How Sacrifice Impacts the Giver and the Recipient: Insights From Approach-Avoidance Motivational Theory

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Abstract

This study investigated how sacrificing for approach versus avoidance goals shapes the giver's and the recipient's emotions and relationship quality. A sample of 80 dating couples participated in a three-part study in which they discussed sacrifice in the laboratory (Part 1), reported on their daily sacrifices for 14 days (Part 2), and completed a follow-up survey 3 months later (Part 3). When partners discussed a sacrifice they had made for approach goals, they experienced greater relationship quality, whereas when they discussed a sacrifice they had made for avoidance goals, they experienced poorer relationship quality. These effects were replicated with outside observer reports. On days when partners sacrificed for approach goals, both partners experienced increased relationship quality, but on days when people sacrificed for avoidance goals, the giver experienced decreased relationship quality. These effects were mediated by positive and negative emotions, respectively. Approach sacrifice goals predicted increases in relationship quality and avoidance sacrifice goals predicted decreases in relationship quality, as reported by both partners 3 months later. Sacrifice per se does not help or harm relationships, but the goals that people pursue when they give up their own interests can critically shape the quality of intimate bonds.

Conflicting interests and desires are inevitable in close relationships. One way that partners can deal with conflicting interests is to *sacrifice* their own interests for the sake of their partner or their relationship. Much of the existing literature on sacrifice has focused on identifying its potential benefits. Research suggests that willingness to sacrifice is associated with increased relationship satisfaction (Van Lange et al., 1997; Wieselquist, Rusbult, Foster, & Agnew, 1999) and that people who are communally oriented to meet their partner's needs experience intrinsic feelings of joy when sacrificing their own self-interest (Kogan et al., 2010). However, theory and empirical evidence suggest that sacrifice may not always be experienced so positively. Research has shown that prioritizing a partner's needs over one's own needs is associated with poorer psychological well-being and relationship quality (Fritz & Helgeson, 1998; Gere, Schimmack, Pinkus, & Lockwood, 2011; Kumashiro, Rusbult, & Finkel, 2008). In short, while sacrifice may in many cases be beneficial, it can also lead to negative emotions that ultimately detract from the quality of relationships.

When is sacrifice beneficial for people and their relationships and when is it costly? Research guided by an approach-avoidance perspective has shown that people's underlying *motivations* for sacrifice can have a powerful impact on their emotions and the quality of their relationships. The highest benefits are reaped when individuals sacrifice for approach goals, such as to please their partners or to create intimacy in their relationships, as opposed to avoidance goals, such as to avoid disappointing their partners or to avoid conflict (Impett, Gable, & Peplau, 2005; Neff & Harter, 2002). The current study builds upon the existing research on sacrifice in three critical ways. First, we investigate *mechanisms* of the link between sacrifice goals and relationship quality, focusing on the critical role of positive and negative emotions in understanding *why* sacrifices undertaken in pursuit of approach goals can be so beneficial for relationships whereas sacrifices for avoidance goals can be so costly. Second, in addition to examining how sacrifice impacts the person who makes the sacrifice, as has been done in previous research (Mattingly &

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Clark, 2012; Powell & Van Vugt, 2003; Van Lange et al., 1997), we investigate for the first time whether and how people's goals for sacrifice impact the *recipient*. Third, we bring romantic couples into the laboratory to examine whether people's goals for sacrifice are associated with *outside observer ratings* of relationship quality.

Approach-Avoidance Motivation

Several theories of motivational processes postulate the existence of approach and avoidance motivational systems (see reviews by Eder, Elliot, & Harmon-Jones, 2013; Elliot & Covington, 2001). In the domain of social motivation, approach goals direct individuals toward positive outcomes such as intimacy and growth in their relationships, whereas avoidance social goals direct individuals away from negative outcomes such as conflict and rejection (Elliot, Gable, & Mapes, 2006; Gable, 2006). A growing body of research has shown that approach and avoidance goals are linked with different outcomes in close relationships (see review by Gable & Impett, 2012). For example, in romantic relationships, individuals with strong approach goals report experiencing greater relationship satisfaction and show greater behavioral responsiveness to their partner's needs, whereas individuals with strong avoidance goals report feeling less satisfied with their relationships and are less responsive to their partner's needs (Impett et al., 2010).

Most relevant to the current investigation on sacrifice, scholars have applied the approach-avoidance motivational perspective to understand sacrifice in intimate relationships (see review by Impett & Gordon, 2008). Studies using both cross-sectional (Neff & Harter, 2002) and daily experience methods (Impett et al., 2005) have shown that when people sacrifice their own needs out of desires to promote their partner's well-being, they tend to experience increased personal fulfillment and a strengthened bond with their partner. In contrast, when they sacrifice to avoid conflict, they tend to feel more resentment, experience more conflict, and report weakened relationship ties. The effects of sacrifice goals on relationships can also accumulate over time, with approach goals building relationship satisfaction and couple stability, and avoidance sacrifice goals detracting from satisfaction and increasing the likelihood that couples will ultimately break up (Impett et al., 2005).

The Mediating Role of Emotions

A critical next step in this line of work is to understand *why* sacrificing in pursuit of approach goals is so beneficial to relationships while sacrificing for avoidance goals can be so costly. Given the central role that emotions have been shown to play in motivational processes (Keltner & Lerner, 2010), we focus on the role of emotional experience in the current investigation. A growing body of research suggests that approach

behaviors tend to be linked with the experience of positive emotions, whereas avoidance behaviors tend to be linked with the experience of negative emotions (see review by Carver, Sutton, & Scheier, 2000, but see also Harmon-Jones, 2003, for a discussion of anger and the approach motivational system). For example, Gable, Reis, and Elliot (2000) found that greater dispositional approach motivation was associated with daily positive (but not negative) emotions, whereas greater dispositional avoidance motivation was associated with daily negative (but not positive) emotions. In the domain of romantic relationships, Impett et al. (2010) found that individuals high in approach relationship goals experienced increased daily positive emotions, whereas those who were high in avoidance goals experienced increased daily negative emotions.

