the lagged analysis when controlling for gratitude levels measured before the sacrifice conversation.

Study 2

Study 2 extended Study 1 in several important respects. First, we sought to replicate the findings of Study 1 by conducting another daily diary study of sacrifice in romantic relationships. Second, in addition to providing a replication of the effects, we also sought to extend the results regarding naturally occurring, daily sacrifices by inviting couples into the laboratory to participate in discussions about important, larger sacrifices that they have made for each other over the course of their relationship. A third extension of Study 2 was to examine the generalizability of the findings to a different western culture; while Study 1 was conducted in the Netherlands, Study 2 was conducted in the United States.

Method

Participants. Participants were 75 heterosexual couples, four lesbian couples, and one gay male couple ($N = 160$), recruited from the San Francisco Bay Area. Participants' mean age was 23.9 years ($SD = 6.4$, range = 18 to 60 years), and about half of the participants were university students. Participants were characterized by a diverse range of ethnic backgrounds: 53% were European or European American, 18% were Chinese or Chinese American, 8% were African or African American, 4% were Mexican or Mexican American, and 17% were of other ethnicities; all spoke English fluently. On average, couples were involved in their current romantic relationship for 1.3 years ($SD = 44$ months, range = 6 months to 30 years), and 48% lived together. The data come from a larger project on romantic relationships (see Impett et al., 2010, 2012, 2014).

Measures and procedure for the laboratory conversation. First, participants attended a laboratory session in which romantic partners took turns discussing "the most important or meaningful sacrifice that you have made over the course of your relationship." The sacrifices that partners discussed varied across a large spectrum of issues representing conflicts of interest in their relationship, such as spending time alone, sacrificing interpersonal relationships, relocating to a new city, and turning down potential lucrative job offers in other geographical regions. The mean length of the discussions was 3 min, 28 s ($SD = 1$ min, 23 s; range = 1 min, 14 s to 5 min, 4 s). The speaking order for the conversations was randomly assigned through a coin flip. Immediately following each of the conversations, participants answered a series of questions, all on 7-point scales (1 = *not at all* to 7 = *a lot*).

Perceptions of sacrifice motives were measured with 12 items in total, with two questions for each of the six subscales, including: "to make me happy" and "to make me feel loved" (partner-focused approach; $\alpha = .78$); "to prevent me from feeling upset" and "to prevent me from feeling let down" (partner-focused avoidance; $\alpha = .78$); "to increase intimacy in our relationship" and "to create more satisfaction in our relationship" (relationship-focused approach; $\alpha = .82$); "to avoid conflict in our relationship" and "to avoid tension in our relationship" (relationship-focused avoidance; $\alpha = .86$); "to feel good about him/herself" and "to feel like he/she is a caring person" (self-focused approach; $\alpha = .50$); and "to avoid feeling

guilty" and "to avoid feeling selfish" (self-focused avoidance; $\alpha = .68$).⁶

Perceptions of partner responsiveness were measured by having participants indicate the extent to which they felt "cared about/loved/connected" to their partner; and gratitude was measured by having participants indicate the extent to which they felt "grateful/appreciative/thankful" after the discussion about their partner's sacrifice (see also Algoe et al., 2010; Gordon et al., 2012). See Table 3 for means, standard deviations, and correlations among all variables.

Measures and procedure for the daily diary. After the laboratory session, participants began the 14-day diary procedure (through SurveyMonkey.com), in which they received a short survey at the end of each day. Each day, participants indicated whether their partner had made a sacrifice for them by actively "engaging in something they did not particularly want" or passively "giving up something they did want." In general, participants responded to 83.6% of the daily surveys ($M = 11.7$ out of 14 days) and reported partner sacrifices on 2.49 (out of 14) days on average ($SD = 2.65$, range = 0 to 12 days). Relevant to the current investigation, participants completed measures of perceptions of their partner's sacrifice motives, daily perceived partner responsiveness and daily gratitude, all measured on 5-point scales (1 = *not at all* to 5 = *a lot*).

Perceptions of sacrifice motives were measured with the same items as in the laboratory session, with the addition of one item to measure self-focused approach motives ("to gain my appreciation").⁵ Because items were measured within participants over time, we calculated within-person reliability of the items representing each subscale (indicated by R_C ; Bolger & Laurenceau, 2013). Except for self-focused approach motives ($R_C = .44$), the items reliably represented the other five subscales: partner-focused approach ($R_C = .71$), partner-focused avoidance ($R_C = .74$), relationship-focused approach ($R_C = .68$), relationship-focused avoidance ($R_C = .84$), and self-focused avoidance ($R_C = .77$). Each day, we measured participants' perceptions of their partner's responsiveness and their gratitude toward their partner, irrespective of whether participants had perceived their partner to have sacrificed. Responsiveness was measured with the same item as in the laboratory session (i.e., to which extent participants felt "cared about/loved/connected" to the partner), as was gratitude toward the partner (i.e., the extent to which they felt "grateful/appreciative/thankful" for their partner's sacrifice). See Table 3 for means, standard deviations, and correlations among all variables. Similar to Study 1, we measured positive emotions ("happy/

⁶ To increase reliability in the daily diary, a third item for measuring self-focused approach motives was added to the two items used in the laboratory, however, this three-item measure had poor reliability. As such, we conducted an additional set of analyses using the original two-item measure and it yielded the same pattern of results as those reported under the results for the daily diary in Study 2. We also conducted our analyses using only the most 'face valid' item, similar to Study 1 ("to feel good about him/herself"), and again these analyses yielded the same results with one exception: the marginally significant association between self-focused approach motives and gratitude in the laboratory conversation was reduced to non-significance ($p = .309$).