Turning to the domain of sacrifice more specifically, research has shown that people experience increased positive emotions when they sacrifice for approach goals, whereas they experience increased negative emotions when they sacrifice for avoidance goals (Impett et al., 2005). Based on this existing work, we expected that one important reason why people may feel more satisfied with their relationships when they sacrifice for approach goals is likely due to the fact that they experience increased positive emotions when they sacrifice in order to please their partner and maintain the relationship that they so highly value. In contrast, when people sacrifice to avoid tension or to prevent their partner from feeling let down, they are likely to experience increased feelings of frustration and resentment, negative emotions that may fuel further conflict and ultimately detract from the quality of their relationship.

Sacrifice for the Giver and the Recipient

Another crucial step in this line of research on sacrifice is to move beyond an exclusive focus on the person who makes the sacrifice to understand how sacrifice is experienced by the *recipient*. We suggest that in addition to experiencing positive emotions and higher relationship satisfaction when people make a sacrifice for approach goals, they will also experience these benefits when they are the recipient of approach-motivated sacrifice. Previous research has shown that people feel more satisfied and experience more positive emotions when they have a partner who is oriented toward creating and sustaining positive experiences in the relationship (Impett et al., 2010). Applying this work to the domain of sacrifice, we expected that the recipients of approach-motivated sacrifice would also feel more satisfied with their relationship since they recognize that they have a partner who cares about meeting their needs and prioritizes maintaining happiness in the relationship over pursuing their own self-interest.

It is less clear how recipients might feel when their partner sacrifices to avoid negative outcomes in the relationship. On the one hand, even in cases when people sacrifice to avoid conflict or to avoid hurting their partners' feelings, the recipients might still benefit because they are in some ways still getting what that they want. That is, people have still made the

choice to prioritize the recipients' interests over their own, and these pro-relationship acts could signal that the partner cares about the relationship (Joel, Gordon, Impett, MacDonald, & Keltner, 2013; Wieselquist et al., 1999). On the other hand, existing research has shown that the romantic partners of people high in avoidance relationship goals feel less satisfied with their relationships and report that their partners are less responsive to meeting their needs (Impett et al., 2010), and that while actively avoiding conflict over important relationship issues might enable couples to "keep the peace" in the moment, conflict avoidance has the potential to erode satisfaction over time (see review by McNulty, 2010). Based on this work, then, we expected that when people sacrifice to avoid negative outcomes in the relationship, the recipient will experience more negative emotions and, in turn, report feeling less satisfied in the relationship.

Moving Beyond Self-Reports of Relationship Quality

All of the existing research on motivation for sacrifice in interpersonal relationships has relied on the use of self-report measures (e.g., Impett et al., 2005; Mattingly & Clark, 2012; Neff & Harter, 2002). Given that the exclusive use of self-report data may result in inflated estimates of relationships between predictor and outcome variables due to shared method variance (Campbell & Fiske, 1959), a third goal of the current study was to corroborate self-report findings with *outside observer reports* of the quality of intimate relationships. We expected that the goals that people pursue when they make a sacrifice for an intimate partner would not only impact both partners' feelings about their relationships, but would also be related to how satisfied other people see them as well.

In our study, we focused on two critical indicators of relationship quality that have been linked with approach and avoidance relationship goals in previous research (Impett et al., 2005, 2010). The first indicator was an overall rating of relationship satisfaction for each of the partners, and the second indicator was the display of conflict behaviors by each partner. In line with our predictions for the self-report data, we predicted that both the giver and the recipient of sacrifices motivated by approach goals would be rated by outside observers as higher in relationship satisfaction, whereas both the giver and recipient of avoidance-motivated sacrifice would be rated as lower in satisfaction and as displaying more conflict behavior.

Overview of the Current Research

We tested our hypotheses regarding the effects of sacrifice goals on both partners' emotions and relationship quality in a three-part study of romantic couples. The data for this study were drawn from a large, multimethod study conducted at the University of California, Berkeley. Although several published papers have used data from this study (Gordon, Impett, Kogan, Oveis, & Keltner, 2012; Impett et al., 2010, 2012; Kogan et al., 2010), none of them investigated the questions of interest in this particular article. In Part 1, couples came into the lab to discuss important sacrifices that they had made over the course of their relationships, allowing us to examine whether people's motivations for sacrifices impacted both partners' emotions and feelings about their relationship, as well as whether sacrifice goals were related to observers' ratings of relationship quality. In Part 2, the couples participated in a 14-day daily experience study of sacrifice that allowed us to broaden the ecological validity of these effects and investigate the effects of sacrifice goals on the quality of relationships in everyday life. In Part 3, the couples were surveyed 3 months later so that we could examine the impact of sacrifice goals on the quality of relationships over a longer period of time. In all three parts of the study, to provide the most convincing test of our predictions, we sought to show that the effects of sacrifice goals are not driven by people making different types of sacrifices when they pursue approach versus avoidance goals. In addition, we wanted to demonstrate that the effects of goals are specific to the domain of sacrifice and are not being driven by the goals that people have in their relationships more generally, nor driven by individual differences in personality (i.e., the Big Five).

PART 1: CONVERSATIONS ABOUT SACRIFICE IN THE LABORATORY

In the first part of our study, couples came into the lab to discuss important and meaningful sacrifices that they had made for each other over the course of their relationship. We predicted that when people describe an important sacrifice that they had made for their partner that was motivated by approach goals, both partners would experience more positive emotions and, in turn, feel more satisfied with their relationship. In contrast, we expected that when people describe a sacrifice that was motivated by avoidance goals, both partners would experience more negative emotions and, in turn, feel less satisfied with the relationship and experience a poorer connection with their partner. We also expected that sacrifice goals would be associated with outside observer ratings of both partners' satisfaction with the relationship and displays of conflict behavior as the couple interacted in the lab.

Method

Participants and Procedure. Eighty couples ($N = 160$ individuals) were recruited for the study. Of these couples, 75 were heterosexual, four were lesbian, and one was a gay male couple. Participants comprised a diverse range of ethnic backgrounds: 53% were European or European American, 8% were

African or African American, 18% were Chinese or Chinese American, 4% were Mexican or Mexican American, and 17% were of other ethnicities.

Participants ranged in age from 18 to 60 years ($M = 23.9$; $SD = 6.4$). The couples had been dating from 6 months to 30 years (median = 15 months; $SD = 44$ months). Forty-eight percent of the couples were cohabiting.

All participants were recruited from the San Francisco Bay Area by means of online flyers posted on Craiglist.org and paper flyers placed throughout the Bay Area. After both partners agreed to take part in the study, they were emailed a link to the initial online survey. After completing this survey, the partners came to the laboratory, completed several self-report measures, and participated in several videotaped interactions. Of particular interest to this study are two conversations about sacrifice. Each partner took a turn discussing "the most important or meaningful sacrifice that you have made for your partner over the course of your relationship." The mean length of discussions was 3 min, 28 s ($SD = 1$ min, 23 s; range = 1 min, 14 s to 5 min, 4 s); speaking order for the conversations was randomly assigned through a coin flip (length or order of conversation did not impact any of our reported results). Each partner was paid US\$20 for participating in the lab study.

Baseline Measures. As part of the initial survey, participants provided basic demographic information (i.e., gender, age, ethnicity, relationship duration) and completed several dispositional measures to be used in control analyses, all on 7-point scales. Participants completed an eight-item measure of *approach and avoidance romantic relationship goals* (Gable, 2006; Impett, Strachman, Finkel, & Gable, 2008; Impett et al., 2010). Participants responded to such items as "I will be trying to deepen my relationship with my romantic partner" (approach goals; four items; $\alpha = .78$; $M = 4.27$; $SD = .59$) and "I will be trying to avoid disagreements and conflicts with my romantic partner" (avoidance goals; four items; $\alpha = .79$; $M = 3.66$; $SD = .75$). Participants also rated their own *personality traits* using the 44-item Big Five Personality Inventory (John, Naumann, & Soto, 2008). Participants responded to items such as "is outgoing, sociable" (Extraversion; eight items; $\alpha = .87$; $M = 3.40$; $SD = .74$), "can be tense" (Neuroticism; eight items; $\alpha = .84$; $M = 2.88$; $SD = .68$), "likes to cooperate with others" (Agreeableness; nine items; $\alpha = .77$; $M = 3.69$; $SD = .54$), "is original, comes up with new ideas" (Openness; 10 items; $\alpha = .82$; $M = 3.79$; $SD = .55$), and "does a thorough job" (Conscientiousness; nine items; $\alpha = .82$; $M = 3.53$; $SD = .65$).

Laboratory Measures. After each of the sacrifice conversations, partners completed several measures, all on 7-point scales. Participants completed a measure of *approach and avoidance sacrifice goals* slightly adapted from Impett et al. (2005). Participants rated the extent to which they sacrificed for four approach goals (i.e., "to make my partner feel loved," "to make my partner happy," "to increase intimacy in our relationship," and "to create more satisfaction in our relation-

ship"; $\alpha = .76$; $M = 5.29$; $SE = 1.35$) and four avoidance goals (e.g., "to prevent my partner from feeling upset," "to prevent my partner from feeling let down," "to avoid conflict in our relationship," and "to avoid tension in our relationship"; $\alpha = .83$; $M = 4.37$; $SD = 1.74$). Participants also completed measures of *positive and negative emotions* (Srivastava, Tamir, McGonigal, John, & Gross, 2009) after each of the sacrifice conversations by indicating the extent to which they felt four positive emotions (e.g., "happy/pleased/joyful") and four negative emotions (e.g., "angry/irritable/frustrated") measured in synonym clusters. The reliability coefficients were high for the composite measures of positive emotions for one's own sacrifice ($\alpha = .89$; $M = 4.35$; $SD = 1.39$), positive emotions for the partner's sacrifice ($\alpha = .90$; $M = 4.55$; $SD = 1.55$), negative emotions for one's own sacrifice ($\alpha = .71$; $M = 1.92$; $SD = .89$), and negative emotions for the romantic partner's sacrifice ($\alpha = .83$; $M = 1.97$; $SD = 1.13$). Finally, participants indicated how they felt about their relationship after each of the sacrifice conversations with items adapted from a measure of social connectedness (Srivastava et al., 2009). Participants indicated the extent to which they felt two indicators of *positive relationship quality* ("affectionate, loving, caring" and "cared about, loved, connected") and three indicators of *negative relationship quality* ("criticized, blamed," "put down, rejected," and "contempt, disgusted by my partner"). They completed these measures to indicate how they felt about their relationship after they discussed their own sacrifice and to indicate how they felt about their relationship after listening to their partner account their sacrifice. The reliability coefficients were sufficient for the composite measures of positive relationship quality for one's own sacrifice ($\alpha = .90$; $M = 5.15$; $SD = 1.45$), positive relationship quality for the partner's sacrifice ($\alpha = .91$; $M = 5.26$; $SD = 1.48$), negative relationship quality for one's own sacrifice ($\alpha = .88$; $M = 1.54$; $SD = 1.00$), and negative relationship quality for the partner's sacrifice ($\alpha = .83$; $M = 1.54$; $SD = 1.03$).

Coding the Sacrifice Conversations. The sacrifices couples discussed in the lab covered a large range of relationship issues, such as giving up spending time alone and personal freedom, sacrificing other interpersonal relationships, providing financial support to one's partner, relocating to a new city or state, turning down potentially lucrative job offers in other geographical regions, limiting college choices to remain in the area, and trying to change personality traits (e.g., Neuroticism and jealousy). Two coders independently coded the conversations for the size/severity of the sacrifice ($1 = $ *not at all major* to $7 = $ *very major*). They both coded all of the conversations, and a composite score was created to represent the mean of the two codes ($\alpha = .80$; $M = 3.28$; $SD = 1.22$). Outside observers also coded one positive and one negative indicator of relationship quality, rating both on 7-point scales. One set of three coders was instructed to code for each partner's global relationship satisfaction by rating the extent to which each partner "feels satisfied with their relationship" ($\alpha = .88$; $M = 4.30$;

SD = .81). A separate set of three coders was instructed to code for each partner's displays of conflict by rating the extent to which each partner "displays conflict behavior" (α = .72; *M* = 1.99; *SD* = .82). Although the ratings of conflict behavior were global, coders were trained to detect specific conflict behaviors inspired by the coding scheme developed by Gottman and Krokoff (1989), including conflict engagement behavior (e.g., disagreement, domineering behavior, defensiveness) and disengaged/withdrawal behavior (e.g., minimal eye contact, avoidance body orientation).