Table 3

Means, Standard Deviations, and Correlations Among Variables in the Lab Conversation (LC) and Daily Diary (DD) of Study 2

Variable	1	2	3	4	5	6	7	8
1. Gratitude								
LC	5.09 (1.76)							
DD	3.96 (.72)							
2. Responsiveness								
LC	.74***	5.32 (1.60)						
DD	.50***	3.73 (.82)						
3. Partner-focused approach								
LC	.34***	.34***	5.42 (1.57)					
DD	.32***	.46***	3.54 (.70)					
4. Partner-focused avoidance								
LC	.09	.04	.59***	4.52 (1.90)				
DD	-.03	-.06	.31***	2.46 (.78)				
5. Relationship-focused approach								
LC	.30***	.40***	.63***	.34***	4.88 (1.76)			
DD	.24***	.43***	.39***	.10	2.28 (.69)			
6. Relationship-focused avoidance								
LC	.002	-.04	.24**	.66***	.24**	4.05 (2.06)		
DD	-.09	-.16**	.10 [†]	.63***	.09	2.04 (.72)		
7. Self-focused approach								
LC	.27**	.18*	.33***	.24**	.32***	.18*	3.34 (1.54)	
DD	.06	.15*	.26***	.17**	.22***	.12 [†]	2.26 (.49)	
8. Self-focused avoidance								
LC	.03	-.11	.15 [†]	.46***	.07	.59***	.31***	3.09 (1.77)
DD	-.08	-.16*	.05	.50***	-.03	.55***	.21***	1.87 (.58)

Note. Correlations do not take the dyadic structure of the data (i.e., nesting within dyads) into account. Means and standard deviations (in parentheses) for the laboratory conversation (scale range = 1–7) and the daily diary (scale range = 1–5) are displayed on the diagonal. In the daily diary, correlations represent daily within-person correlations (i.e., correlated fluctuations within participants), and means and standard deviations are calculated on the basis of within-person averages across the diary, thus the standard deviations reflect the within-person variability of each variable.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

pleased/joyful”) in both the laboratory conversation and daily diary to be used in control analyses.

Results

Laboratory conversation. Because both partners in the couple provided data, we analyzed the data using multilevel modeling to account for the fact that partners’ responses are not independent (Kenny et al., 2006). We used a two-level model where partners are nested within the dyad. Intercepts were allowed to randomly vary, and slopes were treated as fixed effects. Dyads were treated as indistinguishable, as gender did not moderate any of our findings (Kenny et al., 2006). As in Study 1, we used models in which we entered all six sacrifice motives simultaneously as predictors of the outcomes so that we could examine the unique effects of each motive controlling for the others. Furthermore, we used the MCMAM simulation method to assess mediation (see Footnote 3).

As predicted, partner-focused approach motives were positively associated with gratitude (see Table 2). The more that participants thought that their partner sacrificed to make them happy, the more gratitude they reported feeling during the conversation in the laboratory. None of the other motives predicted gratitude (ps ranging from .223 to .842), except for a marginally significant positive association between the self-focused approach motives and gratitude ($b = .19$, $SE = .09$, 95% CI = [-.004, .38]), $t(146.40) = 1.93$, $p = .055$. Note that these associations held when controlling for positive emotions

(e.g., the association between partner-focused approach motives and gratitude: $b = .22$, $SE = .11$, 95% CI = [.01, .42]), $t(134.74) = 2.04$, $p = .043$.

Next we examined the effects of the six sacrifice motives on perceived partner responsiveness. Again, as expected, partner-focused approach motives were positively associated with partner responsiveness (see Table 2). In addition, relationship-focused approach motives were also significantly associated with partner responsiveness ($b = .24$, $SE = .09$, 95% CI = [.06, .42]), $t(147.83) = 2.68$, $p = .008$. Thus, the more participants perceived their partner to have sacrificed to make them happy, and the more they perceived them to sacrifice to promote the well-being of the relationship, the more they perceived them to be responsive during the conversation. None of the other motives were associated with partner responsiveness (ps ranging from .221 to .914).

Next, we tested the hypothesis that partner responsiveness mediates the association between partner-focused approach motives and gratitude. Indeed, in a model in which we simultaneously entered all six sacrifice motives and partner responsiveness, we found that partner responsiveness was positively associated with gratitude ($b = .80$, $SE = .07$, 95% CI = [.67, .93]), $t(143.31) = 12.05$, $p < .001$, and mediated the association between partner-focused approach motives and gratitude (see Table 2). Thus, when participants perceived their partner to sacrifice to make them happy, they felt more grateful during the conversation, at least in part because they perceived them to be more responsive.