Results

Intercorrelations among all of the measures of approach and avoidance relationship and sacrifice goals assessed in all three parts of the study are shown in Table 1. Since both partners in the couple provided data, we analyzed the data using multilevel modeling in SPSS v.20 to account for the fact that partners' reports were not independent. We used a two-level model where partners are nested within the dyad. We conducted two main sets of analyses: one to examine the effects of people's goals for an important sacrifice that they had made for the relationship on their own emotions and relationship quality, and a second in which we examined the effects of people's

goals for sacrifice on their partner's emotions and relationship quality. In all of the analyses, approach and avoidance goals were entered simultaneously to examine their unique effects. To test for mediation, the Monte Carlo Method for Assessing Mediation (MCMAM; Selig & Preacher, 2008) was used to generate a 95% confidence interval (CI) for the indirect effect with 20,000 resamples. Significant mediation is indicated when the confidence interval does *not* include zero.

Our first set of hypotheses concerned the effects of one person's sacrifice goals on his or her own relationship quality. The results of these analyses are shown in Table 2. As expected, approach sacrifice goals were associated with greater positive relationship quality, whereas avoidance goals were associated with greater negative relationship quality. We also predicted that the reason why approach and avoidance sacrifice goals are differentially associated with the giver's feelings about his or her relationship is due to the emotions that people experience when they sacrifice in pursuit of approach and avoidance goals. Indeed, approach sacrifice goals were associated with experiencing more positive emotions, whereas avoidance sacrifice goals were associated with experiencing more negative emotions. Results of MCMAM analyses revealed that positive emotions fully mediated the link between approach sacrifice goals and positive relationship quality (indirect effect

Table 1 Intercorrelations Among Approach and Avoidance Relationship Goals at Background, Approach and Avoidance Sacrifice Goals in the Lab, and Approach and Avoidance Sacrifice Goals in the Diary

	Approach Relationship Goals at Background	Avoidance Relationship Goals at Background	Approach Sacrifice Goals in Lab	Avoidance Sacrifice Goals in Lab	Approach Sacrifice Goals in Diary	Avoidance Sacrifice Goals in Diary
Approach goals at background	—					
Avoidance goals at background	.43***	—				
Approach sacrifice goals in lab	.42***	.30***	—			
Avoidance sacrifice goals in lab	.17*	.35***	.41***	—		
Approach sacrifice goals in diary	.21*	.32***	.48***	.27**	—	
Avoidance sacrifice goals in diary	.01	.32***	.25**	.45***	.46***	—

Note. Measures of goals at background and in the diary were measured on a 5-point scale; measures of goals in the lab were measured on a 7-point scale; approach and avoidance sacrifice goals are aggregated over the 14-day diary for the purposes of reporting these correlations.
*p < .05. **p < .01. ***p < .001.

Table 2 Approach and Avoidance Sacrifice Goals Predicting Outcomes in the Laboratory Study

	Laboratory Outcomes					
	Positive Relationship Quality	Negative Relationship Quality	Positive Emotions	Negative Emotions	Satisfaction (Observer Coded)	Conflict (Observer Coded)
Actor effects						
Approach	.34***	−.09	.36***	−.11†	.16*	−.04
Avoidance	−.01	.15**	−.05	.10*	−.11*	.10*
Partner effects						
Approach	−.01	.03	.09	−.06	−.09	.04
Avoidance	.07	.05	−.04	−.07	.05	.06

Note. All numbers are standardized coefficients.
†p < .10. *p < .05. **p < .01. ***p < .001.

95% CI [.15, .44]; direct effect = .05, *SE* = .06, *p* = .38), and negative emotions fully mediated the link between avoidance sacrifice goals and negative relationship quality (indirect effect 95% CI [.01, .14]; direct effect = .07, *SE* = .04, *p* = .06). Finally, we replicated the findings linking sacrifice goals with relationship quality using outside observer reports of satisfaction and conflict. As expected, the more people indicated that they had sacrificed in pursuit of approach goals, the more satisfied they were rated by outside observers, but the more people sacrificed for avoidance goals, the less satisfied they were rated by outside observers and the more conflict they were rated to have displayed.

Our second set of hypotheses concerned the effects of sacrifice goals on the recipient's reports of relationship quality. As shown in Table 2, neither approach nor avoidance sacrifice goals were associated with the romantic partner's reports of the quality of the relationship when listening to his or her partner account a time of personal sacrifice. Because none of these effects were significant, we could not test our hypotheses regarding mediation of the potential partner effects by emotions. In addition, neither approach nor avoidance sacrifice goals were significantly associated with outside observer ratings of the partner's level of satisfaction or conflict.

Given the cross-sectional nature of the data, we sought to rule out several alternative explanations. First, it is possible that people who sacrificed for avoidance goals may have been discussing sacrifices of greater importance or severity than people who sacrificed for approach goals, in turn accounting for the reported pattern of results. To rule out this alternative hypothesis, we controlled for outside observers' ratings of the size/severity of each sacrifice. After accounting for this variable, all of the reported associations remained significant. Second, we sought to show that our effects were due to people's goals in the domain of sacrifice rather than to individual differences in approach and avoidance goals in romantic relationships more generally. As such, we controlled for approach and avoidance romantic relationship goals measured in the background survey. When doing so, all of the effects of sacrifice goals remained significant, with only one exception (the effect of approach sacrifice goals on coded relationship satisfaction dropped to *p* = .11). Third, it is also possible that our effects could have been driven by more general personality variables. As such, we conducted another set of analyses in which we simultaneously controlled for all of the Big Five personality factors, and all of our results remained significant. Finally, it is possible that people's mood might have impacted their goals, in turn shaping the quality of their relationships. Therefore, we tested reverse mediation models and compared these models to our theoretically derived models to determine which models could better explain the links between sacrifice goals, emotions, and relationship quality (see Kenny, Kashy, & Bolger, 1998, for a discussion of reverse causality in mediation). We did not find any support for these alternative models (they accounted for a 1–3% reduction in the overall effect compared to 53–85% reduction for our theoretical models).