Diary. As in Study 1, we analyzed the data with multilevel modeling to account for the nesting of daily measurements within participants, and participants within dyads (Kenny et al., 2006). Predictors were within-person centered (Enders & Tofghi, 2007), intercepts were allowed to vary randomly, and slopes were treated as fixed effects. As in Study 1, dyads were treated as indistinguishable, unless the effects were moderated by gender.⁷ As in previous analyses, we used models in which we entered all six sacrifice motives to test unique effects of each motive controlling for the others. And, again, we used the MCMAM simulation method to assess mediation.

As predicted, partner-focused approach motives were positively associated with gratitude (see Table 2). Thus, on days when participants perceived their partner to sacrifice to make them happy, more so than they typically did across the 14-day study, the more gratitude they reported feeling. None of the other motives significantly predicted daily gratitude (*ps* ranging from .104 to .769). Note that these associations held when controlling for positive emotions (e.g., the association between partner-focused approach motives and gratitude ($b = .22, SE = .11, 95\% CI = [.01, .42], t(134.74) = 2.04, p = .043$).

Next, we examined the effects of the six sacrifice motives on partner responsiveness. As predicted, results showed that partner-focused approach motives were positively associated with partner responsiveness (see Table 2). Relationship-focused approach motives were also positively associated with partner responsiveness ($b = .36, SE = .08, 95\% CI = [.21, .50], t(293.33) = 4.75, p < .001$). Thus, on days when participants perceived their partner to have sacrificed to make them happy and on days when they perceived their partner to have sacrificed to promote the well-being of the relationship, more than they usually did, they perceived their partner to be more responsive. None of the other motives significantly predicted daily partner responsiveness (*ps* ranging from .476 to .795), except for a marginally significant negative association between the relationship-focused avoidance motives and partner responsiveness ($b = -.16, SE = .08, 95\% CI = [-.32, .01], t(306.26) = -1.85, p = .065$).

Next, to examine whether partner responsiveness mediates the association between partner-focused approach motives and gratitude, all six sacrifice motives and partner responsiveness were simultaneously entered in a model to predict gratitude. Results showed that partner responsiveness was positively associated with gratitude ($b = .39, SE = .07, 95\% CI = [.25, .53], t(305.31) = 5.36, p < .001$, and mediated the association between partner-focused approach motives and gratitude (see Table 2). Thus, indeed, on days when participants perceived their partner to have sacrificed to make them happy more so than they typically did, they felt more grateful, at least in part because they perceived their partner to be more responsive.

Discussion

Study 2 provided additional support for our prediction that perceived partner-focused approach motives elicit greater perceptions of partner responsiveness, which in turn, elicit gratitude. As in Study 1, results from a daily diary procedure and couples' conversations in the laboratory revealed that gratitude emerged when people perceived their partner to have sacrificed to promote their happiness (i.e., partner-focused approach motives). However,

relationship and self-focused motives were not significantly associated with gratitude. Although relationship-focused approach motives were positively associated with perceived partner responsiveness in both the daily diary procedure and laboratory conversations, they did not predict gratitude. These findings were replicated in a different sample (i.e., North American sample) and replicated in an additional daily diary procedure, as well as in a laboratory discussion about a partner's major sacrifice.

General Discussion

The present research investigated how gratitude emerges when a romantic partner makes a sacrifice. In two daily diary studies regarding "minor" sacrifices (Studies 1 and 2) and couples' conversations regarding "major" sacrifices in the laboratory (Study 2), we examined the role of perceived partner sacrifice motives in shaping gratitude for a partner. In line with previous research showing the importance of intentions that signal genuine departures from self-interest (e.g., Tesser et al., 1968; Tsang, 2006b), our results revealed that gratitude was only reliably evoked when participants perceived their partner to have sacrificed for partner-focused approach motives. Perceiving their partner to be interested in promoting one's own well-being induced participants to perceive their partner as highly responsive to their needs and interests (Reis et al., 2004) and in turn to feel grateful. However, in accordance with literature showing that avoidance motives undermine personal and relationship well-being (e.g., Elliot et al., 2006; Impett et al., 2005) and perceptions of responsiveness (Impett et al., 2010), perceiving the partner to be partner-focused to avoid negative end states did not promote perceptions of responsiveness and gratitude. Furthermore, and in line with recent findings showing that people do not appreciate prosocial behaviors that are tainted by self-interest (Newman & Cain, 2014), perceptions of self-focused motives (e.g., to feel good about oneself or not feel guilty) and even perceptions of relationship-focused motives (e.g., to promote the well-being of the relationship or prevent harming the relationship) did not elicit gratitude. Although we did observe positive associations between perceptions of relationship-focused motives and perceptions of partner responsiveness in Study 2, this finding was not consistent across studies. Moreover, perceptions of self-focused motives were not related to perceived partner responsiveness in either of the studies.