PART 2: SACRIFICE IN DAILY LIFE

In Part 2 of our multimethod study, the couples completed daily surveys about sacrifice for 2 weeks to provide a more naturalistic account of sacrifice in everyday life. We predicted that on days when people sacrifice for approach goals, both partners would experience more positive emotions, in turn contributing to increased relationship satisfaction as reported by both members of the couple. In contrast, we expected that on days when people sacrificed for avoidance goals, both partners would experience more negative emotions, which would, in turn, detract from relationship satisfaction and fuel relationship conflict.

Method

Participants and Procedure. The same 80 couples from Part 1 participated in a 14-day daily experience study. Both members completed a 10-min online survey through surveymonkey.com for 14 consecutive nights beginning the day of their laboratory session. Participants were informed that in the event that they missed a diary at night, they could complete the diary the next morning; however, if they still did not complete the diary by the end of the next morning, they were asked to skip that diary. In addition to explaining the basic procedures to the couples, we indicated that partners should complete their daily surveys separately, that they should not discuss their answers with each other during the study, and that we would never reveal their responses to their partner.

To maximize compliance with the daily nature of the protocol, we sent reminders via email and employed a lottery bonus system. Each night around 10:00 p.m., we emailed a reminder to all participants who had not yet completed the diary for that day. Participants were instructed that for every diary they completed on time, a ticket in their name would be entered into a raffle to win an additional $100, $50, and $25 cash prize. A total of 158 participants completed 1,876 diary entries on time as determined by an automatic time-stamp generated by the website, an average of 11.7 (out of 14) days per person. Each partner was paid US$30 for participating in the daily experience study.

Daily Measures. Each night, participants reported end-of-day retrospective measures of daily sacrifice, sacrifice goals, emotions, and relationship quality, all measured on 5-point scales. To measure *daily sacrifice*, participants answered the following question: "Today, did you do anything that you did not particularly want to do for your partner? Or, did you give up something that you did want to do for the sake of your partner?" (Impett et al., 2005; Kogan et al., 2010). Participants reported making sacrifices on 25% of days, with an average of 2.88 sacrifices made over the course of the 2-week study (*SD* = 2.57; range = 0 to 11 sacrifices). Each time participants indicated that they made a sacrifice, they completed the same eight-item measure of *sacrifice goals* used in Part 1, with four

items assessing approach goals (day-level α = .81; *M* = 3.00; *SD* = .98) and four items assessing avoidance goals (day-level α = .88; *M* = 2.38; *SD* = 1.09). We asked four additional questions to obtain more nuanced information about the daily sacrifices: *effort* ("I put a lot of time and effort into making this sacrifice"; *M* = 3.01; *SD* = 1.14), *typicality* ("I frequently make sacrifices like this one for my partner"; *M* = 3.80; *SD* = .92), *reluctance* ("I felt reluctant or hesitant to make this sacrifice"; *M* = 2.66; *SD* = 1.17) and *perceived partner needs* ("My partner really wanted or needed me to make this sacrifice"; *M* = 3.35; *SD* = 1.11).

Each time participants indicated that they made a sacrifice or received a sacrifice from their partner, they completed the same eight-item measure of *positive and negative emotions* assessed in the laboratory. The alphas were high for the composite measure of positive emotions when making a sacrifice (four items; day-level α = .87; *M* = 2.34; *SD* = 1.01), negative emotions when making a sacrifice (four items; day-level α = .74; *M* = 1.52; *SD* = .65), positive emotions when receiving a sacrifice (four items; day-level α = .81; *M* = 2.69; *SD* = .97), and negative emotions when receiving a sacrifice (four items; day-level α = .81; *M* = 1.40; *SD* = .58). Finally, each day, regardless of whether participants reported making or receiving a sacrifice, they completed one-item measures of *relationship satisfaction* (*M* = 3.60; *SD* = 1.05) and *conflict* (*M* = 1.70; *SD* = .98).

Results

We analyzed the data with multilevel modeling using the HLM computer program (HLM v. 6.08; Raudenbush, Bryk, Cheong, & Congdon, 2004). We used a three-level model in which days were nested within persons and persons were nested within couples (see Impett et al., 2010, 2012). This analysis simultaneously controls for dependencies in the same person's reports across days and between partners. We tested our predictions regarding the effects of sacrifice goals on the giver's and the recipient's daily outcomes in separate sets of analyses since testing these two effects simultaneously would have required both partners to have made a sacrifice for each other on the same day. In all of the analyses, approach and avoidance goals were entered simultaneously to examine their unique effects. To avoid confounding within- and between-person effects, we used techniques appropriate for a multilevel framework, partitioning all the Level 1 predictors into their within- and between-variance components, which were person-mean centered and aggregated, respectively (Raudenbush et al., 2004; Zhang, Zyphur, & Preacher, 2009). Person-mean centering accounts for between-person differences in sacrifice goals and assesses whether day-to-day changes from a participant's own mean in sacrifice goals are associated with changes in both partners' outcome variables, consequently unconfounding between- and within-person effects. Although we focus on the within-person effects of sacrifice when reporting the results below, we have listed both the within- and between-person effects in Table 3. We report significant results using robust standard errors. In our tests of mediation, we used MCMAM with 20,000 resamples and 95% confidence intervals to test the significance of the indirect effects (Selig & Preacher, 2008).