The costly prosocial behavior of sacrifice has the potential to promote the well-being and maintenance of romantic relationships (Van Lange et al., 1997). Presumably, partners feel grateful for

⁷ Three out of 12 possible gender interactions were significant. Gender interacted with partner-focused approach motives in predicting gratitude ($b = .21, SE = .08, 95\% CI [.06, .37], t(307.27) = 2.66, p = .008$, with this association being significant among women ($b = .51, SE = .12, 95\% CI = [.28, .74], t(334.27) = 4.40, p < .001$, but not among men ($p = .383$). Also, gender interacted with the relationship-focused avoidance motives in predicting gratitude ($b = .31, SE = .09, 95\% CI [.13, .49], t(289.22) = 3.36, p = .001$. Specifically, this association was significantly negative among men ($b = -.47, SE = .17, 95\% CI = [-.81, -.14], t(273.36) = -2.76, p = .006$, but not among women ($p = .437$). Furthermore, gender interacted with the relationship-focused avoidance motives in predicting responsiveness ($b = .36, SE = .09, 95\% CI [.19, .53], t(226.31) = 4.15, p < .001$, with this association being significantly negative among men ($b = -.63, SE = .17, 95\% CI = [-.97, -.29], t(246.82) = -3.68, p < .001$, but not among women ($p = .903$).

each other's relationship investments, and this is an important factor in promoting further pro-relationship behaviors (Gordon et al., 2012; Kubacka et al., 2011) and in promoting the well-being of relationships (e.g., Algoe et al., 2010; Gordon et al., 2011). However, sacrifices can be made for very different reasons, and our results show that people's perceptions of what motivates their partner to sacrifice impact how grateful they feel. Importantly, our findings show that the experience of gratitude is only promoted when people perceive their partner's sacrifices as being motivated to "serve them" (i.e., partner-focused), and not when they are perceived as being motivated to serve the relationship in general or themselves. Even when couples discussed a partner's major sacrifice (Study 2), participants did not feel more grateful when perceiving their partner to be motivated by a relationship- or self-focus, but only when perceiving a partner to be focused on them specifically.

Why may it be that perceptions of relationship-focused approach motives for sacrifice do not enhance gratitude? It may not be surprising that sacrifices that are perceived to be driven by self-focused motives do not elicit gratitude, as these motives are self-interested in nature (Newman & Cain, 2014). However, it may be less intuitive that relationship-focused motives also do not elicit gratitude. The motivation to benefit the relationship may be perceived as investing in the "self-and-partner-collective" and thereby also serving the sacrificing partner (i.e., because of the various short- and long term benefits one receives from the relationship; e.g., Kiecolt-Glaser & Newton, 2001). For this reason, relationship-focused motives may also—to some extent—seem tainted by self-interest. To enhance feelings of gratitude, people may need to infer partner-focused motives, relatively free from self-interest (e.g., Tesser et al., 1968). Thus, it may take more than "just" perceiving a partner's pro-relationship dedication as this may not be sufficient to elicit gratitude.

Broader Implications

Gratitude is the glue that allows us to find close others, bind us to them, and remind us of the value and importance of these relationships (Algoe, 2012); accordingly, gratitude has important implications for the well-being of those who feel grateful and for the well-being of their relationship (e.g., Algoe et al., 2010). Perceiving a partner to be motivated to benefit one's well-being, to have one's best interests in mind, and be responsive to one's needs triggers gratitude, as these perceptions importantly identify the partner as a responsive partner and serve as a reminder of how valuable they are (Algoe, 2012).

Given that gratitude serves social functions in various types of relationships, ranging from strangers, coworkers, to close others (e.g., Algoe et al., 2008; Tsang, 2006a), we believe that perceiving a benefactor to behave prosocially by specifically having one's best interests in mind should trigger gratitude in any type of relationship. However, there may be factors distinguishing the threshold for gratitude to emerge. Our findings suggest that people may need to perceive their partner to exceed the general goal of promoting the relationship, which may generally be expected in communal relationships (Clark et al., 2010). Future research could examine the role of communal versus exchange orientations (Clark & Mills, 1979) and hence the expectations that people hold about the sacrifices their partners make (e.g., how often, for what rea-

sons) and whether these expectations match their observations of their partner's motives and behaviors. Such research could reveal whether relationship-focused approach motives can elicit gratitude under certain circumstances. For example, in relationships that are characterized by an exchange orientation or low levels of closeness (e.g., in a business context), people may more easily come to feel grateful for others' prosocial behaviors when they perceive the other person to be focused on "the common good" (i.e., relationship-focused motives) because in these relationship contexts the norm to behave in a prosocial manner may be less strong, expectations may be more easily exceeded, and prosocial behaviors may be more easily appreciated.