Our first set of hypotheses concerned the effects of daily sacrifice goals on the relationship quality of the person making the sacrifice. As expected and shown in Table 3, on days when people sacrificed for approach goals (more than their own average across the 14-day study), they experienced greater relationship satisfaction and less relationship conflict. In contrast, on days when people sacrificed for avoidance goals more than they typically did across the 2-week diary, they experienced lower relationship satisfaction and more conflict. We further expected that the reason why approach and avoidance sacrifice goals differentially influence relationship quality is because people experience different emotions when they sacrifice in pursuit of approach versus avoidance goals. Indeed,

Table 3 Approach and Avoidance Sacrifice Goals Predicting Outcomes in the Daily Experience Study

	Daily Outcomes			
	Satisfaction	Conflict	Positive Emotions	Negative Emotions
Actor effects (within person)				
Approach	.45***	−.22*	.53***	−.24***
Avoidance	−.13*	.12*	−.24***	.26***
Actor effects (between person)				
Approach	.47***	−.11	.76***	−.06
Avoidance	−.19*	.40***	−.29***	.22***
Partner effects (within person)				
Approach	.20*	−.23*	.34***	−.06
Avoidance	−.04	.06	−.04	.02
Partner effects (between person)				
Approach	.14†	−.10	.59***	.02
Avoidance	−.09	.26**	.13	.23**

Note. All numbers are unstandardized HLM coefficients.
†*p* < .10. *p* < .05. **p* < .01. ***p* < .001.

approach sacrifice goals were associated with experiencing more positive emotions when making a sacrifice, and avoidance sacrifice goals were associated with experiencing more negative emotions. MCMAM analyses revealed that positive emotions partially mediated the link between approach sacrifice goals and increased relationship satisfaction (indirect effect 95% CI [.17, .33]; direct effect = .20, SE = .07, p = .004) and fully mediated the link between approach sacrifice goals and reduced relationship conflict (indirect effect 95% CI [−.33, −.08]; direct effect = −.02, SE = .09, p = .81). In addition, negative emotions fully mediated the link between avoidance sacrifice goals and increased relationship conflict (indirect effect 95% CI [.07, .20]; direct effect = −.01, SE = .06, p = .86) and fully mediated the link between avoidance sacrifice goals and lower relationship satisfaction (indirect effect 95% CI [−.19, −.07]; direct effect = .01, SE = .05, p = .97).

Our second set of predictions concerned the impact of one person's goals for sacrifice on the recipient's reports of the quality of the relationship. As expected and shown in Table 3, on days when people sacrificed for approach goals, their romantic partner experienced increased relationship satisfaction and less relationship conflict. Contrary to our expectations, however, avoidance goals were not significantly associated with the partner's daily relationship satisfaction or with the partner's reports of relationship conflict. Given that we documented an effect of approach goals on the partner's relationship quality, our next step was to test the partner's positive emotions when receiving a sacrifice as a mechanism. Indeed, on days when one person sacrificed for approach goals, his or her partner reported experiencing increased positive emotions. In turn, the partner's positive emotions fully mediated the link between approach sacrifice goals and the partner's daily relationship satisfaction (indirect effect 95% CI [.07, .24]; direct effect = −.01, SE = .10, p = .94) and fully mediated the link between approach sacrifice goals and the partner's reports of relationship conflict (indirect effect 95% CI [−.18, −.03]; direct effect = .03, SE = .12, p = .79).

Finally, given that the daily experience data were correlational in nature, we sought to rule out several alternative explanations for our results. First, it is possible that our effects might be due to people making different kinds of sacrifices when they pursue approach versus avoidance goals. As such, we accounted for several additional variables, including effort, typicality, reluctance, and perceived partner needs for the sacrifice. Indeed, approach sacrifice goals were associated with feeling less reluctant to make the sacrifice (b = −.20, p < .001), and avoidance goals were associated with perceiving that one's partner expressed a strong need for the sacrifice (b = .23, p < .001). However, after controlling for all four of these factors simultaneously in a subsequent set of analyses, all of the associations between daily sacrifice goals, emotions, and relationship quality for both partners remained significant. In addition, because all of the daily effects of sacrifice goals on emotions and relationship quality as reported by both partners are entirely within person (since we separated between-

and within-person effects and person-mean-centered sacrifice goals), they are statistically independent of any between-person individual differences in approach and avoidance relationship goals and Big Five personality factors. Finally, we also sought to determine whether an alternative mediation model in which goals mediate the link between emotions and relationship quality could better explain the data than our theoretical model. Although we found some support for these alternative models, the effects were weaker (accounting for 2–17% of the overall effect) than the effects we obtained in our mediation models (accounting for 56–100% of the overall effect).

PART 3: SACRIFICE AND RELATIONSHIP QUALITY 3 MONTHS LATER

In the final part of the study, we sought to determine whether the effects of sacrifice goals on relationship quality documented in the daily diary study were relatively short-lived or whether they would persist over a longer period of time. In addition, given that we did not demonstrate harmful effects of sacrificing in pursuit of avoidance goals for the recipient of sacrifice in the laboratory or the daily experience parts of the study, we were particularly interested in determining whether sacrificing to avoid negative outcomes might be costly for the recipient over the longer term given that some existing research suggests that the costs of conflict avoidance might accrue over time (Gottman & Krokoff, 1989). Thus, in Part 3, we examined the effects of sacrifice goals on both partners' reports of the quality of the relationship 3 months later.

Method

Procedure. Three months after completing the daily experience study, both members of the couple were provided with a link to a 10-min online follow-up survey. Of the 158 participants who provided laboratory and daily experience data, 131 (83%) participants completed the follow-up survey. Participants who completed and did not complete the follow-up survey did not significantly differ in baseline relationship satisfaction or approach and avoidance sacrifice goals aggregated over the course of the diary. After completing the follow-up survey, each member of the couple was mailed a check for US$10.

Measures of Relationship Quality. We assessed relationship quality at baseline and at the 3-month follow-up with measures of relationship satisfaction, closeness, and thoughts about breaking up. *Relationship satisfaction* was assessed with five items (Rusbult, Martz, & Agnew, 1998; baseline α = .90, M = 6.01, SD = .88; follow-up α = .92, M = 5.68, SD = 1.22) such as "Our relationship makes me happy" on 7-point scales (1 = *strongly disagree* to 7 = *strongly agree*). *Closeness* was measured with the one-item Inclusion of Other in the Self Scale (Aron, Aron, & Smollan, 1992). Participants were pre-

sented with a series of seven pairs of circles, one circle representing them and the other circle representing their partner. In each picture, the circles overlap to varying degrees (from not at all overlapping to almost completely overlapping), and participants were asked to choose the picture that best represents their relationship with their romantic partner (baseline $M = 5.18$, $SD = 1.24$; follow-up $M = 5.03$, $SD = 1.45$).