What about the actual motives that drove the partner to sacrifice? In the present research we examined the perceptions that people have regarding their partner's motives, which may not necessarily reflect the partner's actual motives for sacrifice.⁸ Individuals may be biased in their perception of a partner's motives, and thus may overestimate or underestimate their partner's benevolent intentions (e.g., Fletcher & Kerr, 2010). Future research could examine who is especially likely to feel grateful and who may be at risk for not feeling grateful. For example, romantic partners usually have a more pronounced positive bias in their perceptions of each other in the early stages of the relationship (e.g., Fletcher & Kerr, 2010) and may be prone to infer partner-focused motives even when they are not really there ("love is blind"). On the contrary, people may be less inclined to infer such motives when they do not have sufficient trust or self-esteem to believe that a partner is making these sacrifices for them (e.g., Collins & Feeney, 2004; Murray, Holmes, MacDonald, & Ellsworth, 1998). As such, perceived motives for sacrifice in relationships is a topic that sheds light on the importance of partners' display of their motives and the attributions partners make about each other's motives. This communication process could importantly impact partners' emotional experiences and, eventually, could help to explain why some relationships grow and become more vital, whereas others decline.

The current findings imply that gratitude emerges only selectively, that is only when perceiving a partner to sacrifice to promote one's happiness. Thus, not to lose the opportunity to feel grateful, it would be adaptive if people would perceive these motives. This would require the perceiving partner to be attentive to these motives, and, for the partner to express these motives in order for the perceiving partner to pick up on them. In turn, the perceiving partner, feeling grateful for the partner's sacrifice, could express his or her gratitude, thereby fueling further pro-relationship processes (Kubacka et al., 2011). In contrast, failing to feel grateful and not expressing feelings of gratitude may disrupt this process, and the glue that could strengthen the relationship might be unused. For example, the sacrificing partner may not feel acknowledged for making a (costly) relationship investment; he or she may feel disappointed and may feel less motivated to do so

⁸ For exploratory purposes, we ran all analyses controlling for actual partner reported motives for sacrifice, yielding the same results as reported in both studies. Furthermore, perceived partner motives and actual partner reported motives did not significantly correlate or were only moderately correlated (*r*s ranging from .01 to .32). These results indicate that it is especially people's perceptions of their partner's motives, rather than the actual motives, that elicit gratitude.

again. Future research could explore whether failing to acknowledge and express gratitude for a partner's prosocial behaviors could detract from relationship well-being, especially when these behaviors are specifically intended to benefit the other's well-being.

The present research is one of the first in the literature on close relationships to examine perceptions of the motives underlying pro-social behavior. In particular, interdependence theory (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003) has touched on this topic, describing sacrifice as a typical example of a prosocial act that requires transformation of motivation, that is, going beyond short term self-interest (Van Lange et al., 1997). In this literature, a partner-focus would be characterized as maximizing a partner's outcomes, and relatedly, is described as a pro-partner transformation of motivation. A relationship-focus is characterized by maximizing joint outcomes (the relationship), and a self-focus is characterized by maximizing own outcomes. The present findings contribute to this literature by providing initial evidence that perceived transformations—pro-partner versus pro-relationship or proself—may shape important psychological processes that are relevant to future interaction. In particular, attributing pro-partner motives for a partner's sacrifice is crucial to the experience of gratitude, which may be important to strengthening trust and commitment in the relationship (e.g., Wieselquist, Rusbult, Foster, & Agnew, 1999).

Strengths and Limitations

Before closing, we address some strengths and limitations of the present research, as well as directions for future research. A major strength of the current work is that we used daily experience studies which allowed us to examine sacrifices in the daily lives of romantic couples. This research method helped us to provide insight into the everyday, naturally occurring experiences of romantic partners and how they are associated with perceptions of each other's motivations in these sacrifice situations. Another major strength of the present research is the replication of our findings across studies: findings were replicated in similar settings (both studies used daily diary procedures), as well as across different research settings (in a laboratory conversation about a partner's major sacrifice). Furthermore, in Study 2, we extended the findings to the context of major sacrifices that partners had made over the course of their relationship (e.g., when one partner decides to relocate to a different city for the other to take a new job). Finally, our findings provide some evidence for generalizability across two different western cultures (the Netherlands, the United States).

A limitation of the present research is that the findings are correlational, and definitive causal conclusions cannot be drawn. Although we find daily variation in perceptions of a partner's sacrifice motives to be associated with daily changes in perceived partner responsiveness and gratitude, future research could use experimental procedures (e.g., manipulate perceptions of partners' sacrifice motives) to draw firm causal conclusions. Future research could also disentangle experiences of gratitude as a result of perceiving a partner's sacrifice—and the partner's motives—as compared to when a partner has not sacrificed at all. In the present research we examined perceptions of a partner's sacrifice motives in the presence of conflicts of interest. Yet sometimes, pro-partner

motives are displayed in a spontaneous manner, in the absence of conflicting interests—for example, when a partner spontaneously brings home some flowers as a present. One intriguing question for future research is how feelings of gratitude come into being when there is no conflict of interest, above and beyond how much gratitude people typically experience for their partner.

Concluding Remarks

Close relationship partners inevitably encounter situations in which their preferences diverge, thereby challenging their willingness to sacrifice. The results of this research suggest that people are most likely to feel grateful for their partner's sacrifices—whether they are “minor” or relatively more “major”—when they perceive their partner to be guided by partner-serving motives (i.e., to make them happy), rather than self-serving or relationship-serving motives. The present findings add credence to the claim that it may not be the sacrificial act per se that matters. Even in the context of close relationships, partners seem to operate as intuitive psychologists, seeking to understand behavior in terms of interpersonal motives. And such attributions, however implicit, have a profound impact on the experience of gratitude. Stated differently, it is not so much the act that counts: It is the social motive that counts.

References

- Agnew, C. R., Van Lange, P. A. M., Rusbult, C. E., & Langston, C. A. (1998). Cognitive interdependence: Commitment and the cognitive representation of close relationships. *Journal of Personality and Social Psychology, 74*, 939–954. <http://dx.doi.org/10.1037/0022-3514.74.4.939>
- Algoe, S. B. (2012). Find, remind, and bind: The functions of gratitude in everyday relationships. *Social and Personality Psychology Compass, 6*, 455–469. <http://dx.doi.org/10.1111/j.1751-9004.2012.00439.x>
- Algoe, S. B., Gable, S. L., & Maisel, N. C. (2010). It's the little things: Everyday gratitude as a booster shot for romantic relationships. *Personal Relationships, 17*, 217–233. <http://dx.doi.org/10.1111/j.1475-6811.2010.01273.x>
- Algoe, S. B., Haidt, J., & Gable, S. L. (2008). Beyond reciprocity: Gratitude and relationships in everyday life. *Emotion, 8*, 425–429. <http://dx.doi.org/10.1037/1528-3542.8.3.425>
- Aron, A., & Aron, E. N. (1986). *Love and the expansion of self: Understanding attraction and satisfaction*. Washington, DC: Hemisphere.
- Bartlett, M. Y., & DeSteno, D. (2006). Gratitude and prosocial behavior: Helping when it costs you. *Psychological Science, 17*, 319–325. <http://dx.doi.org/10.1111/j.1467-9280.2006.01705.x>
- Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology, 54*, 579–616. <http://dx.doi.org/10.1146/annurev.psych.54.101601.145030>
- Bolger, N., & Laurenceau, J.-P. (2013). *Intensive longitudinal methods: An introduction to diary and experience sampling research*. New York, NY: Guilford Press.
- Clark, M. S., Lemay, E. P., Jr., Graham, S. M., Pataki, S. P., & Finkel, E. J. (2010). Ways of giving benefits in marriage: Norm use, relationship satisfaction, and attachment-related variability. *Psychological Science, 21*, 944–951. <http://dx.doi.org/10.1177/0956797610373882>
- Clark, M. S., & Mills, J. (1979). Interpersonal attraction in exchange and communal relationships. *Journal of Personality and Social Psychology, 37*, 12–24. <http://dx.doi.org/10.1037/0022-3514.37.1.12>
- Collins, N. L., & Feeney, B. C. (2004). Working models of attachment shape perceptions of social support: Evidence from experimental and