Because only 13% of the couples in this study broke up ($N = 8$), we could not predict break-ups. We had anticipated this issue with these fairly committed couples, so we included a measure of *thoughts about breaking up*. Four items were adapted from the Marital Instability Index (Booth, Johnson, & Edwards, 1983)—including "Have you or your partner ever seriously suggested the idea of breaking up?" "Have you discussed breaking up with a close friend?" and "Even people who get along quite well with their partner sometimes wonder whether their relationship is working out. Have you ever thought your relationship might be in trouble?"—and rated on a 3-point scale (0 = *never*; 1 = *within the last month*; 2 = *currently*). Participants also answered the question "Have you and your partner had a separation or broken up?" on a 2-point scale (0 = *never*; 1 = *within the last month*). We standardized each of the items before combining them into a composite measure of break-up thoughts (baseline α = .71; follow-up α = .78).

Results

We analyzed the data using multilevel modeling in SPSS v.20 to account for the fact that partners' reports were not independent. We used a two-level model where partners are nested within the dyad. We aggregated participants' scores for approach sacrifice goals and avoidance sacrifice goals over the 14-day diary study and included these variables in the model along with baseline levels of both partners' reports of the same relationship variable (e.g., relationship satisfaction at the 3-month follow-up, controlling for both partners' relationship satisfaction at baseline). We entered both partners' sacrifice goals simultaneously in our models in accordance with Actor-Partner Independence Model (APIM) procedures (Kashy & Kenny, 2000).

Our first set of hypotheses concerned the link between people's own sacrifice goals and their reports of relationship quality at the 3-month follow-up. The results of these analyses are shown in Table 4. Consistent with our predictions, the more people sacrificed for approach goals over the course of the diary, the greater relationship satisfaction they reported at the 3-month follow-up, controlling for both partners' baseline satisfaction, and the more closeness they reported at the follow-up, controlling for both partners' baseline closeness. Approach goals were not significantly associated with break-up thoughts at the 3-month follow-up. In contrast, the more people sacrificed for avoidance goals over the course of the diary study, the lower their relationship satisfaction and closeness and the more they had thought about breaking up with their romantic

Table 4 Approach and Avoidance Sacrifice Goals Predicting Outcomes in the Longitudinal Study

	Longitudinal Outcomes		
	Satisfaction	Closeness	Break-Up Thoughts
Actor effects			
Approach	.32*	.45*	−.07
Avoidance	−.44***	−.53***	.12*
Partner effects			
Approach	.27*	.12	−.05
Avoidance	−.22†	−.07	.06

Note. All numbers are standardized coefficients.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

partner by the 3-month follow-up, again controlling for both partners' scores on these relationship quality measures at baseline.

Our second set of hypotheses concerned the link between people's sacrifice goals and their partner's reports of the quality of the relationship over time. Consistent with our hypotheses and as shown in Table 4, the more people sacrificed for approach goals over the course of the diary study, the more satisfied their romantic partner felt with the relationship 3 months later. However, approach sacrifice goals were not significantly associated with the romantic partner's closeness or thoughts about breaking up at the follow-up. In contrast, the more people sacrificed for avoidance goals over the course of the diary, the marginally less satisfied their romantic partner felt with the relationship by the 3-month follow-up. Avoidance sacrifice goals were not significantly associated with the romantic partner's closeness or thoughts about breaking up.

Finally, and as in the first two parts of the study, we sought to rule out several alternative explanations. First, in an additional set of analyses in which we controlled for aggregate scores of four aspects of daily sacrifice (i.e., effort, typicality, reluctance, and perceived partner needs), all of our longitudinal effects remained significant. These results suggest that the long-term effects of goals on the quality of relationships are not being driven by people making qualitatively different types of sacrifices when they sacrifice in pursuit of approach versus avoidance goals. Second, in two separate sets of analyses, we controlled for individual differences in general approach and avoidance romantic relationship goals and the Big Five personality factors. When doing so, all of our effects remained significant. These results suggest that there are unique downstream effects of sacrifice goals on the quality of romantic relationships, above and beyond the influence of individual differences in people's goals for their relationships more generally as well as individual differences in Big Five personality factors.

DISCUSSION

Much of the research on sacrifice suggests that giving up your own desires to promote the well-being of a partner or a rela-

tionship promotes feelings of relationship satisfaction and closeness, both in the moment and over the course of time in relationships (e.g., Van Lange et al., 1997). However, theory and research suggest that there may be some circumstances under which sacrifice is both personally and interpersonally harmful (Gere et al., 2011; Impett et al., 2005; Rusbult & Van Lange, 1996). The current investigation merged research on sacrifice with research on approach-avoidance social motivation to provide evidence that the goals that people pursue when they make sacrifices for an intimate partner critically shape both the giver's and the recipient's immediate emotional experience and feelings about the relationship, and that these effects persist even over longer periods of time. The differential effects of approach and avoidance goals for sacrifice on emotions and relationship quality were not due to people making different types of sacrifices when they pursued approach versus avoidance goals, they were specific to motivational goals in the domain of sacrifice, and they could not be attributed to individual differences in Big Five personality factors.

Theoretical Contributions

The current study extends previous research on sacrifice in interpersonal relationships in three important ways. First, the findings fill an important gap in the literature by investigating the mechanisms underlying the effects of approach and avoidance goals on the quality of romantic relationships (Gable & Impett, 2012). The results revealed that an important reason why approach and avoidance goals for sacrifice lead to such divergent relationship outcomes stems from their differential links with positive and negative emotions. In particular, one reason why people reap relationship benefits when they sacrifice for approach goals is due to the fact that they experience more positive emotions when engaging in acts that benefit their partner or their relationship. In contrast, people feel less satisfied and experience more conflict in their relationships when they sacrifice to avoid tension or to prevent their partner from feeling let down due to increased negative emotions associated with these acts.