- observational studies. *Journal of Personality and Social Psychology*, *87*, 363–383. <http://dx.doi.org/10.1037/0022-3514.87.3.363>
- Day, L., & Impett, E. A. (2016). For it is in giving that we receive: The benefits of sacrifice in romantic relationships. In C. Knee & H. Reis (Eds.), *Positive approaches to optimal relationship development* (pp. 211–231). Advances in personal relationships. Cambridge, UK: Cambridge University Press. <http://dx.doi.org/10.1017/CBO9781316212653.011>
- Elliot, A. J., Gable, S. L., & Mapes, R. R. (2006). Approach and avoidance motivation in the social domain. *Personality and Social Psychology Bulletin*, *32*, 378–391. <http://dx.doi.org/10.1177/0146167205282153>
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, *84*, 377–389. <http://dx.doi.org/10.1037/0022-3514.84.2.377>
- Enders, C. K., & Tofighi, D. (2007). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods*, *12*, 121–138. <http://dx.doi.org/10.1037/1082-989X.12.2.121>
- Feeney, B. C., & Collins, N. L. (2015). A new look at social support: A theoretical perspective on thriving through relationships. *Personality and Social Psychology Review*, *19*, 113–147. <http://dx.doi.org/10.1177/1088868314544222>
- Fitzsimons, G. M., Finkel, E. J., & vanDellen, M. R. (2015). Transactive goal dynamics. *Psychological Review*, *122*, 648–673. <http://dx.doi.org/10.1037/a0039654>
- Fletcher, G. J., & Kerr, P. S. (2010). Through the eyes of love: Reality and illusion in intimate relationships. *Psychological Bulletin*, *136*, 627–658. <http://dx.doi.org/10.1037/a0019792>
- Gable, S. L. (2006). Approach and avoidance social motives and goals. *Journal of Personality*, *74*, 175–222. <http://dx.doi.org/10.1111/j.1467-6494.2005.00373.x>
- Gable, S. L., & Impett, E. A. (2012). Approach and avoidance motives and close relationships. *Social and Personality Psychology Compass*, *6*, 95–108. <http://dx.doi.org/10.1111/j.1751-9004.2011.00405.x>
- Gordon, A. M., Impett, E. A., Kogan, A., Oveis, C., & Keltner, D. (2012). To have and to hold: Gratitude promotes relationship maintenance in intimate bonds. *Journal of Personality and Social Psychology*, *103*, 257–274. <http://dx.doi.org/10.1037/a0028723>
- Gordon, C. L., Arnette, R. A., & Smith, R. E. (2011). Have you thanked your spouse today? Felt and expressed gratitude among married couples. *Personality and Individual Differences*, *50*, 339–343. <http://dx.doi.org/10.1016/j.paid.2010.10.012>
- Hofmann, W., & Patel, P. V. (2015). SurveySignal: A convenient solution for experience sampling research using participants' own smartphones. *Social Science Computer Review*, *33*, 235–253. <http://dx.doi.org/10.1177/0894439314525117>
- Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine*, *7*, e1000316. <http://dx.doi.org/10.1371/journal.pmed.1000316>
- Impett, E. A., Gable, S. L., & Peplau, L. A. (2005). Giving up and giving in: The costs and benefits of daily sacrifice in intimate relationships. *Journal of Personality and Social Psychology*, *89*, 327–344. <http://dx.doi.org/10.1037/0022-3514.89.3.327>
- Impett, E. A., Gere, J., Kogan, A., Gordon, A. M., & Keltner, D. (2014). How sacrifice impacts the giver and the recipient: Insights from approach-avoidance motivational theory. *Journal of Personality*, *82*, 390–401. <http://dx.doi.org/10.1111/jopy.12070>
- Impett, E. A., Gordon, A. M., Kogan, A., Oveis, C., Gable, S. L., & Keltner, D. (2010). Moving toward more perfect unions: Daily and long-term consequences of approach and avoidance goals in romantic relationships. *Journal of Personality and Social Psychology*, *99*, 948–963. <http://dx.doi.org/10.1037/a0020271>
- Impett, E. A., Kogan, A., English, T., John, O., Oveis, C., Gordon, A. M., & Keltner, D. (2012). Suppression sours sacrifice: Emotional and relational costs of suppressing emotions in romantic relationships. *Personality and Social Psychology Bulletin*, *38*, 707–720. <http://dx.doi.org/10.1177/0146167212437249>
- Joel, S., Gordon, A. M., Impett, E. A., Macdonald, G., & Keltner, D. (2013). The things you do for me: Perceptions of a romantic partner's investments promote gratitude and commitment. *Personality and Social Psychology Bulletin*, *39*, 1333–1345. <http://dx.doi.org/10.1177/0146167213497801>
- Kamp Dush, C. M., & Amato, P. R. (2005). Consequences of relationship status and quality for subjective well-being. *Journal of Social and Personal Relationships*, *22*, 607–627. <http://dx.doi.org/10.1177/0265407505056438>
- Kelley, H. H., Holmes, J. W., Kerr, N. L., Reis, H. T., Rusbult, C. E., & Van Lange, P. A. M. (2003). *An Atlas of Interpersonal Situations*. New York, NY: Cambridge. <http://dx.doi.org/10.1017/CBO9780511499845>
- Kelley, H. H., & Thibaut, J. W. (1978). *Interpersonal relations: A theory of interdependence*. New York, NY: Wiley.
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York, NY: Guilford Press.
- Kiecolt-Glaser, J. K., & Newton, T. L. (2001). Marriage and health: His and hers. *Psychological Bulletin*, *127*, 472–503. <http://dx.doi.org/10.1037/0033-2909.127.4.472>
- Kim, H. K., & McKenry, P. C. (2002). The relationship between marriage and psychological well-being: A longitudinal analysis. *Journal of Family Issues*, *23*, 885–911. <http://dx.doi.org/10.1177/019251302237296>
- Kubacka, K. E., Finkenauer, C., Rusbult, C. E., & Keijsers, L. (2011). Maintaining close relationships: Gratitude as a motivator and a detector of maintenance behavior. *Personality and Social Psychology Bulletin*, *37*, 1362–1375. <http://dx.doi.org/10.1177/0146167211412196>
- McCullough, M. E., Emmons, R. A., & Tsang, J. A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, *82*, 112–127. <http://dx.doi.org/10.1037/0022-3514.82.1.112>
- McCullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin*, *127*, 249–266. <http://dx.doi.org/10.1037/0033-2909.127.2.249>
- McCullough, M. E., Kimeldorf, M. B., & Cohen, A. D. (2008). An adaptation for altruism? The social causes, social effects, and social evolution of gratitude. *Current Directions in Psychological Science*, *17*, 281–285. <http://dx.doi.org/10.1111/j.1467-8721.2008.00590.x>
- Murray, S. L., Holmes, J. G., MacDonald, G., & Ellsworth, P. C. (1998). Through the looking glass darkly? When self-doubts turn into relationship insecurities. *Journal of Personality and Social Psychology*, *75*, 1459–1480. <http://dx.doi.org/10.1037/0022-3514.75.6.1459>
- Newman, G. E., & Cain, D. M. (2014). Tainted altruism: When doing some good is evaluated as worse than doing no good at all. *Psychological Science*, *25*, 648–655. <http://dx.doi.org/10.1177/0956797613504785>
- Reis, H. T., Clark, M. S., & Holmes, J. G. (2004). Perceived partner responsiveness as an organizing construct in the study of intimacy and closeness. In D. J. Mashek & A. P. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 201–225). Mahwah, NJ: Erlbaum Publishers.
- Righetti, F., Balliet, D., Visserman, M. L., & Hofmann, W. (2015). Trust and the suppression of emotions during sacrifice in close relationships. *Social Cognition*, *33*, 505–519. <http://dx.doi.org/10.1521/soco.2015.33.5.505>
- Righetti, F., Gere, J., Hofmann, W., Visserman, M. L., & Van Lange, P. A. M. (2016). The burden of empathy: Partners' responses to divergence of interests in daily life. *Emotion*, *16*, 684–690. <http://dx.doi.org/10.1037/emo0000163>
- Righetti, F., Luchies, L. B., van Gils, S., Slotter, E. B., Witcher, B., & Kumashiro, M. (2015). The prosocial versus proself power holder: How power influences sacrifice in romantic relationships. *Personality and*