The findings from this study build upon the existing literature on sacrifice in a second way by investigating sacrifice from a dyadic perspective. In this study, in addition to showing how sacrificing in pursuit of different goals impacts the person making the sacrifice, for the first time, we show that people's goals for sacrifice are associated with how the recipient feels as well. Beginning with dyadic effects for approach goals, we found that on days when one person sacrificed to make his or her partner happy or to enhance intimacy in the relationship, the recipient experienced more positive emotions and, in turn, reported feeling more satisfied and loved. These effects also persisted over a 3-month period of time in relationships. That is, increased approach sacrifice goals over the course of the diary study were associated with increases in the romantic partner's satisfaction 3 months later.

The findings regarding the effects of avoidance goal pursuit on the recipient of sacrifice were a bit more mixed. In the laboratory and daily diary parts of the study, one person's avoidance sacrifice goals were not significantly linked with the romantic partner's feelings about the relationship. In the longitudinal part of the study, however, the more people sacrificed to avoid negative outcomes in their relationship, the less satisfied their romantic partner felt 3 months later. Looking across the three parts of this study, these results suggest that while giving up one's own self-interest might resolve an immediate conflict of interest in the relationship, doing so may leave lingering negative emotions that can detract from the quality of the relationship over time. These findings are consistent with recent empirical findings showing that actively avoiding conflict, especially regarding highly contentious issues, can erode relationship satisfaction (see review by McNulty, 2010).

The findings from this study build upon existing research on sacrifice in a third way by incorporating outside observer reports of relationship quality. Since all of the self-report measures used in the three parts of this study share common method variance, we obtained outside observer reports of relationship quality to corroborate the self-report findings and to enable us to broaden the ecological validity of our effects. Consistent with their focus on creating positive experiences in their relationship, people who indicated that they had sacrificed for their partner in pursuit of approach goals were rated as relatively more satisfied by outside observers. In contrast, people who indicated that they had sacrificed for their partner in order to avoid negative outcomes in their relationships were rated as less satisfied and as displaying more conflict when interacting with their romantic partner in the lab.

LIMITATIONS AND FUTURE DIRECTIONS

Many of the participants in this study were college students in relatively new relationships where feelings of satisfaction were quite high. It is possible that the associations between sacrifice goals and relationship quality may be different in relationships of greater duration and commitment. During periods when relationship satisfaction is known to decline, such as during the child-rearing years of a marriage (Doss, Rhoades, Stanley, & Markman, 2009), sacrifices undertaken in pursuit of avoidance goals may be less harmful than those made by the relatively young dating couples in our study. Indeed, a recent study suggests that people who construe the self as highly interdependent with close others are buffered against some of the personal and relationship costs of sacrificing for avoidance goals (Impett, Le, Asyabi-Eshghi, Day, & Kogan, 2013). This research suggests that sacrificing for avoidance goals is not always harmful, and future research that examines relationships of greater duration and commitment, as well as the circumstances under which sacrificing for avoidance goals might be beneficial, is needed to extend the current work.

Our theoretical framework and findings suggest that the goals that people pursue when they sacrifice for their romantic partner influence their emotional experience and their feelings about their relationships. However, since we did not experimentally manipulate sacrifice goals, our findings do not provide a definitive test of this direction of causality. For example, just as sacrificing for approach goals may lead people to experience more positive emotions and greater relationship satisfaction, it is also possible that being in a good mood or feeling happy in the relationship makes people more likely to sacrifice to approach positive experiences. Given that prior research has shown that current relationship quality influences cognition and behavior in close relationships (e.g., Fletcher & Thomas, 2000), it is likely that there are bidirectional links between sacrifice goals and the quality of interpersonal relationships. Our longitudinal findings in which we control for baseline levels of relationship quality provide the best evidence that goals shape relationship quality, as sacrificing for approach goals predicted increased relationship quality 3 months later, whereas sacrificing for avoidance goals predicted decreased relationship quality. Unfortunately, we could not conduct lagged-day analyses in order to provide further evidence for the directionality of the effects in the daily experience study since those analyses would have required that participants sacrifice 2 days in a row multiple times over the course of the diary. Future research in which both approach and avoidance goals are experimentally manipulated (Strachman & Gable, 2006) would provide a more definitive test of the causal links between approach and avoidance sacrifice goals and relationship quality.

The current study also does not address the question of whether it is possible for people with chronically low levels of approach goals or high levels of avoidance goals to learn to focus on the positive things to be experienced in their relationships. Nevertheless, it is important to note that, by definition, goals are short-term cognitive representations of wants and fears that should be malleable and sensitive to situational cues (Elliot et al., 2006; Gable, 2006). Indeed, previous research has shown that goals can be experimentally manipulated in the social domain (Strachman & Gable, 2006) and the achievement domain (e.g., Elliot & Sheldon, 1997). Experimental evidence for changing people's goals in their romantic relationships has yet to be conducted, but on the basis of theory and previous experimental research, we expect that people's goals in their relationships can and do change over time. Experimentally manipulating relationship goals is a ripe area for future research.

CONCLUSION

Giving in to a partner's wishes is both necessary and inevitable in close relationships. Sometimes, people sacrifice to make their partner happy and to enhance intimacy and closeness in their relationship. At other times, they do so to prevent conflict or to prevent their partner from feeling upset or let down. The central idea guiding this research is that these two very different types of goals for sacrifice are powerful predictors of the quality of intimate bonds. When people sacrifice in pursuit of approach goals, both the giver and the recipient of the sacrifice experience more joy and delight, positive emotions that, in turn, contribute to enhanced relationship satisfaction in the couple. In contrast, when people sacrifice in pursuit of avoidance goals, both partners experience more anger, frustration, and resentment, negative emotions that, in turn, detract from the quality of relationships. In short, this research suggests that sacrifice per se does not help or harm relationships, but that the goals that people pursue when they give up their own interests for a partner can powerfully shape the quality of intimate bonds.

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