- Social Psychology Bulletin*, 41, 779–790. <http://dx.doi.org/10.1177/0146167215579054>
- Righetti, F., & Visserman, M. L. (2017). I gave too much: Low self-esteem and the regret of sacrifices. *Social Psychological & Personality Science*. Advance online publication. <http://dx.doi.org/10.1177/1948550617707019>
- Rusbult, C. E., Finkel, E. J., & Kumashiro, M. (2009). The Michelangelo phenomenon. *Current Directions in Psychological Science*, 18, 305–309. <http://dx.doi.org/10.1111/j.1467-8721.2009.01657.x>
- Rusbult, C. E., & Van Lange, P. A. M. (2003). Interdependence, interaction, and relationships. *Annual Review of Psychology*, 54, 351–375. <http://dx.doi.org/10.1146/annurev.psych.54.101601.145059>
- Selig, J. P., & Preacher, K. J. (2008). Monte Carlo method for assessing mediation: An interactive tool for creating confidence intervals for indirect effects [Computer software]. Retrieved from <http://quantpsy.org/>
- Stellar, J. E., Gordon, A. M., Piff, P. K., Anderson, C. L., Cordaro, D., Bai, Y., . . . Keltner, D. (in press). The self-transcendent emotions and their social functions: Compassion, gratitude, and awe bind us to others through prosociality. *Emotion Review*.
- Tesser, A., Gatewood, R., & Driver, M. (1968). Some determinants of gratitude. *Journal of Personality and Social Psychology*, 9, 233–236. <http://dx.doi.org/10.1037/h0025905>
- Tsang, J. A. (2006a). Gratitude and prosocial behavior: An experimental test of gratitude. *Cognition and Emotion*, 20, 138–148. <http://dx.doi.org/10.1080/02699930500172341>
- Tsang, J. A. (2006b). The effects of helper intention on gratitude and indebtedness. *Motivation and Emotion*, 30, 198–204. <http://dx.doi.org/10.1007/s11031-006-9031-z>
- Van Lange, P. A. M., Rusbult, C. E., Drigotas, S. M., Arriaga, X. B., Witcher, B. S., & Cox, C. L. (1997). Willingness to sacrifice in close relationships. *Journal of Personality and Social Psychology*, 72, 1373–1395. <http://dx.doi.org/10.1037/0022-3514.72.6.1373>
- Visserman, M. L., Righetti, F., Kumashiro, M., & Van Lange, P. A. M. (2017). Me or Us? Self-control promotes a healthy balance between personal and relationship concerns. *Social Psychological & Personality Science*, 88, 55–65. <http://dx.doi.org/10.1177/1948550616662121>
- Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. L. (2003). Gratitude and happiness: Development of a measure of gratitude, and relationships with subjective well-being. *Social Behavior and Personality*, 31, 431–451. <http://dx.doi.org/10.2224/sbp.2003.31.5.431>
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92, 548–573. <http://dx.doi.org/10.1037/0033-295X.92.4.548>
- Wieselquist, J., Rusbult, C. E., Foster, C. A., & Agnew, C. R. (1999). Commitment, pro-relationship behavior, and trust in close relationships. *Journal of Personality and Social Psychology*, 77, 942–966. <http://dx.doi.org/10.1037/0022-3514.77.5.942>
- Wood, A. M., Froh, J. J., & Geraghty, A. W. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review*, 30, 890–905. <http://dx.doi.org/10.1016/j.cpr.2010.03.005>

Received May 15, 2016

Revision received May 12, 2017

Accepted May 13, 2017 ■